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**ASSISTANCE TO THE TUMEN RIVER ECONOMIC DEVELOPMENT AREA (TREDA)  
GOVERNMENTS IN PRIORITIZING INDUSTRIAL  
INVESTMENT OPPORTUNITIES**

SI/RAS/95/801

**VOLUME II  
ENTERPRISE SURVEY AND STATISTICAL DATA**

Prepared for the Governments of the People's Republic of China,  
Democratic People's Republic of Korea and Russian Federation  
by the United Nations Industrial Development Organization,  
acting as executing agency for the United Nations Development Programme

*Based on the work of J. Ayoub, Y.J. Chen, W.B. Miller,  
M. Nagano and S. Pigon, team leader*

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United Nations Industrial Development Organization  
Vienna

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\* This document has not been edited

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## 1. LIST OF ORGANIZATIONS IN CLOTHING SECTOR IN PRIMORSKI KRAI

	Name of Institute, Industries, Joint-Stock Address	Key Woman/ Key Man/ Tel/Fax	Remarks
	Vladivostok Garment Making & Trade Amalgamation « ZARYA » 155 Prospekt 100 Let Vladivostok Vladivostok 6900068	Mr. Gennady I. BABUSHKIN General Director Tel : 31 61 78 Fax : 31 61 81	Manufacture and sale of light industry products
	Nakhodka Knitted Glove Factory « RITM » 14 - A Nakhimovskaya St. Nakhodka 692913	Mr. Nikolay I. NAZAROV Director Tel : (42366) 5 77 35 Fax : (42366) 5 72 21	Manufacturing of knitted protective gloves
	PALP (Far Eastern Sewing Industry) 1 - b, Muravieva - Amurskogo Street. 690001 Vladivostok	Mr. Nikolay DOZHNIKOV President Tel : (4232) 26 80 48) Fax: (4232) 26 80 48	
	AO KEDR T. LEZOZAVODSK, 692060 (Textile and Sewing Industries) Belova Street, N° 8	Mrs. Olga Nikulina IOSIFOVNA General Director Tel : (42 32) 95 5 54	
	AO USSURII, LESOZAVODSK . 692060 (Textile and Sewing Industries) Pushkinskaya Street, 31/A, Russia	Mrs. Alexandra Yurienvna SAMBUR General Director	
	AVANGARD - ZODIAQ (Sewing Factory) 16, Kakhovskaya Street Uglekamensk , 692881 Russia, Primorye Region	Mrs. Valentina M. BOGDAN Director Tel : (42 32) 91 198	ZODIAC <sup>1</sup> and Co is the result of the privatization of garment factory Avangard. It has 1123 sq.m of premises, including 877 sq.m of industrial premises and 250 sq.m of warehouses. It has 128 skills employees and is equipped with modern equipment. Zodiac produces more than 30 different articles, including bedclothes, dressing gowns, shirts, pants, dresses and work clothes. Zodiac is particularly interested in cooperation with foreign companies in production of cotton clothes.
	MOLODYOZHNOE (Textile and Sewing Industries) 1, Leninskaya street. Partizanszk Primorsky Region 692880, Russia	Mrs. Vera I. KARAS General Director Tel : (42 32) 20 39 Fax : (42 32) 20 39	

<sup>1</sup> Text of advertising materials published « QUOTA-FREE Export-Oriented Garment Manufacturing in he Russian Far East, in « Russian Trade Connections, page 5, April 1995

	JS ARTYOUM FABRIC 191 Street Kirova ARTYOM Russia	Mrs. Galina Grigoryevna REZIVIKOVA Head of Sewing Department Tel : (8 42 32) 38 00 Fax : (8 42 32) 33 22	Clothing for children Work force decreases from 1000 persons in 1989 to 100 persons in 1995.
	Ussurisk Garment Making Factory « RABOTNITSA » 41 Lenina St. Ussuriysk 692500	Mr. Alexander A. MILOSTIVENKO Director Tel : (42341) 2 21 30	Manufacture and sale of light industry goods
	« MODEX » 92, Herzen City of Partizansk 692880 Russia	Mrs. Valentina V. KHIZHNYAK Director Tel : 3630 24 12	Dresses, bed clothes, working clothes, underclothes, dresses, etc. 2000 sq.m Industrial area 41 EQUIPMENT 74 Workers Modex <sup>2</sup> is garment factory sitting on four hectares of land ; The factory is equipped with modern Japanese and Korean equipment's. Modex's current staff includes 80 skilled designers-modellers, technologists and sewing-machine operators. Modex currently produces shirts, jackets, blouses, bed clothes and work clothes. Modes cooperates with such major local wholesalers and Departments store (TsUM) and Nakhodthorg. Modex sells its product in the domestic Primorski Krai market and through its trading network. Modex is holding 1400 sq.m of industrial space in reserve for expansion.
	Nakhodka Garment Factory	Mrs. Svetlana I. LAVRINOVICH Director	Working Clothes, Bed Clothes. Have some experience in producing shirts for export from the fabric of clien, 3300 sq.m Industrial area, 250 EQUIPMENT, 200 Workers

---

<sup>2</sup> Idem

1.1. Administration Services, Technological and Training Institutes

	<p>ADMINISTRATIVE COMMITTEE OF THE NAKHODKA FREE ECONOMIC ZONE 9, Lunacharskogo Street 692926 NAKHODKA</p>	<p>Tel : (42 3 66) 56 371 Fax : (42 3 66) 47 272</p>	
	<p>PRIMORRSKI TERRITORY ADMINISTRATION Committee of Economics and Planning 22, Svetlanskaya Street. Vladivostok, Russia 690110</p>	<p>Mr. Yuriv A. SYASIN (Ph. D. Engineering) Director Rational Using of Industrial Potential &amp; Infrastructure Territory Division. Tel : (4232) 22 37 93 Fax : (4232) 22 55 60</p>	
	<p>PRIMORSK CHAMBER OF COMMERCE &amp; INDUSTRY, RUSSIAN FEDERATION 13 - A, Okeansky Pr. Vladivostok, 690600, Russia</p>	<p>Mr. Alexander S. PISSAREV Chairman Tel : (42 32) 26 96 30 Fax : (42 32) 22 72 26</p>	
	<p>FAR EASTERN TECHNOLOGICAL INSTITUTE 41, Gogolya Street 690600 Vladivostok, Russia</p>	<p>Dr. Gennadi I. IAZAREV President, Professor Mr. Alexander P. KOROBOV Director of International Department Tel : (42 32) 250 853 Fax : (42 32) 250 054</p>	
	<p>PRIMORSKY TERRITORY GOVERNMENT Fish Industry Committee 22 Svetlanskaya Street Vladivostok, Russia 690110</p>	<p>Dr. Yury A. PONOMAREV Analysis and Prediction Department, Director Tel : (4232) 269 317 Fax : (4232) 269 105</p>	
	<p>Far-East State University 8 Sukhanova St. 690000 Vladivostok</p>	<p>Tel : 22 47 00</p>	
	<p>Far-Eastern State Technical University 10 Pushkina St. Vladivostok 690600</p>	<p>Prof. Gennady P. TURMOV Rector Tel : 25 51 18 Fax : 25 69 88</p>	<p>Training of specialists in technical sciences, scientific and technical researches</p>
	<p>Far-Eastern Foreign Economic Association « DALSO » 54 Svetlanskaya St. Vladivostok 690600</p>	<p>Mr. Alexander S. VOROPAEV President Tel : 22 45 53 Fax : 22 95 20</p>	<p>export-import operation, foreign economic cooperation</p>



**1.2. Commercial and Trading Activities**

VOSTOKREMSTROYMASH 14, October 25 street Vladivostok, 690000	Mr. YURI M. KOSTYUKOV Tel : (4232) 22 13 51, Fax : (4232) 22 09 06	
Vladivostok Central Department Store (GUM) 35 Sveltanskaya St. Vladivostok 690000 Russia	Mrs. Valentina N. CHIBIRYAK Manager Tel : 22 20 54 Fax : 26 49 64	Wholesale and retail trade of consumer manufactured good
Joint Stock Company PRIMLEGPROM 1 - B Muravyeva-Amurskogo St. Vladivostok 690001	Mr. Nikolay G. DOLZHIKOV General Director	Manufacture and sale of light industry products
Far-Eastern Consumers Cooperative Society « POTREBKOOPERATSIYA SEVERA » 3 Mordovtesva St. Vladivostok 690090	Mr. Anatoly N. KIRLYUK Director Tel : 22 97 14 Fax : 26 94 26	Wholesale trade
Commercial & Industrial Concern « COMMERSANT ». Formerly : Trade Office) 6 Fontannaya St. Vladivostok 690600	Mr. Anatoly V. PAVLOV General Director Tel : 22 42 93 Fax : 26 82 52	Manufacture and sale of Consumer goods
Foreign Economic Trade & Industrial Co. « EXPODALPOLIS » 6, Fontannaya St. Vladivostok 690600	Mr. Grigory L. SMIRNOV President Tel : 25 85 26 Fax : 22 03 86	Export/Import of Fish products and leather haberdashery
Primorski Garment Production Amalgamation « VOSTOK » 33 Leninskaya St. Spassk-Dalny 692210	Mr. Victor M. KOKHANOV General Director Tel : (42352) 2 28 45	Manufacture and sale of light industry products
DALSTROYEXPO (Exhibition, Marketing Studies Company) 14, Borodinskaya Street 690049 Vladivostok, Russia	Mrs. Vera S. ERMILOVA Director Tel : (42 32) 46 00 58 Fax : (42 32) 25 04 36	
« ACFES » 103 Prospekt 100 Let Vladivostok 690600 Vladivostok	Tel : (4232) 31 85 10 Fax : (4232) 31 83 11	Trade : Import and Whole sake of food products

**1.3. List of Committees and officials in Primorski Krai Administration working on Light Industries, Foods and Seafood Industries**

Governor of Primorski Krai	Mr. Yevgenii I. NAZDRATENKO
Senior Vice Governor for Agriculture	Mr. Valentin S. DUBININ
Vice Governor for Financial Policy and Planning	Mr. Nikolai V. PIMENOV
Vice Governor for Industry Trade and Services	Mr. Fedor T. NOVIKOV
Vice Governor for Construction, Utilities, Transportation, Communications and Information	Mr. Igor I. BELCHUK
Vice-Governor for Foreign Economic & Regional Relations	Mr. Vladimir A. STEGNII
Chairman of the Committee for Foreign Economic & Regional Relations	Mr. Andrei G. ZAGUMENNOV
Chairman of the Committee for Maintenance and Utilities	Mr. Sergei I. OSIPOV
Chairman of the Committee for the Food and Food Processing Industries	Mr. Boris I. YEMETS
Chairman of the Committee for Natural Resources	Mr. Yevgeneii S. STOMATYUK
Chairman of the Committee for Industry	Mr. Stanislav A. ASEYEV
Chairman of the Committee for the Fishing Industries	Mr. Vitalli M. DANILOV
Chairman of the Committee for Trade, Services and Supply	Mrs. Svetlana I. CHISTOKLETOVA

## 2. SELECTED DATA ON FOOD PROCESSING INDUSTRY IN PRIMORSKY KRAI

Name of Factories	Address	Production Volumes	Staff (Persons)	Capital (Million Rubbles)	Products	Evolution Figures Last Three Years 91/92/93
AO KVEN	NAKHODKA Leningradskaya St. Tel : 2 56 22	200 Tons/year	40	5.0	CRAB STICKS	80 - 130 - 250
AO MIASOKOMBINAT	NAKHODKA Svedlova 10 St. Tel : 4 94 84	292.8 Tons/year including 2.8 Tons of Sausages	237	39.4	MEAT PRODUCTS	2.5 - 2.4 - 2.8
AO MOLOKOZAVOD	NAKHODKA Sverniy Prospect, 6 Tel : 4 44 67	9.3 Thousand Tons	172	15.0	MILK PRODUCTS	10.1 - 9.3 - 12.8
AO GORPISCHEKOMBINAT	NAKHODKA Ozernaiy, 12 St. Tel : 4 65 83	352 Tons, 33 DCL	59	2.5	CONFECTIONERY, BEVERAGES	396 - 352
AO HLEB ZAVOD	NAKHODKA Malinovskogo 14 St. Tel : 4 05 14	11.7 Thousand Tons	196	14.4	BREAD AND CONFECTIONERY	13 - 11, 1 - 11.7
AO RYBKOMBINAT	NAKHODKA Pirogova St. Tel : 2 39 57	380 Thousand Tons	200	5.0	SEA FOOD GASTRONOMY	330 - 250 - 380
AO PTITSEFABRIKA	NAKHODKA Sello Ekaterinovka Tel : 99 91 11	14.2 Million Eggs 125 Tons of Meat	200	5.0	MEAT PRODUCTS EGGS	Stable
PIZAVOD "KIVI"	NAKHODKA	360 Tons	12	6 000.0	BEER	New Facilities
PIZAVOD "RUSKOE PIVO"	NAKHODKA	300 Tons	13	4 000.0	BEER	New Facilities

AO TOO "VOSTOK"	NAKHODKA Selo Vladimir Aleksandroskovoe Komsomolskaya 46 St. Tel 91 3 90	124 Tons Potatoes 6.3 Tons Vegetables 363 Tons Milk Products 127 Tons Meat	300	4 520.0	MEAT-----> VEGETABLES MILK -----> POTATOES	203 - 176 - 127  210 - 906 - 119.3
TOO PARTIZANSKY	PARTIZANSK	78.3 Tons Potatoes 7.2 Tons Vegetables 154.2 Tons Milk 127 Tons Meat	247	5.3	MEAT MILK	200-173-199.3 1480-543-219
TOO NOVOLITOVSK	SELO NOVOLITOVSK Cherniakhovokogo 27 St.	91 tons Potatoes 143.7 Milk 119 Tons Meat	176	4.0	MEAT-----> MILK-----> VEGETABLES POTATOES	134 - 123 - 119 694- 318-143.7
TOO "NAKHODKINSKIY"	SELO EKATERINOVKA	41 Tons Milk 31 Tons Vegetables	46	2.4	MEAT MILK	119 - 71 - 31 901 - 37 - 41
AO "AZIA"	NAKHODKA Tel : 4 32 40	500 Tons Meat	11	4 000.0	MEAT PRODUCTS	350 - 500
VL. VL. RAIPO	SELO VLADIMIR ALEXANDROVSK	700 Tons Meat	23	5 000.0	MEAT PRODUCTS	300 - 400 - 700
JUG MOR. RIBKOOP	P. JUGNO -MORSKOI Tel : 5 15 40	326 Tons Meat 300 Tons Loaf	29	7 000.0	MEAT PRODUCTS LOAF/ BREAD	
BAKERY (7 Units)	NAKHODKA TERRITORY OF FREE ECONOMIC ZONE	8 Tons/day	52	11 000.0	LOAF	Stable Daily Production
SIROVARENNIY ZAVOD	NAKHODKA TERRITORY OF FREE ECONOMIC ZONE	7 Tons/day	12	1 500.0	MILK PRODUCTS, CHEESE	Stable

## 3. LIST OF COMPANIES AND INSTITUTIONS IN YANBIAN PREFECTURE AND R-S FETZ

COMPANY	ADDRESS
1. Administration & Economic Committee of Rajin-Sonbong City (AECRS)	Namoen-dong, Rajin-Song City, DPRK Tel: 8502-845 Fax: 8502-813585
2. Antu Pharmaceutical Factory (ATPF)	47 Mingan St., Mingyue Town, Antu 133600 P.R. China Tel: 0433-582-3586 Fax: 0433-582-3717
3. China Tumen River Area Investment Promotion (CTRAIP)	28 Henan Street, Yanji City, Jilin Province P.R. China Tel: 86433-281-5752 Fax: 86433-281-5632
4. Committee for Promotion of External Economic Cooperation (CPEEC)	Central District, Pyongyang, DPRK Tel: 8502-816163 Fax: 8502-814630
5. Dunhua Pharmaceutical Factory (DPF)	No. 1, North Mountain Road, Dunhua City, P.R. China Tel: 04335-225-127 Fax: 04435-230-844
6. Hunchun Pharmaceutical Factory (HPF)	Henan Street, Hunchun 133300 P.R. China Tel: 0440-251-2880 Cable: 0418
7. Investigation and Research Office of Yanbian People's Government	67 Henan Street, Yanji City, Jilin Province P.R. China Tel: 86433-281-7811 / 281-7810
8. Kwanggok Ironware Co-operative	Kwanggok-dong, Rajin District, Rajin-Sonbong City
9. Petrochemistry Industry Administration of the Yanbian Korean Autonomous Prefecture (PIAYKAP)	5 Lihua Road, YanXi Street, Yanji 133002 P.R. China Tel: 433-271-4046
10. Pharmaceutical Administration of Yanbian Korean Autonomous Prefecture (PAYKAP)	131 Jiefang Road, Yanji City, Jilin Province P.R. China Tel: 86433-251-3039 Fax: 86433-251-3082

11.	Planned Economy Commission of Yanbian Korean Autonomous Prefecture (PECYKAP)	67 Henan Street, Yanji City 1333001, Jilin Province, P.R. China Tel: 86433-281-2106 Fax: 86433-281-2880
12.	Policy Research Office of Yanbian CPC Committee	1 Youyi Road, yanji City, Jilin Province P.R. China Tel: 86433-251-3271
13.	Rajin Bean Paste Factory	Sinhung-dong, Rajin District, Rajin-Sonbong City
14.	Rajin Cement Factory	Sinhung-dong District, Rajin District, Rajin-Sonbong City
15.	Rajin Chemical Daily Necessities	Dongmyong-dong, Rajin District, Rajin-Sonbong City
16.	Rajin Clothing Export Factory	Changpyong-dong, Rajin District, Rajin-sonbong City
17.	Rajin Disabled Soldier's Foodstuff Processing Factory	Anhwa-dong, Rajin District, Rajin-Sonbong City
18.	Rajin Fishing Cooperative	Anju-dong, Rajin District' Rajin-Sonbong City
19.	Rajin Furniture Production Cooperative	Dongmyong-dong, Rajin District, Rajin-Sonbong City
20.	Rajin Ironware Export Factory	Namsan-dong, Rajin District, Rajin-Sonbong City
21.	Rajin Knitwear Factory	Changpyong-dong, Rajin District, Rajin-Sonbong City
22.	Rajin Meat and Fish Processing Factory	Anju-dong, Rajin District, Rajin-Sonbong City
23.	Rajin Paper Mill	Sinan-dong, Rajin District, Rajin-Sonbong City
24.	Rajin People's Hospital	Rajin District,

	Rajin-Sonbong City Tel: 267 (domestic line)
25. Rajin Plasticware Factory	Dongmyong-dong, Rajin District, Rajin-Sonbong City
26. Rajin Pharmaceutical Factory	Sinhung-dong, Rajin District, Rajin-Sonbong City Tel: 284 (domestic line)
27. Rajin Weaving Factory	Dongmyong-dong, Rajin District, Rajin-Sonbong City
28. Sonbong Building Materials Factory	Sonbong County, Rajin-Sonbong City
29. Sonbong Daily Necessities Factory	Sonbong County, Rajin-Sonbong City
30. Sonbong Fishing Enterprise	Sonbong County Rajin-Sonbong City
31. Sonbong Foodstuff Processing Factory	Sonbong County, Rajin-Sonbong City
32. Sonbong Garment Factory	Sonbong District, Rajin-Sonbong City
33. Sonbong Pharmaceutical Factory	Sonbong County, Rajin-Sonbong City, Tel: 389
34. Sonbong Sodium Carbonate Factory	Sonbong County, Rajin-Sonbong City
35. Sonbong Textile Factory	Sonbong County, Rajin-Sonbong City
36. Tumangang Sleeper Sawmill	Tumangang-gu, Sonbong District
37. Yanbian Building Materials Industry General Company	44 Changbai Road, Yanji City, Jilin Province, P.R. China Tel: 86433-281-3241
38. Yanbian Commission for Structural Reforms	131 Jiefang Road, Yanji City, Jilin Province, P. R. China Tel: 86433-251-3082 / 251-4107

39.	Yanbian Forestry Administration	4 Zhanggian Street, Yanji City, Jilin Province, P.R. China Tel: 86433-281-3416
40.	Yanbian Light Industrial and Textiles Bureau	8 Yuanfanglane, Yanji City, Jilin Province P.R. China Tel: 86433-271-4095
41.	Yanbian Machinery Electronics Bureau	323 Changbai Road, Yanji City, Jilin Province, P.R. China Tel: 86433-281-5591
42.	Yanbian Pharmaceutical Administration	131 Jiefang Road, Yanji City, Jilin Province, P.R. China Tel: 86433-251-3694
43.	Yanbian Power Administration	14 Guangming Street, Yanji City, Jilin Province, P.R. China Tel: 86433-251-3317
44.	Yanbian Price Bureau	67 Henan Street, Yanji City, Jilin Province P.R. China Tel: 86433-281-4917 / 281-3350
45.	Yanbian Science and Technology Committee	20 Henan Street, Yanji City, Jilin Province P.R. China Tel: 86433-281-5217
46.	Yanbian Second Light Industry Bureau	65 Tianchi Road, Yanji City, Jilin Province P.R. China Tel: 86433-281-3713
47.	Yanbian Second Pharmaceutical Factory (YSPF)	No. 61, Aidan Road, Yanji City, P.R. China Tel: 0433-251-4470
48.	Yanbian Statistics Bureau	67 Henan Street, Yanji City, Jilin Province P.R. China Tel: 86433-281-4695
49.	Yanbian Technical Supervision Bureau	17 Youyi Road, Yanji City, Jilin Province P.R. China Tel: 86433-251-6248



## 4. PROPOSALS FOR FOREIGN INVESTMENT IN FOOD PROCESSING

<u>PROJECT DESCRIPTION</u>	<u>LOCATION</u>	<u>COST ESTIMATED</u>	<u>OUTPUT</u>
Purchase of sublimate lines for fruit and vegetable freezing	LESOZAVODSK	250 million \$USA	90 000 m <sup>3</sup> /year
Construction of small-scale farm equipment factory	NAKHODKA	500 billion Rubles	25 million Tons
Construction of grain and feed handling complex and feed production facility	NAKHODKA VLADIVOSTOCK	3000 billion Rubles	(Unavailable)
Modernization, retooling of sugar factory	USSURIISK	(Unavailable)	500 Tons/day
Modification of can factory to production of easy-open lids	VLADIVOSTOK	50 billion Rubles	1500 Tons/year

## 5. LIST OF ENTERPRISES, ORGANIZATIONS IN FOOD AND SEA FOOD INDUSTRIES

### 5.1. Sea food processing sector

	Name of Institute, Industries, Joint-Stock Address	Key Woman/ Key Man/ Tel/Fax	Remarks
	REBOKOMBINAT	Mr. Vlachslav NOVIKOV, Chairman of Board Tel: (4232) 31 21 16, Fax : (4232) 31 21 48	Sea food and fish products
	KRANAYAZK VLADIVOSTOK ESTONIE NAKHODKA ( KVEN) 139, Leningradskaya Street 692900 NAKHODKA - Primorski Region	Mr. OGOLENKO Tel : (42366) 2 56 22	(Sea Foods and Flavored Crab Sticks processing plant)
	ACTIVE MARINE FISHERY COMPANY (B. A. M. R.) Nakarova Street, 5 692900 NAKHODKA ,Primorski Krai Region	Mr. Anatoly N. KOLESNICHENKO General Director Tel : (42366) 22 8 01 Fax : (42366) 22 77 1	
	YUZHMOREBYFLOT Sea Food Processing (Tinned, Frozen processing) 16, Zavodskaya Street, Yuzhno - Morskoy Primorsky Region, 692204, Russia	Tel : (42366) 5 14 40 Fax: (42366) 4 78 26	
	PRYMORRYBPROM Joint-Stock Company (Fish factory "SLAVIANKA") Nerpinskaya Street s. Slavyanka - 3 Hasansky Region, Primorski Territory, 692731 , RUSSIA	Mr. Yuri P. KOCHNEV Director Tel : (423 31) 42 6 60 Fax : (423 31) 42 6 60	
	AO DAL NIVOSTOCHNAYA BASA FLOTTA PO RIBELOUSTVOV IOBRABODKE MORE PRODUCTO (Far Eastern base of Getting and Conversion of Fish and Sea Products) 69276 Primorsky Krai, KHAZANSKI RAYON, POSOLOK ZARUBINA	Mr. Vladimir Sergeiwitch SOTNIKOV Vice General Director of Fleet Tel : (42 33 1) 26 60 12	
	DALMOREPRODUKT Holding Company (Fish Catching and Processing) 53, Pologaya street, 690600 Vladivostok, Russia	Mr. Yuriy G. DIDENKO, General Director, Chairman of Board of Directors Tel : (4232) 267 012 Fax : (4232) 267 450	

Joint Stock Company « DALRYBA » 51 Svteslanskaya St. Vladivostok 690600	Mr. Yury I. MOSKALISOV General Director Tel : 22 46 40 Fax : 26 57 49	Searching, catching, processing, manufacturing and transportation of fish and sea-food product, ship repairing
Production Amalgamation « PRIMORRYBPROM » 83 Svetslanskaya St. Vladivostok 690078	Mr. Alexei G. SUVOROV General Director Tel : 26 61 97 Fax : 22 48 43	Catching and manufacturing of fish and sea-food products.
Vladivostok Fishing Sea 25 Beryozovaya St. Vladivostok 690043	Mr. Leonid A. MEKHED Tel : 27 72 10 Fax : 27 72 10	Handling & storage of fish and sea-food products and food-stuffs
« PACIFICO » Russian-Korean Joint Venture Pacific Fishing Company 8 Bashidze St. Vladivostok 690106	Mr. Anatoly E. UMRKHIN General Director Tel : 27 36 01 Fax : 22 89 99	Fish Catching & Processing
« DALRYBA » 51 A Svetlanskaya St. 690000 Vladivostok	Mr. Yury I. MOSKALTSOV President Tel : (4232) 22 46 40 Fax : (4232) 22 89 49	Fishing and seafood harvesting, Foodstuffs production and canning, Ship repair and machine manufacturing
BTRF (Fishing Industry Enterprises) 243 Kalininskaya St. 690000 Vladivostok	Tel : 27 03 67	
Daltekhybprom 42 Kalininskaya St. 690000 Vladivostok	Tel : 27 95 95	(Fishing Industry Enterprises)
Kamchatrybprom Agency 1 Lazo St. 690000 Vladivostok	Tel : 22 44 65	(Fishing Industry Enterprises)
Krayrybolovpotrebsoyuz 3 Mordovteva St. 690000 Vladivostok	Tel : 25 85 95	(Fishing Industry Enterprises)
Magadanrybprom Agency 22 A Sovetskaya St. 690000 Vladivostok	Tel : 25 49 53	(Fishing Industry Enterprises)
Primorrybprom 83 Svetlanskaya St. 690000 Vladivostok	Tel : 21 85 86	(Fishing Industry Enterprises)
Vostokrybkhodflot 25 Beryozovaya St. 690000 Vladivostok	Tel : 27 02 57	

Fishery Products Sellers 51 A Svetlanskaya St. 690000 Vladivostok	Tel : 22 54 82	
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**5.2. Food Processing**

NAKHODKINKIJ Joint-Stock company Meat Packing Plant Sverdlov Street, 10 692900 NAKHODKA, Primirkij Territory, Russia	Mrs. Olga SMIRNOVA General Director Tel : ( 8266) 4 94 84 Fax: ( 42366) 4 93 00	
DINKOMA COMPANY (A producer of Special Food Products) 6, Bashidze Street Vladivostok, Russia	Mrs. Elena A. GOLOMOVZAYA General Director Tel : (42 32) 22 46 66 Fax : (42 32) 26 84 24	
Nakhodka Can-Making Factory 1 Astafieva St. Nakhodka 692900	Mr. Gely V. VOROBYOV Director Tel : (42366) 2 34 55	Manufacture of tin cans for the fishing industry, printing works
BAKEHOUSE № 1 2, Ekipazhnaya St. 690000 Vladivostok	Tel 23 12 01	
BAKEHOUSE № 2 29, Narodny Av. 690000 Vladivostok	Tel : 25 49 02	
BAKEHOUSE № 3 29, Narodny Av. 690000 Vladivostok	Tel : 25 48 92	
Beer Factory 10 Krylova St. 690000 Vladivostok	Tel : 25 55 64	
Confectioner Factory 52 Aleutkaya St. 690000 Vladivostok	Tel : 25 95 46	
Flour Mill 13 Kalininskaya Qt. 690000 Vladivostok	Tel : 27 74 28	
Meat Factory 3 Fontannaya St. 690000 Vladivostok	Tel : 27 74 55	
Packing Factory 8, Dubovaya St. 690000 Vladivostok	Tel : 27 69 67	

GORMOLOKOZAROD Food Milk Fabrik Nakhodka Severni Promuzel Primorki Krai 692900 NAKHODKA	Mrs. Irina V. ANTONOVA Executive Director Tel : (42366) 4 93 94 Fax: (42366) 4 93 94	
Milk Factory 19, Strelochnaya St. 690000 Vladivostok	Tel : 29 55 69	

**5.3. Administration Services, Technological and Training Institutes**

ADMINISTRATIVE COMMITTEE OF THE NAKHODKA FREE ECONOMIC ZONE 9, Lunacharskogo Street 692926 NAKHODKA	Tel : (42 3 66) 56 371 Fax : (42 3 66) 47 272	
PRIMORRSKI TERRITORY ADMINISTRATION Committee of Economics and Planning 22, Svetlanskaya Street. Vladivostok, Russia 690110	Mr. Yuriv A. SYASIN (Ph. D. Engineering) Director Rational Using of Industrial Potential & Infrastructure Territory Division. Tel : (4232) 22 37 93 Fax : (4232) 22 55 60	
PRIMORSK CHAMBER OF COMMERCE & INDUSTRY, RUSSIAN FEDERATION 13 - A, Okeansky Pr. Vladivostok, 690600, Russia	Mr. Alexander S. PISSAREV Chairman Tel : (42 32) 26 96 30 Fax : (42 32) 22 72 26	
Far-Eastern Branch of the Academy of Sciences of Russian Federation 50 Svetlanskaya St. Vladivostok 690600	Prof. Academician Georgy B. YELYAKOV Presidium Chairman Tel : 22 25 28 Fax : 22 87 50	
FAR EASTERN TECHNOLOGICAL INSTITUTE 41, Gogolya Street 690600 Vladivostok, Russia	Dr. Gennadiy I. LAZAREV President, Professor Mr. Alexander P. KOROBOV Director of International Department Tel : (42 32) 250 853 Fax : (42 32) 250 054	
PRIMORSKY TERRITORY GOVERNMENT Fish Industry Committee 22 Svetlanskaya Street Vladivostok, Russia 690110	Dr. Yury A. PONOMAREV Analysis and Prediction Department, Director Tel : (4232) 269 317 Fax : (4232) 269 105	

	Primorski Regional Collective Fishery Union 63 Menzhinskogo St. Vladivostok 690600	Mr. Anatoly G. BULENOK Board Chairman Tel : 26 71 82 Fax : 22 02 92	Catching and manufacturing of fish and sea-food products.
	Far-Easter Marine Research Institute 40 Fontannaya St. Vladivostok 690600	Mr. Yaroslav N. SEMENIKHIN Director Tel : 22 47 64 Fax : 22 21 05	Designing of hydraulic structures, economic and design calculus in the field of sea transport
	Scientific & Production Amalgamation « DALRYBTEKHTSENTER » 42 Kalinina St. Vladivostok 690043	Mr. Vitaly P. KUGAEVSKY General Director Tel : 27 78 63 Fax : 27 86 48	Developing and application for fishing industry
	Institute of Sea Biology 17 Palchevskovo St. Vladivostok 690032	Mr. Vladimir L. KASIANOV Director Tel : 29 62 05	Research in ocean flora & fauna, ecology and biological productivity of the world ocean shelf; the development of the scientific principles of the rational use, protection and reproduction of the shelf living resources.
	Pacific Oceanological Institute 7 Radio St. Vladivostok 690032	Prof. Academician Victor I. ILYICHEV Director Tel : 29 65 00	Researches in the World Ocean
	Pacific Research Institute of Fishing Industry and Oceanography 4 Tupik Shevchenko Vladivostok 690600	Mr. Valery N. AKULIN Director Tel : 25 79 06	The studies of the sources of raw materials, oceanological research, the development of new technologies for raw material processing
	Nakhodka Fishing Seaport 69 Nakhodkinskyu Pr. Nakhodka 692900	Mr. Yury A. PODGORNYKH General Manager Tel : (42366) 22 05 61	Processing & storage of fish, sea-food products and food-stuffs
	Far-Eastern Inspection of Fishery Production Quality 51 Svetlanskaya St. 690000 Vladivostok	Tel : 22 27 88	
	Primorsk Union of Fishery Collective Ventures 63 Pologaya St. 690000 Vladivostok	Tel : 25 88 82	
	Sakhalinrybprom Agency 23 Okeanskiy Av. 690000 Vladivostok	Tel : 25 52 71	
	Scientific Association of Fishery 1 Beryozovaya St. 690000 Vladivostok	Tel : 27 89 11	

	TURNIF (Research Fleet) 2 Petra Pervogo St. 690000 Vladivostok	Tel : 22 43 71	
	Vladivostokrybsnab 6 Bashidze St. 690000 Vladivostok	Tel : 25 87 29	
	Far-Eastern Commercial Institute 19 Okeanski Av. 690000 Vladivostok	Tel : 26 50 89	
	Far-East Fishery Institute 52 B Lugovaya St. 690000 Vladivostok	Tel : 29 53 06	
	Far-East State University 8 Sukhanova St. 690000 Vladivostok	Tel : 22 47 00	
	Far-Eastern State Technical University 10 Pushkina St. Vladivostok 690600	Prof. Gennady P. TURMOV Rector Tel : 25 51 18 Fax : 25 69 88	Training of specialists in technical sciences, scientific and technical researches
	Russian Institute of skill improvement		Training specialists for Food processing industries
	Voronejskiy Interregional Institute of Retraining for Food and reprocessing Industries		Training specialists for Food processing industries
	Novosibirskiy Sectoral Regional Institute of Agrobusiness		Training specialists for Food processing industries
	Krasnodarskiy Regional Institute		Training specialists for Food processing industries
	Volgogradskaiyia School of skill management		Training specialists for Food processing industries
	Far-Eastern Foreign Economic Association « DALSO » 54 Svetlanskaya St. Vladivostok 690600	Mr. Alexander S. VOROPAEV President Tel : 22 45 53 Fax : 22 95 20	export-import operation, foreign economic cooperation

5.4. Commercial and Trading Activities

VOSTOKREMSTROYMASH 14, October 25 street Vladivostok, 690000	Mr. YURI M. KOSTYUKOV Tel : (4232) 22 13 51, Fax : (4232) 22 09 06	
Vladivostok Central Department Store (GUM) 35 Sveltanskaya St. Vladivostok 690000, Russia	Mrs. Valentina N. CHIBIRYAK Manager Tel. : 22 20 54 Fax : 26 49 64	Wholesale and retail trade of consumer manufactured good
Joint Stock Company PRIMLEGPROM 1 - B Muravyeva-Amurskogo St. Vladivostok 690001	Mr. Nikolay G. DOLZHIKOV General Director	Manufacture and sale of light industry products
Far-Eastern Consumers Cooperative Society « POTREBKOOPERATSIYA SEVERA » 3 Mordovtesva St. Vladivostok 690090	Mr. Anatoly N. KIRLYUK Director Tel : 22 97 14 Fax : 26 94 26	Wholesale trade
Commercial & Industrial Concern « COMMERSANT », Formerly : Trade Office) 6 Fontannaya St. Vladivostok 690600	Mr. Anatoly V. PAVLOV General Director Tel : 22 42 93 Fax : 26 82 52	Manufacture and sale of Consumer goods
Foreign Economic Trade & Industrial Co. « EXPODALPOLIS » 6, Fontannaya St. Vladivostok 690600	Mr. Grigory L. SMIRNOV President Tel : 25 85 26 Fax : 22 03 86	Export/Import of Fish products and leather haberdashery
Primorski Garment Production Amalgamation « VOSTOK » 33 Leninskaya St. Spassk-Dalny 692210	Mr. Victor M. KOKHANOV General Director Tel : (42352) 2 28 45	Manufacture and sale of light industry products
DALSTROYEXPO (Exhibition, Marketing Studies Company) 14, Borodinskaya Street 690049 Vladivostok, Russia	Mrs. Vera S. ERMILOVA Director Tel : (42 32) 46 00 58 Fax : (42 32) 25 04 36	
« ACFES » 103 Prospekt 100 Let Vladivostok 690600 Vladivostok	Mr. Tel : (4232) 31 85 10 Fax : (4232) 31 83 11	Trade : Import and Whole sake of food products
« VLADRYBSBYT » 6 Bashidze St. 690000 Vladivostok	Mr. A. I. ZUBKO President Tel /Fax : 25 88 66	Wholesale products : fresh and processed seafood's, meats and meat products



Vladivostok Fishery Works 1 Tatarskaya St. 690000 Vladivostok	Tel : 46 86 57	
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**5.5. List of Committee and Administration Officials working on Light Industries**

Governor of Primorski Krai	Mr. Yevgenii I. NAZDRATENKO	
Senior Vice Governor for Agriculture	Mr. Valentin S. DUBININ	
Vice Governor for Financial Policy and Planning	Mr. Nikolai V. PIMENOV	
Vice Governor for Industry Trade and Services	Mr. Fedor T. NOVIKOV	
Vice Governor for Construction, Utilities, Transportation, Communications and Information	Mr. Igor L. BELCHUK	
Vice-Governor for Foreign Economic & Regional Relations	Mr. Vladimir A. STEGNI	
Chairman of the Committee for Foreign Economic & Regional Relations	Mr. Andrei G. ZAGUMENNOV	
Chairman of the Committee for Maintenance and Utilities	Mr. Sergei I. OSIPOV	
Chairman of the Committee for the Food and Food Processing Industries	Mr. Boris I. YEMETS	
Chairman of the Committee for Natural Resources	Mr. Yevgenii S. STOMATYUK	
Chairman of the Committee for Industry	Mr. Stanislav A. ASEYEV	
Chairman of the Committee for the Fishing Industries	Mr. Vitalli M. DANILOV	
Chairman of the Committee for Trade, Services and Supply	Mrs. Svetlana I. CHISTOKLETOVA	

**5.6. List of Meat Products processing sector Industries**

Name	Key Women or Key men	Address
JS PRIMORSKIY KONDITER	Mr. VASSILIEV Tel : 25 95 46	Alentskaiya 52 690000 Vladivostok
JS VLADIVOSTOKVSKIY LIKERO-VODOCHNTY ZAVOD	Mr. ANDREEV A. P.	Narodniy Prospect 20 690014 Vladivostok
JS LIVONIYA	Mr. ABBASSOV M. M. Tel : 25 56 25	Krilova 10 690014 Vladivostok
JS VIKON 1993	Mr. RABOZHEV N. Y. Tel : 21 52 79	Shishkina 3 690041 Vladivostok
JS PIVOINDUSTRIYA PRIMORIYA	Mr. LOGENKO V. A. Tel : 21 54 06	Vesenniaia Vitoraiia 133 690054 Vladivostok

JS PRIMORSKIY SAKHAR	Mr. KHOMENKO A. I. Tel : 2 27 96	Shevchenko 9 692500 USSURIYSK
JS DALSOIYA	Mr. GULOV A. P. Tel : 3 05 01	Volochiaevskaiya 120 692500 USSURIYSK
JS USSURIYSKIY BALSAM	Mr. JEMETS U. A.	Krasnoznamennaiya 49 692500 USSURIYSK
JS USSURIYSKIY GORPISCHENCOMBINAT	Mr. TOROPOVA N. P. Tel : 2 00 21	Gorkogo 41 692500 USSURIYSK
JS PIZAVOD USSURIYSKIY	Mr. TIKVA A. N. Tel : 2 01 70	Toporkova 126 692500 USSURIYSK
JS NAKHODKINSKIY GORPISCHHECOMBINAT	Mr. LEDEDEVA L. A. Tel : 4 37 82	Oziernaiya 12 692900 NAKHODKA
JS PARTIZANSKIY GORPISCHENCOMBINAT	Mr. MALISHEVA R. I. Tel : 21 96	50 Let VLKSM 7 692880 PARTIZANSK
JS PARTIZANSKIY PIZAVOD	Mr. ZAITSEVA N. S.	Sverdlova 36 692880 PARTIZANSK
JS SPASSKIY KONSERVNIY ZAVOD	Mr. VOLOBUEV N. Y. Tel : 2 33 49	Kransogvardeyskaiya 1 692210 SPASSK DALNIY
JS CHERNIGOVSKI KONSERVNIY ZAVOD	Mr. NIKHOLINA N. V. Tel : 9 57 61	Partizanskaiya 6 692240 CHERNIGOVKA
JS POGRANICHNIY KONSERVNIY ZAVOD	Mr. CHERVINETS N. S.	K. Marx 55 692580 POGRANICHNIY
JS LIANA	Mr. JIGINAS Z. M. Tel 2 65 88	Vokzalniya 68 692330 ARSENIEV
JS SNED	Mr. ZIYAT'DINOV R. M. Tel : 95 5 65	Sibirtseva 24 692060 LESOZAVODSK
TOO RAIPISCHCOMBINAT MIKHAILOVSKIY	Mr. RADKIN N. E. Tel : 2 12 47	Vokzalanaiya 1 692550 MIKHAILOVKA
JS DALVEGORSKIY PIZAVOD	Mr. GREB V. V.	Primorskaiya 15 692430 DALNEGORSK
JSYAJOLEVSKIY CONSERVNIY ZAVOD	Mr. LISINSKIY S. V. Tel : 91 6 44	Leninskaiya 31 692360 YAKOVLEVKA
JS ZAVOD MINVOD LASTOCKA	Mr. MERENKOV Y. A. Tel : 38 7 71	Pojarskoro p na 692281 LICHEGORSCK
JS KHANKAISKIY KONSERVNIY ZAVOD	Mr. NAZARENKO G. N. Tel : 96 1 46	Naberejnaiya 1 s. Astrakhanka 692281 KANKAISKIY
JS VLADIVOSTOKSKI MOLOCHNIY COMBINAT	Mr. STEKIN A. S. Tel : 29 53 49	Strelochnaiya 19 690088 VLADIVOSTOK

MOLOCHNIY ZAVOD ANUCHINSKIY	Mr. GLUSHAK V. V.	Partizanskaiya 2 692340 ANUCHINA
TOO MOLOKO CO Ltd. (MOLOKO-ZAVOD « KIROVSKIY »)	Mr. MIGAL A. M. Tel : 9 22 54	Gargarina 56 692090 KIROVSKIY
JS SODRUJESTVRO	Mr. MILASHENKO G. M. Tel : 2 22 54	Tretiy Microraion 692024 LUCHEGORSK
JS CHUGUEBSKIY MOLOCHNIY ZAVOD	Mr. IEKIMENKO P. P. Tel : 2 11 03	50 Let Oktiabzia 117 692400 CHUGUEVKA
TOO MOLOKO ZAVOD	Mr. GAZIZULIN N. G. Tel : 9 32 30	9th IYANVARIYA 30 692060 LESOZAVDOSK
JS YAKOVLEVSKIY MOLOCHNIY ZAVOD	Mr. SMIRNOVA E. I. Tel : 9 11 24	Sovetskaiya 46 692360 YAKOVLEVKA
TOO MONOKO CO Ltd. « KAVALEROVO »	Mr. POPENKO P. N. Tel : 9 13 45	Krasnoznamennaiya 5 692420 KAVALEROVO
JS ARTEMOVSKIY MOLOKO ZAVOD	Mr. TKACHENKO V. M. Tel : 30 58	Kirova 17 A 692800 ARTEM
JS GORMDOKOZAVOD USSURIYSKIY	Mr. ZARITOVSKAIYA A. T. Tel : 3 44 27	Sovetskaiya 128 692525 USSURIYSK
JS PORGANICHNIY MOLOCHNIY ZAVOD	Mr. MAMINA L. A. Tel : 9 11 36	Lenina 114 692580 POGRANICHNIY
JS MIKHAILOVSKOIE MOLOKO	Mr. POLIGASH I. P. Tel : 2 18 46	Zavodskaiya 6 692550 MICHAILOVKA
JS ARSENEVSKIY MOLOKOZAVOD	Mr. BONDAL V. G. Tel : 2 05 93	Vokzanaiya 66 692330 ARSENEV
JS NAKHODKINSKIY MOLOCHNIY ZAVOD	Mr. ANTONOVA I. V. Tel : 4 44 67	Severniy Promnzel 692900 NAKHODKA
JS SPASSKIY MOLOCHNIY ZAVOD	Mr. KIRAI A. A. Tel : 4 11 64	Moskovskaiya 19 692210 SPASSK-DALNIY
AOOT CHERNIGOVSKIY MOLOCHNIY ZAVOD & CO, Ltd	Mr. CHAVOVA T. A. Tel : 9 53 14	Endennogo 3 692240 CHERNIGOVKA
JS KHANKAISKIY MOLOCHNIY ZAVOD	Mr. NENASHEV N. I. Tel : 9 13 67	Lazo 23 692280 KAMEN-RIBLOV
JS KHOROLSKIY ZAVOD CO	Mr. DIMITRIEV V. V. Tel : 2 15 06	Oktiabzskaiya 1 692260 KHOZOE
JS MIASOCOMBINAT VLADIVOSTOKSKIY	Mr. YAKOULEV V. P. Tel : 25 74 55	Fontannaiya 3 690008 VLADIVOSTOK
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JS SPASSKIY MIASOCOMBINAT	Mr. KHAZIN A. A. Tel : 2 15 74	Primorskaiya 43 692210 SPASSK DALNIY

JS PISCHEVICK	Mr. YATSIK V. A. Tel 32 22	Shkolnaiya 1 692880 PARTIZANSK
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JS ATLANT	Mr. KHLOPOVA L. M. Tel : 2 34 33	Kamishova 1 692330 ARSENIYEV
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JS MIASOCOMBINAT « DALNEGORSKIY »	Mr. KOZIREVA R. R. Tel : 9 21 20	Primorskayia 4 692430 DALNEGORSK

## 6. RAJIN-SONBONG INDIVIDUAL ENTERPRISE ACCOUNT<sup>3</sup>

Note: "Local" means that the materials for production come from the RSFETZ, also known as Rajin-Sonbong City. Central Industry means that materials come from various places within the DPRK. Otherwise, the actual source is identified. Onsong area is the source for most of the coal used in the RSFETZ; it is located just outside the Zone. Also, "Floor Space, m<sup>2</sup>" and "Total Area, m<sup>2</sup>", where the total area is greater than the floor space, mean that more than one level or story is available. It should be noted that Rajin Railroad Station has a separate goods station to handle cargo. The exchange rate is US\$ 1 = 2.2 Won.

### 6.1. GARMENTS/TEXTILES

#### 6.1.1. SONBONG TANNERY AND LEATHER PROCESSING WORKSHOP

LOCATION: Sonbong County, Rajin-Sonbong City  
 PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s)* and Unit(s)	Designed Capacity**	Actual Production				
		1990	1991	1992	1993	1994
Leather Shoes, pairs	20,000	15,400	15,200	12,200	10,500	13,800
Imitation Leather Shoes, pairs	2,000					
Leather Caps, pieces	1,000	1,300	1,500	1,200	1,100	1,300
Imitation Fur Caps, pieces	5,000					
Leather Gloves, pairs	1,000	1,100	1,200	1,200	1,500	1,400
Tanned Skins, 1,000 m <sup>2</sup>		10,500	1,800	9,300	9,800	10,300
<b>TURNOVER: 1,000 Won</b>						

\* Some other miscellaneous products are produced such as belts, women' handbags and overcoats.

\*\*Designed capacity calculated on 2 x 8 hour shifts and the amount that tannery can produce.

Comments: Consumption local and in DPRK.

Quality of Products: Highly acceptable in DPRK.

#### MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s). Unit(s) in Tons	At Designed Capacity	Supplier	Availability
<b>Skins*</b>	50	Local	Not enough. have imported from Mongolia, in the past.***
Ox Skins			
Pig Skins			
Sheep Skins			
Mink Skins			
Fox Skins			Insufficient
Chrome Sulphate	3	Hamhung	Sufficient
Salt	30	Nampo	Insufficient
Soda Sulfide	2	Hamhung	Sufficient
Lime	30	Local and Region	Insufficient
Shoe soles (rubber)	2	Chongjin	Insufficient
Cloth (inside shoes)**	1	Central Industry	Sufficient
Coal	200	Onsong	Insufficient****
Nylon thread	0.2	Imported	Insufficient
Others	4	Central Industry	Insufficient
Imitation Leather		Central Industry	
Glue			

<sup>3</sup>Source: CPEEC, Rajin and Sonbong Officials, and national consultants.

- \* Factory personnel collect the skins for suppliers. The main skins used are from ox and pig. Pig is dominant by 4 to 1, but the number of skins in the local area is a limiting factor. The other skins are used in special cases. The mink and fox are farmed and up to 50,000 hides could be available each year. These farms could be expanded. Many of these hides are sold because the enterprise does not have the correct or enough chemical agents to tan the hides. Rabbit farms have also been used to develop rabbits that have a waterproof hide and excellent fur. Sonbong County has three milk cow farms that are also a good prospect for additional hides.
- \*\* When insufficient, the factory purchases fibres and has them woven for them.
- \*\*\* The sheep hides, according to the Sonbong authorities, were of exceptional quality with the tanning already done. They would like to make the arrangements again but transportation is difficult to arrange.
- \*\*\*\* Insufficient partly because of lack of foreign exchange and partly because of U.S. Sanctions.

Employees: (At Designed Capacity)

Total number of employees: 92 (62 female)

Management: 3 (Director, Finance, Production)

Technicians: 13 (9 Engineer)

Skilled : 36 (twenty-eight 7-8 class)

**NOTICE:** This is a new factory site for the enterprise. Originally, it had been the site of a factory manufacturing chemical goods such as paints, glue, etc.

FACTORY SITE, Total Area: 1 Hectare

Buildings	Floor Space,m <sup>2</sup>	Total Area,m <sup>2</sup>	Material
Factory	1532	1532	Block
Administration and Other*	365	365	Block

Comments: Space is available for expansion at the factory site.

Waste water could be a problem at the present site. Factory could be moved to an area where proper recycling of water would be feasible.

None of the area within the factory area is paved.

MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Sewing Machines	Sciko	3	75,000	70,000
	Milyong	8	100,000	100,000
	Ssangma	3	50,000	40,000

Comments: Machinery made in 1970's and '80's.

Maintenance done at the factory, spares from Central stores.

UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Paekhat substation	Paikhak-Ri	2 km	120,000
Water	Kangrung Catchment*	Kangrung Valley	5 km	kwh/yr.
Steam	Ryongsong #1 boiler	Factory	-	10 m <sup>3</sup> /day
Transport	Rail, Truck**	Sonbong Station	2 km	700 ton/year

\* The factory has a well that is used for drinking water, etc.

\*\* Road: Rajin-Musan Road, width 8 m and paved. Not paved 200 m in front of factory.

## 6.1.2 SONBONG GARMENT FACTORY

LOCATION: Sonbong County, Rajin-Sonbong City

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Adults Clothes, suits	8,400	9,500	10,000	11,800	4,200	
Winter Jacket, piece	11,000	1,000				
School Uniforms, suits	9,400	4,100	1,700	2,500	1,500	
Work Clothes, suits	34,000	1,100				
		28,200	14,300	26,700	7,500	
		28,700				
		11,200	10,000	10,700	11,200	
turnover, in 1,000 won		520.6	540.8	593.5	486.2	
		196.3				

\*Designed capacity calculated on 2 x 8 hour shifts.

Comments: At one point, the factory reached a total of 65,000 units, with a third shift (A Designed Capacity Total is 62,800 units).

Quality of Products: Products are sold locally; probably the same or slightly less quality than the national level.

## MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s), Metres	At Designed Capacity	Supplier	Availability
Tetoron and staple fibre cloth	64,000	Central Industry	Insufficient
Vinalon and Staple fibre cloth	54,000	Central Industry	Insufficient
Vinalon/staple Fibre (for coats)	35,000	Central Industry	Insufficient
Rayon Cloth	65,000	Central Industry*	Insufficient
Cotton, Ton	7	Russia	Insufficient
Coal, Ton	150	Onsong	Sufficient

\* Timber comes from Russia to make the rayon; this is currently a problem.

Comments: Prospects to obtain raw materials are bleak.

Employees: (At Designed Capacity)

Total number of employees: 145 (122 female)

Management: 3 (Director, Finance, Production)

Technicians: 11 (two Engineers)

Skilled : 15

Comments: Sonbong county authority has a garments training centre at the factory that operates according to need.

## FACTORY SITE, Total Area: 0.4 Hectares

Buildings	Floor Space, m <sup>2</sup>	Total Area, m <sup>2</sup>	Material
Factory	773	773	Block
Administration and Other	115	115	Block

Comments: Room for expansion, plans available.  
No paved or concrete area.  
254 m wood fence, height 1.5 m.  
Road: Access road 8 m width, one corner a problem, plans to widen.

## MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Sewing Machines	Milyong.>85	85	-	-
	Ssangma=70	21	-	-
Over-stitched(for cuffs)		1	-	-
Button hole maker		1	-	-

Comments: The machines are all manually powered, i.e., by foot treadle. Over-stitched and button hole maker are very old and need replacing; Buttons are sewed on manually.

## UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Paikhak substation	Paikhak-ri	3 km	176,000 kwh/y
Water	Kangrung catchment	Paikhak-ri	4 km	0.2 m <sup>3</sup> /day
Steam, heat	Boiler, 0.5 ton/hr	Factory		
Transport	Rail, Truck	Sonbong Station	2 km	

Electricity: Voltage 220v

Road: City road, 8 m outside factory, plans to widen and shorten the distance from 200 m.

## 6.1.3. SONBONG TEXTILE FACTORY

LOCATION: Sonbong County, Rajin-Sonbong City

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Artificial Silk/lining cloth, metres	450,000	167,000	29,600	45,100	8,600	
Knitted Underwear, pieces	60,000	12,600				
Others**	-	21,300	2,500	2,800	2,100	
<b>TURNOVER, 1,000 Won</b>		463.3	455	459	288.3	480.5

\* Designed capacity calculated on 2 x 8 hour shifts.

\*\*15 other products had been produced, e.g., towels, socks, etc.

Comments: The factory is virtually producing nothing at the time of the visit.

Quality of Products: Medium

## MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s) in Tons	At Designed Capacity	Supplier	Availability
Cotton Thread	43.2	China	Insufficient
Artificial Silk Thread	56	Russia	Insufficient
Staple Fibre/Vynalon Thread	14	Central Industry	Insufficient
Rayon Thread	4.5	Central Industry*	Insufficient
Anylon Thread	3	Anju Area	Insufficient
Wool	-	Local	Sufficient
Vynalon/Artificial Silk Thread	3	Hamhung	Insufficient
Coal	450	Onsong	Sufficient



\* Timber comes from Russia to make the Rayon; currently this is a problem.

Employees: (At Designed Capacity)

Total number of employees: 211 (167 female)  
 Management: 6 (Director, Finance, Production, etc.)  
 Technicians: 18 (Six Engineers)  
 Skilled : 36 (Two 7-8 class)

FACTORY SITE, Total Area: 1.03 Hectares

Buildings	Floor Space,m <sup>2</sup>	Total Area,m <sup>2</sup>	Material
Factory	2449	2449	Block
Administration and Other	520	520	Block

Comments: Space for expansion; empty buildings.  
 No paved or concrete.  
 403m wood/block fence, height 1.8 and 2.0 m.

**MAJOR MACHINERY INSTALLED**

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Artificial Silk Loom	Ssangma	50	390,000	350,000
Circular Weaving Mach.	18 inch	4	metres	metres
Two-sided Industrial Horizontal Loom	7 inch	10	16 Tons	16 tons
One-sided Industrial Horizontal Loom	Table	6	10,000 metres	8,000 metres
Drying/dying Machine		1	10,000 metres	8,000 metres
Cotton Gin		2	300,000 metres	200,000 metres
			50 tons	50 tons

Comments: Machinery made in 1970's, power driven.

**UTILITIES, POWER AND TRANSPORTATION**

Item	Source	Location	from Factory	Amount Used
Electricity	Paekhak substation	Paekhak-ri, Sonbong District	2 Km	168,000 kwh/y
Water	Kangrung Catchment	Paekhak-ri	3 km	6 m <sup>3</sup> /y
Steam	Boiler, 1 ton/hr			1 ton/hr
Transport	Rail, Truck	Sonbong Station	2 km	

Electricity: Voltage 220.

Road: Access road to factory 50 m, 6 m wide, not paved.

## 6.1.4. RAJIN KNITWEAR FACTORY

LOCATION: Changpyong-dong, Rajin District, Rajin-Sonbong City

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s) and Price/unit	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Sweaters, Piece 75 Won	20,000	2,300	900	800	950	1,200
Underwear, Piece 35 Won	238,000	7,600	11,800	5,800	6,400	26,400
Sports Uniforms, Piece	10,000	1,400	31,500	1,300	1,500	1,200
Scarves, Piece 25 Won	4,000					
Gloves, Pair 1.20 Won	150,000	1,800	9,600	1,500	1,600	1,300
<b>Total</b>	<b>422,000</b>					
<b>TURNOVER</b> Won	1,000	136	300	260	100	1280

\* Designed capacity calculated on 2 x 8 hour shifts.

**Comments:** Built in 1989, began operation from 1991.  
As of September, 1995, produced 20,000 units.  
Costs make up 65% of price, distribution centre adds a margin of 5% and profit is 30%. All consumption is local.  
Every month the management organizes sessions for the staff on quality.

**Quality of Products:** Medium, one and double sided knit; products are inspected by the management appointed factory inspector and packaged at the factory and inspected again by the state inspector at the time of delivery.  
Variety is possible with two kinds of knitting machines, different sizes also possible, but difficult to change styles.

## MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s) in Tons	At Designed Capacity	Supplier	Availability
Orlon Yarn*, Tons	16.5	Anju Area	Insufficient
Tetron, Orlon, Bonylon, rayon, Ton	55.4	Central Industry	Insufficient
Stable Fibre Yarn Thread, Tons	1.0	Chongjin	Sufficient
Coal, Tons	130.0	Onsong	Sufficient

\* Imported for three years from Singapore but now that is finished.

Raw material now available is unsuitable for good products. The Director has some control over which raw material is provided from central industry.

**Employees:** (At Designed Capacity)

Total number of employees: 82 (71 female)  
 Management: 3 (Director, Finance, Production)  
 Technicians: 6 (2 Engineers)  
 Skilled : 4 (one 7-8 class)

**Comments:** About 80% of the workers are considered direct labour.  
Director has a four-year degree in economics with specialization in knitwear.

## FACTORY SITE, Total Area: 0.16 Hectare

Buildings	Floor Space, m <sup>2</sup>	Total Area, m <sup>2</sup>	Material
Factory	621	716	Block
Administration and Other*	243	486	Block

\*e.g., Nursery school

**Comments:** The factory is now one level; but the foundations are in place for three levels.

No Paved area but foundation is in place for 200 m<sup>2</sup>; awaiting bitumen.  
450 m building stone fence, height 1.5 m.

#### MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Sewing Machines	15	5	346,000	346,000
Two-side Knitting Mach.	7	11	46,000	46,000
One-side Knitting Mach.	5.5	5	36,000	36,000
Gloves Knitting Machine	2	2	7600	7600

Comments: Machinery made in 1970's.

#### UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity*	Rajin substation	Yokjon-dong	2 km	28,000 kwh/yr
Water	Well at the factory*	Factory	-	15 m <sup>3</sup> /day
Steam	Perpendicular boiler	Factory	-	2160 ton/year
Transport	Rail, Truck	Rajin Goods Stat.	1 km	

Electricity: Capacity 30 KVA (Transformer), Voltage 3.3/0.22 kv.

Water: New reservoir under construction providing 80,000 m<sup>3</sup>/day; completion, 1996.

Road: Paved, 9 m wide.

#### 6.1.5. RAJIN WEAVING FACTORY

LOCATION: Dongmyong-dong, Rajin District, Rajin-Sonbong City

**NOTICE:** Chinese investors have approached the factory authority to establish a joint venture to make cotton dish cloths. The Chinese will provide 250 looms and rebuild the factory. Seven million products will be sold in Japan and South Korea each year. No contract, yet, but negotiations continue.

#### PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity	Actual Production				
		1990	1991	1992	1993	1994
General Fabrics, metres e.g., Rayon Staple Fibre	400,000	40,000	35,000	80,000	24,000	27,000
<b>TURNOVER,</b> Won	1,000	120	110	96	95	160

\*Designed capacity calculated on 2 x 8 hour shifts.

Quality of Products: Slightly lower than Central Industry.

#### MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s) in Tons	At Designed Capacity	Supplier	Availability
Rayon yarn	40	Changjin*	Insufficient
Staple fibre yarn	20	Central Industry	Insufficient
Bituminous coal	135	Onsong	Sufficient

\* Timber comes from Russia and this is currently a problem.

Employees: (At Designed Capacity)

Total number of employees: 79 (69 female)

Management: 3 (Director, Finance, Production)

Technicians: 3 (2 Engineers)

Skilled: 9 (one 7-8 class)

Comments: Training is done through a one-year training centre in the region or through a one-year apprenticeship.

FACTORY SITE, Total Area: 0.4 Hectares

Buildings	Floor Space, m <sup>2</sup>	Total Area, m <sup>2</sup>	Material
Factory	1116	1116	Block
Administration and Other	180	180	Block

Comments: Ample room for expansion.  
276 m block fence, height 1.5 m.MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Looms	Ssangma-800	44	400,000	

Comments: Machinery made in 1970's.

UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Namsan substation	Namsan-dong, Rajin District	1.2 km	36,000 kwh/y
Water Transport	Huchang Catchment Rail. Truck	Huchang-ri Rajin Goods Station	Piped 10km 1.5 km	2 m <sup>3</sup> /day

Electricity: 3.3/0.22kv

Road: 0.4 km feeder, paved, 23 m wide.

*6.1.6. RAJIN CLOTHING EXPORT FACTORY*

LOCATION: Changpyong-dong, Rajin District, Rajin-Sonbong City

PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production			
		1990	1991	1992	1993 1994
Dresses, piece	652,000	255,500	213,400		
Female Clothes, piece	284,000	65,300	81,700		
Female Trousers, piece	218,000	57,500	79,500		
<b>TURNOVER:</b> Won	1,000	4,132	4,426		

\*Designed capacity calculated on 3 x 8 hour shifts.

Comments: Almost all items had been sold to Aold@ USSR, some sold locally and to DPRK.

Quality of Products: Good

### MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s)	At Designed Capacity	Supplier	Availability
Textiles, metres	4,732,000	Russia	Stopped
Thread, tons	7	Russia	Stopped
Buttons, pieces	6,596,800	Russia	Stopped
Coal, tons	650	Onsong	Sufficient
Diesel, tons	5.5	Local	Sufficient

#### Employees: (At Designed Capacity)

Total number of employees: 686 (642 female)

Management: 10 (Director, Finance, Production) [3 shifts]

Technicians: 7 (1 Engineers)

Skilled : 24 (Twelve 7-8 class)

Comments: Training is provided through a one-year programme at the local textiles/garments training centre or through a one or two year apprenticeship (depending on the workers needed).

#### FACTORY SITE, Total Area: 5 Hectares\*

Buildings	Floor Space,m <sup>2</sup>	Total Area,m <sup>2</sup>	Material
Factory, 7 buildings	2517	2517	Block
Administration and Other, 6 buildings	664	664	Block

\* Recently merged with another factory, equipment removed, but buildings remain. Roughly three times the original factory site size.

Comments: Ample room for expansion.  
Paved, asphalt, area is 800 m<sup>2</sup>  
310 m wood/block fence, height 1.5 m.

#### MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Sewing machine, electric	97A	200	797,000 pieces	797,000 pieces
	208A	6		
Button sewing machine	Ma4-B-581	19	620,000 pieces	620,000 pieces
	Nb-372/-B-814/B-916	13	8,000,000 buttons	8,000,000 buttons
Button hole making m.	P727112	12	8,000,000 holes	8,000,000 holes
Fixed cutting machine	PI-b	1		
Mobile cutting machine	WOUP-10	3		
Sleeve sewing machine	N-302-2	3		
Heavy-duty chain driven Sewing machine	1276	3		
Portable Boiler	NB-27/LW-69			
	976	4		
Chain driven double Stitcher		3		

Comments: Machinery made in 1980's, continuously being upgraded by local technicians with help from Central Industry.

**UTILITIES, POWER AND TRANSPORTATION**

Item	Source	Location	from Factory	Amount Used
Electricity	Rajin substation	Yokjon-dong, Rajin	1.5 km	187,000 kwh/y
Water	Chonggye Catchment	District	2 km	3.6 m <sup>3</sup> /day
Transport	Rail, Truck	Rajin Goods Station	0.5	

Electricity: 3.3/0.22 kv

Road: Asphalt road to Rajin Port 4 km, access width 8m, but main part 23 m wide.

Water: Available supply is 2,000m<sup>3</sup>/d.

**6.2. FOODSTUFFS**

**6.2.1. RAJIN MEAT AND FISH PROCESSING FACTORY**

LOCATION: Anju-dong, Rajin District, Rajin-Sonbong City

**PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)**

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Fish Cake Sausage, Tons	1,030					
Fish/Vegetable roll, Tons	124					
Soya Bean Milk, Tons	760	105	134	268	477	413
Fish Processing, Tons	1,000	114	20	23	21	18
Maize/acorn Vodka, litres	100,000	70,000	54,000	40,000		55,000
Instant Soup, Tons	0	63,000				
		14	25	94	35	43
<b>TURNOVER:</b> 1,000 Won		415	290	328	384	582

\*Designed capacity calculated on 2 x 8 hour shifts.

Comments: Fish cake sausage not being produced, now. Instead, dried, ground meat and bone will be provided in powder form for nursery school and school children. Soya bean milk will also be provided to nursery school and school children. All consumption is local.

Quality of Products: Low.

**MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY**

Raw Material(s), Unit(s)in Tons	At Designed Capacity	Supplier	Availability
Fish	3,666	Local	Unavailable*
Meat	60	Local	Sufficient
Vegetable	350	Local	Sufficient
Soya beans	110	Local	Sufficient
Corn	60	Local	Sufficient
Seaweed	65	Local	Sufficient
Soya Bean Oil	200	Local	Insufficient
Coal	680	Onsong	Sufficient
Fridging Oil	0.93	Undok Area	Sufficient
Ammonia	1.2	Local	Sufficient
Diesel Fuel	2.1		Sufficient
Gasoline	1.2		Sufficient

\* Type of fish used is Alaska Pollack and sardines; fishing season is October through February.

At the time of visit, the factory appeared to be closed, only activity was three workers at the freezer and cold storage unit. Could smell leaking ammonia, equipment is very old; said it took 4 hours for items to be completely frozen, few fish in the freezer plus some pigs; no fish or meat in the storage; maximum storage is 500,000 tons at any one time.

Employees: (At Designed Capacity)

Total number of employees: 88 (52 female)  
 Management: 3 (Director, Finance, Production)  
 Technicians: 20 (10 Engineers)  
 Skilled : 24 (four 7-8 class)

Comments: Because of seasonal aspects, workers have been sent to the factory's 5 hectare farm to work and to fish; only 5 or 6 staff remain at the factory.

FACTORY SITE, Total Area: 2.4 Hectares

Buildings	Floor Space, m <sup>2</sup>	Total Area, m <sup>2</sup>	Material
Factory, 7 buildings	3041	3041	Block
Administration and Other, 3 buildings	246	246	Block

Comments: Ample room for expansion.  
 Paved, concrete, area is 600 m<sup>2</sup>  
 1400 m wood fence, height 1.5 m.

MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Fish cake cooker		1	1,050 tons	1,050 tons
Fish cake broiler		1	310 tons	310 tons
Sausage filler		1	1,860 tons	1,860 tons
Refrigerator	100,000 calories	3	620 tons	620 tons
Refrigerator	50,000 calories	1	310 tons	310 tons
Boiler	0.5 ton/hr.	1	0.5 ton/hr.	0.5 ton/hr.

Comments: Machinery made in 1970's, continuously being upgraded by local technicians with help from Central Industry.

UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity*	Namsan substation	Namsan-dong Factory	3 km	775,000 kwh/yr
Water	Well at the factory*	Factory	-	140 m <sup>3</sup> /day
Steam	Perpendicular boiler	Rajin Goods Station	-	1,000 ton/year
Transport	Rail, Truck		4 km	

Electricity: Voltage 3.3/0.38, 0.22kv

Water: Available supply; 150 m<sup>3</sup>/d.

Road: Feederline 0.1 km, width 6 m.

6.2.2. *RAJIN FISHING COOPERATIVE*

LOCATION: Anju-dong, Rajin District, Rajin-Sonbong City

**NOTICE:** According to the Director of the operation, they have a joint venture with a Japanese investor who has invested, so far, US\$ 56,000 in equipment, including a refrigerated container, pumps, freezers, sterilizer, factory clothing, etc.. A Japanese inspector is on site, although I did not see or meet him/her. The area looked clean and had the appearance of being kept in good hygienic condition, except that people were smoking. Again, according to the director, the Japanese were paying the factory US\$ 60/kg for top quality sea urchin and US\$ 30 for inferior ones; i.e., the factory was receiving US\$ 65,000 for one ton, top quality. In total, the factory was harvesting 500 - 600 ton of fish per year. The Japanese had just sent samples of sea cucumbers to compare with those harvested in the region, with the prospect of further orders. All sea products are kept fresh on board by use of ice, but enough ice is only available for the bigger boats, i.e., the ice production is only 1 ton per day. Since no cooking is done on board boat and boats are not equipped with freezers, the length of time the boats can stay at sea fishing is limited to one day in the summer and two days in the winter. Generally, the bigger boats use two nets, smaller boats use one net. There are 53 boats in the fleet; 1 each 200 hp (21mx8.5m), 100 hp (21mx8.5), 30 hp (18m), 15 hp (13m); seven 28 hp and twenty-three 8 hp. These boats were built around 1985. None has electronic gear.

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s), tons/y	Current Catch
Squid	50
Sea Urchin	300
Crab	50
Sea Cucumber	1
Scallop	20
Alaska Polack	
Herring	5
Trout	3
Lockington	5
Hard-finned Sandfish	5
Octopus	1

Comments: Gross turnover is US\$ 500,000/y and according to Director, the costs for one year are only US\$ 50,000.

Quality of Products: Difficult to estimate on visit.

6.2.3. *RAJIN DISABLED SOLDIERS' FOODSTUFF PROCESSING FACTORY*

LOCATION: Anhwa-dong, Rajin District, Rajin-Sonbong City

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)/year	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Candy, Tons	700	81	76	120	70	58
Cake, Tons	850	223	104	142	115	148
Beer, Litres	600,000	289,000	130,000	171,000	121,000	87,000
Vodka, Litres	200,000	40,000	47,000	51,000	55,000	50,000
<b>TURNOVER: 1,000 Won</b>		520	350	430	420	570

\*Designed capacity calculated on 2 x 8 hour shifts.

Comments: All capacity is for local consumption.



Quality of Products: The factory authority and State inspector, who remains at the factory, retain standards similar to all DPRK. The factory appeared clean and very well maintained.

#### MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s)in Tons	At Designed Capacity	Supplier	Availability
Sugar	690	Imported	Insufficient
Millet Jelly	340	Local	Sufficient
Wheat Flour	612	Local	Insufficient
Maize Flour	65	Local	Sufficient
Barley	135	Local	Insufficient
Maize and Soya Bean Oil	51	Local	Sufficient
Coal	1200	Onsong	Sufficient

Comments: Sugar, wheat flour and barley are imported by DPRK. In 1995, the factory Director believes that the price of some materials may be doubled.

#### Employees: (At Designed Capacity)

Total number of employees: 164 (76 female)  
 Management: 5 (Director, Finance, Production, Chief Engineer, Raw Materials)  
 Technicians: 15 ( 4 Engineers)  
 Skilled : 22 (one 7-8 class)

Comments: Training is done through one year at the training centre or by apprenticeship programme.

#### FACTORY SITE, Total Area: 1.2 Hectares

Buildings	Floor Space,m <sup>2</sup>	Total Area,m <sup>2</sup>	Material
Factory, 5 buildings	1204	1738	Block
Administration and Other, 10 build.	1730	1995	Wood

Comments: Room for expansion.  
 All area without buildings is paved.  
 388 m block fence, height 1.3 m.

#### MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Mixer	-	1	850 tons	850 tons
Shaping Machine	-	2	910 tons	910 tons
Furnace	-	1	850 tons	850 tons
Fermenting Tank	-	20	672,000	672,000 litres
Others	-	5	litres	

Comments: Machinery made in 1970's in DPRK; continuously being upgraded by local technicians.  
 The equipment appears well maintained, no sign of corrosion or rust and everything painted.

## UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Namsan substation	Namsan-dong, Rajin District		385,000 kwh/y
Water	Well for cooling	Rajin District	180 metre	Total;
Steam	Huchang Catchment	Factory, 2 ton/hr	12 km	135 m <sup>3</sup> /day
Transport	Boiler	Rajin Goods Station		3900 ton/y
	Rail, Truck		2 km	

Electricity: Voltage, 3.3/0.22kv

Water: Available supply ; 140 m<sup>3</sup>/d.

Road: bitumen, width 23 m.

## 6.2.4. RAJIN BEAN PASTE FACTORY

LOCATION: Sinhung-dong, Rajin District, Rajin-Sonbong City

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production			
		1990 1994	1991	1992	1993 1994
Bean Paste, tons	1500	1510	1450	1380	1258
Soy Sauce, tons	1000	1216			
Maize Oil, tons	500	1063	983	930	976
Spirits, tons	360	960	84	90	74
			145	185	136
		124			58
					120
<b>TURNOVER</b> , 1,000 Won		910	850	730	830
		840			

\*Designed capacity calculated on 1 x 8 hour shifts.

Quality of Products: Through continued improvement in the production processes, the quality of the products is good; also, close quality control.

## MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s). Unit(s)in Tons	At Designed Capacity	Supplier	Availability
Maize Flour	1033	Local	Sufficient
Salt	570	Nampo	Sufficient
Coal	4133	Onsong	Sufficient
Others (Maize, acorns)	300	Local	Sufficient

Comments: The Factory is involved in a joint venture with a Chinese investor to produce "convenient" noodles for local consumption with exports to China in the future. The investment, to this point, is US\$ 200,000. The Chinese counterpart staff are at the site as of late August, 1995. This is a "partial" joint venture and although the production will take place at the factory site, it will not be part of the present enterprise.

Employees: (At Designed Capacity)

Total number of employees: 180(129 female)

Management: 5 (Director, Finance, Production, Shift Engineer, Raw Materials)

Technicians: 44 (10 engineers)

Skilled: 56 (seven 7-8 class)

Comments: Training for new staff is done through a one year programme at the training centre or through a one year apprenticeship programme. Some staff are deployed at the maize and pig farm (see below).

FACTORY SITE, Total Area: 2.0 Hectares\*

Buildings	Floor Space,m <sup>2</sup>	Total Area,m <sup>2</sup>	Material
Factory	4402	5022**	Block
Administration and Other	607	807	Block

\* The factory also has a 50 hectare farm for maize production and 300 pigs.

\*\*Through improvements in production, e.g., automation, less space is needed. Approximately one-half of the present space is free.

Comments: Ample room for expansion.  
All area not built is paved.  
548 m block fence, height 1.5 m.

## MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Steaming Machine		1	1500 tons/y	199
Corn-and-cob Grinder		2	4800 tons/y	400
Oil Press	200	4	500 tons/y	
Air Compressor		1	10 m <sup>3</sup> /min.	10 m <sup>3</sup> /min.
Ovens		5		
Tanks		4		

Comments: Machinery made in 1970's; Originally made in DPRK; continuously being upgraded by local technicians with help from Central Industry, e.g., automation with control rooms (some gauges made in USSR and China).

## UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Rajin substation	Yokjon-dong, Rajin District	1.5 km	426,000 kwh/y
Water	Wonbong Catchment	Chonggye-dong, Rajin District Factory	2.0 km	28.5 m <sup>3</sup> /day
Steam	Boiler, 1 ton/hr	Rajin Goods Stat.		8400 ton/y
Transport	Rail, Truck		0.5 km	

Electricity: Voltage 3300 KVA, 3.3/0.22 kv.

Road: bitumen, 0.5 km feeder distance, width 7 m.

## 6.2.5. SONBONG FOODSTUFF PROCESSING FACTORY

LOCATION: Sonbong County, Rajin-Sonbong City

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s) and Price	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Millet Jelly, tons	300	150	100	70	60	40
Candy, ton 4.5 Won/K	200	100	70	60	40	40
Cake, tons 4.0 Won/K	300	120	80	78	68	80
Vodka, litres 2.5 Won/500 ml	50,000	40,000	50,000	45,000	45,000	50,000
Others		-	-	-	-	-
<b>TURNOVER, 1,000 Won</b>		610	600	620	630	724

\*Designed capacity calculated on 1 x 8 hour shifts.

Comments: Millet Jelly is being produced as a substitute of Sugar; 60% of the millet jelly produced goes back into the candy products.  
Other products being produced include cake Abeer sticks@ (5 Won/K), and an artificial fruit drink (1 Won/500 ml).  
Average margin (profit) on costs: 3%.

Quality of Products: Medium to low.

## MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s) in Tons	At Designed Capacity	Supplier	Availability
Millet Jelly	120	Local	Sufficient
Maize flour	93	Local	Sufficient
Wheat Flour	10	Central Industry	Insufficient
Rice	1	Local	Sufficient
Beans	1.5	Local	Sufficient
Soft and Hard Coal	1000	Local	Sufficient
Vegetable Oils	24	Local	Sufficient

Comments: The factory can no longer obtain sugar, for a while they could get some through Hong Kong and China. At one stage, they were exporting canned duck to Cuba in exchange for Sugar.

Employees: (At Designed Capacity)

Total number of employees: 127 (76 female)  
 Management: 4 (Director, Finance, Production, etc.)  
 Technicians: 16 (4 Engineers)  
 Skilled : 56 (Twenty-four 7-8 class)

## FACTORY SITE, Total Area: 1 Hectares

Buildings	Floor Space, m <sup>2</sup>	Total Area, m <sup>2</sup>	Material
Factory	1913	3190	Block
Administration and Other	230	230	Block

Comments: Ample room for expansion; foundation already available for additional building. 540m concrete bar fence, height 2 m.

## MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Candy Vacuum Concentrator	Screw Type	1	450 tons	450 tons
Cake Oven	Conveyor type			
	Circulatory	1	450 tons	450 tons
Millet Jelly Concentrator	tube type			
	Cylinder Tank	2	600 tons	600 tons
Vodka Distiller		1	300 tons	300 tons

Comments: Machinery made in 1970's.

## UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
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Electricity	Paekhak substation	Paekhak-ri	2 km	220,000 kwh/y
Water	Yongam Water Service	Yongam	4 km	30 m <sup>3</sup> /day
Steam	Ryongson #1, 1.5 t/hr	Factory		1/5 tons/hr
Transport	Rail, Truck	Sonbong Station	1.5 km	

Electricity: Voltage 220.

Road: Access is 30 m, 8 m wide and paved.

Comments: This area has very high quality water, springs and wells, for beverages. Sonbong County also has many medicinal plants that can be added.

## 6.2.6. SONBONG SODIUM CARBONATE FACTORY

LOCATION: Sonbong County, Rajin-Sonbong City

**NOTICE:** This factory is closed. The hope is that carbonated beverages might be produced at the site, but any factory would be welcome. Ample well water is available at the factory. The specifications of the water is :

pH		7.5
Ca		13 mg/l
Mg		2"
K,Na	2"	
Cl		20"
HCO <sub>3</sub>	15"	
Hardness	2 mg/l	
Temperature	7/c	
No bacteria or germs		

There are four centrifuge pumps, that the consultant is assured are sound (but have surface rust), each capable of pumping 0.2 m<sup>3</sup>/second. The pumps are about 10 years old. The factory also has machine equipment to make spares and provide maintenance.

The equipment in the factory is to be disposed of. The centrifugal separator sets will remain.

FACTORY SITE, Total Area: 2.3 Hectares

Buildings	Floor Space,m <sup>2</sup>	Total Area,m <sup>2</sup>	Material
<b>Factory, Total</b>	<b>3090</b>		<b>Block</b>
Reactor/separator room	709	2781	
Calcination furnace room	720	1022	
Maintenance/transformer room	192	192	
Warehouse	26	26	
Pumping station	365	388	
Others	<u>827</u>	827	<b>Block</b>
<u>Administration and Other,</u>	218	218	
<u>Total</u>	320	320	
Offices	223	223	
Health/entertainment	43	43	
Nursery			
Guard post			

Comments: Space for expansion; the factory is five levels. The surface of the building is in poor shape. Did not see the interior on visit.  
565 m wood/iron sheet fence, height 1.6 m.  
The surface of the buildings will need some repair, but, the consultant is assured by the Vice-chairman of Sonbong County (responsible for industry) that the building is structurally sound. The surface corrosion to the buildings apparently has been caused by the sodium carbonate once produced there. This pollution is the reason the factory has been shifted from the present site.

#### UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount used
Electricity	Paekhak substation	Paekhak-ri	2 km	860,000 kwh/y
Water	Well	Factory		2,160 m <sup>3</sup> /day
Steam	Sonbong Thermo Power Plant,	Sonbong		
Transport	2ton/h Rail, Truck	Sonbong Station	2 km	

Electricity: Voltage 3/3 kv/220 v, factory has a 320 kva transformer.

Water: Available supply: 3,000 m<sup>3</sup>/d, 30 metres from the main buildings.

Steam comes directly from the Sonbong power plant. Therefore, nearly any amount of steam can be used.

#### 6.2.7. SONBONG FISHING ENTERPRISE

LOCATION: Sonbong County, Rajin-Sonbong City

**NOTICE:** This fish harvesting enterprise is probably the largest in Rajin-Sonbong City, harvesting approximately 60 % of the total for the region. The enterprise has recently (June, 1995) entered into a joint venture with a Japanese partner. The enterprise is delivering live and frozen fish/seafood to Japanese ships at Sonbong Port. The fleet is composed of 62 boats (17 powered), 2 x 250 hp, 7 x 200 hp, 1 x 100 hp, 1 x 75 hp, 1 x 28 hp, 1 x 10 hp, 1 x 8 hp, and 3 x 4 hp. The age of the boats is about 20 years. Some have electronic gear. The catch per year averages 3,000 tons; the average turnover is said to be 2,000,000 Won. The cold storage capacity at any one time is 1,300 tons, salting capacity is 700 tons. The enterprise has an icemaking capacity of 30 tons per day (4 hours). There is a sorting facility (2,000 tons/yr capacity) and a 5 ton refrigerated truck.

Total number of employees is 518 (124 Female).

Management: 35  
Technicians: 100 (30 Engineers)  
Seamen: 273

The factory site is 4 hectares with total floor space of 3,645 m<sup>2</sup>. The factory is 3 km from the Sonbong Rail Station.

### 6.3. DAILY NECESSITIES

#### 6.3.1. RAJIN CHEMICAL DAILY NECESSITIES

LOCATION: Dongmyong-dong, Rajin District, Rajin-Sonbong City

#### PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Laundry Soap, tons	2,000	104	141	158	142	165
Washing Soap, tons	150	6	11	20	28	36
Grain Oil (rice), tons**	170	12	8	9	10	15
<b>TURNOVER 1,000 Won</b>		261	268	317	396	870***

\* Designed capacity calculated on 2 x 8 hour shifts.

\*\* Oil is made from rice bran and used as a raw material.

\*\*\* This figure is so much higher, according to the authorities, because different, lower costs materials may have been used and additional products, not listed here, such as shoe polish and ladies' cosmetics were produced.

Comments: Joint Venture with Chinese investor, (US\$ 50,000, now, with undertaking to invest US\$ 110,000) to produce Chinese laundry soap at August, 1995. All products are, now, for local consumption with future exports to China.

Quality of Products: According to authorities, the soap is better than China's and some laundry soap will be exported to China next year.

#### MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s) in Tons	At Designed Capacity	Supplier	Availability
Rice Oil (from own production)*	170 540	Local Local and Imported	Sufficient Not Stable
Herb Oil**	30	Local and Imported	Not Stable, poor*
Animal Oil**	80	Hamhung	Sufficient***
Caustic Soda***	8	Hamhung	Sufficient***
Carbonate Soda***	0.2	Local and Imported	Sufficient
Aromatics	30	Local	Sufficient
Chemical Solvent	8	Local	Sufficient
Gasoline	3500	Onsong	Sufficient
Coal			

\* Rice oil from own production is used as material input.

\*\* Oil quality is a problem, too much moisture, therefore must be boiled and this adds to cost. They hope to get some better oil from the Chinese investor.

\*\*\* Transport is by truck, now, making the material expensive; investigating rail to reduce the costs.

Employees: (At Designed Capacity)

Total number of employees:	83 (60 female)			
Management:	4	(Director, Finance, Production, Chief Engineer)		
Technicians:	22 (12 Engineers)			
Skilled :	6			

**FACTORY SITE, Total Area:** 0.4 Hectare

Buildings	Floor Space,m <sup>2</sup>	Total Area,m <sup>2</sup>	Material
Factory, 4 buildings	832	1032	Block
Administration and Other, 2 buildings	274	274	Block

Comments: Room for expansion.  
150 m block fence, height 1.2 m.

**MAJOR MACHINERY INSTALLED**

Machinery	Size/Type	Units	Designed Capacity, Tons	Present Capacity Tons
Soap Mixing Machine		3	1100	1000
Soap Shaper		3	1100	1000
Oil Extractor		1	180	170
Distiller		1	180	170

Comments: Machinery made in 1980's.  
Equipment appears well maintained and buildings in good condition.

**UTILITIES, POWER AND TRANSPORTATION**

Item	Source	Location	from Factory	Amount Used
Electricity	Namsan substation	Namsan-dong, Rajin District	0.3 km	191,000 kwh/y
Water	Well	Factory	-	120 m <sup>3</sup> /day
Steam	Boiler, 1 ton/hr	Rajin Goods Station	-	6000 ton/y
Transport	Rail, Truck		2km	

Electricity: Voltage 3.3/0.22 kv.  
Water: Available supply: 140 m<sup>3</sup>/d.  
Road: Feeder line 0.1 km, width 9 m, asphalt.

**6.3.2. RAJIN IRONWARE EXPORT FACTORY**

LOCATION: Namsan-dong, Rajin District, Rajin-Sonbong City

**PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)**

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Hand Hair Clippers, piece	80,000	91,000	96,000	71,000	65,000	62,000
Metal Comb, piece	40,000	15,000	38,000	40,000	10,000	11,000
Barber's Razor, piece	8,000	9,000	6,000	5,000	6,000	8,000
Scissors, various styles, piece	230,000	311,000	274,000	250,000	294,000	263,000
<b>TURNOVER: 1,000 WON</b>		892	930	872	793	1093

\*Designed capacity calculated on 3 x 8 hour shifts.

Comments: Products are exported; hair and garment scissors to USSR, all varieties to Africa. Mechanical sheep clippers had been produced for DPRK, but discontinued.



The enterprise also has equipment to produce 200,000 m/yr of cables or electric wires with diameters of 1.6 to 6.0 mm, either coated or bare.

Quality of Products: Probably as good as those produced in China. Inspected by the factory authority, state inspectors and export inspectors.

#### MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s)	At Designed Capacity	Supplier	Availability
Pig Iron, tons	80	Chongjin	Sufficient
Steel plates, tons	123	Chongjin/Kimchaek	Sufficient
Round Steel, tons	15	Kimchaek	Sufficient
Tools,(e.g., drill bits) item	2,700	Factory	Sufficient
Abrasion Wheels, item	1,500	Factory	Sufficient
Plating Reagent, tons	3.6	Chongjin	Sufficient
Paints, tons	2	Factory/imported	Sufficient
Packing materials, tons	20	Local	Sufficient
Casting Sand, tons	80	Local	Sufficient
Coal, tons	900	Onsong	Sufficient

#### Employees: (At Designed Capacity)

Total number of employees: 260 (185 female)  
 Management: 6 (Director, Finance, Production[2], Chief Engineer, Raw Materials)  
 Technicians: 38 (15 Engineers)  
 Skilled: 36 (six 7-8 class)  
 Comments: Training for new staff through one year apprenticeship system.

#### FACTORY SITE, Total Area: 3 Hectares

Buildings	Floor Spacc,m <sup>2</sup>	Total Area,m <sup>2</sup>	Material
Factory	2290	2290	Block
Administration and Other	1370	1370	Block

Comments: Ample room for expansion.  
 No paved area.  
 350 m Block fence, height 1,5 m.

#### MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Low Frequency Induction Furnace	Inductive	1	324, tons	280, tons
Press				
Two Head Grinder	Crank	10	200, tons	160, tons
Milling Machine		60	400,000, scissors	363,000, scissors
Nickel/chrome Plating vats	T-180	12	80,000 pieces	76,000 pieces
		4	720 dm <sup>2</sup>	670 dm <sup>2</sup>

Comments: Machinery and technique is old with manual, labour intensive methods, but obviously highly skilled, and still producing; continuously being upgraded by local technicians with help from Central Industry.

## UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Namsan substation	Namsan-dong, Rajin District	1 km	500,000 kwh/y
Water	Huchang Catchment	Huchang-ri, Rajin District	12 km	100 m <sup>3</sup> /day
Transport	Rail, Truck	Rajin Goods Station	2 km	

Electricity: Voltage .3.3/0.22 kv.

Road, feeder line 0.5 km, road width 7m, no pavement.

## 6.3.3. KWANGOK IRONWARE CO-OPERATIVE

LOCATION: Kwangok-dong, Rajin District, Rajin-Sonbong City

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Galvanized Products, piece	60,000	10,000	8,900	10,100	9,400	10,300
Aluminum Products, piece	40,000	11,000	10,500	9,400	8,700	11,200
Hinges and Locks, piece	50,000	36,000	37,000	37,000	37,000	39,000
Lighters	50,000	33,000	36,000	32,000	39,000	42,000
<b>TURNOVER</b> , 1,000 Won		223	204	192	183	210

\*Designed capacity calculated on 2 x 8 hour shifts.

Comments: Factory has hot and cold rollers.

Quality of Products: Can be used for local consumption.

## MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s) in Tons	At Designed Capacity	Supplier	Availability
Steel sheets	300	Chongjin	Insufficient
Aluminum	10	Pyongyang	Insufficient
Zinc	30	Danchon	Sufficient
Concentrated Sulfuric Acid	20	Hamhung	Sufficient
Plating Reagent	1	Chongjin	Sufficient
High Caloric Coal	640	Saebjol	Sufficient

## Employees: (At Designed Capacity)

Total number of employees: 86 (31 female)

Management:

4 (Director, Finance, Production, Chief eng.)

Technicians:

6 (3 Engineers)

Skilled :

16

## FACTORY SITE, Total Area: 0.5 Hectares

Buildings	Floor Space, m <sup>2</sup>	Total Area, m <sup>2</sup>	Material
Factory, 4 buildings	1369	1369	Block
Administration and Other, 3 buildings	807	807	Block

Comments: Space for expansion.

480 m wood/brick fence, height 2 m.

## MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Hot Roller		1	200 tons	200
Cold roller		2	30 tons	20
Iron sheet cutter		1	1500 tons	1000
Press	Crank	9	150 tons	100

Comments: Machinery made in 1970's in DPRK.

## UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Kwangok substation	Kwangok-dong, Rajin District	4 km	340,000 kwh/y
Water	Kwangok Catchment	Kwangok-dong	1 km	18 m <sup>3</sup> /day
Transport	Rail, Truck	Kwangok Station	0.5 km	

Electricity: 3.3/0.22kv

Water: Available supply; 20 m<sup>3</sup>/d at factory.

Road: Rajin-Sonbong Road, asphalt. width 9 m.

## 6.3.4. RAJIN PLASTICWARE FACTORY

LOCATION: Dongmyong-dong, Rajin District, Rajin-Sonbong City

**NOTICE:** This factory has problems with raw material supply and is now operating at one-half of capacity; a joint venture has been arranged with Chinese investors who will supply equipment worth of US\$ 66,000 and eventually materials. However, to date, the equipment has not arrived (although delivery expected in July). A local delegation to China, recently, approached the investors and found the problem: some minor confusion upon the date when the equipment should arrive. As of 12 September, 1995, a fax from the Chinese investor indicating to come for more discussions on around 15 September. One section of the new factory building is nearly complete with the internal floor to be laid soon, and the final section will be completed, again shortly. The new factory will be 500 m<sup>2</sup> and the office 400 m<sup>2</sup>.

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Plastic Vessels, pieces	82,000					
Vinyl Pipe, metres	10,000					
<b>TURNOVER:</b> 1,000 Won		138	120	105	122	1146

\*Designed capacity calculated on 2 x 8 hour shifts.

**Quality of Products:** quality lower than Sonbong Disabled Soldiers Factory and therefore low.

## MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s) in Tons	At Designed Capacity	Supplier	Availability
High Pressure Polyethylene	36	Anju Area	Insufficient
Poly Vinyl Chloride	17	Hamhung	Insufficient
Coal	15	Onsong	Sufficient

Employees: (At Designed Capacity)

Total number of employees:	36 (26 female)	
Management:		2 (Director, Finance)
Technicians:		6 (2 Engineers)
Skilled:		1

FACTORY SITE, Total Area: 1.6 Hectares

Buildings	Floor Space, m <sup>2</sup>	Total Area, m <sup>2</sup>	Material
Factory, 5 buildings	818	818	Block
Administration and Other, 2 buildings	105	105	Block

Comments: Space for expansion; See Notice, above.  
121 m block fence, height 1.3 m.

MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units
Roller	ø450	2
Corn and cob grinder		2
Basin former	Screw 0.95	1
Box former	Screw 0.95	1
Material supplier	Screw 0.95	1

UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Namsan-dong substat	Rajin District	0.35 km	120,000 kwh/y
Water	Well	Factory		2 m <sup>3</sup> /day
Transport	Rail, Truck	Rajin Goods Station		

Electricity: 3.3/0.22 kv

6.3.5. *SONBONG DAILY NECESSITIES FACTORY*

LOCATION: Sonbong County, Rajin-Sonbong City

PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Plastic Hoses, km	200	4,200	9,300	10,000	1,700	1,000
Plastic Pipes, km	150	No Longer Produced				
Vinyl Sheets, km <sup>2</sup>	300	No Longer Produced				
Ethylene Sheets, km <sup>2</sup>	4000					
Vinyl Carpets, km <sup>2</sup>	300	54,200	23,700	61,400	16,000	8,000
Trunks, pieces	20,000	10,200	4,200	3,400	2,000	1,400
Bags, pieces	100,000	21,800	4,800	63,600	3,200	3,800
Plastic Kitchen Utensils, pieces	400,000	8,000	8,700	7,300	9,400	14,100
Plastic daily Necessities, pieces	200,000	4,000	1,900	3,300	3,900	3,400
<b>TURNOVER, 1,000 won</b>		877.1	772.8	818.3	248.4	556.0

\*Designed capacity calculated on 2 x 8 hour shifts.

Comments: Because of material supply problems, only a few items (particularly school bags, folders, some vessels, etc.) were being produced at the time of the visit. The local authorities say the only problem with production has been the lack of materials caused by oil sanctions as the equipment and technology is good.

Quality of Products: medium

#### MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s). Unit(s)in Tons	At Designed Capacity	Supplier	Availability
Vinyl Chloride	491	Hamhung	Insufficient
Plasticizer	19	Hamhung	Insufficient
Polyethylene	365	Anju Area	Insufficient
Coal	900	Onsong	Sufficient

Comments: Some Plasticizer had been imported from Russia, but not any longer.

#### Employees: (At Designed Capacity)

Total number of employees: 240 (70 female)

Management: 5 (Director, Finance, Production, Materials, Chief eng.)

Technicians: 7 (4 Engineers)

Skilled: 28 (three 7-8 class)

Comments: Training is through a one-year apprenticeship programme; 2 year education at the factory, 2 year on-the-job training.

#### FACTORY SITE, Total Area: 1 Hectares

Buildings	Floor Space,m <sup>2</sup>	Total Area,m <sup>2</sup>	Material
Factory	1575	2063	Block
Administration and Other	1471	1471	Block

Comments: No space for expansion.

#### MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Plastic Presser*	0110-80	2	350 km	350 km
Vinyl Pattern	14", 4phases	1	600 km <sup>2</sup>	600 km <sup>2</sup>
Plastic Machine	o40-140	4	700,000 pieces	
Vacuum Plastic Machine	o40-140	2	150,000 pieces	
Others**				

\* This machine has the capacity to make different sizes to hold up to 50 litres.

\*\* 28 additional installations have been made, e.g., sewing machines.

Comments: Machinery made in 1990's; Produced locally and by Central Industry.

#### UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Sonbong substation	Sonbong seat	2 km	3,000,000 kwh/y
Water	Kangrung Catchment	Kangrung Valley	4 km	30 m <sup>3</sup> /day
Steam, 1 ton/h	Boiler, Hyoksin Type	Factory		2400 ton/year
Transport	Rail, Truck	Sonbong Station	1.6 km	

Road: Access 500 m, 6 m wide, one-half paved.

#### 6.4. WOOD PRODUCTS

##### 6.4.1. RAJIN PAPER MILL

LOCATION: Sinan-dong, Rajin District, Rajin-Sonbong City

#### PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity	Actual Production				
		1990	1991	1992	1993	1994
School Note Books, Tons	400	256	240	290	304	320
Wallpaper, Tons	100	64	60	72	76	80
<b>TURNOVER: 1,000 Won</b>		225	382	265	295	280

\*Designed capacity calculated on 1 x 8 hour shifts.

Comments: According to the Director of the factory, the factory has been able to meet the demand for the local population, year by year. The factory's profit margin is 5-7 %. All for local consumption.

Quality of Products: The quality of the products is very low, with inconsistency in colour, mostly shades of light green, one side gloss; caustic soda is no longer used. The note books are also made at the factory.

#### MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s)	At Designed Capacity	Supplier	Availability
Soft wood logs, m <sup>3</sup>	300	Local	Sufficient
Wastepaper, tons	400*	Local	Sufficient
Maize Husks, Tons	100	Local	Sufficient
Bleaching powder, tons	80	Hamhung	Sufficient
Solid Sulfuric Acid, tons	25	Hamhung	Sufficient
Talcum Powder, tons	50	Kimchaek	Sufficient
Milling Blanket, m <sup>2</sup>	600	Hamhung	Sufficient
Milling Wire Netting, m <sup>2</sup>	24	Sinuiju Area	Sufficient
	2000	Onsong	Sufficient
Coal, tons	20	Local	Sufficient
Gasoline, tons			

Comments: Also use some maize husks with the wastepaper. Wastepaper is collected at the local recycling collection centre.

#### Employees: (At Designed Capacity)

Total number of employees: 87 (42 female)

Management: 4

Technicians: 20 (8 Engineers)

Skilled : 15 (five 7-8 class)

Comments: Training for new staff is either one year at the training centre or through a one year apprenticeship programme.

#### FACTORY SITE, Total Area: 1.0 Hectares

Buildings	Floor Space, m <sup>2</sup>	Total Area, m <sup>2</sup>	Material
Factory, 5 buildings	1689	2260	Block
Administration and Other, 6 building	640	640	Block

Comments: Room for expansion.  
400 m block fence, height 1.2 m.  
A new building for additional raw paper making has been constructed.

## MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Raw Paper Maker, tons		1	500	500
Mixer and oven, tons		3	400	400
Timber Grinder, tons		2	245	245
Corn-cob Grinder, tons		1	150	150
Printer, books		2	3,000,000	3,000,000
Sorter, tons		1	360	360
Guillotine		2		
Sewing machine		2		

Comments: Machinery made in 1970's; continuously being upgraded by local technicians with help from Central Industry.

## UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Namsan substation	Rajin District	2 km	500,000 kwh/y
Water	Well	Factory	-	1,104 m <sup>3</sup> /day
Steam	Boiler, 1 ton/hr	Factory	-	6,000 ton/y
Transport	Rail, Truck	Rajin Goods Station	2 km	-

Electricity: Voltage: 3.3/0.22kv

Road: feeder distance 0.1 km, width 9 m.

## 6.4.2. RAJIN FURNITURE PRODUCTION COOPERATIVE

LOCATION: Dongmyong-dong., Rajin District, Rajin-Sonbong City

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Wardrobes, pieces	3000	641	761	587	589	590
Desks and chairs, sets**	400	1100	1765	1671	1597	1542
Others	2600					
<b>TURNOVER: 1,000 Won</b>		180	193	195	182	238

\*Designed capacity calculated on 1 x 8 hour shifts

\*\*Sets for schools, 1 desk and two chairs.

Comments: "Others" include dining tables and smaller products; all products are for local consumption. Also, wooden handicraft articles are made, e.g., statues, pictures made of small shells, and large dressing table mirrors. This year, one statue was bought by a Japanese for US\$ 5,000.

Quality of Products: Poor, plywood very poor, but acceptable for local market.

**MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY**

Raw Material(s), Unit(s)	At Designed Capacity	Supplier	Availability
Logs, softwood, m <sup>3</sup>	1800	Local	Sufficient
Varnish, tons	10	Hamhung	Insufficient
Thinner, tons	3.5	Hamhung	Sufficient
Latex, tons	2	Hamhung	Sufficient
Urine Plastic glue, tons	2	Factory	Sufficient
Gasoline, tons	10	Local	Sufficient

**Employees: (At Designed Capacity)**

Total number of employees:	71 (26 female)
Management:	4 (Director, Finance, Production, Chief Engineer)
Technicians:	17 (5 Engineers)
Skilled:	11 (four 7-8 class)
Comments:	Training for new staff is through a one-year apprenticeship.

**FACTORY SITE, Total Area: 1 Hectares**

Buildings	Floor Space, m <sup>2</sup>	Total Area, m <sup>2</sup>	Material
Factory, 4 buildings	2300	2300	Block
Administration and Other, 7 building	800	800	Block

Comments: Room for expansion.  
500 m wood and block fence, height 2 m.

**MAJOR MACHINERY INSTALLED**

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Log Circular Saw		2	2000 m <sup>3</sup>	1800 m <sup>3</sup>
Plainer	Automatic 450	2	2000 m <sup>3</sup>	2000 m <sup>3</sup>
Plywood Press	Cooling, crank	2	14,000 m <sup>2</sup>	14,000 m <sup>2</sup>
Furniture saws, drills				
Wood Drying Chamber	moisture -35%	1		

Comments: Machinery made in 1970's from DPRK.

**UTILITIES, POWER AND TRANSPORTATION**

Item	Source	Location	from Factory	Amount Used
Electricity	Namsan substation, Rajin District	Dongmyong-dong, Rajin-Sonbong C.	1.5 km	36,000 kwh/y
Water	Well		-	16 m <sup>3</sup> /day
Transport	Rail, Truck	Factory	2 km	

Electricity: Voltage 3.3/0.22 kv

Water: Available supply is 20 m<sup>3</sup>/d.

Road: Feeder distance 0.1 km; width of road 7 m; no pavement.



## 6.4.3. TUMANGANG SLEEPER SAWMILL

LOCATION: Tumangang-gu, Sonbong County, Rajin-Sonbong City (approximately 30 km from Sonbong County)

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Sawn Wood**, m <sup>3</sup> *	100,000	94,000	91,700	96,000	26,000	4,900
Plywood, m <sup>2</sup>	100,000	86,000	80,000	39,000	39,000	0.500
Chest of Drawers, unit	1,200	1,300	1,214	438	406	43
Wardrobe, unit	1,200	1,263	1,141	386	415	43
Additional 29 Items, furniture						
<b>TURNOVER: 1,000 Won</b>		<b>4,930</b>	<b>4,750</b>	<b>2,920</b>	<b>1,220</b>	<b>280</b>

\* Designed capacity calculated on 2 x 8 hour shifts; in 1990, operating at full capacity. This year, so far, well down on output.

\*\*60% of sawn wood goes to produce railroad sleepers that make up 90% of output by turnover.

Comments: Before 1990, the factory had, one year, produced 130,000 m<sup>3</sup> of sleepers. The sleepers are supplied directly to the railroad. All is for local consumption.

Quality of Products: The quality of the plywood, by international standards, is not high: it is finished on one side or both sides; five widths are produced. The quality of the furniture is good. It should be noted that a large furniture factory operates in the area that, reportedly, produces high quality furniture from quality wood.

## MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s). Unit(s)	At Designed Capacity	Supplier	Availability
Hardwood Logs, m <sup>3</sup>	121,950	Russia	Major problem*
Sulfuric Acid, Tons	9	Chongjin	Sufficient
Iron Wire, Tons	125	Kimchaek	Some problems
Sawdust, m <sup>3</sup>	2,001	from the factory	-

Comments: Since the collapse of the USSR, supply of logs has been declining. By arrangement, the factory has sent workers to harvest logs in Russia (the harvest being shared). However, Russia, who is to supply the trucks to transport the logs to the railroad, has failed to comply at the time of the visit to the factory (5 September, 1995).

Employees: (At Designed Capacity)

Total number of employees: 536 (175 female)

Management: 22 (Director, Vice-Director -3, etc.)

Technicians: 59 (16 Engineers)

Skilled: 114 (six 7-8 class)

An apprenticeship programme is used for training.

## FACTORY SITE, Total Area: 20 Hectares

Buildings	Floor Space, m <sup>2</sup>	Total Area, m <sup>2</sup>	Material
Factory	6794	8120	Ash Block
Administration and Other	6473	7555	Ash Block

Comments: Ample room for expansion.  
Paved, concrete, area is 5112 m<sup>2</sup>  
The buildings appear to be very well constructed, the administration building is two levels, well maintained.

## MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Band Saw(round logs)	48 inch blade	4	50 m <sup>3</sup> /hour	60 m <sup>3</sup> /hour
Band Saw(planks)	42 inch blade	2	0.8 m <sup>3</sup> /hour	1 m <sup>3</sup> /hour
Horizontal Band Saw,	42 inch blade	2	1.5 m <sup>3</sup> /hour	1.5 m <sup>3</sup> /hour
Boiler, heating	Ryongsong #1	1	1 ton/hr, 5760/y	1 ton/hr, 5760/y
Boiler, Industrial	Ryongsong #2	4	2 ton/hr, 14500/y	2 ton/hr, 14500/y
Additional machines*		14	-	-

\* Of the 14 added machines, 8 made from Japan and China. At the time of purchase, it was a great improvement to production and technology, but now these are old.

Comments: Machinery made in 1970s; continuously being upgraded by local technicians with help from Central Industry and therefore some increase in capacity over the designed figure. The factory retains lathes and machine equipment to maintain their equipment.

## UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factory	Amount Used
Electricity	Tumangang substation	Tumangang-gu	1.5 km	1,200,000kwh/y
Water	Hongui-ri	Tumanganng-gu	2.0 km	113 m <sup>3</sup> /day
Transport	Rail, Truck	Tumangang Station	1.0 km	

Electricity: Voltage, 3.3 kv, 1560 kva

Water: Available supply sufficient to meet demand of the factory.

Road: Feeder about 130 m., width 9 m.

## 6.5. BUILDING MATERIALS

**NOTICE:** The "Building Materials" data is incomplete. The consultant did not visit the enterprises nor did he have the time to verify the information.

## 6.5.1. RAJIN CEMENT FACTORY

LOCATION: Sinhung-dong, Rajin District, Rajin-Sonbong City

## PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity*	Actual Production				
		1990	1991	1992	1993	1994
Cement, Tons		6800	5200	5900	5300	4500
<b>TURNOVER</b> 1,000 Won		346	288	290	240	222

## MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY

Raw Material(s), Unit(s)in Tons	At Designed Capacity
Limestone	28,000
Iron ore	850
Slug	6,000
Gypsum	1,000
Fuel oil	5,000
Diesel Oil	70
Gasoline	10
Lubricants	3

Employees: (At Designed Capacity)

Total number of employees:	127 (47 female)
Management:	12 (Director, Finance, Production)
Technicians:	7 (5 Engineers)
Skilled :	6

FACTORY SITE, Total Site Area: 2 Hectares

Buildings	Floor Space, m <sup>2</sup>	Site Area, m <sup>2</sup>	Material
Factory	1010	1010	Block
Administration and Other	1390	1390	Block

Comments: Ample room for expansion.  
No paved area.  
19,000 m block fence, height 1.5 m.

MAJOR MACHINERY INSTALLED

Machinery	Size/Type	Units	Designed Capacity
Crusher	1600 x 3800	1	1.5 ton/hour
Crusher	1600 x 4800	1	1.5 ton/hour
Crusher	1.8 x 8	1	4.5 ton/hour
Lime kiln	Revolving 1.8 x 28	1	2 ton/hour
Compressor		2	10 m <sup>3</sup> /hour

UTILITIES, POWER AND TRANSPORTATION

Item	Source	Location	from Factor	Amount Used
Electricity	Rajin-Sonbong substation	Yokjon-dong.	1.8	200,000
Water	Wonbong Catchment	Sonbong	km	kwh/y
Steam	Boiler, 0.5 ton/hour	Sinhung-dong	2 km	160 m <sup>3</sup> /day
Transport	Rail, Truck	Sonbong Factory Rajin Goods Stat.	1.5 km	4,500 ton/year

Electricity: Voltage 3.3/0.22 kv.

Water: Available supply; 200 m<sup>3</sup>/d.

Road: Rajin-Chonggye Highway, access distance 0.5 km, unpaved, 7m width.

## 6.5.2. SONBONG BUILDING MATERIALS FACTORY

LOCATION: Sonbong County, Rajin-Sonbong City

PRODUCTS, DESIGNED CAPACITY AND ACTUAL PRODUCTION (1994)

Product(s) and Unit(s)	Designed Capacity	Actual Production				
		1990	1991	1992	1993	1994
Slug Cement, tons	2220					
Slug Cement Blocks, m <sup>3</sup>	6900					
Building materials, wood, m <sup>2</sup>	10,000					

**MATERIALS, REQUIREMENTS, SUPPLIERS AND AVAILABILITY**

Raw Material(s)	At Designed Capacity	Supplier	Availability
Slug, tons	2000		
Lime, tons	500		
Logs, m <sup>3</sup>	1000		
Coal, tons	400		

**Employees: (At Designed Capacity)**

Total number of employees:	66 (19 female)
Management:	3 (Director, Finance, Production)
Technicians:	3 (3 Engineers)
Skilled:	13 (two 7-8 class)

**FACTORY SITE, Total Site Area: 2.1 Hectares**

Buildings	Floor Space, m <sup>2</sup>	Site Area, m <sup>2</sup>	Material
Factory	1729	1729	Block
Administration and Other	356	356	Block

Comments: Ample room for expansion.  
355m block fence, height 1.3m.

**MAJOR MACHINERY INSTALLED**

Machinery	Size/Type	Units	Designed Capacity	Present Capacity
Cement mixer	Cylinder	2	2200 tons	2200
Circular saw		1	2000 m <sup>3</sup>	2300
Shaping press	Friction	1	450,000 pieces	

**UTILITIES, POWER AND TRANSPORTATION**

Item	Source	Location	from Factory	Amount Used
Electricity	Sonbong substation	Paekhak-ri	800 m	124,000 kwh/y
Water	Well	Factory		5 m <sup>3</sup> /day
Steam	Boiler, 0.5 tons/d	Factory		1872 tons/year
Transport	Rail, Truck	Sonbong Station	4 km	

Electricity: Voltage 3.3/0.22 kv  
Water: Available supply 15m<sup>3</sup>/d.  
Traditional medicines in DPR K

## ENTERPRISE SWOT ANALYSIS

## 6.6. SONBONG FOODSTUFFS PROCESSING FACTORY

FACTOR	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
<u>PRODUCT(S)</u> # Products Type quality Export Supply stability Distribution Demand Price # Customers Competition	Local consump. Not high     Small	Increase quality   Could increase	Specialization <sup>4</sup>  Good Central Distribut. Stable Set by Govern. Known Little	New JV producers  Policy change Change  Could increase	×Increase quality to ensure demand and market ×Actively pursue ways to assure supply stability  ×Carefully watch for new- comers
<u>Raw Materials</u> Availability  # Suppliers Supply stability Quality Price From Relationship	Sugar, wheat flour insufficient Most local  Set by Govern.	Increase #suppliers New suppliers As above	Most sufficient  Reliable Good Set by Govern. Local		Offer incentives, where feasible, to assure continued quality and supply
<u>Infrastructure</u> Electricity Water Rail Road Telecom. Port	Not good, bitumen Not good		No generator need Catchment 4 km Good, close 1.5 km to rail,  Close	Could deteriorate Could deteriorate	Monitor with local officials and press for better roads and telecoms.
<u>Site/building</u>  Quality/conditi on Space, expansion Access	Road not good	Good for Joint Venture	Good condition Ample Easy, bitumen, 8m wide		

<sup>4</sup> Cakes, candies, vodka, fruit drink, and millet jelly that is also used as material input as a substitute for sugar.

<b>Equipment</b> Technology "Software" Age Condition	Old, 1970's 1970's Old, 1970's		Simple Simple Not well maintained		Merge with Rajin Disabled Soldiers'
<b>Staff</b> Skill - Management Technicians Skilled	Implementato rs	Little training time needed for new technology, software, etc.; Give sr. mgt. more power, corporatize	Highly skilled, well educated, hard workers, experienced		Sr. staff training in total qual. control, mgt. technics., financial technics /decision making, marketing, supply logistics

## 6.7. RAJIN BEAN PASTE FACTORY

FACTOR	WEAKNESS	OPPORTUNIT Y	STRENGTH	THREAT	ACTION
<u>PRODUCT(S)</u> # Products Type quality Export Supply stability Distribution Demand Price # Customers Competition	Local consump. Good     Small	Increase quality   Could increase	Specialization <sup>5</sup>  Good Central Distribut. Stable Set by Govern. Known Little	New JV producers  Policy change Change  Could increase	×Increase quality to ensure demand and market ×Actively pursue ways to assure supply stability  ×Carefully watch for new- comers
<u>Raw Materials</u> Availability # Suppliers Supply stability Quality Price From Relationship	Central industry   Set by Govern.	Increase #suppliers New suppliers As above	Sufficient  Reliable Good Set by Govern. Local		Offer incentives to assure continued quality and supply
<u>Infrastructure</u> Electricity Water Rail Road Telecom.  Port	Not good, bitumen Not good		No generator need Catchment 2km Good, close 0.5 km to rail, goods station  Close	Could deteriorate Could deteriorate	Monitor with local officials and press for better roads and telecoms.
<u>Site/building</u> Quality/conditi on Space, expansion Access	Road not good	Good for Joint Venture	Good condition Ample Easy, bitumen, 7m wide		Try UNIDO's IPS services for JV Press authorities for improvement
<u>Equipment</u>					

<sup>5</sup> Bean Paste, Soy Sauce, spirits and maize oil.

<sup>6</sup> Second best maintained factory as seen by consultant.

Technology "Software" Age Condition	Old, 1970's 1970's Old, 1970's		Simple, automated Simple  Well maintained <sup>6</sup>		Try UNIDO's IPS services for JV
<u>Staff</u> Skill - Management Technicians Skilled	Implementators	Little training time needed for new technology, software, etc.; Give sr. mgt. more power, corporatize	Highly skilled, well educated, hard workers, experienced		Sr. staff training in total qual. control, mgt. technics., financial technics /decision making, marketing, supply logistics



## 6.8. KWANGOK IRONWARE COOPERATIVE

FACTOR	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
<u>PRODUCT(S)</u> # Products Type quality Export Supply stability Distribution Demand Price # Customers Competition	Unstable	Increase quality Ensure stability Could increase	Specialization <sup>7</sup> Niche market Good Reliable Stable Set by Govern. Known None locally	New JV producers with better goods Policy change Change Could increase	×Increase quality to ensure demand and market ×Actively pursue methods to assure supply stability ×Carefully watch for new- comers
<u>Raw Materials</u> Availability # Suppliers Supply stability Quality Price From Relationship	Some insufficient Some unstable Set by Govern. Central industry	Increase #suppliers New suppliers As above	Central industry Some stable Central industry	Could get worse Narrow reliance Could get worse	If corporatized, offer incentives for better quality and supply
<u>Infrastructure</u> Electricity Water Rail Road Telecom. Port	Not good Not good		No generator need Large catchment, 1 km from factory Close, 0.5 km Bitumen, 8 m wide Close	Could deteriorate Could deteriorate	Monitor with local officials and press for better roads and telecoms.
<u>Site/building</u> Quality/conditi on Space, expansion	Road not good		Good condition Some Easy, 8 m wide		Try UNIDO's IPS services for JV Press authorities for

<sup>7</sup>Galvanized and aluminum products, hinges/locks and lighters.

Access					improvement
<u>Equipment</u> Technology "Software" Age Condition	Old  1970's Old, but working		Simple Simple  Well maintained	New JV with better equipment/ technology	Try UNIDO's IPS services for JV Watch for new- comers.
<u>Staff</u> Skill - Management Technicians Skilled	Implementators	Little training time needed for new technology, software, etc.; Give sr. mgt. more power, corporatize	Highly skilled, well educated, hard workers, experienced		Sr. staff training in total qual. control, mgt. technics., financial technics /decision making, marketing, supply logistics

## 6.9. RAJIN DISABLED SOLDIERS' FOODSTUFF PROCESSING FACTORY

FACTOR	WEAKNESS	OPPORTUNIT Y	STRENGTH	THREAT	ACTION
<b>PRODUCT(S)</b>					
# Products			Specialization <sup>8</sup>		
Type	Local			New JV	×Increase
quality	consump.	Increase quality		producers	quality to
Export	Good				ensure demand
Supply		Supply			and market
stability	Unreliable	reliability	Central		×Actively
Distribution			Distribut.	Policy change	pursue methods
Demand			Stable	Change	to assure
Price			Set by Govern.		supply stability
# Customers	Small	Could increase	Known		
Competition			Little	Could increase	×Carefully
					watch for new-
					comers
<b>Raw Materials</b>					
Availability	Seasonable/imp				
# Suppliers	ort	Increase			Offer incentives
Supply	Central	#suppliers			for better
stability	industry	New suppliers			quality and
Quality	Unreliable	As above			supply
Price			Local		
From	Set by Govern.				
Relationship	Import				
<b>Infrastructure</b>					
Electricity			No generator	Could	Monitor with
Water			need	deteriorate	local
Rail			Well, 140 m <sup>3</sup>	Could	officials and
Road	Not good		/d <sup>9</sup>	deteriorate	press for better
Telecom.			Good, close		roads and
Port	Not good		2 km to rail,		telecoms.
			goods station		
			Close		
<b>Site/building</b>					
Quality/conditi on	Road not good	Good for Joint	Good condition Ample		Try UNIDO's
Space, expansion		Venture	Easy, bitumen, 23 m wide		IPS services for JV
Access					Press authorities for improvement

<sup>8</sup> Cakes, candies, and beverages (beer and vodka)<sup>9</sup> Huchang catchment has ample water if well water is insufficient.

Equipment

Technology Old, 1970's  
 "Softwarc"  
 Age 1970's  
 Condition Old, 1970's

Simple  
 Simple

Well  
 maintained<sup>10</sup>

Try UNIDO's  
 IPS services for  
 JV

Staff

Skill -

Management Implementators  
 Technicians  
 Skilled

Little training  
 time needed for  
 new  
 technology,  
 software, etc.;  
 Give sr.  
 mgt.more  
 power,  
 corporatize

Highly  
 skilled,well  
 educated, hard  
 workers,  
 experienced

Sr.staff training  
 in total  
 qual.control,  
 mgt. technics.,  
 financial  
 technics  
 /decision  
 making,  
 marketing,  
 supply logistics

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<sup>10</sup> Best maintained as seen by consultant.

## 6.10. RAJIN IRONWARE EXPORT FACTORY

FACTOR	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
<b>PRODUCT(S)</b>					
# Products			Specialization <sup>11</sup>		
Type			Niche market	New JV	× Increase
quality		Increase quality	Very good	producers	quality to
Export		Seek other	African market		ensure demand
Supply		markets	Reliable		and market
stability			Reliable		× Actively
Distribution			Stable	Policy change	pursue methods
Demand			Set by Govern.	Change	to assure
Price			Known		supply stability
# Customers		Could increase	Little		
Competition				Could increase	× Carefully
					watch for new-
					comers
<b>Raw Materials</b>					
Availability			Stable	Could change	If corporatized,
# Suppliers		Increase	Central	Narrow	offer incentives
Supply		#suppliers	industry	reliance	for better
stability		New suppliers	Has been stable	Could change	quality and
Quality	Set by Govern.	As above			supply
Price					
From			Central	Could become	
			industry and	unstable	
Relationship			local		
<b>Infrastructure</b>					
Electricity			No generator	Could	Monitor with
Water			need	deteriorate	local
			Large	Could	officials and
Rail			catchment,	deteriorate	press for better
Road	Not good		12km from		roads and
			factory		telecoms.
Telecom.	Not good		Good, close		
Port			2 km to rail,		
			goods station		
			Close, on-off		
			containers,		
			soon		
<b>Site/building</b>					
Quality/conditi		Good	Good condition		Try UNIDO's
on		for	Ample		IPS services for
Space,	Road not good	Joint	Easy, 7 m		JV
		Venture	wide		Press

<sup>11</sup> Hand hair clippers, scissors, barbers' razors and metal combs.

expansion					authorities for improvement
Access					
<u>Equipment</u>					
Technology "Software"	Old		Simple Simple	New JV with better equipment/technology	Try UNIDO's IPS services for JV
Age	1970's				Watch for newcomers.
Condition	Old, but working		Well maintained <sup>12</sup>		Sr. staff training in total qual. control, mgt. technics., financial technics /decision making, marketing, supply logistics
<u>Staff</u>					
Skill -					
Management Technicians	Implementators	Little training time needed for new technology, software, etc.;	Highly skilled, well educated, hard workers, experienced		
Skilled		Give sr. mgt. more power, corporatize			

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<sup>12</sup> Well maintained.

### 6.11. RAJIN MEAT AND FISH PROCESSING FACTORY

This analysis is based on the assumption that the factory will no longer produce fish products.

FACTOR	WEAKNESS	OPPORTUNIT Y	STRENGTH	THREAT	ACTION
<b><u>PRODUCT(S)</u></b>					
# Products			Specialization		
Type	Local			New JV	×Increase
quality	consump.	Increase quality		producers	quality to
Export	Not high				ensure demand
Supply		Supply			and market
stability	Unreliable	reliability	Schools		×Actively
Distribution			Stable	Policy change	pursue methods
Demand			Set by Govern.	Change	to assure
Price	Set by Govern.		Known		supply stability
# Customers	Small	Could increase	Little		
Competition				Could increase	×Carefully
					watch for new-
					comers
<b><u>Raw Materials</u></b>					
Availability	Seasonable				
# Suppliers	Local	Increase			Offer incentives
Supply	cooperative	#suppliers			for better
stability	Unreliable	New suppliers			quality and
Quality		As above			supply
Price	Set by Govern.		Local		
From					
Relationship					
<b><u>Infrastructure</u></b>					
Electricity			No generator	Could	Monitor with
Water			need	deteriorate	local
Rail	No goods		Well, 150 m <sup>3</sup> /d	Could	officials and
Road	station		Good, close	deteriorate	press for better
Telecom.	Not good		0.1 km to rail		roads and
Port	Not good				telecoms.
			Close		
<b><u>Site/building</u></b>					
Quality/conditi on		Good	Good condition		Try UNIDO's
Space, expansion	Road not good.	for	Ample		IPS services for
Access		Joint	Easy		JV
		Venture			
<b><u>Equipment</u></b>					
Technology	Old, outdated		Simple		
"Software"			Simple		
Age	1970's				
Condition	Not good				

<u>Staff</u>			
Skill -		Little training	Highly skilled,
Management	Implementators	time needed for	well
Technicians		new	educated, hard
Skilled		technology,	workers,
		software, etc.;	experienced
		Give sr.	
		mgt.more	
		power,	
		corporatize	
			Sr.staff training
			in total
			qual.control,
			mgt. technics.,
			financial
			technics
			/decision
			making,
			marketing,
			supply logistics

The firm has produced widely different products, i.e., fish cake sausage, fish/vegetable rolls, soya bean milk, maize/acorn vodka and instant soup, but now seem to be concentrating on soya bean milk and vodka. All raw materials are seasonable. The fish will, probably, be more difficult to obtain since two joint ventures have recently begun, one in Rajin with the cooperative adjacent to the factory and another in Sonbong. These two cooperatives make up a large portion of the fishing industry. The firm might be able to rent its freezing facilities to the Rajin Fishing Cooperative rather than deal with fish products. Most of the fishing done will be for species required for the market in Japan, not local, although lesser quality fish may go to the factory. It is likely that the prices can now be negotiated with the cooperatives, since JVs exist in the fishing cooperatives. If the firm wants to continue operation in fish products, it should seek advice on new products to reduce the seasonal aspects of production and reliability of product supply. From output figures, the firm appears to be specializing in soya bean milk, for distribution to school children, and maize/acorn vodka.



## 6.12. SONBONG DAILY NECESSITIES FACTORY

FACTOR <u>PRODUCT(S)</u>	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
# Products			Specialization <sup>1</sup>		
Type			Plastic,	New JV	× Increase
quality		Increase quality	inexpens.	producers	quality to
Export		Seek other	Good		ensure demand
Supply	Poor	markets			and market
stability					× Actively
Distribution			Central distrib.	Policy change	pursue methods
Demand			Set by Govern.	Change	to assure
Price			Known		supply stability
# Customers		Could increase	Local and		
Competition			DPRK	Could increase	× Carefully
					watch for new-
					comers <sup>ii</sup>
<u>Raw Materials</u>					
Availability	Unstable	Ensure supply			If corporatized,
# Suppliers	Central	Increase		Narrow	offer incentives
Supply	industry	#suppliers		reliance	for better
stability	Unstable	New suppliers		See footnote 2.	quality and
Quality		As above			supply
Price	Set by Govern.		Central		
From		New suppliers	industry and		
			local		
<u>Relationship</u>					
<u>Infrastructure</u>					
Electricity			No generator	Could	Monitor with
Water			need	deteriorate	local
			Large	Could	officials and
			catchment, 4	deteriorate	press for better
Rail			km from		roads and
Road	Not good		factory		telecoms.
Telecom.	Not good		Good, close		
Port			1.6 km to rail		
			Close		
<u>Site/building</u>					
Quality/condition	None		Good condition		Try UNIDO's
Space,	Road not good				IPS services for
expansion			Easy, 7 m		JV
Access			wide		Press
					authorities for
					improvement
<u>Equipment</u>					
Technology	Old		Simple	New JV with	Try UNIDO's
"Software"	Old		Simple	better	IPS services for
Age	1990's <sup>iii</sup>			equipment/	JV

Condition	Good <sup>iv</sup>	technology	Watch for new-comers.
<u>Staff</u>			Sr. staff training
Skill - Management Technicians Skilled	Implementators	Little training time needed for new technology, software, etc.; Give sr. mgt. more power, corporatize	Highly skilled, well educated, hard workers, experienced
			in total qual. control, mgt. technics., financial technics /decision making, marketing, supply logistics

## 7. SECTORAL ASSESSMENT

### 7.1. FOODSTUFFS AND DAILY NECESSITIES

#### SECTOR IDEA

#### FOODSTUFFS AND DAILY NECESSITIES<sup>13</sup>

Explain the idea; that is, what do you want to happen in the sector and what is the sector's role in the development of industry?

Revitalize the pollution-free foodstuffs and daily necessities enterprises in the RSFETZ through modifications in management and industry restructuring to focus on producing for the local market (with future possibilities of exporting), primarily using domestic raw materials.

What are the reasons of the sector development? For example, unexploited natural resources, increase the value added of products.

These enterprises should help lead the way to further investment in the Zone by presenting an example and an image to both the regional enterprises and international firms seeking off-shore opportunities. Furthermore, the development will lead to the more efficient use of the Zone's human resources and existing facilities.

#### PEOPLE

Who will operate the businesses in the sector?

Local Government, with a role similar to a board of directors, and top management. This means that central control of the enterprises will be relaxed and top management in the enterprises will address the total management problem as revealed by the market. Local management and board members may have to be (re)trained to operate the enterprises in a new environment. However, if and when, joint ventures are negotiated, the management will be operated by the JV.

What will their roles be?

Business planners and implementors of the enterprises' strategy.

How will their rewards be determined?

Through negotiation with the board based on the market and financial incentives.

What do these people bring to the businesses in the sector that will assist the businesses?

- Skills

Able to produce products acceptable to local market at an acceptable price. Maintain and operate old equipment.

- Experience

Understanding of the local and TREDATA markets.

- Personal attributes

Hardworking, honest, diligent, well-educated, dependable.

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<sup>13</sup> See the individual "Enterprise SWOT Analysis" for selected enterprises.

SWOT ANALYSIS - PEOPLE

FACTOR	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
Board of Directors	Inexperience in this type of system.	To develop a model for other boards with built -in local attitudes.	Thorough knowledge of the region as well as possible JV .	The board may be too dominant and interfere with the everyday running of the enterprises	Training in corporate strategy , monitoring, accountability and roles. study /familiarization tours.
Senior Management	Lack of experience by local personnel in total management control	To combine the experience of outside management with that of the local personnel	Thorough knowledge of the enterprise and region.	That the management will not have sufficient training to carry out the required duties.	Training required. Probably study tours. Foreign managers hired and duties negotiated.
technicians			Ability to keep factory operating and ability to adjust production.		Training in Total Quality Control.
Skilled Labour			Skills , diligence, etc.		

What skills will need to be acquired in the sector?

Management, Design, Marketing, Material Supplies Acquisition and Logistics, Financial decision-making, strategic planning and accountability

How will these skills be acquired?

Interchange of staff with appropriate organizations, overseas training, foreign transfer in JV, if not organized by UNIDO for overseas training or on-the-job training.

How will suitable staff be recruited?

Senior Management: Local to recruit the most able people for the positions in DPRK.

Middle Management: Local to recruit the most able in DPRK

Technical Staff: As above

Labour: As above

What staff are required in the sector?

Trained and experienced personnel in materials acquisition, logistics, etc.; Marketing personnel; Management decision makers, total quality management.

LOCATION

FACTOR	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
Materials	Not enough of some materials locally	Establish a network of reliable suppliers through port and RR	Good potential facilities and rail connections with TREDAs. Many intermediate suppliers close.	Consistent supply.	Look for JV or contract work.
Pacific Rim	Unknown	Become the key link in value added items to TREDAs and other Pacific Rim nations. Very large potential market.	Well located in the area with ice-free ports and RR linkages to TREDAs. Close to Asian "tigers".		Advertise; send <u>trained</u> delegations.
Climate		Create a thriving manufacturing centre	Mild, good spot to locate a JV; very good for tannery		Advertise
Labour		Create a pool of highly trained and skilled personnel.	Well educated, trained, behaved, responsive		Determine training needs. Begin training programmes
Existing Facilities	Some Infrastructure not up to standard; Easier access to area needed!! for potential customers. Need banks, etc. Foreign accomm. and facilities. No telecom		Compactness of RSFETZ. Buildings in good condition. RR and ports close.	That outward appearance will keep some customers away. e.g., roads, no adequate accomm., isolatedness.	Local authorities to press for better roads, airport, communication, banks, etc.
General location	Foreign businesses unaware of region.		Good climate, environment.		Advertise

What permits, licenses, regulations are required for the businesses in the sector?  
See other documents dealing with specific requirements.

How and why has the existing or planned zone influenced the location of the sector?  
Key location in TREDAs and Pacific Rim, Good potential port facilities.

THE PRODUCT(S)

List the names of the specific product(s), the key features of each and the ISIC number, if appropriate, that will be offered to the market from the sector.

Product names	Key features
Soya Bean Milk	For school children programme
Vodka	Local variety, often includes acorn input
Cakes and Candies	
Beer	
Soya bean paste and sauce	
Galvanized/aluminum product	
Hinges/locks	
Cigarette lighters	
Hand hair clippers/razors	Manual good for rural barbers
Metal scissors and combs	Scissors in various types
Plastic-hoses, carpets, utensils	For local consumption, basins, containers, etc.
Soap	Laundry and hand soap

List the benefits of the products from the sector.

Export earnings presently through ironware but also most likely through vodka, particularly to South Korea and soap to China; create a favorable impression to interested investors, use existing unused or underutilized facilities and personnel; add to the development of the region, reduce Government's need to subsidize some areas.

Is there a need for these products? How has this been determined?

In the past, The products have been acceptable by to the market, including DPRK, China and African countries. Also, many foreign enterprises are looking for off-shore locations to relocate or to have contract goods made in order to cut high costs in their own countries.

### **PRICE(S)**

How will prices be determined for the product(s) in the sector?

Negotiation with the customers if contract work. According to the market and costs, otherwise.

### **THE MARKET**

#### **The Customer**

Who and where is the target market of the products produced in the sector?

Local, initially and continued export to Africa, TRED countries, next.

How has it been determined that those above will buy the products?

From recent patterns. Also, some small joint ventures already exist. China has shown interest and already developed some joint ventures, e.g., "convenient noodles and laundry soap.

Provide a customer profile for the sector, include factors such as the country(s) and its population(s), etc.

Local and DPRK consumers who have developed tastes for the products. Also TRED consumers, such as the large ethnic Korean population in northeast China and the South Koreans who have similar tastes; Mongolian rural consumers for ironware and plastic items. Enterprises who wish to reduce costs, particularly wage and company taxes and perhaps transportation and handling costs.

#### **Promotion**

How will the sector industries be promoted? Why is the sector's image different or better than sector industries elsewhere and how will this be conveyed and promoted?

Trade delegations; marketing and sales personnel; advertising in international publications and trade journals; word of mouth; investmarts (UNIDO); IPS network (UNIDO).

What image of the sector will be presented to the market and how will this be conveyed and promoted?

Cheap, highly skilled, productive labour, quality products; Location; Potential and present port facilities and low handling charges; potential industrial estates; Investor incentives; existing facilities, ready to move into.

#### **Distribution**

How will the products in the sector be distributed, including delivery?

Via truck and rail for local and DPRK and rail or port for export. Containers can be used but some infrastructure is required for complete roll-on, roll-off facilities, to be completed soon at Rajin Port.

How and where will the products be stored?

Enterprises' existing facilities.

How will the products be packaged? For example, packaged as the competitors do, in line with market expectations, as directed by buyer.

As per contract or customer expectations.

SWOT ANALYSIS - Market

FACTOR	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
Price			Should be relatively low since wages, etc. not high		Train marketing personnel, Begin marketing campaign
Quality	Equipment, old, outdated, some manual		Skilled personnel		Upgrade equipment, JV, lease, buy, seek donors, train in Total Quality management
Stability of Supply	Mostly, unreliable; erratic material supply				Seek reliable material supply, appoint material supply personnel, train
Distribution		Open local and TRED A retail outlets through the factories, perhaps one shop for all.	Good network, ports and RR, also region very compact.		
Service	Not considered before	Develop a programme of service, ie. replacement of poor product, etc. at factory expense			Training, perhaps tours
Packaging	Little consideration previously	Develop modern pack-aging on international standard.			Training, perhaps tours

Who are the major competitors of the industries in the sector and where are they located in the zone, region, country and/or overseas?

Chinese, new ventures in Yanbian Province; Other parts of DPRK for local and national customers;

EQUIPMENT

What equipment/tooling is needed by the industries in the sector?

In many cases, totally new equipment will be needed. In some others, more sophisticated equipment will be required to produce higher quality and more intricate products. It may be possible to integrate some old with new equipment.

From whom will this be purchased and how and is it locally made or imported?

Initially, DPRK if possible, otherwise either bought, leased, provided through donors, or JV. It is possible some second-hand equipment could be imported for the short term.

What is the level of technology involved and how will it be acquired?

The level of technology should be equal to the abilities of the skilled staff and the level of maintenance required. In most cases the local staff should be able to adapt easily without much training. On-the-job training should be used with initial instruction by machinery producers.

How reliable is the equipment and the supplier(s)? How has or can this be verified?

N/A

What stock and/or raw materials will be needed by the industries in the sector?

This will depend on the suppliers. It is suggested that initially, a higher level of stock be maintained until all relationships are fully completed and reliance can be assured.

Where will these be obtained?

From the contract customers or through negotiation e.g., share programmes with suppliers for part of the output.

On what basis, i.e., cash, credit, etc.?

However possible, but using the most efficient method acceptable to all parties and conditions, e.g., barter trade only as the last resort.

How reliable are the supplier(s)? How has or can this be verified?

This will have to be done through contacts or experience

#### INFRASTRUCTURE

FACTOR	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
Roads	Poor	New road network that will impress investors, reduce costs, easy access from China, Russia		Will discourage potential investors	Local Government to press for repair, widening, etc. immediately
Ports	Facilities are not up to international standards, yet. No container network		Excellent location, no ice, sheltered from storms, plenty of space to expand, connected with RR	That work on the ports will not progress as rapidly as required.	Local Government to press for completion
Power			Good	Could deteriorate.	Local Government or press for continual maintenance and up-grading.
Water			Good	Could deteriorate	As above
Telecommunication	Area isolated by lack of telecommunication	System of high technology telecomm can be established			Local Government to press for completion of work already begun.
Industrial Estates	None opened; only on paper and therefore, not impressive	To show seriousness of the Zone in quest for investment and local Government commitment.			Begin work on at least one estate and progress from there.
Financial/business Services	There are none.				Local Government should press for banking & forex facilities, look for accountants, secretarial firms, interpreters, etc. to set up in Zone
Foreign Accommodation	So far none of international standard. New hotel will help. No foreign family accommodation	Good local growth industry prospects; housing, schools, recreation, etc.			Local Government to press for early establishment of such facilities.



## 7.2. GARMENTS/TEXTILES

### THE SECTOR IDEA

#### **GARMENTS AND TEXTILES**

Explain the idea; that is, what should happen in the sector and what is the sector's role in the development of industry?

Revitalize the pollution-free garment and textile enterprises in the RSFETZ through modifications in management and industry restructuring to focus on exporting, using domestic and foreign raw materials and unfinished products.

What are the reasons of the sector development?

These enterprises should lead the way to further investment in the Zone by presenting an example and an image to both the regional enterprises and international firms seeking off-shore opportunities and joint ventures. Furthermore, the development will lead to the more efficient use of the Zone's human resources and existing facilities.

### PEOPLE

Who will operate the businesses in the sector?

Local Government, with a role similar to a board of directors, and top management (probably to include a foreign element). This means that central control of the enterprises will be relaxed and top management in the enterprises will address the total management problem as revealed by the market. Foreign managers (through a management contract) will probably need to be arranged for a period to operate the enterprises and train personnel on-the-job. However, if and when joint ventures are negotiated, the management will be operated by the JV.

What will their roles be?

Business planners and implementors of the enterprises' corporate strategy.

How will their rewards be determined?

Through negotiation with the board and financial incentives.

What do these people bring to the businesses in the sector that will assist the businesses?

- Skills

Able to produce products acceptable to local and international markets (China, USSR) at an acceptable price. Maintain and operate old equipment.

- Experience

Understanding of the local and TREFDA market.

- Personal attributes

Hardworking, honest, diligent, well-educated, dependable.

SWOT ANALYSIS - PEOPLE

FACTOR	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
Board of Directors	Inexperience in this type of system.	To develop a model for other boards with built-in local attitudes.	Thorough knowledge of the region as well as possible JV.	The board may be too dominant and interfere with everyday running of the enterprises.	Training in corporate strategy, monitoring, accountability and roles. study /familiarization tours.
Senior Management	Lack of experience by local personnel in total management control	To combine the experience of outside management with that of the local personnel	Thorough knowledge of the enterprise and region.	That the management will not have sufficient training to carry out the required duties.	Training required. Probably study tours. Foreign managers hired and duties negotiated.
Technicians			Ability to keep factory operating and ability to adjust production.		Training in Total Quality Control.
Skilled Labour			Skills, diligence, etc.		

What skills will need to be acquired in the sector?

Management, Design, Marketing, Material Supplies Acquisition and Logistics, Financial decision-making, strategic planning and accountability.

How will these skills be acquired?

All the above as required; foreign transfer in JV; if not organized by UNIDO for overseas training or on-the-job training through management contracts.

How will suitable staff be recruited?

Senior Management: Management contracts - UNIDO or NGO to develop job descriptions and advertise, internationally or through their network. Local to recruit the most able people for the positions in DPRK.

Middle Management: Local to recruit the most able in DPRK.

Technical Staff: As above.

Labour: As above.

What staff are required in the sector?

Trained and experienced personnel in materials acquisition, logistics, etc.; Marketing personnel; designers at the factories or through a separate designing enterprise; Management decision makers, total quality management.

LOCATION

FACTOR	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
Materials	Not enough of some materials locally for large export market	Establish a network of reliable suppliers through port and RR	Good potential port facilities and rail connections with TREDA. Many intermediate suppliers close. e.g. Japan. Also, good heavy indust. in DPRK	Consistent supply.	Look for JV or contract work.
Pacific Rim	Unknown	Become the key link in value added items to TREDA and other Pacific Rim nations. Very large potential market.	Well located in the area with ice-free ports and RR linkages to TREDA. Close to Asian "tigers".		Advertise; send <u>trained</u> delegations.
Climate		Create a thriving manufacturing centre	Mild, good spot to locate a JV; very good for tannery		Advertise
Labour		Create a pool of highly trained and skilled personnel.	Well educated, trained, behaved, responsive		Determine training needs. Begin training programmes
Existing Facilities	Some Infrastructure not up to standard; Easier access to area needed!! for potential customers. Need banks, etc. Foreign accomm. and facilities. No telecom		Compactness of RSFETZ. Buildings in good condition. RR and ports close.	That outward appearance will keep some customers away. e.g., roads, no adequate accomm., isolatedness.	Local authorities to press for better roads, airport, communication, banks, etc.
General location	Foreign businesses unaware of region.		Good climate, environment.		Advertise

What permits, licenses, regulations are required for the businesses in the sector?  
See other documents dealing with specific requirements.

How and why has the existing or planned zone influenced the location of the sector?  
Key location in TREDA and Pacific Rim, Good potential port facilities.

THE PRODUCT(S)

List the names of the specific product(s), the key features of each and the ISIC number, if appropriate, that will be offered to the market from the sector.

Product names	Key features
Leather/imitation shoes	
Leather coats, caps, gloves	
Built-up garments	
Synthetic/natural textiles	

List the benefits of the products from the sector.

Export earnings; create a favorable impression to interested investors, use existing unused or underutilized facilities and personnel; add to the development of the region; reduce Government's need to subsidize some areas.

Is there a need for these products? How has this been determined?

In the past, TREDAs markets have existed for these products, particularly in USSR. Also, many foreign enterprises are looking for off-shore locations to relocate or to have contract goods made in order to cut high costs in their own countries.

PRICE(S)

How will prices be determined for the product(s) in the sector?

Negotiation with the customers if contract works. According to the market and costs, otherwise

## **THE MARKET**

### **The Customer**

Who and where is the target market of the products produced in the sector?

TREDA; Contract work; Also, initially, Japan, SouthKorea, Singapore, Hong Kong, Australia, Italy.

How has it been determined that those above will buy the products?

From recent patterns. Also, some small joint ventures already exist. China has shown interest and already developed some joint ventures in other areas, as has Japan. South Korea is already in DPRK in the garments field with investments of about US\$ 4 million and 5 million by Hyundai and Daewoo.

Provide a customer profile for the sector, include factors such as the country(s) and its population(s), etc.

Foreign enterprises who wish to reduce costs, particularly wage and company taxes and perhaps transportation and handling costs, to bring materials (finished at various stages) to RSFETZ to transform materials into higher level material or finished product.

### **Promotion**

How will the sector industries be promoted? Why is the sector's image different or better than sector industries elsewhere and how will this be conveyed and promoted?

Trade delegations; marketing and sales personnel; advertising in international publications and trade journals; word of mouth; invesmarts (UNIDO); IPS network (UNIDO).

What image of the sector will be presented to the market and how will this be conveyed and promoted?

Cheap, highly skilled, productive labour; quality products; Location; Potential and present port facilities and low handling charges; potential industrial estates; Investor incentives; existing facilities, ready to move into.

### **Distribution**

How will the products in the sector be distributed, including delivery?

Via rail or port. Containers can be used but some infrastructure is required for complete roll-on, roll-off facilities, to be completed soon at Rajin Port.

How and where will the products be stored?

Enterprises' existing facilities.

How will the products be packaged? For example, packaged as the competitors do, in line with market expectations, as directed by buyer.

As per contract or customer expectations.

FACTOR	WEAKNESS	OPPORTUNITY	STRENGTH	THREAT	ACTION
Price			Should be relatively low since wages, etc. not high		Train marketing personnel, Begin marketing campaign
Quality	Equipment, old, outdated, some manual		Skilled personnel		Upgrade equipment, JV, lease, buy, seek donors, train in Total Quality management
Stability of Supply	Unreliable, erratic material supply				Seek reliable material supply, appoint material supply personnel, train
Distribution		Open local and TREDAs retail outlets through the factories, perhaps one shop for all.	Good network, ports and RR, also region very compact.		
Service	Not considered before	Develop a programme of service, ie. replacement of poor product, etc. at factory expense			Training, perhaps tours
Packaging	Little consideration previously	Develop modern pack-aging on international standard.			Training, perhaps tours

Who are the major competitors of the industries in the sector and where are they located in the zone, region, country and/or overseas?

Chinese garments/textiles, new ventures in Yanbian Province, Other parts of DPRK for local and national customers; Hyundai and Daewoo in the region around Pyongyang.

#### EQUIPMENT

What equipment/tooling is needed by the industries in the sector?

In many cases, totally new equipment will be needed. In some others, more sophisticated equipment will be required to produce higher quality and more intricate products. It may be possible to integrate some old with new equipment.

From whom will this be purchased and how and is it locally made or imported?

Initially, DPRK if possible, otherwise either bought, leased, provided through donors, or JV. It is possible that some second-hand equipment could be imported for the short term.

What is the level of technology involved and how will it be acquired?

The level of technology should be equal to the abilities of the skilled staff and the level of maintenance required. In most cases the local staff should be able to adapt easily without much training. On-the-job training should be used with initial instruction by machinery producers.

How reliable is the equipment and the supplier(s)? How has or can this be verified?

N/A

#### STOCK

What stock and/or raw materials will be needed by the industries in the sector?

This will depend on the suppliers. It is suggested that initially, a higher level of stock be maintained until all relationships are fully completed and reliance can be assured.

Where will these be obtained?

From the contract customers or through negotiation e.g., share programmes with suppliers for part of the output

On what basis, i.e., cash, credit, etc.?

However possible, but using the most efficient method acceptable to all parties and conditions, e.g., barter trade only as the last resort.

How reliable are the supplier(s)? How has or can this be verified?

This will have to be done through contacts or experience

#### INFRASTRUCTURE

<u>FACTOR</u>	<u>WEAKNESS</u>	<u>OPPORTUNITY</u>	<u>STRENGTH</u>	<u>THREAT</u>	<u>ACTION</u>
Roads	Poor	New road network that will impress investors, reduce costs, easy access from China, Russia		Will discourage potential investors	Local Government to press for repair, widening, etc. immediately
Ports	Facilities are not up to international standards, yet. No container network		Excellent location, no ice, sheltered from storms, plenty of space to expand, connected with RR	That work on the ports will not progress as rapidly as required.	Local Government to press for completion
Power			Good	Could deteriorate.	Local Government to press for continual maintenance and up-grading.
Water			Good	Could deteriorate	As above
Telecommunication	Area isolated by lack of telecommunication	System of high technology telecomm can be established			Local Government to press for completion of work already begun.
Industrial Estates	None opened; only on paper and therefore, not impressive	To show seriousness of the Zone in quest for investment and local Government commitment.			Begin work on at least one estate and progress from there.
Financial/business Services	There are none.				Local Government should press for banking & forex facilities, look for accountants, secretarial firms, interpreters, etc. to set up in Zone
Foreign Accommodation	So far none of international standard. New hotel will help. foreign family accommodation	Good local growth industry prospects; housing, schools, No recreation, etc.			Local Government to press for early establishment of such facilities.

## 8. MAJOR ENTERPRISES OF LIGHT INDUSTRY IN YANBIAN PREFECTURE

### 8.1. Paper making industry

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity (ton)	market
1	Longjin paper making plant	state	27,790	1,440	paper	16,000	domestic
2	Tumen bayi paper making plant	state	1,000	162	paper	2,500	domestic
3	Hunchun paper making plant	state	6,410	642	packing paper	4,000	domestic
4	Antu paper making plant	state	6,870	640	corrugated paper	10,000	domestic export
5	Yanji paper making plant	state	1,650	274	paper	2,000	domestic

### 8.2. Printing

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity	market
6	Hunchun printing plant	state	820	133			
7	Tumen printing plant	state	1,100	249			
8	Longjing printing plant	state	1,160	197			
9	Helong printing plant	state	990	232			
10	Dunhua printing plant	state	840	298			
11	Wangqing printing plant	state	440	96			
12	Antu printing plant	state	420	85			
13	Yanbian coloured packing paper printing plant	state	3,720	361			

**8.3. Daily silicate products**

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity	market
14	Yanji glass plant	state	15,520	1,350	glass bottle	40,000 tons	domestic
15	Yanji medical glass bottle plant	state	30,740	791	medical glass bottle		domestic
16	Tumen national pottery plant	state	5,270	680	ceramic pipe ceramic jar glass tile	150,000 piece 150,000 piece 7,000 sq m	domestic

**8.4. Daily chemical products**

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity	market
17	Yanbian match plant	state	9,350	1,168	match	600,000	export domestic

**8.5. Food processing**

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity	market
18	Longjing Changbai mountain delicacies plant	Collective	750	116	soft drink alcohol drink	1000tons 200tons	Jinlin province
19	Dunhua Children food processing plant	State	14,630	139	food for children biscuits	4000tons 3600tons	domestic (No.six in China)
20	Longjing Changbai mountain delicacies food plant	State	11,590	360	can food	5000tons	domestic



8.6. *Alcohol beverages*

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity	market
21	Chao yangchuan Spirit plant of Longjing	State	7,530	608	alcohol spirit	3000tons 4000tons	domestic
22	Helong spirit	State	6,610	350	alcohol spirit	5000tons 3000tons	export domestic
23	Antu Changbai Mountain spirit plant	Collective			wine	3000tons	domestic
24	Dunhua spirit plant	State	1,580	260	spirit	2000tons	domestic
25	Wangqing spirit plant	State	1,800	160	wine spirit	1000tons 1000tons	export & domestic
26	Tumen spirit plant	Collective	770	131	alcohol drink	1000tons	domestic
27	Yuanchi spirit plant of Antu	Collective	530	110	spirit	500tons	domestic
28	Hunchun spirit plant	State	1,800	260	wine	2000tons	export domestic
29	Yanji beer plant	State	65,000	1100	beer	50,000tons	domestic domestic

8.7. *Cotton textile*

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity	market
30	Antu textile factory	state	11980	2249	cloth yarn	14000000m 2895 tons	domestic & export
31	Longjing cotton textile plant	state	940	340	cloth	4000000m	domestic
32	Helong national cotton textile plant	state	590	200	cleaning cloth cotton cloth	3500000 piece 500000m	export & domestic
33	Tumen national coloured cloth plant	state	2520	350	carpet for children		domestic

**8.8. Garments**

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity (piece)	market
34	Dunhua garments general plant	state	2280	420	garments	700	80% expo 20% dom
35	Antu garments plant	JV	1730	116	garments	200	100% exp
36	Hunchun national garment plant	state	460	130	garments	100	export & domestic
37	Longjing garment plant	collective	210	78	garments	100	domestic
38	Wangqing garment plant	collective	560	106	garments	100	domestic

**8.9. Knitting textile**

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity	market
39	Yanji knitting textile plant	state	14900	1581	knitwear	2000000 pieces	50% export 50% domestic
40	Tumen national knitting plant No.1	state	8970	850	stockings	6500000 pieces	mainly domestic
41	Tumen knitting plant No.2	state	1240	300	knitwear	900000 pieces	domestic & export
42	Dunhua knitwear plant	state	1550	370	knitwear	800000 pieces	70% export 30% domestic
43	Longjing knitting textile plant	state	540	200	knitwear		export & domestic
44	Wangqing knitting textile plant	state	950	120	polyester curtain cloth	100 tons	domestic

8.10. *Flax textile*

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity	market
45	Longjing flax textile plant	state	36530	1230	yarn spindle	1244 tons 5000 spindles	domestic & export
46	Yanbian flax plant	state	5200	520	long flax fabric	1000 tons	Yanbian
47	Dunhua flax textile plant	collective	9680	470	flax yarn		domestic

8.11. *Chemical fabric*

No.	Name of enterprise	ownership	assets (1000rmb)	employment	product	production capacity	market
48	Wangqing industrial polyester long filament plant	state	29170	268	long polyester filament	2000 tons	domestic

8.12. *Wool textile*

No.	Name of enterprise	ownership	assets (1000rmb)	employ- ment	product	production capacity	market
49	Yanji wool textile plant	state	11890	1224	wool thread	1200 tons	45% export 55% domestic

8.13. *The structure of enterprises with foreign investment of light industry in Yanbian Prefecture by the end of Aug. 1995*

Investment form	number of enterprises	country of foreign investors	number of enterprises	number of enterprises	location	umber of enterprises	sectors	number of enterprises	sectors of light industry	number of enterprises
joint venture	457	South Korea	328	156	Yanji	327	agriculture	29	food manufacture	56
cooperation	64	Hong Kong	93	437	Hunchun	70	industry	440	beverage	18
foreign investment	112	Japan	53		Longjing	56	food & beverage	75	forder	1
total	593	USA	35		Dunhua	43	real estate	19	textile	20
		Taiwan	20		Tumen	34	others	30	garment	52
		North Korea	31		Helong	24	where light industry	301	leather & hider	11
		Russia	9		Wangqing	22	chemical industry	21	wood processing	45
		Australia	3		Antu	17	medical industry	8	furniture	2
		Singapore	5						paper making	10
		Germany	1						stationery	3
		Thailand	2						handicraft	7
		New Zealand	1						construction materials	13
		Peru	1						devices	4
		Burma	1						rubber	7
		Malaysia	2						plastic	16
		Macao	3						metal	18
		Canada	5						electronics	18

## 9. TRADITIONAL MEDICINE FACTORIES IN YANBIAN PREFECTURE AND RAJIN-SONBONG FETZ

### 9.1. *Rajin- Sonbong FETZ*

#### 9.1.1. *SONBONG PHARMACEUTICAL FACTORY (SPF)*

Sonbong Pharmaceutical Factory situated at Sonbong was established in 1970. SPF possesses 1.1 hectares areas of land with 3470 m<sup>2</sup> of buildings' area. There are 141 staff working in this factory, including six management persons, sixteen engineers, fourteen technicians, seventeen skill workers.

There are five major departments in SPF as follows:

1. Administration Department
2. Quality Control Department
3. Department for Extraction of Medicinal Plants
4. Department for Production of Injections
5. Department for Production of Solid Formulations

Over 60 kinds of medicines are manufactured in this factory. The output volumes per annum are ten million of ampoules injection and about 10 tons of solid formulations, including tablets, tea bag, pills pure photochemical etc. The annual sales reached two million Wons in 1994.

The medicines manufactured in SPF can be classified into three groups.

Group one: medicines oriented to international markets

The medicines and pure phytochemicals in this group are as follows:

1. Korean ginseng products, such as ginseng yendan (pills), ginseng tea etc. These products are exported mainly to southeast Asia and China.
2. Diosgenin: (diosgenin is a kind of pure phytochemical substance prepared by extracting of *Dioscorea nipponica*, a species of medicinal plant which is widely distributed in DPRK and northeast part of China. The diosgenin manufactured in this area is exported to Netherlands and Germany. Shering Pharmaceutical company in Berlin produces a series of hormone medicines by using diosgenin as chemical raw material).
3. Sambali: (Sambali is produced by using sea animal named starfish. This medicine is exported to Inner Mongolia of China for treatment of stomach ache).

Group two: medicines oriented to domestic markets

The medicines of this group are biological preparations, such as esterone injection, cytochrom C, etc.

Group three: medicines oriented to local consumption

Most of traditional medicines, other than ginseng products, Sambali etc., and diosgenin are produced to meet the demand of Rajin-Sonbong Area.

The technologies of SPF are at the level of sixties. For example, production of injections is still carried out by hands, not by automatic machine. The ampoules required for injections are also produced by hands.

Most of equipment and instruments used for production and quality control are old with an exception

of vacuum freezing drying machines and centrifugal separators which were imported from Germany. There are old-type extractors and evaporators used in the Department for extraction of medicinal plants, two primitive tabulating machines, four reaction ovens and mechanical balance, glassware etc. There is no High Performance Liquid chromatography (HPLC) instrument, no Gas chromatography (GC) for quality control. So SPF should be improved and modernized by introduction of advanced technologies and modern instruments and equipment from abroad. What is more, the manufacturing practices in SPF is far below the GMP standard of World Health Organization (WHO).

Most of raw materials required for production in SPF is obtained locally or domestically. Part of them is imported from China.

SPF has three bases for raw materials: marine raw materials such as starfish are from nearby sea coast. Ginseng is cultivated in Kaesong in large area. Recently 100 Hectares of ginseng is also cultivated in Rajin-Sonbong area. So these are no problems in supply of raw material for production of ginseng products. The medicinal plant, *Dioscorea nipponica*, is widely distributed in northern part of Korea. Its natural resource is rich. The rest of raw materials are mainly animal or human original, such as human urine, duck blood, internal organs of animals, etc. These raw materials can be supplied locally or domestically.

#### 9.1.2. *RAJIN PHARMACEUTICAL FACTORY (RPF)*

Rajin Pharmaceutical Factory is located at Sinbung-dong, Rajin District, Rajin-Sonbong City. It was established in 1975. RPF is a very small factory. There are only 23 staff working there.

The major traditional medicines manufactured in this factory are tablets, pills, powder, tincture etc. such as *Scopolia peptic* tablet, *Ryongsinwan* pill, *Rhubarb* pill, *Tractylis ovata* millet jelly. The sale value was 270,000 won in 1994.

The equipment used in RPF is primitive. There are two milling machines, one cutting machine, two pill-making machines, one alcohol-distilling tower, two extractors and two evaporators. The quality of medicines produced can not be well controlled because of lack of analysis instruments.

The raw materials required for production of traditional medicines are obtained from this region and from state company of medical materials. The medicines manufactured in RPF are used in Rajin-Sonbong Area for clinic treatment of diseases.

#### 9.1.3. *OTHER COMPANIES IN RAJIN SONBONG FETZ*

There are other three units where about 50 kinds of traditional Korean medicine are produced. The three units belong to Sonbong Hospital, Rajin Hospital and Sungri chemical complex hospital, respectively. Most of the traditional Korean medicine produced in these units are used within these hospitals only.

### 9.2. *YANBLIAN PREFECTURE*

#### 9.2.1. *DUNHUA PHARMACEUTICAL FACTORY (DPF)*

DPF was established in 1970 on the foot of north mountain of Dunhua, with a river running in front of the factory. DPF has 61800 m<sup>2</sup> area of campus land with 28,700m<sup>2</sup> of building area. There are 793 staff working in DPF, including 184 engineers and pharmacists.

There are seven major departments in DPF as follows-Administration.

1. Research Institute
2. Quality Control Department -Department for pre-treatment of crude Drugs
3. Department for Extraction of medicinal plants
4. Seven Departments for Formulations (pill, granule, oral liquid, capsule, tablet, tincture)
5. Pilot plant

DPF has technological base for production of 100 kinds of traditional Chinese medicine. But recent year only prioritized 10 kinds of traditional Chinese medicine are produced in this factory. Annual output value was 110 million RMB with a profit of 13 million in 1994. The products of DPF have strong markets in southern parts of China.

The major competitive positions of DPF are:

1. Rich and steady supply of raw materials: All raw materials used for production are from Changbai mountain, the big natural raw material base. The natural resources of these raw materials are very rich and are more than enough for industrial production.
2. Strong markets in China, especially in southern parts of China. Some product, such as Autaile (anti-hepatitis drug) has very strong market, and the production of it can not meet the demand of the market.
3. Highest ability for research and development of new traditional Chinese medicine in Yanbian Prefecture. There is a research institute in the DPF, in good collaboration with Changchun College of traditional Chinese medicine and Beijing Academy of traditional Chinese medicine. Recently, 5 types of capsules for treatment of apoplexy are researched and developed. These new types of traditional Chinese medicine are expected to have stronger international markets because of lack of good chemotherapy for treatment of these difficult diseases.
4. Advanced technological base: The reformation and modernization made DPF have advanced equipment for production, such as computer-controlled auto-extractor, automatic producing lines for manufacturing capsules and oral liquid.

The major weakness of DPF is lack of working capital for production because in the last two years 40 million RMB was used for reforming and modernizing of the equipment and instrument. In addition, DPF is lack of international marketing personnel. So the best way to solve these problems is establishment of a joint-venture company with a foreign investor.

#### 9.2.2. HUNCHUN PHARMACEUTICAL FACTORY (HPF)

HPF located at Henan Street of Hunchun City was established in 1986. This factory has 68, 815 m<sup>2</sup> campus area with 6, 269 m<sup>2</sup> buildings. Its fixed capital is 8. 19 Million RMB.

There are 318 staff working in HPF, including 25 management persons, 34 qualified engineers, pharmaceuticals, analysts and technologist. HPF produces 7 formulations, 31 kinds of medicines, two kinds of pure plant chemicals-ginsenoside and diosgenin.

The total output value was 26 million RMB with profit of 3.6 million in 1994.

HPF has good equipment for production of ginsenoside and diosgenin. The production capacity of diosgenin is 30 tons per annum. Diosgenin produced in HPF was exported to Shenyang Northeast Pharmaceutical Company for manufacturing of hormones.

Now HPF started a new project " Production of Hydrocortisone by using diosgenin." This new project needs total investment of 3. 41 million US dollars. Production of 5 tons hydrocortisone would create output value of 25 million RMB with 7. 8 million profit per annum, HPF wants to establish a joint venture company with foreign investor for development of this product.

### 9.2.3. YANJI SECOND PHARMACEUTICAL FACTORY

YS Pharmaceutical Factory located in Aidan Street of Yanji City was established in 1970. It has 33, 000 m<sup>2</sup> Factory campus with 17, 000 m<sup>2</sup> of building area. There are seven departments in YS Pharmaceutical Factory: extraction, oral liquid, pill, tablet, granule, quality control and research institute. The fixed capital of YS Pharmaceutical Factory is 10. 63 million RMB. The sale values and profits are as follows:

	1992	1994
sale values	7.78 million	33.75 million (RMB)
profits	0.76 million	2.5 million (RMB)

This factory can produce six formulations, 100 kinds of traditional Chinese medicine. The key products are Guyan granule, ginseng products, etc.

There are 539 staff working in the YS Pharmaceutical Factory, including 75 qualified engineers, technologists, analysts and pharmacists.

The production equipment and analytic instrument are old-typed. YS Pharmaceutical Factory has a new project, Guyan granule, which is new state-class medicine for treatment of cancer. This product is expected to further develop by joint-venture company. This medicine is estimated to have strong markets in China because of its specific therapeutical efficacy.

### 9.2.4. ANTU PHARMACEUTICAL FACTORY (ATPF)

ATPF located at Antu County was established in 1967. ATPF has 38, 000 m<sup>2</sup> area of campus land with 27, 000 m<sup>2</sup> of building area. There are 560 staff working in ATPF, including 68 engineers, technologists, pharmacists, analysts. ATPF has fixed capital of 18 million RMB. Major products of ATPF are health medicines, health drink.

This factory is well known by its ginseng products. The output volume of ginseng-loyal jelly reached its maximum 45. 4 million boxes in 1988. It's value was 18 million RMB.

This factory has department for extraction, tablets, capsule, oral liquid and granule.

50 kinds of traditional Chinese medicine can be produced in ATPF. The products of ATPF are exported to 23 provinces in China and to Japan, Russia, South Korea and Singapore.

ATPF has integrated equipment for production and instruments for quality control, such as HPLC which was imported from Japan. The mission suggested ATPF to pay more attention to quality control of products. The best way would be a joint-venture with Pharmaton Company, Switzerland. Pharmaton has advanced technology for production of Ginsana (G 115) and international marketing experience. The product manufactured by joint-venture company could meet the demand of Chinese market for Ginsana.



9.3. *Output Values and Distribution of Some TCM in Yanbian*

Product Names	Manufacturers	'94 Output values	Distribution	Competitive positions
Anshenbubnoye	Aodong Pharm. Company	101 Million	Every Provinces of China	raw materials are rich in YKAP
Xueshuan-Xinmaining	HuaKan Pharm. Factory	107 Million	"	High Quality
Aotaile	Dunhua Pharm. Factory	18 Million	Southern Provinces of China	High Quality
Fufangyiganling	Dunhua Pharm. Factory	12 Million	Every provinces of China	High quality, rich raw material
Yanxuejing	Yanji No. 2 Pharm. Factory	11 Million	Southern Provinces of China	
Shenlibu	Dunhua Pharm. Factory	6 Million	"	
Ginseng liquid	Huakan Pharm. Factory	7 Million	"	rich raw materials
Haigoduebian pill	Yanji No. 2 Pharm. Factory	2.4 Million	ROK, China	
Jianfeijing	"	1.5 Million	ROK, HK	
Diosgenin				

9.4. *Research and Development of New TCM in Yanbian (New Projects)*

Names of New TCM	Researchers	Investment Plans	Output per Annum	Profits	Therapeutic Effect
Linyuanshi-kening	Dunhua Pharm. Factory	1.36 Million	7.6 Million	1 Million	apoplex
Shungheyen-lingminmuye	"	1.3 Million	19.5 Million	2.4 Million	anti-aging
Beyuang Ginseng liquid	Dunhua Ginseng Factory	10 Million	12.5 Million	5.9 Million	tonic
Gandujing	Uangchin Pharm. Factory	2 Million	80 Million	12 Million	anti-hepatitis
Chiguangling	Helong Pharm. Factory	1.75 Million	3.5 Million	350,000	anti-bronchitis
Ganmaoke-xing	Yanbian Pharm. Factory	1.7 Million	29.5 Million	13.5 Million	anti-cold anti-fluenza

Note : Money unit is RMB in this table.

9.5. *Production capacities and market orientation of Sonbong Pharmaceutical Factory (SPF)*

Products	Production Capacities	Market Orientation	Notes
Gonadotropin (injection)	1,000 Ampoules x 200	Whole DPRK	Sexual stimulant
Kaliculenin (injection)	1,000 Ampoules x 150	Whole DPRK	hypertension
Cytochrom C (injection)	1,000 Ampoules x 20	Whole DPRK	
Merchenin (injection)	1,000 Ampoules x 400	Whole DPRK	anti-cancer
Folliculin (injection)	1,000 Ampoules x 300	Whole DPRK	female hormone
Diosgenin	10 ton	Germany	
Ginseng tea			
Sea star			
Silymarin VB12 Heparin			

## 10. THE FOOD PROCESSING SECTOR IN PRIMORSKI KRAI

### 10.1. *Committee for the Food and Food Processing Industries*

#### **FULL ADDRESS:**

PERVAYA MORSKAYA, 2  
690007 Vladivostok  
Tel: (42 32) 22 66 78  
Fax : (42 32) 22 65 13

#### **NAME AND POSITION OF KEY CONTACT PERSON:**

Mr. Boris Ivanovich YEMETZ  
Chairman,

#### Global figures:

51 enterprises (on 1.1.1995) and 56 (October 1995) enterprises working in food processing (excluding seafood processing) and 3000 persons in 1995.

Food Processing 23  
Milk Processing and Milk Products 19  
Meat Processing and Sausages 9

Until 1991, all sectors are developed by state according the « soviet » sectorial development program. In Recent Time, due to the shortage of all subsidies and price policies, lack of state guarantees, the volume of production gradually decreased.

In 1994, main facilities of meat production were used only on 21.7% of nominal production capacities and 47.8% of sausage productions.

#### Nominal capacities:

The existing facilities on 1/1/1995 on meat processing allow Primorsky to produce:

97 Tons of Meat per shift  
66 Tons of Sausages per shift  
20 Tons of half ready prepared per shift

In 1994, main facilities of milk production were used only on 23% of nominal production capacities.

The existing facilities on 1/1/1995 on milk processing products allow Primorsky to produce:

1000 Tons of milk products per shift  
7 Tons of Butter per shift  
3 Tons of cheese per shift.

The nominal production capacities in the region at (1/1/1995) for food processing are:

<b>FOODS</b>	<b>NOMINAL CAPABILITIES OF PRODUCTION</b>	<b>RATE OF PRODUCTION</b>
Confectionery	23.8 Thousand Tons/Year	61 %
Alcoholic Beverages	2348 Million daL/Year	61 %
Beer	9.8 Million daL/Year	28 %
Non-Alcoholic Beverages	7.6 Million dal/Year	6 %
Vegetable Oil	16 Thousand Tons/Year	45 %
Margarine	22.4 Thousand Tons/Year	22.4 %

**FEDERAL STATE STRUCTURES**

Decide question of subsidies

Questions of raw materials importation from (Chine, USA)

Subsidies in 1994:

3 billion rubles have been distributed to 6 enterprises, from the federal governments, for the main purposes to complete uncommissioned building, offices and shops, all structures with building on stage, planned and started before Perestroika.

Investments in 1994:

1.2 billion rubles are paid from local budget.

Subsidies and investments in 1995:

No federal subsidies in 1995 and only 0.2 Billion Rubles from local budget.

The criteria of distribution subsidies changes now and will be defined, with each case studies, with local administration.

Top Priority: Milk production.

Wait assistance from foreign investors: link to any investor need to invest in food processing.

New project:

USA proposal of Investment for wine production (?) on raw grapes imported from Ukraine. Vladivostok have had the old experience in this sector (?). Transportation cost is not so high (by Railway ?).

Raw Materials imported:

- Meat Supply to be processed: 3000 tons per year, from Korea, China, England, Italy
- Raw Sugar from Cuba and Brasilia 300.000 tons, capacity of processing
- Soya, Margarine, Arachnid (soap production 100.000 tons imported, 54.000 tons processed).
- Can sale to Siberia

Global, local and national Taxes in the sector:

LOCAL TAXES :		FEDERAL TAXES	
1)	Social Insurance's	1)	Special taxes
2)	Pension Funds	2)	Value Added Taxes
3)	Medical Care Funds	3)	Axis ?
4)	Unemployment Funds	4)	Income Taxes
5)	Education Funds	5)	Stamps Taxes for Checks and Bills
6)	Public Transport Funds	6)	Custom Taxes
7)	Water Resources Uses Taxes	7)	On Natural Resources use Taxes
8)	Property Taxes	8)	Profit Taxes
9)	Property Estates	9)	Over Salary Payment
10)	Trade Right Taxes	10)	Uses of Roads
11)	Militia (Police) Taxes	11)	Distribution of Oil Products
12)	General Advertising Taxes	12)	On use of Cars
13)	Land Improvement Taxes	13)	Transportation
14)	Advertising Taxes		
15)	Right of Alcoholic Trade		
16)	Sale of cars and Electronics		

**RAW MATERIALS ORIGIN:**

(please detail Quantity, Transportation costs, Units Prices, ....., etc.):

From Primorski Krai Region (Quantity of local production)

Meat 11.5 %

From Middle Russia

20 to 30 % Dry milk

Soya, from Embarks Region

From West Russia

Nothing

**IMPORTATION OF RAW MATERIALS:**

From Japan

Nothing

From Korea ( North or/and South), Please detail.

Nothing

From China

Meat (Beef, Pork) and Nuts

From USA

Meat (Beef)

From Others (New Zealand, Australia, south-east Asia, Europe, ....., etc.)

Meat: China, USA, Australia, Denmark (60 to 65 %)

Butter: Australia and New Zealand

Raw Sugar: Brazil, Australia, Thailand, through French Companies « SUGDEN ».

**COMPETITION with all IMPORTED GOODS:**

Level Price

EDUCATIONAL, TRAINING, TECHNICAL ASSISTANCE INSTITUTIONS, etc.. involved in this sector:

Highest skill personnel has been mostly prepared by Far Eastern Technological Institute of Food and Fish Industry.

Skill improvement is carried out by:

- Russian Institute of skill improvement
- Volgogradskaiyia School of skill management
- Krasnodarskiy Regional Institute
- Novosibirskiy Sectoral Regional Institute of Agribusiness
- Voronejskiy Interregional Institute of Retraining for Food and reprocessing Industries
- State Technical Control Service and Administration make severe controls for the conditions of equipment and workers skill levels.

**NEW SCHEDULED PROJECTS:**

Set-up an new modern system of retail distribution for food products (dedicated supermarkets).

50 retail shops have been sold by adjudication to private companies.

The need of more expertise to implement and organize the retail market.

They start a new program to build new retail shops equipped « with international standards ».

**10.2. GORMOLOKOZAVOD, MILK FOOD FABRIC NAKHODKA****FULL ADDRESS**

Severni promuzel  
Primorski Krai, Nakhodka  
692900 RUSSIA  
Tel/ Fax : 4 93 84

**NAME AND POSITION OF KEY CONTACT PERSON:**

Mrs. Irina V. ANTONOVA, Executive Director

**STATUS:** State Firm Established in 1978, Privatized in 1993 on Joint Stock Company.

**CAPITAL:** 15 Billion Rubles

Shareholders: 93 % Physical Persons (Mr. SUPRONOV, Mr. GUENADIY, and Mr.  
Jesniev IVGUEINEY)

7 % Other Physical Persons (400) of which 1% for Workers Personnel.

**TURNOVER IN 1995:** 24 billion Rubbles

**STAFF AND WORKERS:**

Total of 200 persons distributed on:

Management	31
Technologists	9
Accountant and Finance	8
Economists	2
Commercial	4
Machinery	6
Workers	140

**MAIN PRODUCTS AND MAXIMUM CAPACITIES:**

Maximum capacities Warehouse: 20 Tons Refrigerated products

200 Tons not Refrigerated products

Maximum Total Production capacities are 70 Tons/day.

40 items are produced, distributed on: Milk 30 tons

Yogurt 20 tons  
Sour Cream 10 tons  
Chocolate Cream 10 tons

**Production Volume in First quarter 1995 and 1994**

	1st Quarter 1995	1st Quarter 1994	Total Year 1994	Total Year 1993
Number of Staff (persons)	202	172	174	172
Volume of sold products (tons)	8 475	2 987	6 576	
Butter				
Cheese	6	9	14	32
Milk Products (tons)	3 371	4 855	9 103	10 696
Ice Cream	85	47	181	214
Raw material processed (tons)	3 521	4 876	9 900	10 487
Raw mat. from Farmers	951	1 407	2 065	4 089
Raw mat. from Plants	1 833	2 792	7 095	5 980
Others	737	677	740	420

New products in studies progress:

- Soya bean products to produce protein (soya milk, soya cheese) with special APV company.
- In 1993 and 1994, 10 new products have been launched: 2 Yogurt, 2 Pudding, 1 Dessert, 3 cheese, 2 cakes with ice cream.

**MARKETING:**

No marketing studies.

Distribution to Shops, Canteens, Hospitals, and Kindergarten.

**COMPETITORS:**

Small farmers are producing and distributing 6 tons/day (as raw materials).

The competition shares only 10% of all milk products market.

GORMOLOKOZAVOD's prices are 15% higher than local competitors.

**PRICING:**

The sale price of their products are 50 % cheaper than international products imported or manufactured through international groups (Nestle, Danone, Mars & Co.)

Capacity of Market : Nakhodka, Partizansk, Vostochny, Tichekansky, BolshoiKommun.

New products are launched in the market.

Price of milk is in continuous increasing: No governmental subsidies, Number of Cows in continuous decreasing.

This sector was supported by former governments. Stopping all subsidies.

**INVESTMENT CLIMATE and new projects or investments**

No merging plans with other local or foreign companies

No downsizing

Bad investment climate, due to high rate of inflation.

Shortage of economical credit: In May 1995, NAKHODKA FEZ made a 600 million Rubles (short term loan: 6 month ) at 110% privilege's rate interest. They have to refund 1 billion Rubles. This loan is used to collect and stock raw material - milk.

### 10.3. NAKHODKINSKIY, Joint-Stock Company Meat-Packing Plant

#### FULL ADDRESS

Primorski Territory  
Sverdlov Street, 10  
NAKHODKA (Russia)  
Tel : (8266) 4 94 84  
Fax : (42366) 4 93 00

#### NAME AND POSITION OF KEY CONTACT PERSON:

Mrs. Olga A. SMIRNOVA, General Director

#### STATUS AND SHAREHOLDERS:

Joint Stocks, privatized in 1992, with Charter Capital of 4 million Rubles.

Main New Capital in 1995: 39 billion Rubbles

Shareholders: 78% Workers

22% NAKHODKA Free Economic Zone Committee

#### FACILITIES POTENTIALS:

Areas of facilities: 13 hectares

Possibility to be connected with railway network

Capacity of Frozen and cooled facilities: 1,200 Tons

#### Pollution and Environmental:

They have their all facilities to treat the production wastes. But no details have been presented (?)

The environmental duties is managed and controlled by the Central Committee (NAKHODKA FEZ. Councils. and the management of the plant (no details ?).

#### HUMAN WORK FORCE :

280 persons distributed as :

Board Management	7
Technologists	7
Commercial	5
Laboratories (Hygiene and Sanitary)	6
workers	255

They developed in this factory a leading collective special worker agreement defining:

- Incentives for all workers according to their efficiencies on volume and quality products.
- Milk distribution for all workers
- Vacations and day-off
- Transportation and buses to collect workers.

#### PRODUCTS AND MAXIMUM CAPACITIES:

Maximum Meat Processing volume capacities: 30 tons/day

They are working on 50 % on their capacities and produce:

- 15 Tons/day according to the market demand and availability of raw materials.
- Distributed on 56 Items: Sausage, Semi-prepared and cooked meat.

Market demands are function of:

- Daily Consumers needs, no medium range previsions
- Seasons
- Raw materials

All products are inspected and tested according to the GOST standard.

A certificate of Quality is produced by factory internal laboratories.



**DISTRIBUTIONS NETWORK:**

They start to create a "Bistro-Restaurant-Delicatessen" in NAKHODKA in order to market, sell and promote all their products.

All their products are sold "Fresh" on line daily production basis.

No need to on line stock management and no need to big cooled warehouses.

25 distribution vans are making daily delivery works to 600 retailed city shops in the Region of NAKHODKA.

- 45% of the production output are distributed by these shops.
- 55% are old on direct deal orders basis to Kindergarten, hospitals, canteens.

**RAW MATERIALS:**

70 % of raw materials and bones used in this factory are imported as FROZEN RAW MATERIAL from:

- China
- USA
- Australia

**COMPETITIONS:**

They have a monopoly fact in the region of NAKHODKA.

6 small similar units exist in Partizansk Region which have 1 ton/day production volume capacity.

**PRICE DISTRIBUTION :**

For 100 % of cost price :

- 65 % Raw Material (Importation)
- 5 % Additional (Local and Imported)
- 12 % Salaries
- 15 % Power and utilities (Electricity, Steam, Boilers, Water)
- 3% Unexpected expenses, taxes, credits.

Some figures: the cost of Water supply for 3 month including the cost of Boiler working budget for 1.5 year is around 1.2 billion Rubles.

Outstanding Problems: Reducing the cost rate of power and utilities to 5 %

**IMPORTATION OF SIMILAR GOODS:**

- No figures are available.
- Estimation of 10 % from the global demand.
- These products are manufactured as a "regional products" and match the Russian Far-Eastern taste.

**MAIN CLIENTS AND MARKETS:**

Only Local Market, and no export: These products are typically prepared and cooked on the Russian Taste.

These products are distributed on the: Canteens, Schools, Kindergarten and Retail shops in Primorski Krai.

**NEW INVESTMENT SCHEDULED :**

- 1) Decrease the cost of Power utilities:
  - Investment to build a new boiler
  - Drill a well for fresh water, on the aim to reduce to **Power rate from 15% of Cost Price to 5% only.**
- 2) Invest to acquire new packaging equipment from USA (Seattle) and from CIS (Ukraine).  
Lag of Russian banking guarantee to obtain the credit. All the question are discussed and decided by Central authorities in Moscow and not in NAKHODKA.
- 3) In April 1995, they acquired new modern equipment from Germany in order to increase their production output from 15 tons/day to 16 tons/day.

**ASSISTANCE AND SUBSIDIES:**

No Federal Help or subsidies.

The shareholder "NAKHODKA free Economic Zone Committee" support them by allocating credits on loan basis with "*acceptable interest rate in Russia*" for :

- Acquiring new equipment                      1 billion Rubles
- Acquiring Raw Materials                      2 billion Rubles.

**INTERNATIONAL CONTACTS:**

They are very active to get new contacts with international companies and institutes.

A colloquium "USE THE MODERN TECHNOLOGIES FOOD INGREDIENTS AND ADDITIONAL MATERIALS IN THE PROCESS OF MEAT AND MILK PRODUCTIONS" has been held from 27 to 30 September 1995 in their plants:

Local, Russian and International participants :

- Institute of Milk Industry - Moscow
- BIELID Company (Russia)
- BUSH BOAK ALLEN Company (Great Britain)
- BIOTETRA Company (Belgium)
- WISCO Company (Finland)
- PROTEIN TECHNOLOGIES INTERNATIONAL (USA)

**STRENGTH:**

Good popularity and Monopoly.

Adapted product for the local market.

Adapted Price even highly increased during the last 5 years.

Started effort on marketing duties and commercial sale force.

**WEAKNESS:**

Lack of investments.

Quality to be improved.

Hygiene and sanitary to be reviewed according to international standard.

Old processes (to be revamped).

Distribution not optimized.

No stock management due to lack of all packaging equipment.

The similar imported products (from China and South Korea) start their introduction in the Primorski Krai and NAKHODKA - with competitive prices and widely distributed - marked and share their local food processing market.

## 11. GARMENT SECTOR ENTERPRISES IN PRIMORSKY KRAI

### 11.1. Joint-stock company ZARIA

(Textile, Fashions, Garments)

#### FULL ADDRESS:

Stoletiya Avenue 155,  
Vladivostok , 690069  
Russia

#### NAME AND POSITION OF KEY CONTACT PERSON:

Mr. G. L. BUBUSKIN, General Manager

Staff: 2000 persons before privatization (1989).

Effective Privatization in 1992 and Capital: 17041 Million Rubbles. Used Capital: 33,7 %  
Shareholders : 1000 persons

Debts: Loans from Social Insurance Funds: 100 million Rubbles, with 66% rate of interest.

Out put production: From 1/1/1995 to 31/6/95: 2751.6 million Rubbles.

Net Income before taxes from 1/1/1995 to 31/6/1995: 1756 million Rubbles.

#### Dynamic Figures:

Year	1990	1991	1992	1993	1994	Sept. 1995
Turnover (1000 R.)	31 714	94 097	547 909	3 703 938	4 277 679	7 763 000
Staff (persons)	1800	1800	1500	1400	1000	500

Production Output from 1/1/1995 to 1/9/1995 :	Thousand Units	Million Rubbles
Costumes for Men	16.2	3 376.0
Trousers	13.7	840.5
Shirts for Men	12.0	403.0
Silk Dresses for Women	5.3	1 116.0
Others	---	2 027.5
<b>Total</b>		<b>7 763.0</b>

Rentability production Level: 6% maximum

Human resources in January 1995: 600 persons distributed in :

persons Management 40  
personas, Technical, Design, Experimental 35  
persons Working on sewing machines 450  
others (drivers, mechanical, ...., ) 100

Average Wages in September 1995: 400.000 Rubbles/month for half skilled workers.  
950.000 Rubbles/month for designers.

Surface of the facilities: 22,5 hectares in general



**Distribution Channels of ZARIA output production :****Local market:**

- 30 % of output production will be directed to be sold in 4 special shops (ZARIA's official distributors) owned by private company in Vladivostok downtown which are occupied by 20 persons. The final customer sale price is decided by ZARIA at 20% benefit only.
- 50 % of output production will be directed to general stores, which are allowed to have more benefits (60 to 200 %) of ZARIA sale prices.

**Compensation of ZARIA production shortage:**

"The Shuttle Trade market" from China and South-Korea: 70 % of the Clothes market in Vladivostok region.

Low prices level

Non adapted quality level

No importation taxes

The Chinese clothes and goods imported by "Shuttle trade market" have been slowly replaced by South Korean products. Best quality, best prices level.

Official Russian taxes for "Shuttle Trade Market": around 1 US\$ per Kg of any goods imported for each trip, when the prices of all goods (imported by travelers) are "estimated by the customs representatives" for less than 2000 US\$ per trip.

There is no rational or accurate definition for custom rate depending for goods (textile, foods, toys, stationary, etc. It seems, the rate is unique for all goods and depends on each trip or on each « customs controller and bargain with travelers. Practically speaking, the customs rate for these savage and existing importation is null ».

New Russian laws try - without any real success - to regulate this situation.

**STRENGTHS :**

- Wide variety of products: assortments of 36 different models.
- Diversification of products: Blankets, uniforms, industrial workers' clothes.
- High quality of raw materials. but unadapted to competitive market.
- Up-dated fashion (new models Summer/Winter each year).
- Participation of professional conferences, exhibitions, fairs.
- Library of models and fashion publications imported from Germany.
- Good relationship with the INSTITUTE of LIGHT INDUSTRY TECHNOLOGY in Vladivostok: All designers working in ZARIA have been graduated from this institute.
- Short time of production and respect on scheduled delivery time (10 days) for special orders.
- Possibility of working in 1 or 2 shifts.
- More than 50 models for each main product : Wide choice of sizes.
- Anticipation of market demand.

**WEAKNESSES:**

- The main weakness is working exclusively with long cycles risky products on integrated systems. No sub-orders or buy-out.
  - High cost-price production level due to:
    - Unadapted old technology equipment for high quantity production (inexisted level of automation, no optimization of raw materials and work force management, ...)
    - 200 % bank interest rate and high inflation.
    - high level local taxes.
    - Transportation cost for raw materials. No local raw materials in Vladivostok Region. All raw materials are imported from Moscow and Lithuania. The railway freight cost have been highly increased. The Poland wool (for example) have had an acceptable price, but the transportation cost will make the final raw material price too high.
- Weakness of market : Reduction of life standard in Russia (due to inflation) reduces the potential to buy new clothes every years and laminates the market size.
- The competitiveness of "shuttle market trade"

- Despite official regional regulations after privatization, the Social debt is still too high. ZARIA have to pay every month 200 million Rubbles to "Community of Workers Housing". This amount must be taken by local government.
- No diversification plans.

#### **New Projects and Investments:**

- Wishes and hope to revamp and modernize 50 % of existing equipment. New technologies and automation processing.
- Some contacts with potential customers (Korean and German) to make some special arrangements.
- The customers should supply all raw materials, all designs and all packing systems asking ZARIA for only output production with international standards. The barter system will include payment with supplementary raw materials (project on preliminary study stage).
- Other Project : Joint-Venture 49%/51% for ZARIA with USA potential customers (confidential on this stage) includes supplying all above conditions plus new equipment and machines (project on preliminary study stage). The customers will arrange all distribution channels in 3 exporting countries.

#### **SPECIAL DIFFICULTIES:**

##### **External:**

- Shortage of electricity during working hour, decreasing the productivity.
- Unpaid invoices and barter.

##### **Internal:**

- Old stocks
- Unadapted fashion
- No marketing plan and commercial activities
- Old R&D system and no new designers, no contacts with abroad, completely closed autarchy
- No incentives for workers and designers
- Old equipments: No data processing or automation
- No marketing at all (old packing system)
- Lack of training on design, processing, marketing, competitors, knowledge of world-wide market
- Raw materials unadapted for 2000's.

## 11.2. ZODIAQ Joint Stock Company

### FULL ADDRESS:

Uglekamensk settlement  
Partizansk Region  
Primorski Krai  
Russia  
Tel: 91 198

### NAME AND ADDRESS OF KEY CONTACT PERSON:

Mrs. BOGDAN Valentina Mefodievna, General Manager

Status: Joint Stock

Date of Effective Privatization: 15 Feb. 1993

Official capital at privatization time: 9.098.000 Rubbles

Actual total of human resources (in September 1995): 95 persons

Distributed in:	Management	10	Commercial	4	Technical and Designers	2	Workers	79
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### Dynamic Figures:

Average worker's salary per hour in US\$ or Rubble (September 1995):

	1990	1991	1992	1993	1994
Global Turnover (1000 Rbl)	2 969.8	11 113.0	45 816.0	380 400.0	907 629.0
Total human Resources	239	218	170	139	109

Average salary in September 1995: 57 US\$ = 256 500 Rubbles.

### Output :

Quantity	Details	Goods turnover (Million Rubbles)	Profit per Unit (Rubles)
59 900	Bed Clothes, Blanket Cover, Sheet, Pillow-case	1 760	12 700
8 500	Quilted Things : Blankets for adults & children, Mattress cover	760	26 000
39 500	Dresses : Tunic dress, dressing-gown, suit	1 228	13 600
29 000	Underwear : Peignoir, night-shirt	560	8 300
30 000	Children clothes : dress, tunic dress, blouse, nappy, baby's loose jacket, baby clothes	600	4 00

**Main Equipment: Detailed and global features :**

Equipments, mention numbers, technical features, (Grouped)	Date of commissioning	Origin. Made by
97KL 93 Sewing type (grinding off)	1984 - 1992	Russia
335 - 337 10 Sewing Zig zag	1986 - 1991	Germany
Juki 3 Juky oversewing (grinding off)	1970	Japan
51 6 Finishing operations, assembling	1990-1991	Russia
827 - 25 22 Machine for Buttonhole and buttons	1985 - 1992	Russia

**OUTPUT PRODUCTION SOLD :**

	1990	1991	1992	1993	1994
Bed Clothes, Blanket Cover, Sheet, Pillow-case	126 112	189 011	147 428	68 866	29 995
Quilted Things : Blankets for adults & children, Mattress cover	15 581	14 778	7 021	2 409	1 525
Dresses : Tunic dress, dressing-gown, suit	3 512	17 757	31 357	23 201	8 678
Underwear : Peignoir, night-shirt	141 989	154 878	25 352	9 883	1 148
Children clothes : dress, tunic dress, blouse, nappy, baby's loose jacket, baby clothes	33 686	8 321	13 876	140	3 262

**Raw Materials Imported and local (Russian) made) (in Thousand meters)**

From Russia	1990	1991	1992	1993	1994
1) : Cotton print	1 847.1	5 082.2	838.0	335.9	245.0
2) : Sateen	606.3	806.0	700.0	115.3	48.0
3) : Flannel	110.0	6 60.7	50.3	33.0	40.0
4) : Tick	120.0	100.0	13.0	---	13.0
5) : Cotton	90.0	88.0	9.3	16.0	1.5
6) : Silk	---	100.0	6.0	---	---
7) : Diagonal	---	---	33.0	118.0	---

**Distribution Channels for Final products and Packing:**

(from producer to final consumers)

Trade, industrial enterprises.

**Packing Machines:** No packing machines.

Goods are sold packed in boxes.

**Direct sales from producers to local shops:**

Direct sales (2 agents/mediators before final consumers).

**Knowledge of competition:**

No idea about similar products imported from abroad.



**STRENGTHS** according to the competition: Primorski Region, Russian Federation, International market, etc.

- Good product definition.
- Good quality products of cotton, guarantee of good works, design have been made by sold in fashion shop and made by experimental producers.
- Good quality of products manufactured on GOST standard and sectoral standard
- New products.
- Equivalent price level (specially according to importation of similar products).
- The guarantee of production terms on delivery time.

**WEAKNESS:**

- Old models not many changes, no new design.
- Very simple models and no complicated.
- No special automation, need to many work to produce.
- Production tax rate is 45 - 50 %.
- No any help form government.

**Investment projects:**

- No investments in progress.

**Contact s and relationships with international companies:**

- No contact with foreign companies abroad.

**Revamping existing facilities:**

- New building plans, many projects to establish new retail shops and plans to purchase new equipment.

**New equipment:**

- Not decided yet.

**Joint-Ventures or merging with other companies:**

- No actual plans.

***11.3. MOLODOJNAYA AT Partizansk,***

(Textile and Sewing Industries)

**FULL ADDRESS:**

1, Leninskaya street. Partizanszk  
Primorsky Region  
692880, Russia  
Tel : (42 32) 20 39  
Fax : (42 32) 20 39

**NAME AND POSITION OF KEY CONTACT PERSON:**

Mrs. Vera I. KARAS, General Director

**Privatization:** March 1993

**Charter capital :** 32722 x 1000 Rubbles

**Average month wage :** 525 000 Rubbles

**Human resources** in September 1995 : 322 persons

Management	32
Commercial	2
Designer	1
Workers	282
Others	19

**Dynamical Figures :**

	1990	1991	1992	1993	1994	Sept 1995
<b>Global Turnover (Rubbles)</b>	13 289 000	26 761 000	152 365 000	865 419 000	738 656 000	
<b>Total Human Resources</b>	775	725	647	544	408	322
<b>OUTPUT PRODUCTION (in Units)</b>						
Men shirts	716 000	527 000	600 000	222 400	257 400	
<i>Exported</i>	---	---	190 500	13 900	229 000	
Child shirts	1 049 000	724 000	317 000	132 000	---	
<i>Exported</i>	---	---	---	38 000	---	
Ladies shirts	67 000	747 000	88 000	88 380	8 000	
<i>Exported</i>	---	---	---	---	2 400	
Child underwear	1 260 000	58 400	427 000	283 900	2 150	
Bed Blankets	28 000	---	43 000	27 600	7 609	
Adults underwear	2 500	33 000	40 200	36 000	---	
<b>RAW MATERIALS USED</b>						
Cotton (meter)	1 713 550	1 303 050	1 262 650	613 950	406 100	
Silk (meter)	3 371 800	1 472 780	1496 850	960 800	269 111	

They are working according to export sub-contracting deals with South-Korean companies for exportation.

**Equipments :**

168	Universal sewing machines	1987 - 1989	168 Russian & 50 GDR and Japanese made
150	Special machines - Overlock		150 Russian & 63 GDR and Japanese made
16	Press & Iron	1989 - 1989	12 Russian and 4 Japanese made

**No other data are available or communicated.**

#### 11.4. RITM FACTORY

##### FULL ADDRESS:

Nakhodka Knitted Glove Factory « RITM »  
 14 - A Nakhimovskaya St.  
 Nakhodka 692913  
 Tel : (42366) 5 77 35  
 Fax : (42366) 5 72 21

##### NAME AND POSITION OF KEY CONTACT PERSON:

Mr. Nikolay I. NAZAROV, Director

**STATUS:** RITM Factory was constructed in 1979 and is located in the centre of Nakhodka with 4000 sq. m of premises. RITM employs 180 staff. In addition to the areas currently for production, RITM has additional space amounting to 800 - 1200 sq. m.

##### Main activity:

- Cotton gloves production for the Far-East Fishing Industry, 70-75 % of total production volume
- Knitting garments production (sweaters, jumpers, pantyhose) 8%
- Other articles: Overalls, doctor's coats, bed-clothes, and wadding mattress 17%

**PRODUCTION:** 70 % of the production is pure cotton work gloves amounting to 2.5 to 3.0 million pair per year. The balance is knit-wear and swing wear. All of the RITM production goes to Russian market. The factory has its own domestic sources of cotton and wool tread.

The company has the partners from Eastern Siberia and Far East. The sphere of partners activity that is interesting for the company is production and financing.

**PROBLEMS:** The main problem arising in the co-operation with the partners from other regions :

- a) High railway tariffs
- b) Payments made through the banks takes a lot of time (about 2 Weeks)
- c) There is no information concerning the small and medium sized companies (money turnover, charter funds. ...).
- d) The company partners sometimes fail to fulfill the agreement.

The company would like to get the information about the potential partners, including the business proposals on concrete type of activity, the possibility of making investments in the Nakhodka FEZ projects.

The company can provide the potential partners with spare territories and/or equipments.

#### 1 - DESCRIPTION OF MARKET

The territory of the Far East, Western and Eastern Siberia is occupied by more than a half of the total population of RUSSIA, a great number of industrial and fishing enterprises are located here.

Due to the present Russian labour protection law and on account of their specific character, many businesses use the products of the glove-making factory « RITM ». In 1986-1990, the output of gloves (80% of basic products) increased annually, ensuring growing demand of enterprises and population of the Far East, Western and Siberia. The products of the factory have not been supplied to the European part of Russia, to the CIS Republics and to the other countries.

The products were not exported partly on account of little knowledge of the foreign market, and mainly due to the failure to satisfy the requirements of the domestic market mention as follow ( in thousand of pair):

Year	Output Production (Thousand of Pair)	Year	Output Production (Thousand of Pair)
1980	1665	1990	4649
1981	2086	1991	4299
1982	2245	1992	4007
1983	2550	1993	2417
1984	2660	1994	1895
1985	2997	1995	2500
		(forecast)	
1986	3261		
1987	3494		
1988	4118		
1990	4469		

Decline of the production started in 1991, which was due to the situation on the domestic market and the general state of Russia's economy.

At the present the home market ensures solvent demand for 2.5 to 3.5 million pairs of gloves compared with 4.8-5.0 million pairs of gloves in 1980-1990. The next 1-2 years, the demand is expected to remain at the same level, and then to increase due to the general economic upturn in Russia. In 5-7 years, the demand may reach and exceed the figures of 1980-1990. Special attention is paid to cotton gloves with rubber covering, their durability increasing twofold.

Presumably, as there has been no special investigation, the market can consume 4-6 fold volumes of these products. Specially, there is a demand for knitted products for fishing industry, such as « a fisherman's water » made of oars wool. The demand for this is constantly increasing.

It is quite practical to manufacture warm clothes for fishermen, as well as for people living in the northern part of the Far East and Eastern Siberia. However, the factory has no possibility to organize a large volume production and to provide the market with clothes for fishermen, using the existing equipment.

## 2 - PRODUCTION CAPACITIES, PERSONNEL

### 2.1 Annual Consumption :

Electric Power, allocated and confirmed by contract with « DALENERGO	402 600 kilowatt / hour
Cost of 1 kW/Hour in 1995	353 Rubbles
Heat Consumed	1 576 kCal
Cost of 1 kCal in 1995	230 000 Rubbles
Consumption of service and sanitary water	6 000 Cubic Meter
Cost of 1 Cubic meter in 1995	8 049 Rubbles

### 2.2 Equipment:

The equipment installed at the factory, 120 units in number, ensures through 3-shift schedule the present demand for 3.000.000 pair of gloves. Restoring removed obsolete equipment is undesirable (glove-making machines were made in the CIS, and there are no spare parts for them). Moreover, in 1994-1996, new equipment for manufacturing (5.000.000 to 7.000.000 pairs of gloves and for changing over to the 2-shift schedule) has to be installed due to the hard conditions of labour; dusty air, noise, vibration which are close to sanitary limits.

### 2.3 Capacities:

Thus, there is the necessity of putting new capacities into operation to manufacture cotton gloves, 1.200.000 pairs per year at the 2-shift work.

Where: 600.000 pairs of cotton gloves without covering,  
600.000 pairs of cotton gloves with rubber covering (drop-like covering).

The purchase and installation of rubber covering equipment are also required.

The factory staffs consist of skilled workers and specialists have appropriate technical education. In 1980-1990, number of regular staff was more than 250; at present, it is less than 200 persons. On replacing equipments with a new more efficient one, the employment is not supposed to change due to switching to the 2-shift work. Released employees will be involved in the production of supplementary goods and the operation of newly installed equipment. There are staff requirement for 25 employees more.

Approximate distribution of professional will be :

Personnel (Workers, employees) for 2 shifts

Knitter		6
Fitter	2	
Sewing machine operator	2	
Controller/Packer	2	
Electrician	2	
Equipment Cleaner	1	
Office Cleaner	1	
Electronic engineer	1	
Rubber covering machine operator	4	
Master/Accounting clerk	2	
Technologist	1	
Workshop foreman	1	
<b>Total</b>		<b>25 workers and employees</b>

### 3 - SUPPLY OF RAW MATERIAL RESOURCES

3.1 The output of basic products is fully ensured by deliveries of raw materials from the domestic market. For the annual plan for 3.700.000 pairs of gloves, the part of the planned reconstruction accounting for 1.200.000 pairs, the quantity of the raw materials will be :

Cotton yarn N 20/1, 14/1, 40/2	215.000 kg
Spandex	1.200 kg
Cotton threads N 40	1.000 kg
Wool yarn N 32/2	1 500 kg
Acryl yarn N 32/2	1 500 kg
Gum	600 kg
Kukhta (thin elastic thread)	4 000 kg

### 4 - TECHNICAL RE-EQUIPMENT PROPOSALS:

4.1 It is suggested that the technical re-equipment be carried out in two stages :

4.1.1 The first stage : INVESTMENTS

Installation of efficient glove-making equipment and rubber covering machine to ensure the output of 1.200.000 pairs of gloves per year, 600.000 pairs with rubber cover.

Note : In Russia, the 220/380 V (3 phase) electric equipment is used.

Approximate equipment are given in the following table :

<b>description</b>	<b>model</b>	<b>quantity</b>	<b>unit price</b>	<b>total</b>
Automatic glove-making machine	MATSUYA SGM-2CS-HS	35	10.000 \$US	350.000 \$US
Electronic glove-making machine	MATUYA MGE-F7M	5	12.000 \$US	60.000 \$US
Overlock sewing machine	DCR-942	2	5.000 \$US	10.000 \$US
Air compressor		1	10.000 \$US	10.000 \$US
Rubber covering machine	NSA-2	1	80.000 \$US	80.000 \$US
Braid (Russian analogue)	OPH or KHC	1	10.000 \$US	10.000 \$US
	<b>Total</b>			<b>520.000 \$US</b>

4.1.2 But : Taking into account the fact that in 1993-1994, the Russia's industry manufactures the glove-making automatic machines analogous to the Japanese equipment and considering available possibilities to partly use the factory's equipment (air compressors, overlock sewing machines), out of import equipment, there is a need to purchase a rubber covering machine NSA-2 (made in Japan), the cost of which, including delivery charges and duty is US\$ 80.000 or 352 Million Rubbles (at the rate of exchange as of 20.08.95: 1 US\$ = 4406 Rubles).

#### 4.1.3 Second stage: (AT THE EXPENSE OF OUR OWN FUNDS)

Replacement of the obsolete knitting equipment with efficient machines and organization of new production on released space. New production will be created with a new structure of output, for example, mounting import common parts of electric and electronic machines and devices in small batches. This will allow to use foreign market quotas which are not taken up by Russia, and to import high-tech equipment.

## 5 - DISTRIBUTION OF EQUIPMENTS :

5.1 Operating areas total 2.400 sq. meter may be expanded by 800 sq. meters by moving the administrative premises, located on the 3rd floor, out of building. (Additional construction works are required, space is available). There is a possibility to extend the areas in the course of replacing the present equipment with more efficient one, which has improved characteristics as regard to labour protection and health of people.

5.2 At present, all equipment is installed on the first floor and covers the area of 600 sq. meters. Supplementary and replaceable capacities will be concentrated, and it will require not more than 300 sq. meters. Vacant spaces are now available.

## 6 - CALCULATION OF RECOUPMENT :

### 6.1 Capacity:

Glove making equipment	30 units
Mode of operation	2 Shifts
Output of one automatic machine	90 pairs (a shift)
90 pairs x 30 units x 2 shifts x 220 days/year	1.188.000 pairs

## 6.2 Sales of products:

Cotton gloves	3300 Rubbles x 600.000 pairs = 1.980.000.000 Rubles
Gloves with rubber covering	450 Rubbles x 588.000 pairs = 2.646.000.000 Rubles
<b>Total</b>	<b>= 4.626.000.000 Rubles</b>

## 6.3 Profit:

Cotton gloves (profitability 18 %)	594 Rubbles x 600.000 pairs = 356.400.000 Rubles
Cotton gloves with rubber covering (profitability 18%)	810 Rubbles x 558.600 pairs = 452.466.000 Rubles
<b>Total</b>	<b>= 808.866.000 Rubles</b>

6.4 Level of Investment: 802.000.000 Rubles

6.5 Recoupment of investments: 802 Million Rubles: 809 Million Rubles ----> 1 year

**NOTE :**

1) It is possible to reduce the period of the recoupment of investments for the newly installed equipment to 1.5 year by :

- a) Reducing overall factory expenses by 15% and increasing profit from one pair of gloves to 20%.
- b) Temporary (partial) increase in the shift index, i.e. increase in output and consequently in profit up to 20-25% at the 2-shift operating conditions.

**2). KIND OF INVESTMENTS :**

- a) Creation of joint manufacture
- b) Mixed (direct and purchasing of the share) investment.
- c) Lease of the areas of enterprise « RIM »
- d) Other (proposal of partners).

### 11.5. Taxes in Textile Industries (Light Industries)

This evaluation has been established by the Management of RITM Company in NAKHODKA (textile industries activities) and has been presented during the light industries exhibition in October 1995, held in the Hall of Vladivostok Administration.

<b>Tax on added cost of</b> (is included in the cost price)	<b>20 %</b>	From realization of production. On export production is not distributed
<b>Special tax (Temporary) of</b>	<b>1.5 %</b>	From realization of production (is included in the cost price)
<b>The profit tax of</b>	<b>35 %</b>	From general gross (balance sheet) profit (reduces income)
<b>Withhold tax of</b>	<b>12 %</b>	From a wage fund (deductions from the wages of persons)
<b>Tax on exceeded wages fund of</b> (reduces a gross profit).	<b>35 %</b>	From excess of rationed size of the charges on payment of labour. It reduces for about 37 % in Far East Regions
<b>Road fund of</b> (is included in the cost price)	<b>3 % or 0.5 %</b>	From realization of production, From trade turnover
<b>Tax to the property of</b> (reduces a gross profit)	<b>2 %</b>	From the cost of fixed assets, capital and material resources
<b>Tax on needs of training of</b> (reduces a gross profit)	<b>1 %</b>	From a wages fund
<b>Tax on transport of enterprise of</b> (is included in the cost price)	<b>1 %</b>	From a wages fund
<b>Medical insurance of</b> (is included in the cost price)	<b>3.6 %</b>	Upon a wages fund
<b>The social insurance of</b> (is included in the cost price)	<b>5.4 %</b>	Upon a wages fund
<b>Pension fund of</b> (is included in the cost price)	<b>29 %</b>	From a wages fund
<b>Fund of employment of the population of</b> (is included in the cost price)	<b>2 %</b>	From a wages fund
<b>Land Tax of</b> (is included in the cost price)	<b>331 Rubbles/month</b>	The tariff of 1995 calculated per square meter and per month
<b>Maintenance of Police of</b> (reduces a gross profit)	<b>3 %</b>	From number of employees x minimum payment of labour (55000 Rubbles/per month).
<b>Cleaning of a territory of city of</b> (reduces a gross profit)	<b>1 %</b>	From number of employees x minimum payment of labour (55000 Rubbles/per month).
<b>The housing fund of</b> (reduces a gross profit)	<b>1.5 %</b>	From realization of production and margin of the goods of not main activity



**12. THE SEA FOOD PROCESSING SECTOR IN PRIMORSKI KRAI****12.1. ACTIVE MARINE FISHERY COMPANY, (BAMR)****FULL ADDRESS**

692900 RUSSIA, Pimorski Region,  
Makarova street 5,  
NAKHODKA,  
Tel : 00 7 423 66 228 01  
Fax : 00 7 423 66 227 71

**NAME AND POSITION OF KEY CONTACT PERSON:**

Mr. Anatoly N. KOLESCNICHENKO, General Director

**STATUTES, OWNER, EFFECTIVE PRIVATIZATION, SHAREHOLDERS**

DALRYBA (stock option and holding company)

**CAPITAL :** (Not communicated)

**INFRASTRUCTURES AND EQUIPMENTS :**

1500 meters port and bath length  
2 deep piers, 1500 meters  
Railway terminals  
Small shipyard repairing houses  
Network of roads

**FLEET : 60 Trawlers**

35 of them: 80 meters length, 2400 gross Tons  
19 of them: Super Trawlers, 100 meters length, 5500 gross  
Tons, German made  
8 cargo ships  
12 Trawling support boats  
Refrigerating plants

**FISH CATCHING AREA :** Baring sea

Hokhotzk sea  
Kuril Islands  
Sea of Japan  
New Zealand

**SHIP BASE HOLD:** NAKHODKA (Russia)

**FISHING STRATEGY :** The fish catching program is decided according the climate and availability of fishes.

80 % of the fish catch is discharged at NAKHODKA.  
20 % of that will be exported directly to Europe, Japan, Korea, and China.

**MAJOR PRODUCTS AND OUTPUTS :**

	1990	1991	1992	1993	1994	1995
Total Output (Tons)	284 399	228 633	171 863	167 242	102 308	94 730
Export	73 943	49 013	39 528	38 464	22 507	20 848
Europe	52 663	23 077	---	---	---	---
China	---	---	13 979	16 288	6 81	8 81
Japan	692	878	1 15	1 90	1 98	2 29
S.Korea	---	---	---	---	---	---
NewZealand	20 588	24 55	24 390	20 26	13 70	9 73
Export Rate (%)	26	21	23	23	22	22

Products to animal feeding ( from wastes of fishes)

**PROCESSING FISH:**

No major detailed data have been communicated about processing distribution :

- Files frozen
- smoked fish
- salted fish
- canned fish (3 million cans).

**MARKETS AND CUSTOMERS:**

- They sell their products to 32 regions in Russian Federation.
- 20 % of their production (specially calamari) will be sold directly to New Zealand where they are caught and to Japan, China, South Korea.

**COMPETITIONS:**

The Russian Federation seafood market is protected market due to local and VAT taxes (18 to 20 %).

No importation from abroad (to be confirmed).

**PROBLEMS:**

- Difficulties of maintenance: shortage of spare parts from Germany
  - Old machines and Engines
  - Stopped this models
  - Too far away from Germany (distance, importation duties)
  - No internal need for spare parts in Germany
  - Spare parts too expensive . when available
    - Because specially tailored for BAMR:
    - Old mechanism and systems
  - Problem of communication; language, mentality of work
    - No rigorous technical definition specification of order
    - Very high transportation costs and fees
- Difficulties of supplying basic equipments not available from Russia: Rubber grabs. No Russian industry of gloves in work. They bought them from China. Good quality from China.
- Up grading of all fleet
- Shortage of investment opportunities to revamp the fleet (no budget, no money, no help from Russian Federation.
- Social worker's problems (about budget, salaries,....)
  - 5 years ago, they have had 100 ships producing the followings :
    - 10 % of total their fish catch share went to Far east Area, 90 % export.
    - Now 50 % of their fish catch share went to Russia and far East Area, only 50 % (?)
    - Now no export because of their high level price.
- No help of (local and central) governments
- Russian credit (200 % interest)

- Special loans from private company from New Zealand (credit supplier for US\$ 2 or 3 millions at 6% interest/year)

### **Two Scenarios situations:**

#### ***A) Without credit Help:***

Their prices are too high comparing with the international prices level.

Old Ships, high level of cost maintenance, high consumption of marine diesel and heavy oil.

The cost of 1 Ton of marine heavy oil : 1 130 000 roubles / tone.

Their consumption is 1000 tons for 45 days sailing ( to be checked ?)

Old equipment, no possibility to reach international quality standard needed in European and American markets.

#### ***B) With Credit Help:***

Acquisition of new ships (from Kiev and Nakhodka (Too expensive)) and wide rehabilitation program.

The revamping program of ships can be done in :

- a) NAKHODKA port ships ( for usual problems)
- b) Singapore : they stopped now, because it's too expensive, and too long delivery time.
- c) China : 40% more expensive but 80% quicker than Singapore and Nakhodka

### **JOINT VENTURE:**

1991 with Australian TALBOT

Local Australian law makes quota for fishing (Australian labour fisherman).

The Joint Venture collapsed after 1 year.

1992 German Co-operation SOKOP - FAR EASTERN FISHING COMPANY 50% / 50%) capital to be defined.

The German brings new machines (BRADER technologies) and new technologies and 2 ships:

Special training for 4 member ship crews ( 4 x 90 = 360 peoples);

Aiming to get new standard (European and American) and filet;

The German has been a supervisor of operation, keeping best quality.

## 12.2. DALEMOREPRODUCT

### FULL ADDRESS

53, Pologaya St.  
Vladivostok 690600  
Tel : (4232) 26 70 12  
Fax : (4232) 26 74 50

### NAME AND POSITION OF KEY MAN

Mr. Yury G. DIDENKO, General Director

### STATUES, OWNER, EFFECTIVE PRIVATIZATION, SHAREHOLDERS:

DALMOREPRODUCT (DMP) holding Company is the Joint Stock Open Company. The holding's economic activity is multifaceted, including fishing, fish and seafood processing (canned fish, preserves, frozen fish), supply and provisions of vessels, ship repairs, medical services and hotel business.

DMP is a major producer of ecologically pure<sup>14</sup>, protein-rich seafood's. The company offers almost 70 different varieties of fresh and canned seafood products, 20 of which are sold in world market. The company's canned crab, salmon, squid and various others enjoy great popularity with overseas consumers. DMP also fishes various species in Argentinean territorial waters.

The company puts out a quarter of all Russian fish production. In the first three months of 1995, only the DMP exported 127 million US dollars worth of fish products. The Far Eastern Fisheries Association's Board of Directors has come to the conclusion that the DMP holding is the only company that still increases the rate of production.

Among the DMP's shareholders there are Japanese companies « NIPPON SUISAN », « MORIKAWA », « MITSUI », NIPPOROS », MARUHA », « TAITO SEIKO », the South Korean Company « HANSUNG », as well as several American and French firms that not only have major equity participation but provide the company with stable and reliable foreign markets.

The holding includes 13 shareholders companies as daughter enterprises, providing for the company's main line - fish products manufacturing. The DMP assets are floating fish-processing plants, 37 fishing vessels and transport-and-tanker fleet.

The estimated worth is 515 million US dollars, as it was assessed by the major American auditing company « Price Waterhouse »: 38 fishing Vessels, 17 processors-trawlers.

The company's personnel is reaching 12.000 persons.

The DMP business plan calls for expanding the entire on-shore support infrastructure in the area of the Abrosimov Cape. Its territory exceeds 53.000 sq.m and the fleet base was with wharves, oil base and refrigerated facilities will be built over there. In order to promote improved seafood products shipments, DMP has initiated plans to build its own port in Vladivostok. The city's Fish Market will be launched there, too.

CAPITAL: (Not Communicated)

### EVOLUTION OF CAPACITIES AND VOLUME OF FISH CATCHING FROM THE 1980's :

11.5 Million Tons from the Oceans. The Vladivostok Region Coast assure 5.5 Million Tons. The Ratio of the sea-food and fish products was around 20 kg/person/per annum in Primorski Krai. In that time, the DMP processing capacities was 5.5 million Tons sold widely in the Soviet/Russian market.

<sup>14</sup> Mention published in the presentation general leaflets

From the beginning of the 1990's, the volume of fish catching from Primorye Coast drops gradually due to economic difficulties and international quota regulations and reaches to 2.2 to 2.5 million Tons, in which the major part (90 %) is exported. The fish ratio consumer is now 7 Kg/year/capita in the Primorye Region.

The fishing and seafood processing sectors are now on major crisis and seems to be drastically reduced and destroyed !

All subsidies to support the fishing sector, from Central and Regional governments (around 3 Milliard soviet/Rubles in 1985) are stopped after privatization. The seafood and fish level prices jumped very high.

The fish products price level was 1/7 of meat prices. Now it jumps to doubles price of meat.

### **STRUCTURAL PROBLEMS OF THE EXISTING FLEET:**

The existing old fleet has been designed according to the former Soviet Ministry of Fishing imposing a very high level of social legislation for sailors and work forces (all cabins are designed with « luxuriant » commodities to sustain a « *social defy* »). It's competitiveness is doubtful comparing with Chinese, Korean and international standards.

The huge volume design, powerful of vessels, and capacities of ships impose a very high level rate of oil use. No subsidies are available and the cost level is too high. The American and Japanese fleet are more adapted for the market and have comparatively a reduced charges for oil.

High level of expenses:

Seasonal rate: 0.5 year working

### **FINANCIAL PROBLEMS:**

Total and average Salaries in 1995: The wages of this sector - on effective working month - should be equal to international market :

6 to 11 Million Rubles/month for Workers: 1250 to 2230 \$US)  
20 to 47 Million Rubles/month for Captains: 4166 to 9700 \$US)

High Russian Taxes level :           Output 2.143 Trillions Rubles  
  Profit for half year of 1995 : 137 Billion Rubles  
  Taxes : 307 Billion Rubbles.

DMP has solved the liquidity problems by accepting loans from their international subsidiaries, on the international rate (American medium terms rate 5 to 12 %).

### **DALMOREPRODUCT IN FIGURES**

	1990	1991	1992	1993	1994	1995 Estimation
Staff (persons)	12 72	14 43	12 51	12 54	11 96	11352
Average salaries (Rubles)	706	1 5	15 16	231 659	903 284	2 894 3
Average salaries of productive personnel (Rubles)	776	1 6	16 53	257 523	1 046 5	3 302 7
Output Production (Million Rubles)	704	1 4	28 81	186 612	583 514	1 668 7
<b>CONSERVES TOTAL</b> (in Million Rubles)	<b>440</b>	<b>365</b>	<b>23 67</b>	<b>93 16</b>	<b>178 169</b>	<b>373 881</b>
Canned Crab	210	210	5 6	24 39	45 33	66 84
Canned Salmons	4	15	294	6 4	13 05	165 056
Canned sardines	79	89	3 9	27 67	54 12	67 61

Preserves	63	37	17	24 71	36 14	35 65
<b>SEA-FOODS TOTAL</b> (in Million Rubles)	<b>70</b>	<b>95</b>	<b>38</b>	<b>35 59</b>	<b>363 538</b>	<b>1 114 0</b>
Polack w/o Head	3	3	952	16 34	87 52	271 846
Caviar Polack	2	4	756	10 96	139 607	383 628
Filet Polack	---	---	362	2 9	16 18	74 18
Surimi	---	7	160	13 28	61 41	213 395
Polack Minced	---	---	633	670	968	3 1
<b>TECHNICAL PRODUCTS TOTAL</b> (in Million Rubles)	<b>71</b>	<b>65</b>	<b>925</b>	<b>8 0</b>	<b>31 60</b>	<b>75 98</b>
Fish Flour	35	33	612	7 2	30 12	74 19
<b>OUTPUT PRODUCTION</b> Natural Units (in T.U.B) <b>TOTAL</b>	<b>450 156</b>	<b>373 808</b>	<b>296 874</b>	<b>157 751</b>	<b>108 399</b>	<b>80 38</b>
Canned Crab	5 9	5 9	15 15	5 6	2 4	1 6
Canned Salmons	2 414	9 14	2 2	9 3	7 6	30 72
Canned sardines	69 093	78 209	107 522	67 09	28 69	13 21
Preserves	97 152	58 491	43 08	45 42	41 38	16 61
<b>SEA-FOODS TOTAL</b> (in Tons)	<b>81 214</b>	<b>111 134</b>	<b>122 007</b>	<b>139 436</b>	<b>194 866</b>	<b>235 543</b>
Pollack w/o Head	3 946	4 012	66 80	96 17	136 431	167 045
Caviar Polack	534	1 088	2597	4 2	8 0	12 64
Filet Polack	---	---	7 0	4 3	6 9	9 2
Surimi	---	1 0	1 4	11 68	15 77	16 23
Polack Minced	---	---	4	786	1 1	1 1
<b>TECHNICAL PRODUCTS TOTAL</b> (in Tons)	<b>52 478</b>	<b>48 277</b>	<b>42 55</b>	<b>334 473</b>	<b>35 68</b>	<b>36 98</b>
Fish Flour	33 555	31 376	31 89	28 83	34 22	35 92
<b>IMPORTATION SEA-FOODS</b> in (Thousand \$USA)	<b>---</b>	<b>---</b>	<b>77 304</b>	<b>50 247</b>	<b>64 019</b>	<b>84 00</b>

**FIGURES OF RAW MATERIALS RECEIVED FROM OTHERS PRIMORSKI KRAI ENTERPRISES AND PROCESSED BY DALMORPRODUCT**

	1990	1991	1992	1993	1994	Sept 1995
TOTAL in Tons	156 378	187 081	172 411	156 824	145 205	182 844
Polack	44 15	114 342	148 562	153 844	144 675	181 341
Sardines	8 6	3 4	5 1	2 4	200	1 2
Herrings	103 526	68 97	14 77	---	---	---
Herring w/o Head	---	181	394	538	331	7
Cod	---	---	3 3	1	---	221
Others	---	153	223	---	---	---

**FIGURES OF RAW MATERIALS RECEIVED FROM FOREIGN SUPPLIERS**

	1990	1991	1992	1993	1994	Sept 1995
DPRK (Korea) Sea Weeds (in Tons)	1 478	13 305	13 099	---	3 034	1 065
DPRK (Korea) Herring (in Tons)	---	---	---	6 954	986	---
Japan Sardines (in Tons)	6 330	11 022	30 980	12 609	---	---

**FISH PRODUCTS EXPORTATION FIGURES**

	1990	1991	1992	1993	1994	sept 1995
<b>Total in Tons</b>	---	<b>2 630.0</b>	<b>1 622.5</b>	<b>2 853.8</b>	<b>1 472.0</b>	<b>1 738.0</b>
Canned Salmon	---	212.0	48.0	919.4	331.0	756.8
Canned Crab	---	1998.0	1 394.5	1 934.1	708.0	981.2
Canned Sardines	---	420.0	180.0	---	433.1	---
Preserves	---	---	---	---	---	---
<b>seafood's Products Total in Tons</b>		<b>12 406.3</b>	<b>30 639.0</b>	<b>31 995.8</b>	<b>140 005.0</b>	<b>179 140.8</b>
Polack w/o Head		2 102.0	9 567.4	11 766.3	109 122.0	143 628.7
Polack Caviar		1 081.6	2 591.2	4 208.6	7 932.5	12 751.5
Surimi		9 222.7	15 558.7	10 868.7	15 425.0	13 569.1
Minced Fish			632.3	757.3	1 035.8	1 066.6
Filet Fish			2 289.4	4 394.9	6 489.7	8 124.9
<b>Technical Products Total in Tons</b>		<b>3 494.6</b>	<b>11 663.5</b>	<b>7 984.7</b>	<b>24 964.0</b>	<b>26 050.3</b>
Fish Flour		2 930.6	7 949.0	6 326.6	23 723.0	25 606.4
Fish Oil		564.0	3 714.5	1 658.1	1 241.0	443.9

**PRICE DEFINITION EVOLUTION IN DALEMOREPRODUCT**

Percentage (%)	1994	First 6 month in 1995
Material expenditure in Total	37.5	36.3
in which Raw Materials and supplies	21.9	24.5
in which Productive tasks	5.4	2.9
in which Fuel	10.1	8.8
in which Fuel	0.1	0.1
Salaries	21.9	20.6
Social Insurance's	7.1	6.2
Amortization of Equipments	5.8	2.2
Others	22.6	20.1
<b>Total Cost Prices</b>	<b>94.9</b>	<b>85.4</b>
<b>Gross Profit</b>	<b>5.1</b>	<b>14.6</b>
<b>TOTAL OF PRICES</b>	<b>100</b>	<b>100</b>

**TRAINING IN DALMORPRODUCTS**

- Far Eastern Institute of fish DALRYBVTUZ
- Maritime College of Vladivostok VLADIVOTSTOKSKIY MORSKOY KOLLEGE
- Far East Marine Technical Institute DALNEVOSTOSCHNOYE MOREKHODNOYE UTHCILSCHE.

Number of specialist graduated from these technical institutes enrolled in 1994 :

DALRYBVTUZ 25 persons  
 VLADIVOTSTOKSKIY MORSKOY KOLLEGE 52 persons  
 DALNEVOSTOSCHNOYE MOREKHODNOYE UTHCILSCHE. 6 persons

124 persons who are on qualification training are studying at VLADIVOTSTOKSKIY INSTITUTE POVYCHENIA QUALIFICATIY (OF QUALIFICATION IMPROVEMENT).

Number of training student enrolled in schools and institutes (by Correspondence) :

High Schools 55  
 Technical High Schools 82

Number of training student enrolled in schools and institutes (by Correspondence) :

DALRYBVTUZ 27 persons

Workers in technical training in DALEMOREPRODUCT :

342 persons of which :  
 138 from DALRYBVTUZ  
 189 from VLADIVOTSTOKSKIY MORSKOY KOLLEGE  
 1 from DALNEVOSTOSCHNOYE MOREKHODNOYE UTHCILSCHE

3 Trainers comes from Far Eastern Marine Academy

7 From Far Eastern Technological University

10 from Others Institutes

**WORK RESOURCE**

Numbers of specialists trained for marine purpose by OUTCHFLOTKADREIY (School for marine Cadre) :  
 8866 persons

Self shaving of sea	3095	
Breathing Apparatus		428
Sanitary duties	4113	
Prevention an environmental works	670	
Sailors		371
Save Boat specialist		24
Trainers, Storekeepers	165	

**FOREIGN COMPETITORS**

Similar products are not imported.

**SUBVENTION OR SUBSIDIES :**

No subsidies from Local or Federal administration.

**NEW PRODUCTS PROGRAMS**

Improved Products for Crabs products:

- 1) Canned production system : The technology of canning is improved specially for closing hermetically the crab cans « EXTRA ».
- 2) Improvement of vapor heating crab product for «FENCY » and « AGREIYL »
- 3) Wet crabs not processed (non égoutté)



**PRODUCTS**

- 1) Frozen Salmon Caviar
- 2) Cooled Crab
- 3) Cooked crab legs and frozen
- 4) Crab meat product
- 5) Frozen Polack Filet and packaging
- 6) Flour from fish bones
- 7) Cod Filet Frozen.

**STRATEGY DEFINITION**

Production

**DEFINITION OF TAXES for the first 9 month 1995 in Thousand Rubles**

		Due	Paid	
Equipments Taxes	2% of average exploitation fees (of annual profit).	2947054	3859430	Federal
Real estate taxes	on sq.m	5751	5751	Local
V.A.T	16.26% or 8.85 %	19174750	20918216	Federal
Exportation Taxes	10-15 % of cost price	57249338	57249338	Federal
Importation Taxes	10 - 15 % of cost price	3321307	3321307	Federal
Income Taxes	15 % of salaries funds	31737279	31737279	10 % Federal 90% Local
Profit Company Taxes	35 %	51665691	51665601	Federal
Exceeded of average wages funds	35 %	27131454	27131454	Federal
Medical Insurance	3.6 %	7628909	7628909	0.2 % Federal 3.4 % Local
Educational Funds	1 %	2437587	2437587	Local
Unemployed Funds	2.1 %	50 92781	50 92781	Local
Pension funds	28.0 %	57674942	57674942	Local
Social Insurance	5.4	2879490	2879490	Local
Road Funds	3%	22818273	22818273	Local
Police and Militia Funds	3 % of minimal wages	39810	39810	Local
Cleaning of territory	5% of minimal wages	66350	66350	Local
Culture taxes	1.5 % of production	11822623	11822623	Local
Transport Taxes	1% of production	2437520	2437520	Local
Environmental taxes	10%	984607	2896767	Local
New vehicles taxes	20% of Vehicles	95411	95411	Local
Reselling vehicles taxes	10% of sold prices			Local
Reselling Oil Taxes	25% of sold price			Local
Scientific and Culture	1.5 of Cost			Federal
<b>TOTAL</b>		<b>307210840</b>	<b>336562239</b>	

Customs taxes have to be paid according to Regulation GTK RF N° 396 dated 19 June 1995.

**12.3. KRASNAYAZK VLADIVOSTOK ESTONIA NAKHODKA - (K.V.E.N)**

**FULL ADDRESS:**

LENINGRADSKAYA 13 A STREET.  
NAKHODKA - 9  
Russian federation  
Tel : (266) 256 22  
Fax :

**NAME AND POSITION OF KEY CONTACT PERSON:**

Chairman of Board : MAKIENKO Vladimir Ivanovich

**Status:** Joint Stock closed type

- **Shareholders:** 51 % DALRYBA, responsible for all Banking, Accounting Control, through DALRYBANK.  
25 % Primorski Region Co-operative  
15 % Administrative staff  
8 % Estonia

**Date of Effective Privatization :** 1991

**Chartered Capital :** at privatization time : 4.5 Million Rubles

**Turnover in 1994 :** 3.5 Billion Rubles

**ACTUAL TOTAL OF HUMAN RESOURCES:** (in September 1995): 62 personnels;

Distributed in Management:	9	
Production :	14	
Commercial:	2	
Technical Workers:	8	
Power Station :	9	
Administrative:	11	
Marketing:	5	
Finances:	4	

**R&D And TRAINING :**

No need of training.

All technicians have been trained in Far-Eastern Technological Institute and Food Processing Institute.

**AVERAGE SALARIES :** 642 800 Rubles/month

Average worker salaries per hour in US\$ or Rubble (September 1995) :

**MAIN EQUIPMENT FOR CATCHING: DETAILED AND GLOBAL FEATURES :**

Equipments	Date of commissioning	Origin, Made by
Line to product flavored cab sticks	15.12.1993	JAPAN
Refrigerators 1 for 50 tons and 1 for 100 tons	15.12.1993	JAPAN
Vacuum packing machine ( In Progress).	December 1995	GERMANY

**SEA FOOD PRODUCTS**

Crab flavored sticks for existing company (total production : 244.4 tons) and distributed 114.0 for 9 months.

**OUTPUT PRODUCTION :**

	1993	1994	1995 (Vision) 9 months
Global Production	0,5 Tons	116.3 Tons	127 Tons
Total human Resources			62

**RAW MATERIALS :** Stuffing fish minced from Russia (DALMOREPRODUCT) and Japan  
Flavoring from Switzerland.

**DISTRIBUTION CHANNEL AND PACKING (FROM PRODUCER TO FINAL CONSUMERS).**

Agents and commercial structures in cities of Far East region and Siberia:

- 60 % in Primorki Region
- 20 % in Khabarovsk
- 5% in Novo Sibirsk and Moscow
- 15 % Estonia and Others

**DISTRIBUTION OF LOCAL SHOPS IN PRIMORSKI :**

3.5 tons per month on Direct sales process : agents in Vladivostok and Artem.

**COMPETITIONS :**

Some similar products have been imported to Western part of Russia, from Korea, France and China (but no available Figures).

Price policy : The Russian KVEN productions are on better price level than Japanese.

**STOCK POLICY :**

No big stock available. The production is programmed according to commands.

The medium term objective consists to have these figures on stock:

50 Tons available of refrigerating Room

100 Tons on Raw Materials

But the shortage of funds imposes a small quantity of available stock on demand.

**SANITARY CONTROL**

Some samples are inspected by central station of Russian Administration Sanitary control.

A certificate Microbiological laboratory is available in the plant, according to GOST standardization.

All raw materials are tested before acceptance.

Quality-insurance organization and service will be set-up soon ?

**NEW PRODUCTS IN PROGRESS**

All 5 or 6 new products will be prepared with DALRYBA and NAKHODKA FEZ councils.

1. Fish Sausage products
2. Sliced salt fish
3. Semi-cooked product manufactured with DALRYBA

**NEW MARKETS IN PROGRESS**

Contact with China to export the new product « Fish Sausages »

**SALES CONDITIONS**

Advance payments are required for non reliable partners, after the case of 20 million Rubles bankruptcy.

**STRENGTHS:**

- Good Product Definition
- No similar enterprises in Siberia and Far East ( MONOPOLY FACT)
- Long time of storing ( Vacuum packing and frozen), minimum Three month time limit.
- Good taste
- Using available basis local raw material (fish)
- Similar imported products imported are twice more expensive

**WEAKNESS :**

- The product is a luxuriant product and not the first need products.
- Relatively High prices.
- Using of imported flavoring.

**INVESTMENT PROJECTS :**

Project to install fish sausage process line (from MAS ENGINEERING TECHNOLOGY (Switzerland).  
Install quick frozen chambers.

Joint-Ventures or merging with other autonomous companies (not yet sold to other holdings or to be merged with other group).

**HELP OF LOCAL, REGIONAL GOVERNMENTS**

Need favorable credit.

**TAXES LEVEL IN THIS SECTOR**

89.9 %

**12.4. REBOKOMBINAT (Fish Process plant)****FULL ADDRESS:**

Tel : (4232) 31 21 16

Fax: (4232) 31 21 48

**NAME AND POSITION OF KEY CONTACT PERSON:**

Mr. Vlachslav NOVIKOV (Chairman of Board)

Mr. Stanislav ASSEIIV (General Director)

**STATUES, OWNER, EFFECTIVE PRIVATIZATION, SHAREHOLDERS :**

Established in 1934, re-established and reorganized in 1975.

New investments in 1988: Shops, building warehouse, Ground to sea.

**CAPITAL :** (Not communicated)

**INFRASTRUCTURES AND EQUIPMENTS :**

- Fleet 3 ships for catching
  - 1 self propelled barge (non refrigerated)
  - 1 PTR (ship with refrigerated (-8°C), capacity for storing 50 tons)
  - 1 Pier 80 m. length
- 2 refrigerators (-18 °C) with capacity of:
  - 5000 tons, Finish made, commissioned in 1988,
  - 3000 tons, Russian made, commissioned in 1975
- 7 Cold smoking chambers (Tower type), flexible capacity (from 4 to 9 tons) according to fish type, Russian made, commissioned in 1975
- 6 hot smoked chamber, capacity 4 tons each, Russian made, commissioned in 1987
- 4 manual packing machines, German made, commissioned in 1982/1983. These machine are in shortage of thin layer plastic films and are transiently out of work.
- Canning machines, Japanese made, over-designed, used accordance with orders, out of work due to stopping of canned demands.
- Bath to salted fish, Russian made, commissioned in 1975, with up to 100 ton capacity
- Handy preserve machine: hand cutting
- Garage: 40 cars, vans and lorries
  - 8 refrigerated lorries, Japanese made ISUZI, commissioned in 1985, Capacity 3 tons each.

**CATCHING CAPACITY:**

Years	1988	1989	1990	1991	1992	1993	1994	1995 (*)
Capacity (tons)	2868	2909	3020	2534	1315	620	542	226

\* 6 first month in 1995

**NOMINAL OUTPUT PRODUCTION CAPACITIES:** 12.000 Tons per year

**OUT PUT PRODUCTION:**

	1990	1991	1992	1993	1994	Vision 1995
output Production (in Tons)	10.718	8.598	4.078	3.654	3.133	8.300 (*)
Man Power (Fleet & Fish Processing)	750	680	600	583	503	500
Turnover (in million Rubbles)			154		6.000	

\* Vision plan

**PRODUCTS:**

Frozen deeply (-18°C)	5% of the output production
Cold fresh fish	10%
Marinated and salted	10%
Smoked	25%
Ready sale Cooked	20%
Half prepared	10%
Preserve caned	5%

**Monopoly to prepare cooked dishes in the Primorye Region.**

**PRODUCT DEFINITION:**

Market: Vladivostok city, possible evolution for Primorye Krai or other region depending on future road infrastructures and distribution channels capacities.

**HUMAN RESOURCES:**

500 persons in October 1995 as following:

Management	42
Technical Engineering	50
Fleet and Fish catchers	80
Garage, Warehouse, Logistics, low skills	120
Workers in Fish Processing	208

**WEAKNESS**

- Old fleet
- Expensive Oil
- Lag of Fish in Vladivostok region
- No possibility to catch in deep water and far from Primoreye.

**INVESTMENT PROJECTS IN PROGRESS WITH GOOD HOPES :**

- Diversification of products
- Going to deep water
- New products to be exported in Japan and earn hard currencies.
- Up size the fleet capacity and structures:
  1. SRTM (fish catcher and refrigerator of medium size), Russian made from KIEV (Ukraine) for crabs catching.
  2. STR (small catcher and refrigerator) for shrimps catching, Russian made from YARUSLAVEL

**REORGANIZATION AND NEW STRATEGIES:**

Arrange new revamping and organization of market fishing, cooking.  
 Capability of the facilities, know-how  
 Customers orders  
 Nature of fish caught with actual fleet  
 Sale on daily and regular basis production: Cold salted fish

**DISTRIBUTION CHANNELS AND SALE PROFIT:**

Distribution shops and ring distribution: 80 % , profit: 5%  
 Commercial structure: 5 %, profit: 100 %  
 The company owned 3 retail shops in Vladivostok.  
 3 equipped lorries temporary shops: The profit margin is too slow - 15 %. The net profit: 10%

**PRICES DEFINITION:**

Profit Margins: 10 % from cost prices for ready cooked meals  
 Rentability of sector: 15 %  
 20 % of price is energy.

**TRENDS IN THE FUTURE:**

- Increase the cold smoked products
- Follow up the increased demand
- New products in preparation (cooked, shrimps, crabs, ...)
- Preparation of line of tinned fish for long preserve

**STRENGTHS:**

- Personnel very well qualified
- Good and huge existing facilities, close to railways for possible export (Siberia, for example)
- Niche dominant: Unique facility large sized in Far-East for cooked fish

**WEAKNESS:**

- Shortage of finance
- Shortage of new order, small market, high prices, unpaid invoices, embargo from city shops.
- No export means, no dollars and no new equipments
- No raw materials available to increase the production (contradiction with above)

**FREE REMARKS:**

- On the top again, as 20 years ago, and reach the maximum of capacity
- Reorganization and modernization
- Creating Marketing Department
- No needs to automation (?)

## 12.5. YUZHMOREYBFLOT

### FULL ADDRESS:

16, Zavodskaya St.  
YUZHNO-MORSKOY  
Primorski Region, 692204  
Russia  
Tel: 5 14 40  
Fax: 4 78 26

### NAME AND POSITION OF KEY CONTACT PERSON:

Mr. Vladimir BARANOFF, General Director

STATUS: Joint stock company

VESSELS: Total 44 ships;

- 12 small tonnage, 200 tons
- 4 Large tonnage, 2000 tons
  - 2 of them 17 years old, anchored on Dalian Bay
  - 2 of the 5 year old, anchored on Vostok Bay
- 1 small floating fish factory (mother ship) with 1500 tons cargo capacities, working with 2 sea food processing vessels.
- New vessel 3 years old was bought in 1994 (medium tonnage).

### PROCESSING AND PRODUCTS:

Fish Processing: Smoked

Salted

Canned

Fat processing complex (6000 to 7000 tons/year capacity)

### CUSTOMERS:

20 % of production exported to Japan, South Korea and China,

80 % for local market (Primorski Krai).

No sales to other regions of Russian Federation.

### DISTRIBUTION:

- Primorski Krai: 5 wholesalers for Canned Fish
- Japan :
  - life or frozen Shrimps
  - life or frozen Crab
  - « YOSH » Fish
- South Korea : frozen Shrimp
  - frozen Octopus
  - frozen Pollack
- China :
  - frozen Pollack
  - frozen Sardines

### PRICES LEVEL

Pollack: US\$ 280 to US\$ 580 per ton (FOB Nakhodka) according to international market.

Their price are 12% more than international price (China) due to higher fuel price in Russia and very low level wage in China. The difference of Chinese level wages are compensating the fuel difference.

### STRATEGIES :

1. Merging plans with Japanese and South-Korean companies. The Russian part accept the principle of merging. Studies on progress.
2. Increasing the internal market (on Primorski region).

**SUBSIDIES :**

No subsidies from Governments.

The Nakhodka Free Economic Zone allowed them in December 1994 a short Term loan (1.50 Billion Rubles) on special low rate interests: 90%. They refunded back on May 1995 the amount of 1.95 billion Rubles.

**DETAILS OF PRODUCTS (1992 - 1995) :**

	1992	1993	1994	9 months 1995	Vision 1996
<b>Prices as the reported year (Million Rubles)</b>		2 173	27 219	49 590	114 780
<b>Total catch (tons)</b>	38 974	27 544	18 588	16 033	42 700
Pollack	27 080	22 484	15 407		33 000
Herring	476	43	842		3 500
Sardine	1 799	2 449	601		2 400
Crab	70		3		300
Prawn	116	73	122		200
Flat Fish	1 055	444	120		1 300
Perch	3 761	1 354	1 125		2 000
<b>Out Put Processed (TUB)</b>					
Cans	4 866	3 375	3 251	3 931	10 200
Specially salted herring	2 641	2 118	2 741		7 300
Salted iwashi	4 204				
<b>Fish Products (Tons)</b>					
Fresh pollack	22 678	17 016	10 738	5 194	6 000
Frozen pollack	2 893	3 881	1 322	3 060	14 675
Frozen sardine			1 323		
Sardine	1 508	537	218		
Frozen crab	70				
Alive crab			2	15	120
Frozen prawn	116	135	114	43	180
Frozen flat fish	419	169		152	1 000
Frozen herring				891	
Frozen perch			144	263	700
Smoked-dried fish	273	102	89	59	350
Frozen octopus			23		
Frozen pollack caviar		146	56	210	300
<b>Total foodstuff (Tons)</b>	5 371	829	1 221	782	1 250
Food agar	50	10	4	6	
Macro-biological agar	40	11	12		50
Veterinary fat	3 999	390	137	40	
Fodder fish	1 186	88	770		
Fodder flour	96	330	298	738	1 200



**NEW INVESTMENT PROGRAM:****TECHNICAL ECONOMICAL REASONS OF DEVELOPMENT OF CAN FISH PROCESSING PLANT**

**The main aim:** Increasing output of fish to 1.5 times. Total output expected 10.200 T.U.B (scale of canned) while now only 7000.

**Forecast Investment:**

Necessary equipment for canned fish processing plant:

- a) Fish cutting machines
- b) Can closing machines
- c) Dosage machine and weighting

All cost for this chain: 1 million \$US

Custom fees for import equipments: 5 %

Payment for custom procedures: 0.15 %

VAT and special taxes: 2.5 %

Total funds needed to buy equipment: (credit) is US\$ 1.3 million.

Payment percentage for credit ( estimated 25 % per year)

Mutual time for credit: 1.5 years

Credit interest for whole period: US\$ 487.000.

Credit insurance will be covered by pledge of properties.

Total expenses: US\$ 1.787 millions.

Expected profit: Processing of conserves: Annual turnover: 10200 TUB

Average distribution price for 1 TUB is 5134000 rubles or US\$ 941.

Expected annual income: 52367 million Rubbles or US\$ 9,598,200.

Expected rentability and expected clean profit will be US\$ 3,359,000

Taxes on profit: 35 % (US\$ 1175000)

Profit which will remain in enterprise: US\$ 2184

Analysis income and expenses we can conclude about attractive of this project for investments and re-compensated in one year.

Credit for 1.5 year is accounted that 0.5 year for buying and bring materials in country and assembling and getting projected full power.

**12.6. QUANTITY OF FISH AND MARINE PRODUCTS CATCHED IN 1994 BY PRIMORSKI KRAI COMPANIES,**

(In Tons)

	VBTRF	PKRKS	DALMORE PRODUCT	BAMR	DPCBTF	YUZHMORE YBFLOT	PRP	TURNTF	DVBF	OTHERS	TOTAL	Rate (%)	
<b>SHARE RATE</b>	<b>28.2%</b>	<b>19.7%</b>	<b>19.1%</b>	<b>16.0%</b>	<b>11.2%</b>	<b>1.7%</b>	<b>1.6%</b>	<b>1.2%</b>	<b>1.0%</b>	<b>0.3%</b>	<b>100.0%</b>		
<b>TOTAL</b>	<b>304 148</b>	<b>212 771</b>	<b>205 469</b>	<b>172 171</b>	<b>120 237</b>	<b>18 546</b>	<b>17 444</b>	<b>13 092</b>	<b>11 169</b>	<b>2 932</b>	<b>1 077 979</b>	<b>100.00%</b>	
POLLACK	274 732	193 533	170 963	121 432	102 138	15 407	8 097	7 721	7 477	---	901 500	83.629%	
HERRING	5 373	1 977	8 450	488	13 473	842	282	---	76	---	30 961	2.872%	
COD	6 443	7 026	667	1 854	608	---	397	---	297	---	17 292	1.604%	
SARDINE	---	771	13 907	---	1 068	601	323	---	---	---	16 670	1.546%	
TUNA FISH	15 628	---	---	1	---	---	---	---	---	---	15 629	1.45%	
[LEMONEMA]	---	---	---	13 811	---	---	---	---	---	---	13 811	1.281%	
[TERPOUG]	---	3 821	---	1 007	2 104	1 125	4 667	2	518	---	13 244	1.229%	
BURBOT	---	---	---	3 632	---	---	---	3 640	---	---	7 272	0.675%	
FLAT FISH	---	1 747	---	529	52	120	1 290	12	504	---	4 254	0.395%	
GOBIUS	---	534	---	626	---	---	1 247	1	317	---	2 725	0.253%	
NARAGA	---	866	117	24	154	106	194	1	57	---	1 519	0.141%	
[POUTASSOUS]	---	---	---	1 115	---	---	---	7	---	---	1 122	0.104%	
[STAVRIDA]	---	---	---	479	---	---	---	229	---	---	708	0.066%	
BARRACUDA	---	---	---	614	---	---	---	---	---	---	614	0.057%	
[SERTOLELLA]	---	---	---	210	---	---	---	112	---	---	322	0.03%	
SNAKES	---	---	---	---	---	---	---	91	---	---	91	0.008%	
FRESHWATER	---	---	---	---	---	---	90	---	---	---	90	0.008%	
HAKE	---	---	---	8	---	---	---	72	---	---	80	0.007%	
HALIBUT	---	48	---	27	---	---	---	---	---	---	75	0.007%	
[KRASNOPERKA ]	---	53	---	---	---	---	---	---	21	---	74	0.007%	
MACKEREL	---	---	---	14	---	---	---	38	---	---	52	0.005%	
[NALIME]	---	---	---	7	---	---	---	38	---	---	45	0.004%	
[PRISTILOMA]	---	---	---	32	---	---	---	---	---	---	32	0.003%	

SMELT	---	4	---	---	---	---	20	---	1	---	25	0.002%	
[PELINGUIS]	---	2	---	---	---	---	---	---	16	---	18	0.002%	
[BERRICKS]	---	---	---	17	---	---	---	---	---	---	17	0.002%	
<b>Fish and Seafood</b>	VBTRF	PKRKS	DALMORE PRODUCT	BAMR	DPCBTF	YUZHMOOR YBFLOT	PRP	TURNTF	DVBF	OTHERS	TOTAL	Rate (%)	
[LOUTIANE]	---	---	---	15	---	---	---	---	---	---	15	0.001%	
SALMON	---	12	---	---	---	---	2	---	---	---	14	0.001%	
[BELDUGA]	---	5	---	---	---	---	---	---	---	---	5	0.00%	
PERCH	---	3	---	---	---	---	---	---	---	---	3	0.00%	
[SOLNETCHIK]	---	---	---	2	---	---	---	---	---	---	2	0.00%	
OTHERS	189	2 369	57	1 875	---	---	41	234	---	762	5 527	0.513%	
<b>Seafood</b>												Rate Total Caught	% Rate Seafood Caught
CALAMAR	---	---	---	24 352	---	---	---	893	1 022	---	26 267	2.437%	59.467%
CRAB	---	---	11 308	---	136	3	47	---	197	2 170	13 861	1.286%	31.38%
[TROUBATCH]	1 385	---	---	---	---	14	51	---	6	---	1 456	0.135%	3.296%
PRAWN	398	---	---	---	504	122	66	---	100	---	1 190	0.11%	2.694%
[INFELTSIA]	---	---	---	---	---	136	372	---	---	---	508	0.047%	1.15%
[GREBECHKI]	---	---	---	---	---	---	---	---	500	---	500	0.046%	1.132%
SEA URCHIN	---	---	---	---	---	7	219	---	---	---	226	0.021%	0.512%
OCTOPUS	---	---	---	---	---	52	---	---	---	---	52	0.005%	0.118%
[KOUKOU MARIA ]	---	---	---	---	---	---	6	1	26	---	33	0.003%	0.075%
SEA-KALE	---	---	---	---	---	11	17	---	---	---	28	0.003%	0.063%
[SLISOULIA]	---	---	---	---	---	---	---	---	15	---	15	0.001%	0.034%
[JARBICOULIA]	---	---	---	---	---	---	---	---	14	---	14	0.001%	0.032%
Other seafood	---	---	---	---	---	---	9	---	---	---	9	0.001%	0.02%
TREPAN	---	---	---	---	---	---	7	---	---	---	7	0.001%	0.016%
[MIDI]	---	---	---	---	---	---	---	---	5	---	5	0.00%	0.011%
<b>Total Seafood</b>	<b>1 783</b>	<b>0</b>	<b>11 308</b>	<b>24 352</b>	<b>640</b>	<b>345</b>	<b>794</b>	<b>894</b>	<b>1 885</b>	<b>2 170</b>	<b>44 171</b>		
<b>Rate %</b>	<b>4.04%</b>	<b>0.00%</b>	<b>25.60%</b>	<b>55.13%</b>	<b>1.45%</b>	<b>0.78%</b>	<b>1.80%</b>	<b>2.02%</b>	<b>4.27%</b>	<b>4.91%</b>	<b>100.00%</b>		

12.7. QUANTITY OF MARINE PRODUCTS PROCESSED IN ALL PRIMORSKI KRAI, 1994 (in Tons)

	DALMORE PRODUCT	VRTRF	BAMR	PRBTF	DKRKS	TURNTF	PRP	YUZHMO RRYBFLO T	DVBF	TOTAL	RATE (%)
SHARE RATE	36.0%	23.2%	15.1%	11.9%	4.2%	3.1%	2.7%	2.3%	1.4%	100.0%	2 977 368
<b>Global Total</b>	<b>1 016 100</b>	<b>613 497</b>	<b>421 514</b>	<b>341 224</b>	<b>108 178</b>	<b>89 085</b>	<b>76 559</b>	<b>70 746</b>	<b>41 251</b>	<b>2 778 154</b>	
Canned Products	272 621	175 732	114 224	90 586	32 075	23 853	20 532	17 473	10 956	758 052	25.46%
Marine Products	236 989	145 813	102 306	80 914	25 332	21 744	18 075	17 159	9 971	658 303	22.11%
Frozen Products	198 992	145 431	101 882	71 227	25 201	21 744	15 971	15 061	9 533	605 042	20.32%
Cooled Products	183 611	133 692	83 129	40 424	22 337	21 147	13 461	3 441	8 284	509 526	17.11%
Salted Fish	1 003	---	---	29 097	88	52	1 642	11 183	---	43 065	1.45%
Others	4 489	999	16 197	508	779	---	206	152	567	23 897	0.80%
Cooked Meal	8 317	3 518	1 984	1 195	531	24	262	56	507	16 394	0.55%
Caviar	---	7 222	---	---	837	---	---	---	---	8 059	0.27%
[?]	1 572	---	24	---	143	521	30	140	11	2 441	0.08%
Dried Fish	---	---	285	3	417	---	281	82	72	1 140	0.04%
Seafood	---	---	223	---	15	---	---	---	---	238	0.01%
Smoked Fish	---	---	---	---	31	---	72	---	9	112	0.00%
Filet Fish Dried	---	---	---	---	2	---	---	7	78	87	0.00%
Salted Herrings	---	---	40	---	---	---	4	---	7	51	0.00%
Stuffing Fish	---	---	---	---	14	---	13	---	5	32	0.00%
Preserved Cans	68 303	---	218	---	---	---	3 854	3 251	1 251	76 877	2.58%
Specially Salted Herring	40 203	1 090	1 002	27 270	376	---	2 156	2 741	---	74 838	2.51%
Fish Industrial Products	35 632	29 919	11 918	9 672	6 743	2 109	2 457	314	985	99 749	3.35%
Fish Flour	34 179	26 055	9 468	5 121	1 631	1 225	1 012	298	375	79 364	2.67%
Animals Foods	---	2 110	2 450	4 481	5 112	884	1 310	---	610	16 957	0.57%
Fat Products	1 169	1 754	---	70	---	---	90	---	---	3 083	0.10%
Agar	---	---	---	---	---	---	45	16	---	61	0.00%

## 13. SHIPYARD'S IN PRIMORSKY KRAI :FACTS AND FIGURES

### 13.1. DALJZAVOD SHIPYARD

Company Name : DALJZAVOD SHIPYARD  
Company Structure : Joint-stock company, 20 % State, 80 % Private  
Capital : 8 million Rubles  
Employee : 18,000 (1990), 6,200 (1995)  
Sector : Naval Military Conversion Industry  
Address : 2, Dljzavodskaya Street, Vladivostok, 69000 Russia  
Tel: (4232) 223226, Fax: (4232) 223002  
Name of Key Person: Mr. Sergey M. KUCHERENKO, General Director,  
Mr. Sergey V. NOVICOV, Engineering  
Director

#### 1-. DALJZAVOD SHIPYARD

##### 1.1 Profile

The DALJZAVOD Shipyard is situated in the Vladivostok town of the Primorsky Krai.

It was established and built as the Admiralty of the Naval port and a ship repair base of the Russian Pacific Naval Fleet in the Far East in 1887.

In October 1994, about half plant of the shipyard was privatized as a Joint-Stock Company.

##### 1.2 Organization

The organization structure is not available.

#### 2-. FACILITIES AND CAPACITY

##### 2.1 Facilities

The main data of the facilities are as follows:

- Area 60 hectares
- Mooring line 1,600 m length, 7-8 m of depth
- Dry dock No. 1 170 m  $\varnothing$  34 m  
No. 2 250 m  $\varnothing$  50 m  
No. 3 under an interruption of construction
- Floating Dock No. 1 250 m  $\varnothing$  50 m (Inside)  
No. 2 200 m  $\varnothing$  32 m (Inside)
- Ship lift System Side-launching 2,000 ton  $\varnothing$  2
- Cranes Floating Crane 150 ton  $\varnothing$  1  
40 tons jib crane  $\varnothing$  3  
15 tons jib crane  $\varnothing$  2  
20 tons jib crane  $\varnothing$  1  
18 tons jib crane  $\varnothing$  1

- 5 tons jib crane ♯ 1  
80 tons portal crane ♯ 1
- Machine Erecting Shop    Overhead Shop Cranes:  
                                   (150 m ♯ 60 m)    25 tons ♯ 1, 20 tons ♯ 1  
   Lathe: 24 m Shaft Turning Lathe ♯ 1 and many others  
   Boring machine: table 4 m ♯ 8 m, machining height-3.5 m and  
   others
- Ship Erecting Shop        Pipe Bending Machines  
                                   (200 m ♯ 30 m)    Welding machines and others
- Boiler Shop                Hydraulic Press Capacity 1,250 ton,  
                                   (100 m ♯ 30 m)    Pipe Bending Machines and others

Other Shops are shown in GENERAL ARRANGEMENT as per attached.

## 2.2 Condition of Facilities

The general ages of the above mentioned facilities are about 20 years and more.

There have been insufficient capital investment in the past 8-10 years, but there are plans for upgrading the facilities.

The existing major facilities such as the docking system and most of the machinery are normally serviceable.

## 3- OPERATION AND THROUGHPUT

The main areas of business are shipbuilding, ship repair, general steel and engineering products including ship breaking.

Before 1990, average 20 of naval warships, submarine, cruiser, etc. were built per year (80% work load), however after Perestroika, no navy warship was built (15% work load at present).

1000 PS Tug Boat Under Construction, Super Trawler Repairing.

As government permit to call foreign fleet, there are no restrictions on the customers, marketing action to abroad was carried out by advertisement of magazine.

Basic ship repair customers: Russian Pacific Naval Fleet

## 4- ANNUAL CONSUMPTION OF MAJOR MATERIALS

Average annual consumption of major consumables in 1993/94 are as follows:

- (1) Steel plates and profiles 2,000 tons
- (2) Welding consumables 20 tons

## 5- DESIGN CAPACITIES AND R & D

Laboratory (Chemical, Mechanical, Welding, etc.)

Basic design was given by naval design bureau and Marine Fleet Research Institute.

Detail and production design were made by themselves.

## 6- COST OF LABOUR

Average wages: Engineer 150 US\$/month, Skilled Labor 400 US\$/month, Others 100 US\$/month.

## 7- PROCUREMENT OF MATERIALS

Steel stock : 2,000 ton/year

## 8- STAFF RECRUITMENT AND TRAINING

For skilled technical labor, recruitment is amongst the graduates of the various technical schools but DALJZAVOD shipyard has to retrain new employees of 80-100 persons per year.

## 9- DEVELOPMENT PLAN

Target of product for diversification: Speed boat

Maintenance and upgrading the existing facilities and improvement of the skills of steel welding and fabrication.

**13.2. VLADIVOSTOKSKY SHIP REPAIR PLANT (VSRP)**

Company Name : VLADIVOSTOKSKY SHIP REPAIR PLANT (VSRP)  
 Company Structure: Joint- stock , 100 % Private (juridical person, bank, private person)  
 Employee : 1,600 (1990), 1,100 (1995)  
 Sector : Ship repair  
 Address : 2, Nihneportovaya, Vladivostok, 690600  
 Tel: (4232) 221063, Fax: (4232) 268145  
 Name of Key Person : Mr. Felix I. SASS, Director

## 1- VLADIVOSTOKSKY SHIP REPAIR YARD

## 1.1 Profile

The Vladivostksky Ship Repair Plant (VSRP) is situated in the Vladivostok town of the Primorsky Krai.

VSRP was established and built as the ship repair shop of the Far Eastern Shipping Company (FESCO) in 1910.

In 1994, VSRP was privatized as a Joint-Stock Company.

## 1.2 Organization

The organization structure	:	Manager	15 ( 1.4 %)
		Engineer	190 (17.3 %)
		Skilled worker	650 (59.0 %)
		Supporting worker	200 (18.2 %)
		Others	45 ( 4.1 %)

2- FACILITIES AND CAPACITY

2.1 Facilities

The main data of the facilities are as follows:

- Arca 4 hectares
- Mooring line 1000 m length, 7-8 m of depth
- Floating Dock No. 1 130 m ϕ 21 m (Inside)  
No. 2 155 m ϕ 24 m (Inside)
- Cranes Floating Crane 25 ton ϕ 2
- Machinery Shop Overhead Shop Cranes  
(100 m ϕ 60 m), 25 tons ϕ 1,  
14 m Shaft Turning Lathe ϕ 1 and 5 m Lathe

ϕ 6 sets, others.

Boring machine: 1.2 m and others.

- Pipe Shop Pipe Bending Machines:  
(50 m ϕ 30 m) Max. 80 mm dia, others.

Max. 290 mm dia. and

- Hull Shop Welding machines and others.
- Dock Shop (60 m ϕ 50 m), Metal Forging Shop(60 m ϕ 70 m), Wood

Shop

(110 ϕ 30 m ϕ 3 F).

Other Shops are shown in GENERAL ARRANGEMENT as per attached.

2.2 Condition of Facilities

The floating docks (Russian made) are 8 years old and the general ages of the above mentioned facilities are about 10-15 years or more.

There is annual capital investment for maintenance.

The existing major facilities such as the floating docks system and most of the machinery are operating in good condition.

2.3 Utilization/Productivity

Working Ratio:	1990/1	1991/2	1992/3	1993/4	1995*
	* Estimated	95-98%	80 %	70%	75% 80%.

3- OPERATION AND THROUGHPUT

In 1985-1992: 120-130 ships repaired (Increase rate 35 % per year)

Year	1991	1992	1993	1994
Sales (mil. R.)	27	220	2,824	10,800

3.1 Customers, Marketing Arrangements

Marketing action (3 person) only to domestic shipping companies.

Basic Customers: FESCO, VOSTOKTRANSFLOT, VLADMORPAS, VBTRF, KASCO, SAKHALIN and others.

Offer basis and inquiry basis of technical negotiation.

4- LABOUR COST

- Engineer: 130-320 US\$/month,
- Skilled worker: 170-320 US\$/month.
- Supporting workers: 110-170 US\$/month.

5- MAINTENANCE OF FACILITIES

For major repairs and maintenance of facilities, the job is performed by specialized labor of Dock Shop.



- 6-. **ANNUAL CONSUMPTION OF MAJOR MATERIALS**  
 Average annual consumption of major consumables in 1993/94 are as follows:  
 -Steel plates and profiles: 500-600 tons  
 -Welding consumable: 30-40 tons  
 -Paint: 100-120 tons
- 7-. **DESIGN CAPACITIES AND R & D**  
 Design department: 8 persons
- 8-. **PROCUREMENT AND SOURCE OF MATERIAL**  
 Steel stock: 200 ton/4 months & 2-3/year, (delivery time: 5-6 months).  
 Steel maker: CHELIABINSK, CHEZEPOVETSK,  
 Pipe maker: SINARSKY ZAVOD  
 Electrode: DALJZVOD, KOMSOMOLTSK NA AMURE  
 Ship machinery: Import, possible to repair 20-30 %  
 Paint: Import 70 % (1990), 90 % (1994) (Owner's supply)  
 Machinery spare parts are supplied by customers.
- 9-. **STAFF RECRUITMENT AND TRAINING**  
 Young new workers are recruited from vocational school graduates of 20-30 persons,  
 but VSRP has to retrain new employees of 30 persons to meet the requirement for 4 months  
 according to training program.
- 10-. **CORPORATE PLANS**  
 There is annual corporate plan (finance, technical, manpower, etc.).  
 Diversification: Entering office building rental business.  
 Technical collaboration talks: China and Vietnam were contacted.
- 11-. **DEVELOPMENT PLAN**  
 Development plan: 1.5 million US\$, blasting machine, hydraulic stage, berth improvement,  
 heating system of factories.



## 2.3 Utilization of Facilities

	1990	1994	
No. of ships	120	80	(Capacity: 185 ships/year)
Working ratio	0.65	0.43	

## 3- OPERATION AND THROUGHPUT

1985-1992: 120-130 ships repaired /year (Annual increase rate 35 %)

year	1990	1991	1992	1993	1994
Sales (mil. Rubles)	63.3	71.8	954.3	7,222.2	25,394.5

## Customers and Marketing

Marketing action only to domestic market

Basic Customers: PRIMORSK SHIPPING CORPORATION, Fishery company and others

## 4- LABOUR COSTS

Labor cost is as follows:

Engineer	:	contract basis, 130-320 US\$/month,
Skilled worker	:	200-300 US\$/month,
Supporting worker	:	110-170 US\$/month

## 5- ANNUAL CONSUMPTION OF MAJOR MATERIALS

Average annual steel consumable in 1990/94 are as follows:

Steel plates and profiles : 6,000 tons (1990), 3,000 tons (1994)

## 6- DESIGNED CAPACITIES AND R &amp; D

Technical department	:	37 persons (incl. design)
Quality control	:	20 persons

## 7- PROCUREMENT OF MATERIALS AND EQUIPMENT

Steel stock per month is about 1,000 ton/ months and it takes 5-6 months to receive them.

The main procurement sources are as follows:

Steel maker	:	CHELIABINSK, CHEZEPOVETSK,
Pipe maker	:	SINARSKY ZAVOD
Electrode	:	DALJZVOD (DAZEL Co.,Ltd.), KOMSOMOLTSK NA AMURE

## 8- FACILITIES AND UPGRADING PLAN

To improve the surface treatment of painting,

Blasting machine up to the standard of SA 2.5, fresh water washing machine. etc.

Facilities for improvement of quality and reduction of docking period.

### 13.4. PRIMORSKY ZAVOD-Ship repairing Complex

Company Name: PRIMORSKY ZAVOD-Ship repairing Complex  
 Company Structure: Joint-stock, 75.1 % Pacific International Company  
 Employee : 1,200 (1993), 659 (1995)  
 Sector : Ship repair  
 Address : 3, Nakhodka, 692900 Russia  
 Tel: (42366) 21902, Fax: (42366) 20780  
 Name of Key Person : Mr. Andrey Yu. Sorokvashin, Director

#### 1.- PRIMORSKY ZAVOD SHIPYARD

##### 1.1 Profile

The PRIMORSKY ZAVOD Shipyard is situated in the Nakhodka town of the Primorsky Krai.

It was established and built as state-owned company under the control of Ministry of Fishery in 1957 and the main activities were ship repair and civil construction, general machinery production, casting and mechanical machinery.

In 1993, PRIMORSKY ZAVOD Shipyard was privatized as a Joint-Stock Holding Company which reorganized as of 6 companies, i.e. Ship Repairing Complex, Machinery Complex, Wood Processing Complex Concrete House Complex, Information and Communication Complex, and Eastern Gate Complex.

#### 2.- ORGANIZATION

Organization Structure :	Management	32 (4.9 %)
	Engineer	79 (12.0 %)
	Officer	15 (2.2 %)
	Skilled workers	428 (64.9 %)
	Supporting worker	105 (16.0 %)

#### 3.- FACILITIES AND CAPACITY

##### 3.1 Facilities

The main data of the facilities are as follows:

-Area 1.02 hectares

-Mooring line 1,800 m length, 6.5-10 m of depth

-Floating Dock No. 1- No. 4 : 5,800 - 27,000 DWT

-Cranes Floating Crane 50 ton  $\varnothing$  1, 25 ton  $\varnothing$  1

-Cranes at

Mooring line 5 tons jib crane  $\varnothing$  3

30 tons jib crane  $\varnothing$  3

15 tons jib crane  $\varnothing$  2

-Machine Erecting Shop

Overhead Shop Cranes ( 18 m  $\varnothing$  60 m) 25 tons  $\varnothing$  1

5 tons  $\varnothing$  1

Lathe: 9.8 m Shaft turning lathe  $\varnothing$  1

Boring machine: table 4 m  $\varnothing$  8 m,

Machining height-2.5 m and others

-Hull Shop

Pipe bending machines ( 32 m  $\varnothing$  60 m)

Welding machines and others

- 3.2 Condition of Facilities  
The general ages of the above mentioned facilities are about 15-20 years and more.
- 3.3 Utilization of Facilities  
Working ratio 1994: 50 % of capacity

4- OPERATION AND THROUGHPUT  
In 1980s, average 90 ships repaired per year.

Results of Activities in 1993-1994

Item	year	1	1993	1994	Deviation	Index
Working hours (1,000 H)			895.9	924.1	28.2	
103.2	Sales amount (mil.Rubles)	1318.0	3669.0	2351.0	278.2	
	Expense (mil.Rubles)	1104.6	3130.0	2026.3		
283.4	Gross profit (mil.Rubles)	213.4	538.1	324.7		
171.7	Gross profit ratio (%)	19.3	17.2	2.1		
89.1	Sales/person (1,000 Rubles)	3215.0	6820.0	3605.0	160.0	

- 5- CUSTOMS AND MARKETING  
Marketing action is made only to domestic ship owner.  
Basic repair: 40-ships per year  
BAMR (Active Marine Fishery Company)  
Sakhmoreproduct, Amur River Shipping Co.  
Nefte Port, Vostochniy Port,  
Port Merchant of Nakhodka  
Primopsk Shipping Corporation and  
Other fishing ship owners  
Newly projected market: China, Greece, Japan, Korea

- 6- ANNUAL CONSUMPTION OF MAJOR MATERIALS  
Average annual consumption of major consumable in 1993/94 are as follows:  
-Steel plates and profiles: 1,000 tons/month  
-Welding consumable : 20 tons

- 7- DEVELOPMENT PLAN  
Upgrading of painting technique: Blasting, fresh water washing

### 13.5. GAIDAMAKSKY SHIP REPAIR PLANT

Company Name : GAIDAMAKSKY SHIP REPAIR PLANT  
 Company Structure : Joint-stock, 32% Self-owned, 68% Private  
 Employee : 750 (1993), 682 (1994), 600 (1995)  
 Sector : Shipbuilding and ship repair  
 Address : 692903, Livadiya, Nakhodka, Primorsky Region Russia  
 Tel: (42366) 51235, Fax:  
 Name of Key Person : Mr. Oleg Yakolevich KISELEV Director  
 Mr. Mikhail Mikhailovich PAK, Deputy Director of

#### Production

#### 1- GAIDAMAKSKY SHIP REPAIR PLANT

##### 1.1 Profile

The Gaidamasky Ship Repair Plant is situated in the Maly Gaidamatchik Bay of the Primorsky Krai.

In August, 1947, Gaidamasky Shipyard was established and built as the base of the fish processing plant under the control of Ministry of Fishery.

In 1992, it was privatized as Gaidamasky Ship Repair Plant Joint-Stock Company.

##### 1.2 Organization

Organization structure : Manager/officer 120 (20.0 %),  
 Skilled worker 350 (58.3 %),  
 Support worker 130 (21.7 %)

#### 2- FACILITIES AND CAPACITY

##### 2.1 Facilities and capacity

The main data of the facilities are as follows:

-Area	18 hectares
-Mooring line	1,800 m length, 6.5-10 m of depth
-Floating Dock	No. 1. 75 m $\varnothing$ 25 m (Inside) for 1500 DWT. No. 2. 50 m $\varnothing$ 20 m (Inside) for 800 DWT.
-Cranes	Floating Crane 60 ton $\varnothing$ 1
-Cranes at Mooring line	15 tons jib crane $\varnothing$ 1 10 tons jib crane $\varnothing$ 1 30 tons jib crane $\varnothing$ 4

There are Machine Maintenance Shop, Engine Shop, Machine Shop, Shaft Propeller Shop, Deck Machinery Shop, Hull Shop and the dimension of the all shop is same as of 60 m  $\varnothing$  18 m. Those shop-enclosed, lighted and heated areas are also capable of accommodating several small and medium-sized vessels for new building and repair.

##### 2.2 Condition of Facilities

The general ages of the above mentioned facilities are 15-20 years and more. but main machines are normally serviceable.

- 2.3 Utilization/Productivity
- Ship repair : 100 ships smaller size of 1500 DWT per year
  - New building : 20 m type-24 ships of fishing boat per year
  - Working ratio (1994) : 40 % (about Ship repair 40 ships)
  - New shipbuilding (1994) : 13 m type- 15 ships, other-10 ships
- 2.4 Product
- Re-equipment and repair: Prawn, crab and clam fishery vessels
  - New building : 10-20 m fishery vessels and others
- 3- OPERATION AND THORUGHPUT
- During 1980s : 90 ships repaired
  - Sales amount (mil.Rubles) 1994 : 6,958.0
  - Marketing action to domestic fishery company only
  - Ship repair : 40-50 ships fishery ships and shipping company
  - New Projected Market : 20 m newly developed boat for local fishery company
- 4- ANNUAL CONSUMPTION OF MAJOR MATERIALS
- Average annual consumption of major consumable in 1993/94 are as follows:
- Steel plates and profiles: 700 ton/month
  - Welding consumable : 25 ton
  - Pipe : 110 ton
- 5- DESIGN CAPACITIES
- Design Bureau : repair 5 persons, new building 6 persons.
- 6- LABOUR COST
- Labor Cost (US\$/month) : Engineer : 180-200, Skilled worker: 300-350,  
Supporting worker : 200-300
- 7- PROCUREMENT OF MATERIAL AND EQUIPMENT
- Engine (40 ps, 65 ps, 90 ps) : 10-20 sets from countries of eastern Europe
  - Steel procurement : 300 ton steel, every 4 months
- 8- STAFF RECRUITMENT AND TRAINING
- Training course 6 month training : OJT
- 9- DEVELOPMENT PLAN
- Development plan : Upgrading of Internal facilities
  - Productivity improvement : Co-working with Vladivostok Polytechnic Institute
- 10- PROJECT DEVELOPMENT PLAN
- South Korean company intended to establish J/V to sell boats (13 m fishing boat) in South Korean market.

### 13.6. SLAVYANKA SHIP REPAIR YARD CO., LTD.

Company Name : SLAVYANKA SHIP REPAIR YARD CO., LTD.  
 Company Structure : Joint-stock company, FESCO 30%, others 70%  
 Capital : 89 million Rubles  
 Employee : 1,855 (1995)  
 Sector : Shipbuilding and ship repair  
 Address : Slavyanka, Primorsk region, 692730,  
 Russia  
 Tel: (42331) 41122, Fax: (42331)  
 41771

Name of Key Person : Mr. MAZNITSA Jean, President,  
 Mr. KRYSIN Viatcheslav,  
 Vice-President

#### 1- SLAVYANKA SHIP REPAIR YARD

##### 1.1 Profile

The Slavyanka Ship Repair Yard is situated at the Slavyanka town of the South Primorsky Krai.

In April, 1970, Slavyanka Ship Repair Yard was established under the control of the USSR Ministry of Merchant Marine and was privatized as a Joint-Stock Company, in February, 1993.

##### 1.2 Organization

Organization structure: Manager/Engineer: 446 (24.0 %)  
 Skilled worker :  
 1,331 (70.7 %)  
 Supporting worker :  
 98 (5.3 %)

#### 2- FACILITIES AND CAPACITY

##### 2.1 Facilities

The main data of the facilities are as follows:

-Area 60 hectares  
 -Mooring line 1200 m length, 9.5 m of depth  
 -Mooring pier 300 m  $\varnothing$  1 and 80 m  $\varnothing$  1  
 -Floating Dock No. 1 155 m  $\varnothing$  25.5 m(Inside)  
 No. 2 250 m  $\varnothing$  34.0 m(Inside)  
 No. 3 266 m  $\varnothing$  35.4 m(Inside)  
 -Slipway Lifting capacity 2000 ton  
 -Cranes Floating Crane 100 ton  $\varnothing$  2  
 Floating Crane 25 ton  $\varnothing$  1  
 -Cranes at mooring line 30 tons  $\varnothing$  3  
 -Machinery Shop Overhead Shop Cranes  
 (144 m  $\varnothing$  21.5 m) 15 tons + 2, 5 tons  $\varnothing$  1  
 Hydraulic press, 1200 ton  $\varnothing$  1 Lathe  $\varnothing$  1,  
 Length, 20 m-Dia. 2.0 m Shaft Turning  
 Length, 12 m-Dia. 1.2 m  
 Shaft Turning Lathe  $\varnothing$  1 and Lathe 5 m  $\varnothing$  12, 8 m lathe  $\varnothing$  2,  
 3.5 m lathe  $\varnothing$  6 and others



Boring machine : 1.2 m and others ad same size of  
trical Shop, Hull Shop, Wooden Shop, Foundry Shop, etc.

## 2.2 Condition of Facilities

The floating docks and the general ages of the above mentioned facilities are 18-20 years old and more.

There is annual capital investment for maintenance.

The existing major facilities such as the floating docks and most of the machinery are operating in good condition.

## 2.3 Utilization/Productivity

	<u>1990</u>	<u>1994</u>	
No. of ships	100	60	Capacity: 185 ships/year
Working rate	0.60	0.25	
Basic Customers: FESCO, Fishery company and others			

## 3-. LABOUR COST

Average wage : 170 Us \$/month

Skilled worker : 250-300 US \$/month

## 4-. ANNUAL CONSUPTION OF MAJOR MATERIALS

Average annual steel consumable in 1990/94 are as follows:

Steel plates and profiles : 6,000 tons (1990), 3,000 tons (1994)

## 5-. PRODUCT

Ship repair : over 100 ships per year up to 36,000 DWT

New building : Self propelled barge and 400 t lighter

## 6-. DESIGN CAPACITIES

Design department : 41 persons

## 7-. TRAINING

In Secondary Professional Technical school

## 8-. PROCUREMENT OF MATERIALS

Steel stock : 3,000 ton (delivery time: 5-6 months)

Steel maker : CHELIABINSK, CHEZEPOVETSK,

Pipe maker : SINARSKY ZAVOD

Electrode : DALJZVOD (DAZEL Co.,Ltd.),

KOMSOMOLTSK NA

AMURE

## 9-. DEVELOPMENT PLAN

Enter into new shipbuilding market:

New shipbuilding project : 5,000 DWT General cargo vessel in cooperation with KOMSOMOLTSK NA AMURE USA, Johnson consultant studied for new shipbuilding and upgrading of ship repair technology

Port facilities construction : Small port for FESCO

### 13.7. DAZEL CO. LTD

Company Name : DAZEL CO. LTD.  
 Company Structure : Joint-Stock, 90 % DALJZAVOD, 10 % Private  
 Employee (person) : 50 (1995)  
 Product : Welding Electrode  
 Address : 2, Daljizavodskaya St., Vladivostok,  
 690001 Russia  
 Tel: (4232) 269929, Fax: (4232)

223002

Name of Key Person : Mr. Yurly K. TULKIN, Director

#### 1-. DAZEL CO. LTD.

##### 1.1 Profile

In 1935, DALJZAVOD started to produce welding electrode in the shop of its shipyard.

In 1992, the shop was branched off and reorganized as a private company.

##### 1.2 Organization

Organization structure :

Manager/Officer	13 (26.0 %)
Skilled worker	30 (60.0 %)
Others	7 (14 %)

#### 2.- FACILITIES AND CAPACITY

##### 2.1 Facilities and capacity

The main data of the facilities are as follows:

- Manufacturing shop area : 1,000 m<sup>2</sup>  
 - Capacity : 2,000 ton/year  
 - Main facilities and equipment

Building	:	500 m <sup>2</sup> @ 2 floor
Machines	:	Hopper, Mixer, Forming machine, Dryer, Milling machine, forming press

##### 2.2 Condition of Facilities

The general ages of the above mentioned facilities are about 20 years and more. But main machines made in Russia are normally serviceable.

#### 3.- OUTPUT AND UTILIZATION OF FACILITIES

	1992	1993	1994		
Output(ton)		1,000	1,300		1,000
Working ratio	0.5		0.65	0.5	

#### 4.- CUSTOMERS

Marketing action: 5 persons promoting business to domestic company only.

ALL shipyards, mining company, chemical plant in Far East.

New Projected Market: expansion of territory

#### 5.- MAINTENANCE OF FACILITIES

Maintenance job is performed by the labor of Daljzavod.

## 6-. COST

Labor Cost (US\$/month) : Skilled worker: 150-250,  
Product cost (US\$) : 0.5 \$/kg, Price: 0.8-0.9 \$/kg

## 7-. DEVELOPMENT PLAN

(1) As all raw materials is procured from the European part of Russia, it takes much cost of transportation.

Investigation with Russian Science of Academy is under going to use local raw materials produced in the Krai.

(2) Intention of construction of new shop with modernized automatic machine line with foreign investor, capacity 10,000 ton/year (50 % share of total demand of 20,000 ton).

Documents were already submitted to Government and they are seeking for foreign investor.

## 14. SELECTED STATISTICAL DATA FOR PRIMORSKI KRAI

## 14.1. GENERAL FIGURES FOR PRIMORSKI KRAI

	1985	1990	1991	1992	1993	1994
Total Population (1000 persons)	2 153.1	2 299.6	2 309.2	2 301.7	2 286.9	2 273.1
Work Force	1 100.4	1 073.9	1 087.2	1 082.2	1 044.7	1 005.5
Work Force non-state status	---	53.8	251.0	259.1	301.0	5 303
Unemployment (persons)						86 563
Unemployment officially registered			246	4 966	6 966	17 222
Gross Product (Billion Rubles)		13.3	25	435	2 992	11 453
Gross product - per capita - (1000 Rubles)		5.8	10.8	188	1 300	5 020
National Income (Billion Rubles)		6	13	209	1 701	7 118
Expenditures (Billion Rubles)		6.7	14.9	172	2 147	6 740
Used		5.3	10.3	96	1 003	4 660
Saved		1.4	4.6	76	1 144	2 080
Output Production (Billion Rubles)	6.4	7.4	13.9	196.8	1 468.8	4 014.1
Manufactured goods output (Alc. Beverages includes), Billion Rubles)	2.6	3.2	6.9	94.6	705.3	2 201.6
Food Products Output (Alch. Beverages excluded) (Billion Rubles)	1.7	2.0	4.6	74.3	557.7	1 893.6
Gross Production of Agriculture Base Rubles 1983, (Million Rubles)	852.0	833.2	800.0	708.0	635.0	489.1
Investments Volume Base Rubles 1991, (Million Rubles)	2 729.1	3 991.1	3 376.3	1 215.5	1 008.8	716.3
Building New Houses, (1000 m2)	939	904	658	534	484	461
New kindergarten, (places)	3 845	3 895	420	2 110	330	510
Schools, (places)	8 052	5 105	3 116	3 192	2 546	3 034
Hospitals, (Beds)	380	210	200	64	---	---
Polyclinics, (Visit/day)	770	1 022	1 561	665	325	---
Transportation (Million Tons)	85.8	93.0	83.9	59.7	47.5	37.5
Retail turnover per capita (Rubles)	1 324	2 001	3 525	27 204	292 510	1 048 600
Services turnover per capita (Rubles)	198	350	460	5 918	50 959	289 379
Gross Income in Economy (Million Rubles)	1.5	2.9	6.0	86.8	728.7	1 010.9
Income/Expenditures (Million Rubles)	19.6	63.8	422.2	3 498.3	48 467	25 830
Investment Credit (Million Rubles)	3 055	2 528	6 861	87 791	517 929	1 271 467
Short Term Credit	2 745	2 232	6 568	84 582	510 095	1 247 622
Long Term Credit	310	296	293	3 209	7 834	23 845
International Trade (Million \$ USA)			310.6	411.8	679.3	591.6
Export			126.8	230.8	442.3	435.4
Import			183.8	181.0	237	156.2
Mean Income per Capita (Thousand Rubles)	2	3	6	47	560	2 675
Average salary (Rubles)	238	363	677.2	7 354.7	84 305	324 152
Annual Retail Price Index (times)			3.5	29	11.2	3.1
Manufactured Products Price Index (times)			2.6	38.2	9.9	4.8
Agricultural Products Price Index (times)			2.0	7.9	8.8	4.0
Investments Prices Index (times)				20.0	12.8	4.95

#### 14.2. INDUSTRIAL GROWTH RATES

Industrial growth rates (in %) of	1990/91	1991/92	1992/93	1993/94	1994/95 9 month
Primorski Krai ( by major sub-sector)					
Power	100.3	96.7	95.6	90.4	95.2
Fuels	99.5	96.9	79.3	83.8	108.0
Non-Ferrous Metals	93.9	101.6	86.8	75.1	106.8
Chemical and petrochemicals	100.4	72.8	52.7	80.4	113.0
Machine building and metal working	110.6	87.1	90.1	68.2	76.1
Logging & wood processing	105.8	100.6	87.4	62.7	76.6
Building materials	96.0	68.9	77.7	69.8	79.9
Glass & porcelain/ceramics	157.4	114.2	87.5	60.4	6.7
Light Manufacturing	113.3	73.3	41.4	61.3	65.8
Food Production	88.6	102.0	94.2	83.0	125.5
of which fish processing	97.2	106.6	94.1	87.0	139.5
Flow and associated products	93.6	84.9	86.4	82.9	77.3
Printing and publishing	107.8	59.5	86.7	126.7	86.8
Others	69.2	99.4	105.2	118.5	90
TOTAL	96.3	93.1	88.2	69.4	102.7

#### 14.3. INDUSTRIAL GROWTH RATES (IN %) OF PRIMORSKI KRAI

( ALL SECTORS, BY SUB-REGION)

Index 1985 = 100	1990	1991	1992	1993	1994
All Primorski Krai	107	104.9	96.4	85.3	59.2
Vladivostok	120.5	119.3	122.8	119.3	107.5
Nakhodka	114.8	102.4	95.2	78.0	54.9
Khazan District	132.8	155.1	108.9	115.3	111.0

#### 14.4. DISTRIBUTION OF EMPLOYED ACTIVE POPULATION

(1000 persons)	1990	1991	1992	1993
<b>TOTAL</b>	<b>1 073.9</b>	<b>1087.2</b>	<b>1082.2</b>	<b>1013.1</b>
Industry and Construction	425.5	470.0	476.5	365.1
Agriculture et Forestry	79.0	82.4	87.5	102.6
Transport and Communication	132.7	140.4	132.9	132.3
Commerce et Alimentation	96.9	80.6	100.1	79.2
Health, Culture, Social, Educational services	196.7	195.7	169.9	196.1
Governmental services, finances, credit, insurance & social services	26.0	34.5	39.3	42.3
Others	117.1	73.6	76.1	95.5
<b>PERCENTAGE TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Industry and Construction	39.6	43.2	44.0	36.0
Agriculture et Forestry	7.4	7.6	8.1	10.1
Transport and Communication	12.4	12.9	12.3	13.1
Commerce et Alimentation	9.0	8.03	9.2	7.8
Health, Culture, Social, Educational services	18.3	18.0	15.7	19.4
Governmental services, finances, credit, insurance & social services	2.4	3.2	3.6	4.2
Others	10.9	6.8	7.1	9.4
<b>TOTAL PRODUCTIVE POPULATION (%)</b>	<b>74.3</b>	<b>73.4</b>	<b>74.2</b>	<b>68.2</b>
<b>TOTAL NON-PRODUCTIVE POPULATION (%)</b>	<b>25.7</b>	<b>26.6</b>	<b>25.8</b>	<b>31.8</b>

#### 14.5. EMPLOYMENT MARKET SITUATION

(persons)	1991	1992	1993	Jul.-94
Unemployed active population	19 745	32 030	26 925	19 476
Official registered Unemployed population	246	4 966	6 966	11 997
of whom Women	220	4 220	5 939	9 346
Official registered unemployed receiving allowances	135	3 725	5 003	9 480
of whom Women	119	3 245	4 140	6 871
Unemployment due to global restructure (privatization, ...)	100	2 611	2 383	4 025
Non occupied job position	21 581	4 321	4 583	6 001
Job Position placed by Employment Official Organizations	7 330	9 414	9 484	6 206
<b>Official Unemployment level (% Active population)</b>	<b>0.02</b>	<b>0.5</b>	<b>0.7</b>	<b>1.3</b>

#### 14.6. TIMEWORK SCHEDULED IN INDUSTRY

	1985	1990	1991	1992	1993
Effective worked volume (1000 work x month)	46 522.0	44 357.0	41 338.0	40 102.0	33 806.0
Absence (excluding Week-End and Holidays)	8 601.0	7 903.0	7 840.0	9 007.0	8 498.0
of which Leaves	4 428.0	4 614.0	4 548.0	5 525.0	5 229.0
of which for training	213.0	142.0	—	113.0	116.0
of which illness	2 190.0	2 207.0	2 123.0	1 921.0	1 762.0
of which administration authorized absence	71.0	167.0	209.0	852.0	937.0
of which unjustified absences	124.0	82.0	91.0	83.0	74.0
full days Imposed unemployment	56.0	91.7	120.8	425.0	628.0
Strikes Time	—	—	35.0	21 411.0	6 750.0

#### 14.7. UNEMPLOYMENT FIGURES

(persons)	1991	1992	1993
<b>TOTAL</b>	<b>246</b>	<b>4 966</b>	<b>6 966</b>
18 Years old	18	314	377
18 to 22 years old	26	731	825
22 to 30 years old	—	778	1 128
Before Retirement age	21	346	373
Others	181	1 406	4 263

#### 14.8. WORK FORCE TURNOVER

	1985	1990	1991	1992	1993
Non productive and leak work time (average non-productivity) in day/year	1.4	1.7	2.3	7.4	10.4
of which day off accepted by administration	0.4	0.8	1.1	4.7	5.7
of which public holiday	0.4	0.5	0.7	2.3	4.1
of which unjustified absenteeism	0.6	0.4	0.5	0.4	0.4
Turnover of work force (in % of listed number of workers)	16.8	16.3	18.5	23.4	27.3

## AVERAGE MONTHLY SALARY

(in Rubles)	1985	1990	1991	1992	1993
Average value without Kolkhoz production	284	414	797	9 305	103 837
Energy	244	388	1 054	15 290	141 525
Combustibles	334	439	1 098	19 294	161 907
Metallurgy	340	448	979	12 623	81 631
Chemical Industry & petroleum	297	407	750	13 130	74 418
Mechanical construction	261	381	690	6 215	78 070
Forestry & pulp	252	335	647	6 326	65 112
Buildings materials	232	351	719	7 325	80 227
Glass, Ceramics	219	343	851	7 727	75 108
Light Industry	181	281	579	5 584	60 588
Food Industries	361	578	1 000	10 939	142 894
of which Fishing & Sea food processing	463	653	1 104	11 325	157 649
Flour production	193	308	681	9 110	95 406
Polygraphs and printing	192	296	478	5 589	86 497

## 14.9. AVERAGE WORKERS MONTHLY SALARY

(in Rubles)	1990	1991	1992	1993
TOTAL	363.0	877.2	7 354.7	87 577.0
Federal (state enterprises)	—	686.0	8 096.0	107 900.0
Individual Enterprises	—	570.0	6 270.0	74 912.0
Municipal properties enterprises	—	—	5 369.0	67 405.0
Publics Enterprises (State Regional)	374.0	508.0	3 395.0	41 383.0
Private Enterprises	407.0	936.0	7 697.0	71 572.0
Mixed Owned enterprises	—	999.0	7 066.0	88 876.0

## 14.10. AVERAGE MONTH SALARIES IN INDUSTRIAL SUB-SECTORS

in Rubles	1990	1991	1992	1993
Global Average salaries	364.0	731.0	7 791.0	92 592.0
Industry	414.0	840.0	9 291.0	108 099.0
Agriculture	357.0	577.0	5 769.0	63 236.0
Construction	433.0	1 053.0	8 939.0	107 535.0
Transport	430.0	857.0	10 665.0	130 659.0
Railways sector	411.0	984.0	12 298.0	140 192.0
Transportation (Navigation)	446.0	829.0	10 663.0	166 181.0
Transportation (publics)	427.0	804.0	9 504.0	94 332.0
Telecommunications	298.0	644.0	7 401.0	96 457.0
Retail Commerce and warehouse	309.0	619.0	6 193.0	70 127.0
Data processing Services	320.0	649.0	4 776.0	74 063.0
Public community services	245.0	484.0	4 757.0	67 550.0
Health, sport et social services	252.0	519.0	4 575.0	67 068.0
Educational services	234.0	476.0	4 706.0	54 559.0
Culture	197.0	387.0	3 897.0	49 511.0
Art	233.0	560.0	3 269.0	45 290.0
Sciences	398.0	658.0	5 031.0	60 891.0
Finances, credits establishments, Insurance's	528.0	1 337.0	14 647.0	280 522.0
Administration services	418.0	320.0	6 149.0	116 302.0
Others	205.0	532.0	—	74 670.0
Industrial and Productive services	394.0	824.0	8 642.0	98 325.0
Unproductive services	271.0	550.0	5 424.0	81 566.0

## 14.11. HUMAN RESOURCES BY INDUSTRIAL SUB-SECTORS

(persons)	1990	1991	1992	1993
<b>TOTAL</b>	<b>299 793</b>	<b>283 479</b>	<b>266 797</b>	<b>237 855</b>
Energy	11 637	11 615	13 691	14 429
Combustibles	17 507	17 743	19 211	18 974
Metallurgy	10 490	7 647	10 120	19 147
Chemical Industry & petroleum	9 089	8 576	8 503	7 421
Mechanical construction	108 575	102 037	90 199	73 232
Forestry & pulp	26 706	24 768	24 021	21 226
Buildings materials	19 985	19 293	18 363	15 298
Glass, Ceramics	2 201	2 153	2 216	2 127
Light Industry	18 743	16 644	9 402	7 167
Food Industries	63 508	62 948	61 308	58 194
of which Sea food processing	46 625	45 891	45 213	43 012
Flour production	1 798	1 733	1 746	1 564
Polygraphs and printing	1 148	1 073	1 005	636
Others	8 280	6 981	6 688	6 555

## 14.12. DISTRIBUTION AND QUALIFICATION OF WORK FORCE

(Persons)	1990	1991	1992	1993
<b>TOTAL</b>	<b>299 793</b>	<b>283 479</b>	<b>266 797</b>	<b>237 855</b>
Workers	238 548	225 054	209 811	185 968
Administrative	61 245	53 425	56 989	51 887
White collar	19 728	19 180	18 945	17 670
High Skills specialists	36 238	34 210	33 016	30 679

## 14.13. TECHNICAL HUMAN POTENTIALS

(persons)	1985	1990	1991	1992	1993
<b>Total of High skills Graduated</b>	<b>6 502</b>	<b>11 823</b>	<b>16 748</b>	<b>8 763</b>	<b>6 383</b>
Ph.D. graduated	127	228	257	234	279
Candidate to Ph.D.	2 423	2 152	2 124	1 766	1 797

## 14.14. NUMBER OF GRADUATED STUDENTS AT THE END OF YEAR

(persons)	1985	1990	1991	1992	1993
<b>Total</b>	<b>312</b>	<b>327</b>	<b>324</b>	<b>281</b>	<b>325</b>
Full time students	143	179	170	156	194
Part time students	169	148	154	125	131
<b>Scientific Organization (except Universities et Institutes)</b>	<b>148</b>	<b>150</b>	<b>146</b>	<b>110</b>	<b>106</b>
Full time students	57	84	84	68	63
Part time students	91	66	62	42	43
<b>Universities + Institutes</b>	<b>164</b>	<b>177</b>	<b>178</b>	<b>171</b>	<b>219</b>
Full time students	86	95	86	88	131
Part time students	78	82	92	83	88



## 14.15. NUMBER OF GRADUATED IN THESIS

	1985	1990	1991	1992	1993
<b>Total</b>	<b>89</b>	<b>90</b>	<b>85</b>	<b>67</b>	<b>54</b>
<b>Scientific Organization (except Universities et Institutes)</b>	<b>40</b>	<b>34</b>	<b>38</b>	<b>25</b>	<b>15</b>
Full Time students	19	17	22	14	12
Part Time students	21	17	16	11	3
<b>Universities + Institutes</b>	<b>49</b>	<b>56</b>	<b>47</b>	<b>42</b>	<b>39</b>
Full Time students	32	39	31	25	16
Part Time students	17	17	16	17	23

## 14.16. REGIONAL BUDGET

(Million Rubles)	1980	1985	1990	1991	1992	1993
Total Income	449.1	532.0	1 029.5	3 002.7	31 120.9	467 803.0
Total Expenditures	429.1	525.7	965.7	2 580.5	31 790.4	532 323.0
National Economy	161.6	181.6	351.8	832.7	13 021.4	246 037.0
Social and Cultural sections	233.1	277.8	496.3	1 248.5	14 637.4	199 783.0
of which Culture	8.6	10.5	19.3	58.1	623.8	7 620.0
of which Educational	108.8	133.0	236.0	610.6	7 083.4	99 292.0
of which health and sport	109.9	127.7	228.8	545.2	6 476.6	85 945.0
of which social security	5.8	6.6	12.2	34.7	453.7	6 872.0
Governments official expenditures	8.5	10.1	26.4	53.6	903.9	13 934.0
Other Expenditures	26.3	24.4	33.1	431.7	3 227.7	72 569.0
Federal participation expenditures	---	31.8	58.1	13.9	---	---
<b>Percentage (%)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Social and Cultural sections	37.6	34.5	36.4	32.3	41.0	46.2
of which Culture	2.0	2.0	2.0	2.0	1.9	1.4
of which Educational	25.3	25.3	24.4	23.7	22.3	18.7
of which health and sport	25.6	24.3	23.7	21.1	20.4	16.1
of which social security	1.4	1.3	1.3	1.3	1.4	1.3
Governments official expenditures	2.0	1.9	2.7	2.1	2.6	2.6
Other Expenditures	6.1	4.6	3.4	16.7	10.2	13.7
Federal participation expenditures	---	6.1	6.1	0.5	---	---

## 14.17. DEBTS (suppliers, salaries,)

in (Millions Rubles)	1992	1993
<b>TOTAL</b>	32 489	324 501
Industry	27 236	279 018
Building Enterprises	5 253	45 483
<b>DEBTS (unpaid and outstanding)</b>	14 770	202 640
Industry	12 823	179 670
Building Enterprises	1 947	22 970
<b>SUPPLIERS DEBTS</b>	30 026	242 412
Industry	27 519	219 027
Building Enterprises	2 507	23 385
<b>OUTSTANDING SUPPLIERS DEBTS</b>	16 340	119 231
Industry	15 102	109 917
Building Enterprises	1 238	9 314
<b>OUTSTANDING SALARIES DEBTS</b>	540	15 090
Industry	436	10 666
Building Enterprises	55	1 961
Agriculture	49	2 463

## 14.18. CONSUMER GOODS PRICES INDEXES EVOLUTION

Base December year N-1 in Percentage (%)

Reference Base Calculus (Year)	déc-91 1992	déc-92 1993	déc-93 jun-94
Average value (all goods)	2 873.7	1 037.8	158.9
Foodstuffs	3 257.3	1 044.6	157.6
Meat, Poultry	4 684.2	1 577.1	129.4
Sausages	4 011.9	1 486.5	147.3
Canned Meat	1 353.7	516.5	149.5
Fish products	4 681.2	1 488.5	156.8
Butter	2 270.7	1 117.6	156.1
Oil	6 839.5	380.2	127.5
Milk and Milk Products	5 281.6	961.4	201.0
Cheese	2 217.3	728.6	212.2
Eggs	2 836.5	1 237.2	149.5
Sugar	5 689.3	614.7	130.8
Confectioneries	2 634.0	796.9	142.0
Bread	4 031.2	1 144.8	180.3
Cereals	3 374.5	516.5	235.5
Pates	4 279.1	1 155.5	179.9
Alcoholic Beverages	3 044.9	853.0	132.8
Non alimentary Products	2 558.5	1 026.1	160.3
Raw materials (base cotton)	2 275.7	1 545.5	127.8
Raw materials (base wool's)	1 150.0	483.1	138.8
Raw materials (base silk)	1 901.5	343.1	119.7
Raw materials (base linen)	4 706.4	---	256.1
Clothing	1 598.2	1 006.5	150.4
Furs	2 753.4	711.4	120.8
Hats	2 208.1	622.3	127.3
Tracksuit (sports)	907.3	764.3	146.7
Underwear's	1 535.0	1 240.4	183.0
Socks	524.4	1 413.7	176.0
Leather shoes	3 630.3	1 455.3	136.5
Shoes in caoutchouc	1 364.5	1 406.0	184.3
Detergents	2 448.5	2 325.7	192.2
Perfumes	2 107.3	775.4	215.2
Haberdashery	875.9	801.1	170.0
Tobacco	10 854.3	495.2	121.9
TV-Radio	3 045.1	632.1	163.6
Domestic electrical tools	1 652.1	750.0	141.9
Building materials	4 355.0	2 506.3	171.1
Furniture's	2 437.0	919.8	162.9

Clocks	2 144.8	697.8	145.9
Jewelers	---	---	162.9

#### 14.19. GENERAL CONSUMER PRICES INDEX EVOLUTION

Base (Year N-1) [Time]

Reference Base	déc-91	déc-92	déc-93
Calculus (Year)	1992	1993	jun-94
Total Consumer expenditures	29.0	11.2	170.6
Foodstuffs	32.9	10.9	162.2
Non-Foodstuffs Products	25.6	10.3	160.3
Services	31.2	27.8	340.8
Alcoholic Beverages	30.4	8.5	132.8

#### 14.20. SECTORIAL PRICE INDEXES

Base December Year (N-1)

	1991	1992	1993	jun-94
General index (Goods, products and services)	1.90	29.00	11.20	1.70
Industrial goods and products	2.60	37.00	8.00	2.40
Agricultural products	--	7.90	8.80	5.30
Investments	--	20.00	12.80	11.40
of which construction works	--	14.60	13.20	11.40
Transportation goods tariffs	1.90	49.60	34.90	2.00

#### 14.21. EVOLUTION OF SOCIAL INDEXES

(Base December year N-1)	1991	1992	1993	jun-94
Consumer global price index	1.9	29.0	11.2	1.7
Survival minimal	--	--	11.0	1.7
Average work force income	2.0		10.9	1.5
Average income per capita	--	9.5	11.0	1.9

#### 14.22. SECTORIAL GOODS PRICES EVOLUTION

(In percentage, base December N-1) %	Time (x)	Time (x)		
	1991	1992	1993	jun-94
Global Industry	255.0	37.3	8.4	236.2
Energy	261.9	93.0	7.9	150.8
Combustibles	83.3	127.0	100.0	1156.0
Chemical Industries	189.0	41.0	10.4	180.7
Mechanical Constructions	169.7	32.9	11.0	127.1
Forestry, woods and pulp	300.3	20.7	13.7	230.6
Building materials	290.5	57.9	6.5	235.6
Light Industries	306.7	18.4	12.1	109.9
Food Industries	203.7	42.3	7.4	213.7

#### 14.23. NUMBER OF ENTERPRISES IN REFERENCE YEAR

(INCLUDING SMALL AND MEDIUM AND MIXED ENTERPRISES)

	1990	1991	1992	1993
<b>Total</b>	<b>370</b>	<b>387</b>	<b>362</b>	<b>813</b>
Energy	1	1	1	1
Combustibles	18	19	19	19
Metallurgy	1	1	1	4
Non-Ferrous metallurgy	7	7	7	9
Chemistry and petroleum	5	5	5	21
Mechanical construction	69	70	73	331
Forestry and pulp	46	51	49	84
Building Materials	30	33	36	57
Light Industries	52	53	20	69
Ceramic, glass and porcelains	3	3	3	6
Food Processing	87	93	97	130
of which sea food processing	6	9	9	41
Flour	8	8	8	7
Macrobiotics industries	1	1	1	2
Polygraph and printing	26	26	27	21
Medical bioengineering	2	2	2	9
Others	14	14	13	43

#### 14.24. EXPENDITURE INDEX FOR 1 PRODUCTIVE RUBLE

(% percentage for Year N-1)

	1990	1991	1992	1993
base 1985 (-0,91)	1.16	6.12	5.41	5.39

#### 14.25. ENERGY CONSUMMATION INDEX

(in percentage %)	1985	1990	1991	1992	1993
Year 1985. Indices = 100	100.0	116.0	121.3	111.8	104.9
Year 1980. Indices = 100	116.4	135.4	141.2	130.1	122.0

#### 14.26. INVESTMENTS IN AGRICULTURE

(ACTUAL PRICES in 1991)

in [Million Rubles]	Productive works	Unproductive works
1985	379	154
1990	552	246
1991	403	194
1992	73	47
1993	39	35

#### 14.27. PRINCIPAL INDEXES OF INFRASTRUCTURES WORKS

(Million Rubles)

	1985	1990	1991	1992	1993	1993
					Constant Prices	Current Prices
Capitals	1 584.1	2 066.0	2 257.6	562.7	---	184 900.1
Investments	2 729.1	3 991.0	3 376.3	1 209.3	999.8	383 106.8
Projects in Progress	1 461.0	1 246.0	1 995.0	813.9	609.4	50 028.6

**14.28. INVESTMENTS DISTRIBUTION IN SECTORS**

	1985	1990	1991	1992	1993
<b>TOTAL (IN PERCENTAGE % )</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Industry	26.7	32.8	37.3	39.8	16.8
Agriculture	13.6	10.1	12.5	5.6	1.7
Construction	3.0	2.7	4.9	2.0	0.2
Transport & Communication	7.4	9.4	11.5	10.6	17.3
Community infrastructures, Housing & services	16.8	16.6	21.0	29.2	25.0
Commerce, forestry, warehouses, information systems, sciences, culture & art, education, health	32.5	28.4	12.8	12.8	39.0
of which education	3.3	2.4	2.7	2.5	2.7
of which health	1.3	2.3	1.9	2.5	2.4

**14.29. FIGURES OF SUB-CONTRACTING IN BUILDING CONSTRUCTIONS**

	1985	1990	1991	1992	1993
Volume of transactions (Million Rubles), in 1991 prices.	1 461.0	1 659.9	1 995.3	813.9	609.4
Number of sub-contractors	304	359	312	338	342
Small enterprises in building constructions	---	---	120	113	1 002
Profit of subcontracting in building construction (in Million Rubles)	108.7	431.6	459.4	2 935.1	30 979.2
Rentability Level (%)	---	---	21.4	17.0	20.8

## 14.30. INDUSTRIAL PRODUCTION OUTPUT

(Natural Units)	1985	1990	1991	1992	1993
<b>ENERGY ET COALS</b>					
Energy (Million Kw/h)	11 498.0	11 624.0	11 677.0	10 977.0	10 220.0
Coals (1000 Tons)	18 210.0	15 896.0	14 413.0	12 986.0	11 987.0
<b>METALLURGY</b>					
Leads (Tons)	10 328.0	9 707.0	9 336.0	8 616.0	8 748.0
<b>MECHANICAL CONSTRUCTIONS</b>					
Piping and tubing, Sanitary (1000 units)	4 692.0	4 718.0	4 556.0	1 907.0	824.0
Wood machinery and equipments (units)	3 856.0	2 588.0	2 702.0	2 780.0	656.0
Mechanical works (1000 tons)	118.4	65.9	80.0	45.1	27.4
<b>CHEMICAL, FORESTRY AND PULP INDUSTRIES</b>					
HCL (1000 tons)	332.0	426.0	435.0	341.0	125.0
Boric acid (1000 tons)	136.7	175.6	183.5	138.8	52.9
Woods (1000 m3)	6 135.8	4 630.0	3 802.0	3 490.4	2 341.7
Logging (1000 m3)	1 495.1	892.1	800.9	576.9	271.5
Lumber (1000 m3)	23.5	17.2	6.9	5.4	4.1
Timber (1000 m3) (estimation)	74.5	97.6	94.2	69.8	50.5
Timber/Wood planks (1000 m3)	1 743.0	1 605.0	1 053.0	1 249.0	568.4
<b>BUILDING MATERIALS</b>					
Cements (1000 tons)	3 537.0	3 337.0	3 404.0	1 939.0	940.0
Building steels (1000 m3)	1 311.8	1 274.2	1 199.4	766.2	538.2
Building bricks (Million units)	334.0	289.3	245.3	154.7	111.4
Building roofing slates (Million units)	240.8	295.7	276.5	171.1	60.6

## 14.31. GENERAL FIGURES OF INDUSTRIAL ACTIVITIES

(Global Autonomous enterprises in 1993)

	Industry, Combustibles and Energy	Forestry and pulp industries	Fishing Industries
Output Production (Current Prices in Million Rubles)	154 594	80 668	469 434
Number of Enterprises	18	35	10
Total Human Resources (Persons)	31 868	18 886	42 979
of which Workers	24 988	16 187	30 384
Capitals production (December 93) Million Rubles.	60 088	12 395	264 705
Capital Return (in percentage %)	3.10	8.70	3.30
Equipment's (1 000 000 rubles)	1 563	482	3 336
Return investment percentage evolution (% from Year N-1)	36.10	2.07	(0.38)
Profit (Million Rubles)	(39 210)	17 908	78 585
Rentability Level (en %)	(17.65)	32.46	31.04

## 14.32. PRODUCTIVITY INDEX IN SUB-SECTORS (%)

Base 1985 = 100,	1990	1991	1992	1993	1993 (%), Base 1992
<b>Average value without Kolkhoz production</b>	<b>120.4</b>	<b>120.0</b>	<b>116.2</b>	<b>112.1</b>	<b>96.5</b>
Energy	109.5	110.2	107.0	97.0	90.7
Combustibles	90.7	80.0	71.6	72.0	100.5
Metallurgy	117.8	122.4	118.9	133.4	112.2
Chemical Industry & petroleum	138.2	146.9	103.7	63.8	61.5
Mechanical construction	125.4	147.3	143.2	154.7	108.0
Forestry & pulp	114.9	133.5	133.6	131.2	98.2
Buildings materials	117.6	110.5	80.3	74.6	92.9
Glass, Ceramics	145.0	233.3	259.0	237.2	91.6
Light Industry	131.8	161.9	129.7	62.4	48.1
Food Industries	119.6	104.7	108.6	101.3	93.3
of which Fishing & Sea food processing	119.6	113.4	122.6	114.5	93.4
Flour production	147.8	143.7	120.7	114.2	94.6
Polygraphs and printing	131.7	151.9	96.6	91.4	94.6
Others	112.5	92.9	90.6	112.9	124.6

## 14.33. IMPORT AND EXPORT VOLUME AND VALUE

natural units and value in '000 USD

	Export		Import	
	1993		1993	
	Units	Amounts	Units	Amounts
<b>FOODSTUFFS</b>				
(hors textiles)				
Frozen meat (1000 tons)	---	---	2.2	1 839.0
Frozen poultry (1000 tons)	---	---	110.9	112.0
Milk (1000 tons)	---	---	47.0	159.0
Butter (1000 tons)	---	---	3.0	3 752.0
Frozen Fish (1000 tons)	105.7	138 048.0	0.1	256.0
Fish flour (1000 tons)	7.0	3 739.0	---	---
Caviar and fish liver (Tons)	18.9	117.0	---	---
Seafood's (1000 tons)	2.6	7 020.0	---	---
Oil and fat fish (1000 tons)	4.0	1 330.0	---	---
Eggs (Million Units)	242.3	94.0	---	---
Cereals (1000 tons)	---	---	332.0	142.0
of which Rice	---	---	330.0	138.0
of which Corn	---	---	2.0	3.0
Corn Grains (in Tons)	---	---	1 397.0	640.0
Starch (Tons)	---	---	183.0	23.0
Oleaginous grains (Tons)	750.1	481.0	59.0	169.0
Vegetable Oil (Tons)	---	---	273.0	487.0
Margarine's (Tons)	---	---	99.6	99.0
Canned meat (tons)	---	---	2 676.0	10 844.0
Canned fish (Tons)	---	---	1.0	68.0
Raw Sugar (1000 tons)	---	---	21.3	1 534.0
Refined Sugar (1000 tons)	---	---	2.6	13 070.0
Cacao (Tons)	---	---	207.0	280.0
Coffee (Tons)	---	---	167.1	373.0
Tea (Tons)	---	---	170.0	526.0
Confectioneries (Tons)	---	---	172.6	407.0
Pastes (1000 tons)	---	---	2.2	3 303.0
Bread products & biscuits	---	---	---	---
Pastry products (Tons) (2)	---	---	332.2	2 364.0
Vegetables (1000 tons)	---	---	3.3	598.0
Nuts (1000 tons)	---	---	---	213.0
Melons et cucurbitaces (1000 tons)	---	---	5.2	7.0
Lemons, Oranges (1000 tons)	---	---	1.6	907.0
Apples (1000 tons)	---	---	6.0	3 207.0
Dried fruits & vegetables products	---	---	286.4	669.0
Others foodstuffs (Tons)	---	---	303.2	828.0
Beverages (alcoholic and non-alcoholic) (DCAL)	---	---	---	4 847.0
Animals by-products (Tons)	16.0	1 293.0	---	---
Cigarettes (Million Units)	---	---	12.2	258.0

## 14.34. PRODUCTION PER CAPITA OF CURRENT CONSUMER GOODS

Current prices (in Rubles) for Current Year Statistics

	1985	1990	1991	1992	1993
<b>TOTAL</b>	<b>1 020.0</b>	<b>1 448.0</b>	<b>2 979.0</b>	<b>41 047.0</b>	<b>307 405.0</b>
Foodstuff products	643.0	874.0	1 976.0	2 244.0	243 092.0
Non-foodstuff products	202.0	355.0	739.0	5 959.0	43 977.0
of which light industries	85.0	108.0	227.0	1 593.0	9 342.0
Alcoholic beverages	175.0	219.0	264.0	2 844.0	20 339.0



**14.35. PRODUCTION EVOLUTION IN MAJOR INDUSTRIAL SUB-SECTORS**

	Indices = 100 Base in year 1985 (in %)				Base 1992 (%)
	1990	1991	1992	1993	1993
Total	114.60	110.40	102.60	91.00	88.50
Energy	109.50	105.70	102.20	97.70	95.60
Coal	88.70	77.80	75.40	75.10	99.60
Metallurgy	118.00	110.80	112.60	98.60	87.60
Chemical Industries & petroleum	133.60	143.40	101.70	54.00	53.10
Mechanical Constructions	118.00	130.50	113.70	102.80	90.40
Forestry and pulps	104.70	110.80	111.50	97.30	87.30
Building materials	109.60	105.20	72.50	56.60	78.00
Light Industries	111.90	126.80	124.50	50.70	40.70
Ceramic, Porcelain	125.10				
Food processing	116.30	103.00	105.00	99.00	94.30
in which sea foods	115.70	112.50	119.90	112.90	94.20
Flour	132.90	124.40	105.60	91.20	86.40
Printing and polygraph	123.40	133.00	79.10	69.00	87.20
Others	126.00	87.20	86.70	75.40	87.00

**14.36. INTERNATIONAL COMMERCIAL TRANSACTIONS**

(in million \$USA)

	Export	Import	Export	Import	Export	Import
	1991	1991	1992	1992	1993	1993
<b>TOTAL</b>	<b>126.8</b>	<b>183.8</b>	<b>230.8</b>	<b>181.0</b>	<b>442.0</b>	<b>237.0</b>
Eastern Europe, Vietnam Mongolia & Cuba	0.1	0.6	2.1	0.5	4.0	1.5
China, Laos, Yugoslavia	76.2	144.2	71.2	58.8	189.2	100.7
Non Socialist Countries "capitalist's countries"	50.5	38.4	157.5	123.7	249.1	134.8
of which Developed Countries	35.8	25.6	145.7	122.1	198.2	63.0
of which On Development countries	14.7	12.8	11.8	1.6	50.9	51.0

**14.37. EXPORTATIONS FIGURES**

(1000 \$ USA)	1992		1993	
	Units	Amounts	Units	Amounts
Frozen fish (1000 tons)	59.8	34 507.5	105.7	138 048.0
Canned fish and seafood's (1000 tons)	1.5	43 623.0	1.9	58 305.0
Sea food products (1000 tons)	0.1	170.0	2.6	7 020.0
Fish (Oils and fats) (1000 tons)	3.7	1 127.8	4.0	1 330.0

## 14.38. IMPORTATION FIGURES

(1000 \$ USA)	1992		1993	
	Units	Amounts	Units	Amounts
Frozen meat (1000 tons)	11.5	3 938.4	2.2	1 839.0
Poultry (100 tons)	1.0	820.3	0.1	113.0
Milk (Tons)	---	---	47.0	159.0
Butter ( Tons)	98.0	100.7	3 010.0	3 752.0
Vegetable oil (Tons)	---	470.4	---	487.0
Nuts et Melons	---	4 056.2	---	4 334.0
Canned meat (1000 tons)	0.4	243.0	2.6	10 844.0
Coffee (Tons)	6.0	21.4	167.0	373.0
Tee (Tons)	---	---	170.0	526.0
Raw sugar (1000 tons)	---	---	21.3	13 070.0
Refined sugar (1000 Tons)	3.0	1 636.0	2.6	1 534.0
Confectionery (Tons)	---	3 577.0	---	249.0
Dry fruits	---	454.1	---	1 392.0
Tobacco	---	2 502.5	---	258.0
Beverages (alcoholic and non alcoholic)	---	992.8	---	4 847.0
Caoutchouc	---	213.0	---	527.0
Plastics	---	1.2	---	3 871.0
Shoes and leather products	---	998.8	---	4 930.0
Furs	---	---	---	1 804.0
Survetements	---	5 056.5	---	14 712.0
Clothing's	---	10 430.7	---	22 691.0
Materials	---	2 879.0	---	1 384.0
Shoes (1000 pairs)	825.5	4 740.6	802.5	4 790.0
Mechanical tools	---	46 506.6	---	37 230.0
Computers	---	60.1	---	2 297.0
Domestic electrical apparatus	---	487.9	---	2 027.0
Radios and TV	---	2 479.7	---	10 603.0
Cars	---	3 806.0	---	32 050.0
Boats	---	15 480.9	---	18.0
Services	---	27 422.3	---	57 047.0

## 14.39. PRODUCTION OF CURRENT CONSUMER PRODUCTS IN 1993

Consumer markets and services

	1993 in Million Rubles.	1993 compared to 1992 (%)	Increase or Decrease in % Base Year 1985 = 100 (%) in units or rubles ?			
			1990	1991	1992	1993
<b>Total</b>	<b>705 280.0</b>	<b>88.8</b>	<b>125.5</b>	<b>122.7</b>	<b>111.3</b>	<b>98.8</b>
of which Food Products	557 725.0	91.2	111.0	103.0	97.9	89.3
Non-Food Products	100 890.0	81.3	155.0	174.4	129.1	105.0
Light Industries	21 434.0	64.6	130.9	141.9	107.8	69.6
Alcoholic beverages	45 665.0	106.2	102.8	104.1	92.6	98.3

#### 14.40. INDEXES FOR LOCAL COMMERCE

in Billions Rubles	1985	1990	1991	1992	1993
Volumes of retail sales including agricultural products on daily domestic market	2.8	4.6	8.2	62.8	637.4
Retail Transaction volumes	2.8	4.6	8.1	62.7	636.6
Total goods reserves available in retail stores (Billion Rubles)	0.7	0.8	1.7	17.2	124.7
(in Sales day)	91	60	67	63	62
Work force in retail food stores (1000 persons)	60.9	65.4	60.2	46.6	40.5
Retail enterprise store number	4636	4850	4720	3902	3903
Total sales area of stores (1000 m <sup>2</sup> )	380.3	429.9	424.7	421.7	438.3

#### 14.41. SAVING DEPOSITS IN BANKS

At the end of year	1985	1990	1991	1992	1993
Saving Establishment (Banks) (Units)	527	519	518	491	464
Savers (1000 persons)	1332	1771	1978	2841	2919
Total Amount deposits (million Rubles)	1 651.0	3 213.0	4 303.0	9 557.0	67 805.0
Average Deposits amount (in Rubles)	1 239.0	1 814.0	2 175.0	3 363.0	23 209.0
Average deposits per capita (in Rubles)	764.0	1 390.0	2 334.0	4 157.0	29 679.0

#### 14.42. ENVIRONMENTAL PROTECTION EXPENDITURES in 1993

(Million Rubles)

Total of expenditures	16 184.1
of which Rational uses of water resources	11 421.0
of which Air Quality protection	1 962.7
of which controlling of waste industrial rejections	2 220.5
of which land improvements	579.9

#### 14.43. ECOLOGICAL TAXES (in MILLION RUBLES) in 1993

Taxes for standard value rejections	1 237.8
Taxes for over value rejections	545.8
Fines for over value of standards	24.0
Taxes for Raw Materials	6 550.0
of which Water Resources	4 290.3

#### 14.44. GROSS COMMON PRODUCT BY SECTOR (in million Rubles)

FREE ECONOMIC ZONE of NAKHODKA (1993)

<b>Total</b>	<b>348065</b>	<b>100%</b>
Industry	105227	30.2
Agriculture	10979	3.2
Building	19260	5.5
Transport and communication	145347	41.8
Trade	20486	5.9
Technical & Material supplies & others	24612	7.0
Balance of international operations	20501	5.9
Customs Clearance taxes	1653	0.5

14.45. *Industrial production of Primorsky Krai by major sub-sectors*

Industrial sector	Primorsky Krai		
	1991	1993	1994
Power	2.5	7.2	7.2
Fuels	1.0	1.6	4.3
Ferrous metallurgy	0.1	0.2	0.1
Non-ferrous metallurgy	4.0	5.1	4.6
Chemicals and petrochemicals	3.0	2.9	2.7
Machine-building and metal working	21.0	13.9	13.2
Logging, wood-processing, pulp and paper	6.4	6.6	5.6
Building materials	7.7	5.7	5.5
Glass and porcelain/ceramics	0.4	0.5	0.2
Light manufacturing	4.6	1.9	1.0
Food production of which fish processing	47.7	50.9	51.5
TOTAL	100 <sup>a</sup>	100	100

a Percentage shares do not add up to total in source.

**14.46. PRODUCTION OUTPUT**

(in million Rubles)

<b>Total</b>	<b>253285</b>	<b>100%</b>
Industry	55306	21.8
Agriculture	5107	2.0
Building	12450	4.9
Transport and communication	121106	47.8
Trade	18823	7.5
Technical & Material supplies & others	18339	7.2
Balance of international operations	20501	8.1
Customs Clearance taxes	1653	0.7

**14.47. QUANTITY, STATUS AND ORGANIZATION OF EXISTING ENTERPRISES**

	State Owned	Municipa l local Gvnt	Private	Joint- Venture	Foreign Owned	Others	Total
<b>1.1.1992 Total FEZ</b>	<b>448</b>	<b>2</b>	<b>120</b>	<b>39</b>	<b>/</b>	<b>915</b>	<b>1524</b>
NAKHODKA	365	/	92	38	/	703	1198
PARTIZANSK	83	2	28	1	/	212	326
<b>1.1.1993 TOTAL FEZ</b>	<b>167</b>	<b>251</b>	<b>455</b>	<b>165</b>	<b>/</b>	<b>1650</b>	<b>2688</b>
NAKHODKA	28	192	314	162	/	1429	2179
PARTIZANSK	85	59	141	3	/	221	509
<b>1.1.1994 Total FEZ</b>	<b>52</b>	<b>206</b>	<b>687</b>	<b>342</b>	<b>23</b>	<b>2430</b>	<b>3740</b>
NAKHODKA	39	164	484	339	23	2022	3070
PARTIZANSK	14	42	203	3	/	408	670
<b>1.1.1995 Total FEZ</b>	<b>145</b>	<b>236</b>	<b>2135</b>	<b>189</b>	<b>224</b>	<b>489</b>	<b>3417</b>
NAKHODKA	122	219	1878	186	224	460	3089
PARTIZANSK	23	16	257	3	/	29	328

**14.48. EXPORT AND IMPORT PRODUCTS (TO/FROM FEZ) (NAKHODKA)**

( in Thousand \$US. ):

	Export (1993)	Import (1993)	Export (1994)	Import (1994)
<b>TOTAL</b>	<b>29852</b>	<b>40546</b>	<b>25089</b>	<b>9299</b>
JAPAN	11944	24140	4689	5793
CHINA	4634	4559	851	1382
SOUTH KOREA	807	3942	476	886
GERMANY	11205	525	18315	78
UNITED STATES	250	215	62	295
FINLAND	/	3894	/	142
NEW ZEALAND	/	1147	/	253
BANGLADESH	/	911	/	/
INDIA	/	118	/	/
TAIWAN	/	500	/	/
SINGAPORE	/	287	25	149
HONG KONG	/	228	54	192
SWEDISH	/	28	/	/
DPRK	12	52	50	/
CYPRUS	/	/	69	/
HONDURAS	/	/	26	23
KUWAIT	/	/	30	/
LITHUANIA	/	/	36	/
LIBERIA	/	/	32	/
MALTA	/	/	66	9
VANUATU	/	/	27	/
PANAMA	/	/	56	51
SAINT-VINCENT (GRENADA) <sup>o</sup>	/	/	6	/
VIETNAM	/	/	48	/
THAILAND	/	/	19	/
GREAT BRITAIN	/	/	42	46
UZBEKISTAN	/	/	10	/

**14.49. EXPORT OF MAIN PRODUCTS (in NAKHODKA FEZ)**

	1991	1992	1993	1994
Used oil Product (1000 tones)	15.0	2.3	/	/
Fertilizers (1000 tones)	12.4	/	/	/
Wood Products (100 Cubic Meters)	181.9	51.0	37.5	41.0
Fish & Fish Products (1000 Tones)	23.4	13.6	10.6	9.8
Products of sea catching (1000 tones)	7.0	7.4	/	/
Wide metal plates (1000 tones)	4.0	3.9	2.2	0.1

**14.50. IMPORTATION OF MAIN PRODUCTS (in NAKHODKA FEZ)**

	1991	1992	1993	1994
Cars (pieces)	766	109	18	53
Laurie (cargo vehicles)	2	3	/	125
Buses (Pieces)	3	35	1	/
Electronic & computers	24	24	390	/
Spare parts for cars (1000 rubles)	3258.5	10399.6	161474.0	1460.0
Metal products (1000 rubles)	264.3	391.0	550.0	70.0
Chemical products (Tones)	50.0	204.6	144.0	/
Electrical devices (Pieces)	565	698	477	3554
Paints and furnishes (Tones)	1	0.5	30	/
Sewing products (1000 rubles)	5914.9	31857.0	9060.0	203
Tricotage (1000 rubles)	37.2	14521.6	23880.0	/
Shoes (1000 pairs)	8.5	50.5	3.0	8.2
Meat and Tinned meat (Tones)	90.5	95.8	/	815.0

**14.51. PROFITABILITY OF ENTERPRISES ORGANIZATIONS FOR 1994.**

	Primorski Region	NAKHODKA	Partizansk
Loss-Profit %	6.1	15.5	7.7
Loss-Profit % (expenses for sales producing)	14.1	39.2	15.5
Loss-Profit % (expenditure)	2.4	26.8	3.9

	Nakhodka	Partizansk	Nakhodka	Partizansk
Building materials	-5.5	/	-4.8	/
Light Industries	2.5	/	-4.5	/
Tricotage	14.0	/	-6.5	/
Sewing Industries and textiles	-5.0	/	-2.0	/
Food processing	6.6	/	6.4	/
Food processing (?)	79.0	/	15.3	/
Bread producing	117.4	/	15.8	/
Bakery	20.0	/	10.7	/
Meat and Milk processing	25.0	/	17.3	/
Meat	26.4	/	17.6	/
Butter processing & milk	21.5	/	16.4	/
Fish Industry	5.7	/	4.6	/

## 14.52. STRUCTURES OF RETAIL TURNOVER (1994),

Food products	Million Rubles	% of total
Meat, chicken	16987	7.41
Sausage products	9249	4.04
Fish	5472	2.39
Herrings	909	0.4
Butter	3996	1.74
Vegetable Oils	2817	1.23
Pigs fat	340	0.15
Margarine	891	0.39
Milk and Milk product	6596	2.88
Cheese	1673	0.73
Canned meat	3356	1.46
Canned Fish	1768	0.77
Canned Vegetables	1908	0.83
Canned foods and fruits	2249	0.98
Eggs	6020	2.63
Sugar	5139	2.24
Bakery products	9642	4.21
Jam and honey	1159	0.51
Tea	1560	0.68
Salt	317	0.14
Flower	3011	1.31
Bread	8778	3.83
Cereal and bins	2360	1.03
Macaroni	2219	0.97
Potatoes	2340	1.02
Fresh Vegetables	3875	1.69
Fruits, berries, melons	3495	1.52
Alcohol beverages	35187	15.36
Non-Alcohol beverages	2745	1.20
Ice Cream	1355	0.55
<b>Non food products</b>		
Cotton	655	0.29
Wool's	270	0.12
Silk	761	0.33
Lynn	213	0.09
Sewing product	6105	2.66
Fur and products	470	0.20
Caps and Hat	137	0.06
Tricotage	3416	1.49
Socks	1067	0.47
Lather (textile and combined shoes)	5407	2.36
Rubber shoes	292	0.13
Soaps for Laundry	285	0.12
Synthetic laundry	619	0.27
Toilet Soap	370	0.16
Perfumes	2647	1.16
Ornaments goods	2625	1.15
Strings, cotton	43	0.02
Tobacco	2725	1.19
Matches	192	0.08
Furniture	5479	2.39
Printing, Newspaper, books	996	0.44
Bicycle and motorbike	14	0.01
Sport goods	142	0.06
TV and radio sets	5230	2.28



Musical Instruments	21	0.01
Toys	1900	0.83
Goods for cultural entertainment	747	0.33
Building materials	2122	0.96
Jewelry	2341	1.02
Chemical for home uses	918	0.40
Carpets	2376	1.04
Metal dish and wares	541	0.24
Porcelain	626	0.27
Glass dishes	712	0.31
Watches	683	0.30
Electrical devices	4048	1.77
School notebooks	1323	0.58
Paper and stationary	640	0.28

## 14.53. INDUSTRY OF FEZ (NAKHODKA)

Quantity of enterprises, personnel, and volumes of production (1994)

	Mbr. Entrep	Human Resources			Rate 1994		
		Product ive person ne	Worker s	Volume in wholesa le prices in Million Rubles	Volume product increas e price index	Increas e volume index	Increas e workers number s
<b>TOTAL IN FREE ECONOMIC ZONE</b>	<b>25</b>	<b>19300</b>	<b>14149</b>	<b>270728</b>	<b>2.6</b>	<b>82.2</b>	<b>85.3</b>
RUSSIAN BREAD		232	194	9376	4.6	84.8	97.4
GORPICHECOMBINAT (food processing)		63	50	1133	2.25	58.2	92.6
MAISOCOMBAT (Meat Processing)		195	152	17606	4.1	104.3	105.4
GORMOLOKOZAVOD (City Milk factory)		172	134	6836	4.1	83.9	103.0
PRIMORSKIZAVOD (Ship yard repairing)		1590	1074	22028	4.0	53.0	56.2
UJMORRIBFLOT (Fish Catching )		1702	1180	26268	3.4	138.3	84
BAMR (Fish Catching & processing)		7953	5549	108780	1.9	67.6	86
NAKHODKINSKI SRZ. (Ship yard repairing)		2497	1989	12058	2.1	74.1	89
ACTIF (???)		313	266	5320	2.8	136.9	80
SMZ. (??)		132	104	941	2.3	40.6	73
LADIA (??)		166	143	860	1.8	56.6	81
GBF (Can metal production)		1241	981	24356	4.6	86.5	73
FABRIKA OROUDY LOVA (Fishing tools)		72	62	1284	1.8	124.3	69
RITM <sup>15</sup> (Fish catching and processing)		164	131	1306	3.1	90.5	86
PRODMAG (Food trade company)		51	38	188	1.5	96.8	42
GAIDAMAKSKI SRZ. (Ship yard build & repair)		682	461	4754	3.5	121	91
VODOKANALOUUPRAVLENIA (Management of water supply)		570	497	8720	2.9	/	108.2
SERGUEIVESKY LPX (wood products)		469	409	5053	3.0	72.3	86.7
YALE ( ??? - Wood ?)		165	139	989	3.9	101.7	96.5
ZAVODKAPADA KPD (Concrete panel houses)		408	310	6235	1.8	40.9	73.2
ZAVOD STROIKELNOKERAMIKI (Ceramics)		144	105	3027	2.9	70.7	110.8
ZAVOD CINTAL (???)		81	61	685	3.0	66.7	92.0

## 14.54. LIST OF MONOPOLISTIC ENTERPRISES ACTING IN TRADE MARKET

ECONOMIC FIGURES for 1994

Name of Enterprise	Market	Status	Products	Volume. Production in natural units in 1994	Market share	Production unit in Ruble (1994)	Production Rentability
UJMORRIBFLOT	Federal	State	AGAR (macrobiological)	16 Tons	100	8471	/
GBF	Regional	Mixed	Cans	82661 Thousand Pieces (T.U.B)	100	205.1	/
AKTIF	Regional	Mixed	Panels for house buildings	3.0 Million of relative bricks	100	69413	+ 5.6
BAMR	City Market	Private	Fish production	102309 Tons	88.9	1067	+ 17.9
GORMOLOKOZAVOD	City Market	Private	Natural Milk	9103 Tons	100	678	+ 53.1
MAISOCOMIBAT	City Market	Private	Ham, Sausages	2784 Tons	100	6310	+ 18.9
RUSSIAN BREAD	City Market	Municipal	Bread, Bakery	12438 Tons	100	717	+16.06

## 14.55. PRODUCTS FIGURES in 1994

	Total production in Million Rubles	Food products in Million Rubles	Non-food products in Million Rubbles	Light Industries products in Million Rubbles	Evolution Base 1993) (100 %)
<b>Total in free economic zone</b>	<b>197749</b>	<b>185764</b>	<b>9505</b>	<b>2480</b>	<b>84.2</b>
BAMR	115556	115556	/	/	71
UJMORRIBFLOT	21386	21386	/	/	91.1
KHLEBVASTOCHNI (Eastern Bread)	380	380			/
GORPICHECOMBINAT	1280	1280			59.3
GORMOLOKOZAVOD	6618	6618			73.3
MAISOCOMIBAT	19962	19962			118.1
UJNOMASCOI RIB COOP	983	983			73
NAKHODKA RIB COOP	650	650			53
CONDITER (condiments)	27	27			105
TIKHI OKEAN	4677	4677			103
LADYIA	988		84	904	43
RITM	1566		104	1463	86
POLYGRAPHIC (Printed Matter)	147		147		11
DEVE SMZ (Ship Machinery)	21		21		129
PRIMORERIEM RIBFLOT (Ship repair)	42		42		13
FABRICA AROUDI LOWAR (Fish Tools)	15		15		10
GBF	676		676		38
UKX	119		119		58
GAIDAMAISKI SRZ. (ship repair)	6959		6598		151
SEGUEIEFSKI LPX	564		564		74
AKTIF	339		339		2.7
ITK N° 22	394		282	113	66
ITK N° 27	150		150		49
RAIPO	2574	2574			75
MERCURY	500	500			73
LPX DMGC	30		30		134
PMK (mechanical, heavy materials)					
PRIBREJNEI (collective farm)	248	207	41		34
ZA VODKAPADA KPD (Concrete panel houses)	52		52		65
KHLEB VASTOCHNY	382	382			84.3

## 14.56. VALUE OF PRODUCTION IN NATURAL UNITS

Name of Products Name of main producer	Units	Production 1994	Rate of Increase, Base 1993
Fish Catching	1000 tons	190.8	74
BAMR		172.2	74
BSF (IM NADIBAI DZE)		18.8	67
Clean fish product for food	1000 tons	112.5	66
BAMR		101.9	69
BSF (IM NADIBAI DZE)		10.6	84
Canned Fish	T.U.B	7212	123
BAMR		1220	3.9
BSF (IM NADIBAI DZE)		5992	107
Ship Repair	Million Rubles	29785	62.5
PO PRIMORIE MRIBFLOT		4509	22.4
NAKHODKA SRZ		10868	75
BAMR		7451	102.1
GADAMAKSKY SRZ		6958	123
Concrete Construction for Building	1000 Cubic Meters	22.8	59
AKTIF		22.8	59
Lumber Cutting	1000 Cubic Meters	74.4	62
SERGUEIYE VSKI LPX		74.4	62
Timber	1000 Cubic Meters	45.0	70
SERGUEIYE VSKI LPX		45.0	70
Lumber chip	1000 Cubic Meters	26.5	82
SODROUJESTWOUA		26.5	82
Lumbering	1000 Cubic Meters	2.6	48
SERGUEIYE VSKI LPX		2.6	48
Cans	T.U.B.	82661	69
GBF		82661	69
Sewing production	Million Rubles	791	83.4
CHVEINAYIA FABRIKA		791	83.4
Tricotage Gloves	1000 pairs	1895	74.4
FABRIKA TRICOTAJNIKH PERTCHIATOK		1895	74.4
Natural Milk Production	Tons	9103.3	85
NAKHODINSKI GORMOLOKO ZAVOD		9103.3	85
Meat	Tons	236	2.2
MASOCOMBINAT		236	2.2
Sausage Products	Tons	2784	115
MASOCOMBINAT		2784	115
Non-Alcoholic Beverages	D. C. L.	20	76.9
NAKHODKA GORBISCHE COMBINAT		20	76.9
Sweet Confectionery	Tons	298	55.2
NAKHODKA GORBISCHE COMBINAT		280	56.9
NAKHODKA KHLEBO COMBINAT		18	28
Sweets (Russian Jelly = KISSEL)	Tons	32	47
NAKHODKA GORBISCHE COMBINAT		32	47
Breads	Tons	12438	95.5
NAKHODKA KHLEBO COMBINAT		12438	95.5
Macaroni	Tons	411	28
NAKHODKA KHLEBO COMBINAT		411	28
Ice Cream	Tons	181	84.7
NAKHODKA GORMOLO GOZAVOD		181	84.7
Cheese "ADEIGEISKY"	Tons	13.5	41.2
NAKHODKA GORMOLO GOZAVOD		13.5	41.2

<sup>1</sup> Plastic items, i.e., hoses, vinyl carpets, bags, utensils

<sup>2</sup> Note that a joint venture between the Rajin Plasticware Factory and Chinese has been

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established and should be producing with more modern equipment, soon. Materials will also be supplied.

''' Produced locally and in DPRK.

''' Maintenance seems acceptable.