DEPARTMENT OF
EXTERNAL AFFAIRS
OTTAWA,
CANADA

INI F7/88
DATE 30 November 1988
COPY 49

EXTRACTS FROM THE SOVIET PRESS ON USSR FORESTRY AND FOREST-BASED INDUSTRIES

JULY - 1988

Any enquiries or comments on this publication should be directed to:

The Department of External Affairs, INI
A-2 Lester B. Pearson Building
125 Sussex Drive
Ottawa, Ontario
KIA OG2

TABLE OF CONTENTS

TIMBER AND WOODWORKING

Soviet-Finnish Founding of Plywood Enterprise

On July 5, 1988 founding documents were signed at the USSR Ministry for the Timber Industry in Moscow creating the first large-scale joint Soviet-Finnish industrial enterprise. It is to be known as "Chudovo-RWS" and is slated to produce about 50,000 cubic metres of high-quality large-format birch plywood annually.

This is the fourth joint enterprise linking the Ministry for the Timber Industry and foreign companies.

The founders are Novgorodlesprom - a territorial production complex - and two Finnish companies: WILHELM SCHOMANN LTD., and RAUTE LTD. (the first letters of their names form the abbreviation "RWS").

The new enterprise will be built in the town of Chudovo in Novgorod Oblast on the grounds of the Proletarskoe Znamya Match Factory, a part of Novgorodlesprom. The deadline for start-up is just 30 months from the date on which the planning documents were drawn up - a tight schedule. The factory should be operating at full capacity by 1993.

The authorized funds stand at 6.3 million roubles, of which 70% was contributed by the Soviet side and 15% by each of the two Finnish companies. Product sales will be the responsibility of Wilhelm Schomann, which has at its disposal a wide network of foreign representatives. Payments will be made in hard currency.

Speaking at the ceremonial signing of the founding documents in the boardroom of the USSR Ministry for the Timber Industry, the Minister, M.I. Busygin, said:

"The development of cooperation between the USSR and Finland in the timber industry and forest management fields has excellent precedents due to the fact that the composition of the forests and the conditions of their growth are similar in both countries, while our geographic proximity and neighbourly relations make it possible to carry out programs of technological and economic cooperation and forge new types of foreign economic links.

"Business ties between our Ministry and the Wilhelm Schomann and Raute companies have long existed. Years of successful cooperation have provided us with a fund of expertise.

"With the use of advanced technology and equipment at the joint enterprise, plus improved labour and management methods, we plan to produce high-quality, competitive goods for Soviet, Finnish, and world markets under environmentally safe conditions."

"We regard the founding of this joint enterprise as an important and positive contribution to the further development of commercial ties between the USSR and Finland. It is in keeping with the spirit of the times: the building of a secure world."

Other speakers included G. Ernrut, President of Wilhelm Schomann Ltd., H. Mustakallio, Chairman of the Board of Raute Ltd., and M. Pekkanen, Chairman of the Timber Union of Finland. They praised the long standing, successful cooperation with the USSR Ministry for the Timber Industry and expressed confidence that the agreements concluded would be promptly and successfully implemented. It was stressed that mutual trust, and the pooling of raw

materials, resources and expertise, together with the use of advanced, ecologically-safe plywood manufacturing techniques and the experience gained in the export development field would serve as a guarantee of the profitability of the joint enterprise.

The head of Novgorodlesprom, Igor Slutzker, also spoke in support of this view.

Background

Novgorodlesprom, a territorial production association, was formed in 1988 pursuant to the general plan for developing the timber industry and forestry in the Soviet Union. The complex consists of 31 enterprises involved in logging and wood-processing, and employs tens of thousands of workers.

Wilhelm Schomann Ltd. was founded in 1983 and is among the 10 largest timber industry complexes in Finland. It is the largest producer of plywood and particleboard panels in the country. About 6,000 workers are employed at the company's factories. The annual turnover exceeds 3 billion Finnmarks.

Raute Ltd. was founded in 1908 and consists of a number of branches specializing in the manufacture of equipment for the wood-processing industry. It is the world's leading producer of equipment for plywood manufacturing. The company supplies both fully-equipped factories and individual types of equipment. Raute also produces industrial electronic equipment, electronic scales, and a variety of weighing and measuring systems for

different sectors of industry. It employs 1,400 people and its annual turnover exceeds 520 million finnmarks.

Lesnaya promyshlennost'
7 July 1988
Page 1 (Abridged)

Translated by the Secretary of State Translation Bureau, Multilingual Services Division

A Close Look at Exsportles

An interview with Yury Vardashkin, Executive Director of the Self-Financing Foreign Trade Organization, Exportles (Timber Exports).

Q. "Exportles is now in its 62nd year of existence and it is currently undergoing a restructuring process. What new trends in the organization's work have emerged with its transfer to the USSR Ministry for the Timber Industry?"

A. "The main function of Exportles in the past when it was part of the Ministry for Foreign Trade was the sale and purchase of timber and pulp-and-paper products on the world market. We did everything we could to ensure that the contracts concluded by Exportles were as profitable as possible for our country. The world timber market is characterized by fierce competition, rapid changes, and fluctuating circumstances and prices. To buy or sell products profitably requires solid commercial experience and stable international business links.

Our organization's role in the import and export of timber and paper products has been preserved with its transfer to the Ministry for the Timber Industry. However, our relations with the suppliers of export products have changed and we have assumed responsibilities formerly handled by Soyuzlesbumzagranpostavka (USSR Timber and Paper Exports).

New subdivisions have appeared in our organization's structure: these include the company known as Prominles (Timber Industry Imports) and the entities responsible for procurement of equipment for foreign production units, technical cooperation, and imports of equipment and spare parts. The work of these sub-divisions is connected with the creation of joint Soviet-foreign timber, wood-processing, and pulp-and-paper enterprises on Soviet soil.

Two firms have been created: Mebelexport (Furniture Exports) and Raznolesimpex (Assorted Timber Exports/Imports). The Latter exports matches and matchstick wood and imports woodblocks and planed plywood made of valuable types of wood, as well as raw cork and goods made from cork."

Q. "What have been the main stages in the history of Exportles?"

A. "Before our organization was formed, sales of timber products abroad were handled by the following state organizations: Severoles (Northern Timber), Karelles (Karelian Timber), Dalles (Far Eastern Timber) and Dvinoles (Dvina Timber). Later the Central Timber Export Office was created within the People's Commissariat for Foreign Trade to

coordinate their activity. In August, 1926 the joint stock company, Exportles, which later became a state organization, was founded.

At present, with the development and intensification of activity by transnational corporations in developed capitalist countries, foreign trade is becoming concentrated according to the industry in question. This includes the pulp-and-paper industry. That is why, in giving individual republics the right to sell their timber and paper products independently on the world market, it is important to take into consideration the history of timber exports in our country and to assign the responsibility for coordinating and controlling timber sales abroad to Exportles. It should be mentioned that Exportles receives a great deal of help in selling Soviet timber products in Western European markets from joint-stock companies: the Russian Wood Agency in England, Russholtz in West Germany, Russe Bois in France, Rus Leno in Italy, and Maderas Rusas in Spain."

Q. "Are there any other Soviet foreign trade organizations apart from Exportles dealing with timber and paper imports/exports at the present time?"

A. "Yes, Dalintorg (Far Eastern International Trade), Tsentrosouyz (the USSR Central Union of Consumer Societies), Rosvneshtorg (Russian Foreign Trade), and certain firms and organizations created in the Soviet republics also handle this."

Q. "Our readers would like to know about the range of operations carried on by Exportles. What periods do your contracts cover?"

A. "Exportles is a major exporter of timber and paper products on the world market. Imports also occupy an important place in its commercial operations. We sell millions of cubic metres of timber products and over two million tonnes of pulp-and-paper products annually. Exportles has important dealings with foreign freight companies, especially in regard to the chartering of vessels and other services. It is not easy to buy and sell such a large quantity of timber products, given the fierce competition on the world timber and currency markets. It is necessary to have a thorough knowledge of prevailing market-conditions and the laws of each country with which we are trading, and also to correctly determine the conditions of payment, transportation, grading, legal arbitration, and so on. Special attention is devoted to the setting of prices for products.

Deals are concluded after a series of complex negotiations. They often begin in Moscow and end with the signing of a contract abroad, or vice versa. Executives of our specialized firms and product specialists participate in the negotiations. Legal and financial experts, shipping agents, and industrial representatives are also invited to take part. Every year nearly 4,000 negotiations with foreign firms take place in Moscow. An equal number are conducted abroad, including those held by our joint companies. Contracts are concluded for various periods - some are one-time orders for immediate delivery, others are one-year contracts, and still others are for a period of several years."

Q. "What can you tell us about the results of your organization's work in 1987 and what are the prospects for Exportles in 1988?"

A. "In 1987 Exportles sold all the timber and paper products earmarked for export on the world market. Sales and purchases were carried out at the right time and at the right prices inasmuch as conditions on the world timber market were determined accurately.

Lesnaya promyshlennost'
9 July 1988
Page 2 (Slightly Abridged)

Translated by the Secretary of State Translation Bureau, Multilingual Services Division

Structural Changes Within the USSR Ministry of the Timber Industry

On June 7, 1988, in accordance with directives issued by the USSR Ministry for the Timber Industry, the following organizations were created (on a self-financing basis with individual legal rights), replacing a number of nationwide industrial associations which have been closed:

1. Krasnoyarsklesprom (Krasnoyarsk Logging and Timber Enterprise), a territorial production association located in Krasnoyarsk.

2. NPOlesmash, a research and production association for the construction of timber machinery.

The following territorial research and production associations for furniture manufacture have also been organized on the same basis:

1. Tsentromebel' (Central Furniture) with HQ in Moscow (comprising furniture associations and

enterprises in Moscow and the following Oblasts: Bryansk, Voronezh, Vladimir, Gorky, Ivanov, Kalinin, Kostroma, Moscow, Orlov, Ryazan, Smolensk, Sverdlov, Tula and Yaroslavl, and also the All-Union Technological Planning and Design Institute for Furniture Manufacturing).

2. Yugmebel' (Southern Furniture) with HQ in Rostov-on-Don (comprising furniture associations and plants located in the Krasnodar and Stavropol districts, the autonomous republics of the Northern Caucasus, and the Astrakhan, Volgograd, and Rostov Oblasts, and the Turkmenmebel' (Turkmenian Furniture Association).

3. Vostokmembel' (Eastern Furniture) with HQ in Moscow (comprising furniture associations and plants located in the Altai and Khabarovsk districts, the Vologda, Kemerovo, Kurgan, Kuibyshev, Novosibirsk, Orenburg, Saratov, Ulyanov, and Chelyabinsk Oblasts, and the Tatar and Chuvash autonomous republics; the Tadzhikmebel (Tadzhik Furniture) Association, and the Central Technological Planning and Design Office and its affiliate, the Mytischin Wood-Processing Factory).

The following All-Union associations are closed:

1. Soyuzlesremmash (Soviet Timber Machinery Repairs Association);

2. Zapadmebel' (Western Furniture Association);

3. VNPOmebelprom (All-Union Research and Production Association for the Furniture Industry);

4. The Siberian Research and Production Timber Association;

5. The Sevkavproektmebel' (Northern Caucasus Furniture Design, Research and Production Association).

The Guzerpil Experimental Logging and Timber Enterprise has been transferred from the jurisdiction of the Central Research Institute for Mechanical and Electrification in Forest Exploitation to the Maikop Furniture and Wood-Processing Association known as Druzhba.

Lesnaya promyshlennost'
16 July 1988
Page 2 (Full text)

Translated by the Secretary of State Translation Bureau, Multilingual Services Division

An Appeal to End the Free-Floating of Logs on the Northern Dvina

Local inhabitants recall that in the nineteen fifties the Vaga River was so full of fish that boys could catch enough for a fish stew in 15 minutes. Today there is no point in trying to fish here because there is nothing to catch. The black butts of submerged logs jut out of the water for almost the entire length of the river, rotting pieces of logs lie in the bushes along its shores, and many cubic metres of timber are buried beneath sandbars.

Logs float downstream from spring to autumn. Several large timber farms harvest the timber, transport it to the banks of the Vaga and its tributaries, split it up, slashing off the crowns and butt ends (which, incidentally, are often left at the cutting sites), and toss them into the water, where

they float downstream for hundreds of kilometres until they are gathered into bundles and rafts in deeper water - at the mouth of the Vaga River or in the Northern Dvina. Although it is thought that there are no free-floating logs on the Northern Dvina, in actual fact there are. However, for the moment we shall return to the Vaga River.

The Vaga used to be navigable, and shallow boats made their way along it, splashing the water with their broad wheels. Today's powerful river boats only sail down the Vaga in the spring, right after the ice breaks up, to deliver freight to remote areas while the water is deep, and to pick up rafts of timber prepared in the winter at raft-construction points of the Levkov and Shenkursk Timber Industry Farms, and to the Dvino-Vaga Floating Timber Office.

Without normal navigation conditions and relying only on their experience and intuition alone, the crews of ships administered by the Northern Inland Shipping Authority and the Dvinosplav organization are managing to transport only 22 medium-sized rafts of small wood totalling 4,000-5,000 cubic metres in volume, to the mouth of the Vaga River. Here, at the Shidrovo terminal boom they are gathered together into large caravan rafts and taken on to Arkhangel'sk. The 100,000-120,000 cubic metres of timber currently transported out of the Vaga River in rafts is only a drop in the bucket by comparison with the million cubic metres of wood loosely floated downstream on the river.

We have not gone into the history of free floating logs on this river. Former timber floaters say the network of floating facilities which still exists today was created in the pre-war and war years. The most intense use of the Vaga for this

purpose was in 1974 when it carried 3 million cubic metres of timber. In 1980, 2,135,000 cubic metres of timber were transported along it, and over the past eight years the volume has decreased by another one million cubic metres.

Slightly over a million cubic metres are transported on the river today, but even this is a lot for the exhausted river after decades of exploitation. Free-floating timber is an anachronism, and to still use this method is hopelessly outdated. The Northern Dvina basin is so polluted that the water at its mouth will soon be unfit to drink and the public is being advised not to swim on the beaches at Arkhangel'sk this summer. Five powerful pulp-and-paper complexes are located in Arkhangel'skaya Oblast where there are 39 such rivers, along which roughly five and a half million cubic metres of timber are transported. This means there are 39 rivers with water unfit to drink or even to sustain fish and plant life. Moreover, as a result of sloppy work and clean-up methods, a lot of wood is lost at the end of the line.

We must get rid of free-floating logs as quickly as possible. But how can this be done without reducing timber deliveries to the consumer? Even the factories in Arkhangel'sk, the largest timber center in European Russia, are suffering from shortages of raw wood. Arkhangel'sklesprom has experience in replacing timber floating by other means of transport. In recent years it has been possible to reduce the volume of wood floated freely down the Pinega River and on the Vaga by redirecting a significant portion of it along other routes. This type of approach should be expanded and a new transportation network created.

If we listen to the executive of Arkhangel'sklesprom, this is their goal. V. Zazhigin, Deputy Director of the complex, defined their task as reducing the number of rivers on which wood is floated to 28 by 1991, with the total volume of timber released on them, 4.9 million cubic metres, and further reducing the number of such rivers to 20 by 1996 with a reduction in wood volume to 4 million cubic metres. Is that a lot or a little?

It depends on whose figures you are listening to. Consider for instance, the limits imposed by a resolution adopted in December 1987 by the Oblast Executive Committee. This committee issued instructions to the effect that free-floating of logs should be permitted on only 9 rivers by 1995, not on the 20 proposed by Arkhangel'sklesprom. Incidentally, neither proposal corresponds to the resolution of the RSFSR Council of Ministers, also adopted last year: to totally put an end to the floating of logs in stages by 1995. This is an obvious example of how a government resolution is interpreted locally: the lower down the ladder one goes, the freer the interpretation. If this is what happens to planning, what will happen in practice?

We have no intention of telling the experts what should be done to gradually decrease the log floats. They have the experience, and there are enormous reserves with which to speed up the matter. V. Shishov, Chief Engineer at the Dvinoa-Vaga Floating Timber Office, persuaded us that the floating of logs on the Vaga can be reduced to a minimum. To achieve this, part of the wood must be returned to the railway, the volume of on-shore raft assembly must be increased, and a start made on the shipment of wood in barges. We will not go into detail here - especially since V. Zazhigin already

had a detailed plan setting out what, how, and to where wood should be transported. It coincides with what we were told by V. Shishov. The difference is only in the timeframe.

More detailed consideration should be given to the possibility of expanding timber transportation on the Vaga in rafts and on boats. As mentioned above, the Vaga was navigable in the past and could be made so again. Incidentally, it has not yet been removed from the network of waterways under the jurisdiction of the Ministry of Inland Waterways. In the sixties a plan was developed to make it navigable along its entire length from Shengursk to its mouth. Work to deepen its bed even got underway, but then completion of the project was postponed. Floating timber interfered with the work! Now employees of the inland waterways, railway engineers, and timber-floaters argue every spring over who should receive allocations of fuel and lubricants, as well as funds to operate the boats in the short-lived spring, which is no more than 2 weeks long. Yet no one has gone back to the plan to fully restore navigation on the river. The timber-floaters have completely taken it over.

While logs continue to float down the river, the railway engineers can do nothing. So they have given up on the Vaga. This vicious circle must be broken. It is the loggers who must take the first step by reducing floating timber to a minimum and making it possible for river engineers to begin restoring this waterway - if, of course, it has not been ruined forever. The appropriate scientific research institutes under each Ministry could also make a valuable contribution here, for example, the Northern Scientific Research Industrial Institute at Arkhangel'sk.

Let us return to what was said at the outset. The floating of logs on the Dvina is an anachronism entirely lacking in justification. Imagine a mighty river with heavy navigation: caravans of barges, freight and passenger vessels, lightning-fast hydrofoils. Then imagine masses of floating logs and barriers stretching for dozens of kilometres. The logs float into the path of the boats, creating dangerous situations and preventing work from being carried out to deepen the river bed. During stormy weather timber is tossed out of the barriers hundreds of kilometres downstream, entirely missing the terminal booms. How can Dvinosplav tolerate such choas?

We asked V. Zazhigin why the Pen'e and Pyanda terminal booms are kept operating on the Northern Dvina if the raft assembly can be transferred to the Bereznikov terminal boom, thereby preventing the free-floating timber from going beyond Dvinsky Bereznik? Why can't the floating logs be removed altogether from the Dvina and the raft assembly concentrated in the Vaga River mouth or the Shidrovo terminal boom? We did not receive a clear reply. Mr. Zazhigin pointed to the shallowness of the Vaga and the costliness of constructing a terminal boom. It was evident that there was a lack of will to change the existing situation. Pen'e and Pyanda were needed when 3 million cubic metres of timber floated downstream, but today only one-third of that volume is being transported. Is the only reason not to close them, thereby reducing to a minimum the number of logs floating on the Dvina, the simple fact that this is the way it has always been done? A plan to clear the Dvina of floating logs must be formulated by experts who receive their salaries to change things, not just blindly continue doing what has been done in the past.

It is time to think, to plan, to act, and to do something to save our northern rivers from free-floating logs and the damage they cause.

Lesnaya promyshlennost'
28 July 1988
Page 2 (Full Text)

Translated by the Secretary of State Translation Bureau, Multilingual Services Division

PULP AND PAPER

The Paper Shortage - Why It Exists, What to Do About It

Why isn't there enough printing paper? Publishers are alarmed over the shortage of paper for producing fiction. The editorial offices of both major and minor magazines and newspapers are panicking: this year alone the runs of central newspapers increased by almost 20 million copies. Criticism of the press voiced by several speakers at the 19th CPSU Party Conference has, in our view, only served to stimulate interest in periodicals.

Restrictions on subscriptions and individual sales of periodicals and literature in the era of glasnost' have produced a justified protest from readers, but there is a real threat that many would-be subscribers to various popular periodicals may find their requests rejected. There is a shortage of 15,000 - maybe even 20,000 - tonnes of paper for books and magazines. As a result, several million readers will be unable to subscribe to Soviet press publications.

By 1989, the situation will be even worse. Basing its calculations on the growth rate of subscriptions, the USSR State Planning Commission has calculated that publishers are short 143,000 tonnes of newsprint and 83,000 tonnes of paper for the printing of books and magazines. Would-be subscribers are in danger of having not only their magazine subscriptions, but also their newspaper subscriptions rejected.

What is the solution to this problem? The first would be to limit the number of subscriptions. The second would be to purchase paper abroad.

The increasing circulation of printed material attests to a higher level of involvement by the reading public, who want to be kept up-to-date with events at home and abroad. If information is restricted, the public is deprived of something very necessary.

What can be done to prevent this? In 1988, enterprises under the USSR Ministry of the Timber Industry are scheduled to produce 1,760,000 tonnes of printing paper. Figures for the first 6 months of the year show that the paper industry is meeting its production plan. Approximately 16,000 tonnes of newsprint above and beyond production targets have already been produced. By the end of the year this figure may reach 20,000 tonnes. However, this doesn't solve the problem.

The interesting point is that there is no shortage of paper in reality. One-fifth of the country's total production is exported. A large part goes to the COMECON countries where the per capita demand for paper is greater than in the Soviet Union.

It is important to note that newsprint is supplied to these countries on an exchange basis. In return for the paper being supplied, we receive other types of paper. However, this kind of commercial exchange represents a left-over policy from the former Ministry for the Paper Industry and the Soyuzlesbumzagranpostavka (Soviet Timber and Paper Export) trade organization which was disbanded on December 31, 1987. Why not exchange some other type

of paper rather than newsprint, which is in short supply, for more valuable types of paper?

Soviet trade with the socialist countries is balanced. For instance, every year we import furniture at a cost of hundreds of millions of roubles (expensive furniture, incidentally, which is beyond the reach of most buyers). If imports from these countries were reduced by even 5%, then the balance (approximatey 25 million roubles) could be applied to reduce the export of newsprint, thus retaining 70-75,000 tonnes annually for the Soviet market. This would make it possible to provide newspaper and magazine subscriptions to an additional 11-13 million subscribers.

Why not increase Soviet paper imports from the capitalist countries? The problem is how to obtain the hard currency to pay for it. In 1987, the cost of importing furniture from Finland was 5.4 million roubles. But has anyone actually seen any Finnish furniture on display in the shops? No, because most of it is sold 'under the counter' and disappears out the back door of the shop. Yet for the same amount of hard currency, printing paper could have been purchased which would have made it possible to print an additional several million copies of books and periodicals each year.

Another 5.6 million roubles in freely convertible currency were spent last year on importing equipment for the tobacco industry (1.5 million), and on alcohol and tobacco products (4.1 million). Were these imports really necessary? Might it not have been better to use these funds to purchase paper for another 2.8 million newspaper copies annually?

If we were to decrease textile and clothing imports from the developed capitalist countries by 10% (a drop in the ocean when spread over the country as a whole - less than 14 kopecks per capita), then this would free hard-currency reserves for paper imports for the printing of 18-20 million newspaper copies annually.

Each year the Soviet Union spends almost 3 billion roubles in hard currency to import rolled ferrous metal and pipes. How much of these imports are stored unused for construction projects which never get underway? How much lies rusting in warehouses or in outdoor storage areas wating to be used? If these imports were reduced by only 1%, paper could be imported for 15 million copies of newspapers per year.

As we have seen, then, there are real ways to overcome the shortages affecting the printing of periodicals which are felt by the reading public at large.

However, remedies after the fact are not always the best solution. Thought should be given to problems in the pulp-and-paper industry itself, since it is responsible for producing the volume of printing paper needed by the Soviet economy. A way must be found to bring it out of its impasse and to provide society with the cultural nourishment it needs.

The pulp-and-paper industry urgently needs restructuring. Only five paper-manufacturing machines meet the industry's current technological standards. According to experts, over 40% of the machinery in the Soviet pulp-and-paper industry needs to be replaced - it cannot be modernized or rebuilt.

New factories must be built. These problems are not just a recent phenomen: there was an active push to renew production equipment and increase capacities 20-30 years ago, but gradually this process slowed down. The table below clearly illustrates the down trend.

Mean annual growth rate of pulp and paper production (percentages)			5-Year Plans			
	VII	VIII	IX	X	XI	XII
	8.0	9.4	5.8	2.3	1.9	1.6

These growth rates are grossly inadequate for the needs of a society which considers itself sophisticated. Suffice it to say that in the leading capitalist countries, the pulp-and-paper industry is growing at a faster rate than other industries, even outstripping the national economic growth rate in most instances. In the Soviet Union the reverse is true. At present, the per capita use of paper and paperboard is only 37 kilograms, 8 times less than in the United States. There are few manufactured products so necessary for economics, science, culture, and education in which we lag so far behind the United States. Moreover, we are not only outstripped by all the developed capitalist and European countries, but by many of the developing countries as well.

Large capital investments are needed in order to carry out a radical restructing and to significantly expand pulp-and-paper production. How large? At least 3-4 billion roubles annually, as in the United States. (At present only 0.7 billion roubles are invested in the industry here). However, the volume of capital investment allocated by the

State Planning Commission to develop the industry to the year 2000 dictates that growth rates for pulp-and-paper production will continue to decline.

Should the burden of financing new construction be borne entirely by the USSR Ministry for the Timber Industry? Of course not, especially in view of the fact that the pulp-and-paper industry must be developed for the most part in new, remote regions. For instance, enormous quantities of raw material which could be used for pulp-and-paper production are being burned in Lesosibirsk, yet it is in Siberia and the Far East where the industry could operate to best advantage. However, from one Five-Year Plan to the next the question of building factory complexes in the Asian part of the country has been tossed around without any result. The standard explanation is that neither the money nor the construction materials are available. Yet hundreds of millions of roubles worth of currency are spent annually on the purchase of pulp-and-paper products abroad. It would make more sense to have in-depth processing of the wood done at the sites where it is cut.

It is an entirely different matter if an enterprise must be rebuilt. With the transition to self-financing, the USSR Ministry of the Timber Industry will have to earn its own money for this purpose. It received some "victuals" as of January 1, 1987 when new prices were set for pulp-and-paper products. For instance, the prices of paper for off-set printing rose 63% in comparison with 1980. There has also been a price increase for other types of products. But we mustn't forget that prices for wood and other pulp-and-paper products also increased. According to economists' calculations,

higher prices for paper provided only a small increase in revenue. That is clearly not enough to finance a radical restructing of the entire industry.

Where are the funds for capital investment and increased production to be obtained, then? Let us look at possible answers.

The single scale which is presently applied throughout the industry for currency allocations to the firms exporting paper products is serving to stimulate export trade on the whole. However, it cannot influence the pattern of these exports. Soviet trade with the capitalist countries is dominated by roundwood and lumber. The percentage of fully processed wood products, above all, pulp-and-paper products, in the total volume of exports is quite low. Under these conditions the uniform scale is not merely ineffective: it actually serves as a brake on improvements to the pattern of Soviet timber exports.

In order that the firms manufacturing paper and paperboard will become self-supporting in currency, the scale of payments must be raised to a level which will be high enough to ensure an expanded output. For paper and paperboard exports earning hard currency, the level should be not less than 100% of the earnings. For cellulose and wood pulp it should be 50%. In addition, the tax on the earnings from paper and paperboard exports to be paid into the central reserves of the USSR Ministry of the Timber Industry should be eliminated. (Central reserves should consist primarily of taxes on earnings from the export of unprocessed or very low-grade processed goods.)

The risk to the country's currency budget occasioned by this change would be very slight. For at present, exports of paper and paperboard for hard currency are so limited in scope that no harm would be caused to the country's cash reserves.

The following further suggestions are made: a) the existing scales should be maintained for lumber, wood panel, and plywood exports; b) the scale of the currency deductions for roundwood and wood waste should be decreased to 10% and the proportion of them credited to the central ministerial reserves increased to 50%. Calculations show that given this differentiation in the scale of deductions, cash flowing into the country's hard currency reserves would remain at the present level and there would be no decrease in the allocations to the central ministerial reserves. At the same time, exports of pulp-and-paper products for hard currency would receive a powerful stimulus. The pro-logging bias in the industry's investment policy would be reduced.

The budgetary funds which our country spends annually on importing pulp-and-paper products from the capitalist countries could serve as a powerful reserve of currency for financing the rebuilding and technological reequipping of the pulp-and-paper industry. These imports are costly, and more currency is being spent abroad for our pulp-and-paper needs than is flowing into the Soviet Union. To avoid this, we should create incentives for the manufacture of new types of products by the Soviet pulp-and-paper industry and the expansion of current production. Norms for hard-currency deductions for import substitutions could be introduced, for instance, along the same lines as those for exports. This would place Soviet suppliers of pulp-and-paper products on a more or less equal footing with

capitalist companies on the Soviet domestic market. These conditions, however, are currently lacking. For example, a Finnish businessman can buy everthing he needs to develop his own company's production with the money he receives from the sale of paper products. Soviet pulp-and-paper firms do not have the same opportunities.

There may be objections that we have nothing to be concerned about when the overall indices for production and exports are quite good: we export more than we import - in total volume. However, the consumer does not simply need pulp, paper or cardboard. He is interested in particular types, brands, and sizes of products with given standards of quality. If we look at the problem through his eyes, we discover that we have dozens of pulp-and-paper exports, but Soviet imports in this area are numbered in the hundreds.

We also have other reserves from the redistribution of funds by our subcontractors: the consumers of paper. After prices were raised for wood and paper, the prices of newspapers, magazines, and books were also increased. The publishing houses benefitted greatly from this. For instance, Khudozhestvennaya literatura (Belles-Lettres) which is administered by the USSR State Publishing Committee, is now a highly profitable venture. The profit margin for books is 280%, for magazines it is at least 30%, and for serial novels (published on newsprint, incidentally) it is 600%. Yet paper manufacturers have a profit margin of only 25%, at best.

The profit margin of such magazines as Ogonyok, Yunost, Smena, Sovetsky ekran, Krestyanka, and Rabotnitsa published by "Pravda" Press, of the

CPSU Central Committee, has increased. The economic indices for the magazines Druzhba narodov and Novy Mir, published by "Izvestiya" Press, of the USSR Supreme Soviet, have also improved with the 4.5 and 2.5-fold increases in their circulations, respectively.

In short, the revenue earned by the central publishing houses has risen sharply. In time it may increase even further if the publishers invest their funds in the development of pulp-and-paper firms. This would be of benefit to both sides in that the production of high-quality paper, which we now purchase abroad, could be handled in the Soviet Union. It would make more sense for publishing houses to purchase paper manufacturing equipment rather than the paper itself. It would also be a good idea to create a joint venture to produce our own paper and then sell it abroad if the opportunity presented itself. Unfortunately, the publishing houses do not want to give up their large profits.

Just now, a different approach is being taken. It was recently decided to purchase an up-to-date foreign-made production line for the manufacture of newsprint. The currency needed to pay for this will come from the state's pocket.

It is not realistic, though, to envisage meeting the country's requirements for pulp-and-paper production at a level corresponding to the world level solely through the purchase of imported equipment. The Soviet Union simply does not have enough hard currency. The challenge is clearly to build up-to-date Soviet equipment. As noted in an earlier edition, the industrial base for this purpose was created in the Soviet Union in the 1960's and is under the control of the USSR Ministry for Chemical

Engineering. The main industrial plants for the production of technology for the pulp-and-paper industry are concentrated in Petrozavodsk, Izhevsk, and Dnepropetrovsk, where there are large-scale production complexes. Although the first two of them were created specifically for the pulp-and-paper industry, the volume of technology manufactured for the industry has decreased year by year.

Today, at least 50% of their capacities are taken up with other types of production. Neither the State Planning Commission nor the State Supply Department has complied with the directives issued by the USSR Council of Ministers to correct this distortion in production. All this has contributed to the current drastic shortage of printing paper and to growing public frustration at the difficulty in obtaining reading matter.

Mechanical engineers and researchers at the Central Research Institute for Paper Manufacturing Equipment are getting farther and farther away from the problems of the pulp-and-paper industry. After the State Polymer and Paper Division within the Ministry for Chemical Engineering was abolished, experts in this division familiar with paper manufacturing problems were no longer available. Those experts who remained in the Ministry are now mainly concerned with polymer equipment. The work carried out at the Research Institute for Paper Manufacturing Equipment - and this is very clear - has also been redirected towards the building of new technological models for the polymer industry. This policy was actively pursued by the former directors of the Institute with the knowledge of the (also former) Deputy Minister for Chemical Engineering,

P.D. Grigoriev and experts in the State Planning Commission and the State Supply Department. Once again, new people are in charge of the production of paper manufacturing machinery at the Ministry for Chemical Engineering.

The scientists at the Research Institute for Paper Manufacturing Equipment lack the motivation to create new-generation technology. Why else would they have been unable to create over the past few years a turbulent-type pressure box which would facilitate changing over to the production of a new generation of paper manufacturing machinery with double-mesh formers? Only this type of machinery can help the industry achieve accelerated production rates and higher quality. The situation is even worse than it appears. Over the past 25 years the Paper-Machinery Research Institute has not created a single new design meeting world standards for the pulp-and-paper industry. There are many reasons for this. If we narrow them down to one, we can see how absurd it is. Researchers at the Institute claim that the technological institutes under the Ministry for the Timber Industry are incapable of drawing up an order containing the specifications needed to design a given production unit, while researchers in the industry reply they cannot obtain such specifications because there is no such equipment in the Soviet Union. Each is blaming the other.

This impasse has continued for the past 20 years. Many projects were proposed and discussed. One plan was to transfer the mechanical engineers and researchers in the Ministry for Chemical Engineering to the pulp-and-paper industry. This may not be necessary. New forms of management are spreading

throughout the country, and certainly one could be chosen which is best suited to mechanical engineers and paper manufacturers. For instance, bringing them together in a single 'joint-stock' company might be a positive solution. Researchers from the Central Research Institute for Paper-Manufacturing Machinery and the Central Research Institute for Pulp-Manufacturing Machinery, pulp-and-paper research and design institutes, technological institutes, and start-up managers could also become involved in these joint enterprises.

Having given up on the Ministry for Chemical Engineering, specialists in the pulp-and-paper industry undertook to build their own factory in Astrakhan to manufacture technological equipment and spare parts. The pulp-and-paper industry complexes have large divisions for the production of sub-assemblies and parts for paper manufacturing equipment. Several years ago they were even manufacturing large components there, for instance, rollers for paper-making machines.

A new type of firm (a consortium) organized along 'joint-stock' lines may thus be created in the Soviet Union. This type of firm might possibly include joint enterprises with foreign capital. One example is the Petrofoit firm located in Petrozavodsk.

* * *

We have attempted to clarify the reasons for the lamentable condition of the Soviet pulp-and-paper industry, which has declined to the level of the developing countries. We have concentrated only on

the most important aspects, while leaving aside the tactical problems, which are also very complex. We shall discuss them at some later time.

We realize that restructuring the pulp-and-paper industry (and this is not the first such attempt) cannot be painless. There will be obstacles, but we hope there will not be too many.

We also support the new forms of management and foreign economic activity which have yet to find their place in the pulp-and-paper industry. The Ministry itself cannot do a great deal if the industry's enterprises and organizations, its cooperating plants and suppliers and other interested parties do not confront the problem of paper shortages. The world's leading socialist state should not trail behind the rest of the world economically, scientifically, and culturally. Obtaining books, magazines, and newspapers should not be a problem for the Soviet reading public.

Lesnaya promyshlennost'
14 July 1988
Pages 2,3 (Full Text)

Translated by the Secretary of State Translation Bureau, Multilingual Services Division

FORESTRY

Sea Buckthorn To Be Cultivated and Sold For Its Medicinal, Nutritional and Erosion-Preventing Properties

Statistics show that there are 300 cooperatives in Armenia today marketing a variety of products valued at more than 11 million roubles.

The appearance of sea buckthorn (Hippophae rhamnoides L.) in Armenia is a consequence of a lowering of the water level in Lake Sevan. When the level of the lake began to drop and its waters receded, exposing the bottom, experts began to consider what should be planted to save the newly-exposed land from erosion. One thing was clear - that a plant with a strong root system was needed. Sea buckthorn was the plant best suited to these conditions. Roughly 1,000 ha in the area of Lake Sevan's basin have been covered by this plant.

However, having resolved one problem, another problem arose: several years after the first plantings when sea buckthorn began to produce berries, the woods around Lake Sevan were inundated with berry-pickers who broke branches, uprooted bushes, and trampled the earth in their heedless effort to pick the berries. The result was pitiful.

All this justifiably worried both experts and the public. It was necessary to properly organize the berry-picking and processing. At the initiative of the Armenian State Forestry Committee, the Dzhrnezh Cooperative was created in a former fruit wine factory which had been closed down due to financial losses.

"There are 12 employees in our cooperative," explained Romik Andreasyan, one of its founders. "Among them are an agrarian specialist, a pharmacist, and someone with experience in the canning industry - all specialists of one type or another. Sea buckthorn is only the beginning, for the Armenian forests contain almost 30 varieties of valuable plants which we plan eventually to use. In the meantime we are taking the first steps: we have taken out a bank loan of 92,000 roubles. Making payments on the loan is easy in the autumn. I say 'easy' because we deposited 12,000 roubles in our bank account during the first 4 months alone. Our earnings are directly linked to sales. The more we sell, the better the balance in our book."

"A present we are making natural buckthorn juice in 630 gram jars priced at R2.50 each. We are starting production of drinks, puree, jams, and sweets - all made from buckthorn. We have begun to develop the technology for producing buckthorn butter. The healing properties of this plant have been recognized for a long time and are widely known, so the cooperative's profits will grow rapidly when production is in full swing. This is only one side of the coin, however. It is noteworthy that butter is made from the pits of the berries and, by using them, our production process fully utilizes the whole berry."

"Naturally the cooperative has some problems: a shortage of jars and bottles and high transportation costs. Our relationship with various administrative agencies still has to be worked out and we are experiencing many organizational difficulties. Purchase prices undoubtedly need to be reexamined. They are not properly structured and do

not reflect the degree of purity of the berries - although impurities can be as high as 15%. Our major problem at present, however, is marketing."

"We are known in Armenia", continues Romik Andreasyan, "but we could also supply products made from sea buckthorn to other parts of the country. We have the production capacity to do this. Why shouldn't our product be sold, for instance, through the supply networks to workers in various industries?"

From the Editors: That is a good question. We hope to receive a reply from the sales network of the Soviet agricultural industry. Anyone interested in direct contracts for products made from sea buckthorn should write to: The Armenian State Forestry Committee, Dzhrnezh Cooperative, 13 Naldadyan Street, Erevan 375010, Armenian SSR.

Lesnaya promyshlennost'
12 July 1988
Page 3 (Full Text)

Translated by the Secretary of State Translation Bureau, Multilingual Services Division

Sea Buckthorn Successfully Introduced on Apsheron Peninsula

As the sea buckthorn is being propagated everywhere, we also decided to try and grow this plant in the south -- on the Apsheron peninsula.

A proposal to grow it at Khadyzhensk was put forward by the Chairman of a leading organization of the All-Russian Nature Conservation Society, N.

Korolev. At the Kurganinskii nursery 1100 saplings were obtained for amateur gardeners. The trees began to bear fruit in the third year. Today, the sea buckthorn is being grown on more than 100 farms.

Lesnaya promyshlennost'
19 July 1988
Page 2 (Full Text)

Sea Buckthorn Being Used to Prevent Erosion on Krasnoyarsk Railway

An annual profit of 14,000 roubles is being earned by the Bogotol forest nursery for its services to the Krasnoyarsk Railway in the provision of protective stands.

In addition to poplar and elm, acacia and maple, rose and mountain ash, there are also plantations of sea buckthorn. The forest nursery collective is planning a substantial increase in the area allotted to this plant. This will not only provide for an enhanced output of valuable sea buckthorn oil, but will also increase the safety of movement on the railway. Sea buckthorn bushes inhibit the development of ravines and strengthen the permanent way.

Lesnaya promyshlennost'
7 July 1988
Page 2 (Full Text)

An Experiment in Growing Poplars as a New Source of Pulp for Papermaking

The poplar seedling struggled valiantly to push its way up through the asphalt, just as the idea of creating a local raw material base for the Kherson Pulp and Paper Factory struggled to make its way through a thick wall of bureaucratic indifference. For almost 15 years supporters of the idea fought to realize their dream before the first planted groves appeared near Tsyurupinsk.

The grove will not only solve many of the factory's economic problems, but will also turn the steppe green and help to preserve the northern woods. The importance of such economic tasks is stressed in the Party's resolutions, one of which says, "A primary task is to stimulate efforts towards environmental protection and to carry out a complex of measures aimed at the radical improvement of the country's ecological situation." Unfortunately, not everyone sees this as their goal.

Several years ago we wrote about the experiment in Kherson and the difficulties in getting it started. Even today, the creators of the poplar plantation are still experiencing difficulties. The ministries and local authorities do not always extend timely help to innovators. The experiment is spreading very slowly.

The Kherson Pulp and Paper Factory has been known as one of the best in the industry for several years, although it has had some difficult moments in its past. The factory was intended to process pulp from the reeds which grew abundantly on the Dnepr plains. The experience of similar pulp-and-paper factories was borrowed from countries with warm

climates, but this did not prove transferable to Kherson. As was reported earlier in this newspaper, after the first reed harvests, the root system of the reeds was damaged by the wheels of Soviet tractors and scythes, and the hydrological system of the plains was altered. It became obvious at this point that the factory could not exist on grass alone and the urgent need to switch over to processing another type of raw material was apparent.

Perhaps it was this original mistake which made the factory flexible in dealing with various production problems. This factory was the first to begin using deciduous wood exclusively.

First, however, the wood had to be transported to the Kherson Pulp and Paper Factory. Unfortunately, transporters and suppliers do not always fulfill their obligations to the letter. As a result, the factory has difficulties even today with timber supplies. It was this difficulty with obtaining raw materials that served as the stimulus to create poplar plantations near the factory.

S. Vaikhansky, Director of the Kherson Pulp and Paper Factory, was the first to advance the proposal to create these plantations in 1969. The next 10 years were then spent knocking on doors and working out the details. Those who knew the ups and downs of Vaikhansky's struggle to put his idea into practice sometimes felt it was time to give up, but the persistence of those who supported the proposal finally won the day.

The experimental production of the pulp from fast-growing poplars has already been carried out at the Kherson Pulp and Paper Factory. Various types of paper, including high-quality coated paper which was

later tested at the Minsk Printing Complex, was manufactured at the Dnepropetrovsk and Konyukovskaya factories from the pulp produced in Kherson. A. Kovalenko, a senior scientific researcher at the Nizhnedneprovsk Research Station, showed me advertising material printed on this experimental paper. Beautiful colours spread across the snow-white, elastic pages manufactured from poplar pulp. Illustrators and printers alike were satisfied and concluded that this paper was suitable for high-quality printing. Poplar pulp proved to be as good as traditional pulp.

"The establishing of the plantations promises to have a very beneficial economic effect", said V. Zagoruiko, chief engineer at the Kherson Pulp and Paper Plant. "Judge for yourselves. Although most of the pulp and paper plants in the USA have raw material bases located close to them, this is the first such experiment in the Soviet Union. While American factories transport wood over distances of 100-180 kilometres, we have to transport it over distances of 1,500-2,500 kilometres. Doesn't it make sense to rebuild Soviet plants in order to avoid major transportation expenses?"

It is fact that the calculated cost of each cubic metre of wood furnished by the plantation is R5.52 cheaper than transported wood.

The silvery leaves of the sturdy 3-year old saplings stretch far off to the horizon. By the year 2010 it is planned to make the mill fully self-supporting in timber supplies. Wood will be produced in a closed cycle. The trees will be felled at maturity when they are 12 years old, on the brink of aging, and new seedlings will be planted to replace them.

The economic and ecological advantages of this plan are obvious. However, there are still problems to be solved: the factory has at its disposal only 795 hectares of land out of the 6,500 hectares needed, and equipment is lacking.

"We requested a Valmet skidder-pick-up which is needed in logging along the canal", explained V. Lyaskovsky, Director of the Kherson Pulp and Paper Plant. "At first, the Ministry supported our request, but then the Central Commission on Imports in the Ministry for the Timber Industry rejected it due to the lack of hard currency. It is very hard to cut timber along the canal with power saws, yet the local authorities have offered to allocate large lots of land there. Vehicle attachments are difficult to obtain. We have the funds to pay for them - we don't need hard currency - but there's nowhere to purchase it.

Over a year ago the executives of the Kherson factory and research staff at the Nizhnedneprovskaya Research Station requested that the Ministry authorize them to make an exploratory visit to Italy. The Italians have a great deal of experience in growing poplar plantations, which they began doing 40 years ago. Soviet experience is still very limited and, despite the high regard for our research and project, further study of a whole range of problems is required. Unfortunately, the Ministry did not reply - neither an authorization nor a rejection was received.

Afterwards it was learned that personnel changes had taken place recently in the Capitalist Countries Division of the Ministry for the Timber Industry and the official responsible for the Italian

research trip request was no longer there. The Division assured us that the plantation question would be taken up again later."

The problems listed here are only a fraction of those the creators of the plantation are facing today. Despite the fact that it is regarded as a useful project with a promising future, it is continuing to move ahead mainly because of the stubborn efforts of its initiators. The local authorities and the Ministry do not always respond to the innovative ideas of the timber experts in a timely matter, and industry specialists are in no rush to spread the Kherson experiment. They lend verbal support, but little practical assistance. In 1985, the Ministry of the Timber and Paper Industry adopted a resolution to create similar poplar plantations for the Astrakhan Pulp and Paperboard Plant, but it is being implemented more slowly than it should. The experience at the Kherson factory has not been sufficiently studied by the Astrakhan plant.

Researchers at the Nizhnedneprovskaya Research Station are willing to assist in the projects to create plantations at other plants. They are knowledgeable specialists, but their knowledge and research have not yet attracted sufficient attention.

The diffusing of useful knowledge and experience in our field is not proceeding as it should. This is not an isolated example. There are other promising undertakings directly related to both economics and ecology. One example is the L'vov Paperboard Factory with its unique environmentally risk-free closed circle of water usage, the Prikarpatles (Carpathian Lumber) Complex, which uses wood scrap in its production process, and other

inventions or technological innovations linked to environmental protection and the rational use of wood, all of which should be applied throughout the industry. It is clear that our attitude towards advanced environmental protection measures must change. The level of awareness about environmental protection measures must be raised and these measures must be more broadly applied.

The words economics and ecology both contain the common root "eco", which in Greek means 'home, household, homeland'. However, the concepts derived from this life-giving source are often seen as mutually exclusive. The Kherson experiment is especially noteworthy in that it offers a solution to production problems closely linked to ecological problems.

In years to come man-made forests will not only flourish across the boundless southern Ukrainian steppe, but new ones will appear throughout our country and will help to restore and protect our planet's biosphere. This will become a reality if the principles which guided the Kherson experiment become widely known and accepted in the near future.

Lesnaya promyshlennost'
9 July 1988
Page 1 (Full Text)

Translated by the Secretary of State Translation Bureau, Multilingual Services Division

ENVIRONMENT

Strong Words About Pollution

An interview with E.A. Sizov, Head of the Environmental Protection and Water Usage Division of the USSR Ministry for the Timber Industry.

Q. "Mr. Sizov, ecological problems have become so acute today that they are rightly ranked in importance with peace and the prevention of nuclear war. How do you see the relationship between our industry and nature?

A. "A great deal has already been said and written on this subject by the Soviet public and the mass media. Their opinions have been very negative, and there is really no need to add to them. I should quote some statistics, however. The Soviet pulp-and-paper industry annually uses 3.1 billion cubic metres of fresh water or 3.4% of the country's total water reserves. The volume of polluted effluents stands at 16.5%. In itself this gives us a good idea of the enormous volume of harmful effluents discharged into our rivers and other bodies of water by the pulp-and-paper mills. Our industry occupies first place among the various branches of Soviet industry for certain types of pollution. We are also major offenders in atmospheric pollution."

"The situation in the timber-cutting industry is equally serious. The press has been sounding the alarm about systematic harvesting beyond the allowable cut and the stripping of once-forested land, as a result of which the ecological balance is being disturbed.

"And what about loose-floating wood? This is still much too frequent. Last year, for instance it happened in Arkhangel'skaya Oblast, where the rivers were seriously polluted by floating wood. Fishing is now a thing of the past there. Many valuable species of fish have left altogether for other areas."

Q. "It seems we are chasing after cubic metres and tonnes. We aim very high and write glowing reports of labour achievements, yet we are unwilling to see the consequences of our thoughtless activity. Is it our pursuit of gross production figures that causes the ecological imbalances to take on such frightening proportions today?"

A. "At first, yes. Whole generations have grown up on the idea that our country's expanses are endless and our natural resources inexhaustible. We should remember the saying: 'Don't expect charity from nature'. We took endlessly from nature, forgetting that one day we would have to pay for it.

"I recall a trip I made to the United States in 1970 where I had the opportunity to learn about the situation in the pulp-and-paper industry and other branches of the timber-processing industry. At the time, 30-35% of capital investment was already being directed towards nature conservation measures. In the Soviet Union the figure was only 7%. It is now up to 10-12%, but the increase is not very large."

"However, the fault does not lie entirely in our limited financial assets. The idea that our vast natural resources can stand anything is firmly rooted in the minds of the policy-makers and those lower down the ladder. Managers and party officials alike

are preoccupied with fulfilling the production plan. If this isn't done, heads will roll. Until recently, only fines were levied - and paid out of state funds - for purification facilities which do not work, for polluted waste water far in excess of allowable levels, and for atmospheric pollution."

"The same is true of the timber-cutting industry. There are directives which have existed for some time instructing that forests must be replanted in equal measure to the timber-felling carried out in them, that rivers must be cleaned after wood has been floated down them, and so on. Unfortunately, our actions do not match our words."

Q. "Your assessment of the situation is very harsh. Where are the guilty parties to be found? Who are they?"

A. "I understand your question: it is very important to identify the wrong-doers, especially in this matter. Yet it would be all too easy to point an accusing finger at someone and bring charges against him. The situation is not that simple. Environmental protection is a function of all the ministerial sub-divisions. The responsibility should be borne by all of the Ministry's executive officers. I repeat that the people most directly responsible are the plant managers and staff of the many enterprises where the serious harm being done to the environment is treated with indifference. There is no doubt that, as the head of the Ministry's Environmental Protection and Water Usage Division, I too must be held responsible."

"It is time for the State Planning Commission to reflect on this situation: the

industry has been squeezed dry for many years now with their blessing, while the funds provided for developing it are far less than what is needed."

"Your newspaper should not have an easy conscience about this, either. It has not been consistent in its attitude towards environmental protection.

Q. "So we are all guilty, then? I suppose that's true, but let me ask you this: does the Ministry have a program of action aimed at reducing environmental damage? Will the time ever come when a harmonious relationship exists between our industries and the environment?"

A. "Yes, there is such a program. But I might point out that we have always had a lot of programs. They have not always produced any real action. Over the past 30 years very little has been accomplished. Some changes for the better have been set out for the next 3 years. The problems inherited, however, are enormous. Suffice it to say that most of the pulp-and-paper plants are at least 50% worn out. The easiest solution would be to simply close these plants, but paper manufacturing is very necessary to the country. What should we do, then?"

"Instead of building new factories, old ones should be rebuilt and reequipped. This is a faster and much cheaper solution. Of course this would require replacing outdated technology with new, advanced machinery and processes. Incidentally, we shall be getting industrial plants which, in terms of water usage, the level of purification of run-off water and atmospheric pollution, will meet or even surpass world standards. Greater funding is

available for this purpose than ever before. Almost half of these funds will be channeled into environmental protection measures in the near future."

"The program is divided into various stages. The first stage - 1988-89 is intended to mobilize the enterprises' own resources; in other words, order must be introduced, with strict observance of production cycles and efficient use of existing equipment. The most important task is to change the psychology of all concerned - from directors down to workers - so that environmental protection is clearly seen as a vital concern for all of us."

"As far as the pulp-and-paper industry is concerned, fundamentally new, ecologically safe technology will be created and assimilated by 1995."

"Similar plans are also to be implemented in other branches of industry."

"I am confident that this programme will be carried out. Why am I optimistic? Above all, because society will simply not let us carry on managing things as we have until now. We are on the brink of ecological disaster and must immediately put an end to all of the disgraceful things being done to the environment. There is no other solution."

Lesnaya promyshlennost'
16 July 1988
Page 3 (Full Text)

Translated by the Secretary of State Translation Bureau, Multilingual Services Division

More on Pollution: State Procurator's Office Flexes Its Muscles

An interview with A. Boretsky, Head of the Directorate of General Supervision, Board Member of the USSR Procurator's Office, State Counsel 2nd Class.

Among the top-priority tasks linked to the social reorientation of the Soviet economy are "energetic efforts to protect the natural environment and achieve a radical improvement in the country's ecological situation" - a goal that was voiced at the 19th All-Union Party Conference.

If a 'radical improvement' is needed, this means that the situation is so critical that it requires an immediate and effective response. In general, the fact that the environment - water, air, and forest - needs public protection is not news. It is also not news that the USSR Ministry for the Timber Industry is among the government departments especially in conflict with nature.

All the arguments have been heard and there are no serious objections to them. There is no shortage of righteous indignation, but action is another matter. Yet, action is needed to reduce the harmful influence of logging and the timber processing industry on the environment. The damage to the environment grows year by year.

What is the reason for this gap between words and deeds? Can there be harmony between our industries and nature? We put these questions to top policy makers at the State Procurator's Office and at the USSR Ministry for the Timber Industry.

The nature of the mail received by Soviet law protection agencies is such that the writers are usually unhappy about the subject matter of their letters. It is therefore highly satisfying to read that justice has been restored. The measures taken to curb the pollution of Lake Baikal and Lake Ladoga have met with universal approval. However, if we take the general nature of the ecological mail received by the USSR Procurator's office, the tone of the letters is anxious. People write about the laziness and irresponsibility of those in important positions, about the savage destruction of forests, about the emission of harmful substances into the atmosphere, and about the large-scale pollution threatening our country's bodies of water. A letter from N. Makarov of Perm' to the Procurator General is typical: "Please help our city with its population of one million to preserve its greatest treasure - our people's health." "There is no way to gauge the harm caused to our river by free-floating logs," writes M. Kuprik, a pensioner from Kemerovo. "The law enforcement agencies must increase their efforts to ensure that laws aimed at protecting the environment are observed," writes I. Gashichev from Moscow. "Protection of the forests should rank in importance alongside protection of our country."

The problem has been stated unequivocally and, it must be admitted, in most respects, equitably. This was the way it was viewed at a recent All-Union Seminar-Conference on Environmental Protection held in Ulyanovsk by the Procurator's Office.

The conference was marked by intense and constructive discussions. We studied in detail the positive experience which had accumulated and

examined our mistakes and oversights critically. Most importantly, we elaborated a strategy for our participation in solving complex ecological problems.

Participants in the seminar conference critically analyzed what they had done and focused their attention on unsolved problems and difficult points. They mapped out a programme for coordinated activity by the law protection and environmental protection bodies.

A major task for the procurators' offices today is to ensure that the laws protecting nature are observed. Recently this has acquired a more aggressive, consistent character. We are forced to adopt this stance as a result of decades of poor management practices. These practices have caused nature to be subjected on an almost daily basis to the harmful effect of industrial and agricultural enterprises and complexes. The ecological situation in many regions continues to worsen. Despite this, however, even with continuing industrial development, priority is given to narrow bureaucratic interests, rather than to nature conservation and public health.

The above is also true of the enterprises under the USSR Ministry of the Timber Industry. Verbal statements made by leaders of this industry and official documents issued by the Ministry would suggest that protection of the environment was a top priority for the Ministry. However....

The reality of our statements of principle must be tested in practice. Unfortunately, the action taken to establish the desired relationship with nature in the enterprises under the Ministry's jurisdiction fell far short of what was stated in public. I say frankly: the situation is critical.

Given the situation, it is only natural that enterprises in this industry should come under close scrutiny. In the last few years these enterprises have been subjected to almost every measure possible from the procurator's offices. What are these measures? On the basis of comprehensive inspection by environmental protection specialists, we objected to many infringements of the law and both informed and warned the appropriate officials. Many of these officials were subject to disciplinary action and fines, some were even held criminally responsible for environmental offenses, like, for example, the senior executives of the Priozero Pulp Factory. This is not just an empty gesture towards an ecological 'fad', but is in keeping with our firm, uncompromising position on the issue. Consistency in opposing infringements of environmental laws is an integral part of the work carried out by the procurator's offices.

The seriousness of our intentions is demonstrated by the creation, in several areas, of inter-regional environmental protection procurator's offices - stable bodies with clearly defined, special purpose functions.

Many of these newly created offices went to work very quickly. The Khabarovsk environmental protection procurator's office can already number among its actions not only sanctions against 115 responsible officials fined for environmental offenses, but also the clearing of sunken wood from Nikol'sky Gulf.

While it is important to stop infringements of the law with a minimum of delay and ensure that those who permitted these violations are held fully

responsible for their actions, it is even more important to prevent an impending disaster from taking place. A disaster threatened the lower reaches of the Volga River and the Caspian Sea. It originated at the Astrakhanbumprom (Astrakhan paper manufacturing plant), or to be precise, in its vaporizing ponds. Their dam was in such poor condition that waste products had broken through it and were threatening to pour into the river and sea. The plant managers were warned that they would be held criminally negligent if the dam burst. As a result, a special construction unit fortified the dam.

The list of such actions could be continued. However, the ecological situation surrounding the Ministry of the Timber Industry enterprises is still far from normal. I will end by saying a few words about the Ministry and the enterprises and collective subordinate to it.

Everything in the timber industry begins with logging. However, even at this primary stage, the industry falls down. A few statistics will illustrate this. Last year 23.1 million roubles were paid by enterprises for violations of laws relating to the timber industry; 3,000 fines totalling nearly 70 million roubles were levied upon officials; and in 124 cases felling was halted. If this is 'responsible activity' , then what is meant by 'irresponsibility'?

But of course it is the wood-processing enterprises, especially those producing pulp-and-paper, who are among the "flagships" of industry. Last year alone they discharged one and half million tonnes of sulphur dioxide, hydrogen

sulphide, chlorine, and other pollutants into the atmosphere. The pulp-and-paper plants literally force the population, including pregnant women, invalids, and children to breathe this air! How can the Ministry of the Timber Industry accept this, along with the fact that half a million of the two and a half million cubic metres of polluted effluents which the industry "bestows upon" our bodies of water enter them without any purification whatsoever.

I know in advance that the relevant ministerial services will brandish an impressive pile of environmental protection documents (I have already cited some of them). The leaders of the industry should ask themselves why all this is so ineffectual. Why is the role of the Ministry of the Timber Industry in environmental protection so meagre?

The second question, I think, will be answered most fully by competent people at the Ministry, but I would like to bring to your attention a number of views which have been expressed concerning the first one.

One such opinion was voiced at the 19th Party Conference by the Chairman of the USSR Environmental Protection Committee, F.T. Morgun, who pointed out with full justification that there are identifiable individuals responsible for every infringement of the environmental laws. Who are these individuals? Generations of 'user-managers' have been trained in our country (and not only at the Ministry in question here) to focus only on immediate, short-term goals and to forget about the consequences. That is why the statistics cited earlier are so frightening. We must immediately set about eliminating this school of thought.

The adherents of this school will of course, be rooted out, but that in itself is not enough to train a truly conscientious, thrifty and ecologically literate new generation of managers.

It is not 'fulminations' after a state of emergency that are most important. The vital thing is to have a well-integrated, scientifically balanced, preventative ecological strategy - a policy for every government department, enterprise, and individual to follow.

Unfortunately, a policy of this type can only be envisaged in the future where the Ministry of the Timber Industry is concerned. Yet time does not stand still. The effluent purification plants must be immediately modernized and appropriate facilities built where none now exist. The 'planned' pillaging of the logging sites must be ended without delay. A top-priority task should be the construction of roads for transporting timber, if only to save our bodies of water from free-floating logs.

This will be expensive, but to delay is even more costly. It is time to confront the situation and pay our bills - whatever is required by the environment and by present and future generations. That is the only solution to the present situation.

Lesnaya promyshlennost'
16 July 1988
Page 3 (Full Text)

Translated by the Secretary of State Translation Bureau, Multilingual Services Division

Concern About Mill Effluents - New Production Techniques Discussed

The pulp-and-paper industry is one of the main industrial offenders in the Soviet Union in terms of discharging polluted effluents into bodies of water. The two cases of the Priozersk Pulp-and-Paper Plant on Lake Ladoga and the Lake Baikal Pulp-and-Paper Complex, both of which had to convert to another type of production, have been very unfortunate.

This type of measure is very costly for our economy, but past mistakes must be corrected and our largest bodies of water saved.

Our correspondents discussed this issue with Academician Dr. Boris Nikolaevich Laskorin, who is Chairman of the Commission on Water Conservation Problems, a member of the USSR Academy of Sciences Scientific Council on the Biosphere, and Chairman of the Committee on Environmental Protection, of the Union of Scientific and Engineering Societies.

Opening:

"Dr. Laskorin, you are regarded as one of the earliest and most respected defenders of the environment, especially Lake Baikal. Your opinion is therefore especially valuable for our readers."

Response:

"The USSR Academy of Sciences and our Committee is continuing to work out a concept based on the following principles. Our forests and waters are not merely objects for industrial use. They must

be respected as components of the biosphere which affect the earth, the purity of the air, and the life of the animal and vegetable kingdoms. Unfortunately, when the decision to build the Baikal Pulp-and-Paper Complex and similar plants was made, a sound, integrated approach to the environment had not been formulated.

Now that the decision to change the type of production at this complex has been made, it will be enormouly beneficial in protecting the environment around Lake Baikal. In talking about its ecological and economic import, however, we should also remember the following. After the Baikal Pulp-and-Paper Complex came on stream it was learned that local wood was not suitable for the production of super-cellulose, i.e. cellulose of a high purity. That is why wood has been supplied to the Baikal Combine from the Khabarovsk and Krasnoyarsk Districts, as well as Chita Oblast for the past 20 years. Apparently, the raw materials for pulp production which is now being transferred to Bratsk and Ust'-Ilimsk, will come from these same districts.

Moreover, it was discovered from a thorough examination of the technology that the water from Lake Baikal was not suitable. Where pure water was essential (during the rinsing stage) Baikal water was unsuitable in its natural form. A special purification process was introduced at the plant and salts were removed from the water by a deionization technique. The new mills will be getting water from the Angara River, which means that it will still be Baikal water.

A lot has been said about reexamining the effluent purification norms. These are supposedly becoming stricter all the time. But to avoid harmful

genetic effects on bodies of water, it is necessary to dilute the effluent 1,000-fold, which is neither practical nor cost-efficient. As we are seeing, the new plants on the Angara are proving no better, and this economic approach can hardly be termed scientific. We must return to developments in the field of synthetic fibres."

Q. "But isn't there a lesson to be learned from the Baikal Pulp-and-Paper Mill?

A. "No, there's more to it than that. A large thermal-electric power station operating on Cheremkhovo sulfurous coal was built for the mill and the town. A vast quantity of sulfurous gas which is extremely harmful to the forest is emitted with the smoke when this coal is burned. Work is now being carried out to improve the gas scrubbing process at the Baikal Pulp-and-Paper Combine. This is a single example, but one which serves to emphasize the overall problem. Not only here, but in other regions too, the forest is being adversely affected by sulfurous gas emissions. They are mainly a result of the processing of sulphitic ores in ferrous metallurgy. For instance, large expanses of the taiga are dying as a result of the millions of tonnes of sulfurous anhydride which are emitted annually into the atmosphere around Noril'sk. The same thing is occurring wherever sulfurous fuel - both solid and liquid - is burned: at the thermal electric power stations of the USSR Ministry of Energy and the Ministry for the Timber Industry.

The problem of removing sulfurous anhydride from the gases in smoke emitted by thermal energy facilities has not been finally resolved, either in the Soviet Union or abroad. Soviet design work on

gas scrubbers is not going at all well, although several good projects exist, such as the one for the large Novoryazan' Station. The economic planners do not want to make major capital investments in the purification field. They think only of the immediate costs, without considering the benefit to the national economy as a whole. It might be a useful idea for local enterprises under other government departments and whose collectives are concerned about the maintainance of atmospheric purity, to contribute a part of the funds needed to build these facilities.

The introduction of gas-purification facilities at thermal electric power stations is very important for the timber industry. There is a wealth of experience in this field throughout the world. Such installations are particularly numerous, for example, in Japan. The Soviet Union is only at the decision-making stage at present. We are sadly lagging in the implementation process. It is unthinkable that a project for a thermal electric power station operating on sulfurous fuel should be approved today without provision for scrubbing the sulfurous gas emissions."

Q. Dr. Laskorin, you've raised another problem: first a factory is built, then ecological experts are consulted. Surely it should be the other way around? Factories should be built with due regard to ecological recommendations and local conditions. This was clearly stated at the 19th Party Conference."

A. "We are only now beginning to deal with this, but as usual it's more a question of words than deeds. March 23, 1987 saw the signing of a protocol of a joint meeting of the Commission for the Study of

Water Conservation Problems and the Scientific Council on the Biosphere, under the USSR Academy of Sciences and the former USSR Ministry for the Timber and Paper Industries. It was ratified by G.I. Marchuk, President of the Academy of Sciences and M.I. Busygin, Minister for the Timber and Paper Industries.

It stresses the priority which should be given to ecological recommendations and the need to correct past mistakes. More than a year has passed and yet the announced good intentions have not been put into effect. The Ministry for the Timber Industry pushed this program to one side. Our country still profits from the knowledge that we are very rich in forest resources. That is why our forest management and timber utilization practices have been so wasteful. Our traditional approach is based on the idea (not unique to the Soviet Union but common to all mankind) that natural resources are inexhaustible."

Q. "This attitude began to break down about 20 years ago, did it not?"

A. "It is still very much in evidence, although perhaps it exists more in the subconscious. Take our water resources, for instance, where our approach is founded on another false assumption. The Ministry for Water Resources believed, as it still does, that its main task was to provide water to consumers and satisfy everyone's requirements: industrial, agricultural, and domestic. This led to a false assumption that there were water shortages in some regions, and a decision was made to redirect river drainage. Our water policy should have been based on determined efforts to preserve the natural qualities

of our water and to use it in a rational manner. It is precisely the loss of water's life-supporting properties - the increase in its salt content and biogenetic elements and the eutrification of our lakes - that has resulted in them ceasing to be useful sources of water.

Although water is the most widely distributed mineral in nature, this doesn't mean that it should be squandered. Air and water must be used sparingly. Any other approach will entail serious consequences in many regions. If the discharge of pollutants isn't stopped, our rivers and lakes will contain nothing but effluents."

Q. "Isn't that already the case?"

A. "Yes, especially on Lake Ladoga in the Priozersk region. But the situation is extremely critical in other areas, too. Think of the Amur River and the Baltic coast."

Q. "What should the pulp-and-paper industry be doing to respond to current ecological thinking?"

A. "There has been some progress in the industry in recent years. A whole series of mills, especially the paperboard ones, have changed over to circulating water systems. Specific water consumption has sharply decreased, which is very important. Radical changes in technology have been made. Improvements in the basic technological process will lead to significant reductions in pollution levels. A transition must be made to new, more advanced methods of pulp production. One such is the oxygen-alkaline delignification process. Another very promising approach is that of the dry methods."

Q. "Is this the aerodynamic technique?"

A. "Yes, paper production in an airstream. Then there are the organic solvent delignification techniques."

Q. "Could you tell us more about this?"

A. "In essence it is a waterless method permitting delignification and the production of pure cellulose in an organic medium. With this method the raw materials are more fully utilised. One of the most important tasks in avoiding pollution is to utilise all the basic components in the wood. Lignin, bark, and other valuable organic compounds are very important raw materials. From lignin we can obtain ion-exchange resin and activated charcoal; also, lignin can be used in agriculture as a binding agent and in organic industry as a raw material. An enormous amount of research has been performed on lignin which has not found a practical application. Bark also should not be regarded as just a waste product. It can be used as an ecologically safe, high-caloric form of fuel. There are other ways in which to use it, too. Bark can be used for the manufacture of valuable herbal medicines.

Q. "Should these new techniques be introduced in the waste-products units of pulp-and-paper plants?"

A. "We need to move to an integrated industrial plant. If, for instance, the medical or pharmaceutical industry is interested in a number of elements which can be extracted from bark, this means that the construction or expansion of a combine should be planned with due respect to the interests of affiliated industries."

Q. "Let's return to specifics. Bark is best dealt with at the Balakhnin Pulp-and-Paper Combine where wood is debarked using the dry method and waste materials containing bark are eliminated."

A. "The dry method of debarking should be introduced everywhere. There has been no doubt about this for a long time. However, the transition to dry processes in the pulp-and-paper industry is very slow despite the fact that they confer important techno-economic benefits.

There has been a lot of work done on active sludge, too. It is valuable as fertilizer and in other capacities. Not all of the necessary administrative and technological measures have been taken, however, and some questions have not been solved by science. That is why we discussed these matters with scientists working in the field and came to the conclusion that a single program had to be developed to solve the problems involved in fully using raw wood materials.

Among the new approaches which should be utilized to implement such a program in the industry are the use of membrane technology, ion-exchange processes, absorbent methods that help prevent pollution, and the intensification of technological processes using flocculents, coagulants, and process activators, both in the main production cycle and in the treatment of effluents."

Q. "Dr. Laskorin, what is the best type of treatment facility, in your opinion?"

A. "The best are the closed water-circulation systems. Local purification processes and effluent differentiation should therefore be more widely

introduced. Membrane technology opens up extensive opportunities for a reduction in the consumption of reagents. All this could lead to the disappearance of the very idea of "effluent water". When we have closed systems, nothing will ever be discarded. Closed water-circulation systems are alleged to be much more expensive than the direct-flow systems currently in use. This is not only theoretically inaccurate, but also disproved in practice. Even now there are more than 120 enterprises in various sectors of the national economy operating on closed water-circulation systems (with no discharges into the environment). An excellent project for a closed water-circulation system was developed at the Selengin Central Control Commission (CCC), but unfortunately it was not brought to fruition for many years. The system is slated to be installed at the Selingino CCC before the end of the current Five-Year Plan. It is true that the return of the purified effluent could lead to an increase in the salt content. To avoid this, membrane technology should be used to maintain a constant salt level in the closed loop."

Q. "Dr. Laskorin, you mentioned that not all of the problems in environmental technology have been solved by science. We possess excellent scientific resources in the industry itself. How can they be applied? Wasn't there some talk about opening an Institute of Wood Chemistry in Leningrad."

A. "I'd like to point out the following: For a long time Soviet research led the way in the pulp chemistry and wood technology fields. Suffice it to say we have had some eminent scientists such as Sharygin, Nikitin, and others. But recent years have

seen a decline in the activity of the pure sciences in this industry. Leningrad possesses an excellent scientific base which could well serve to revive the old traditions.

Generally speaking, there is a vast field of activity confronting science. Many elements of the biosphere don't stop at national borders. Rivers often flow through several countries which leads to development of mutual interests."

Q. "Atmospheric currents also know no boundaries?"

A. "True. Acid rain doesn't always fall in its country of origin. Expenditures on gas purification would be fully justified, even if they were substantial."

Q. "The fact that the pulp-and-paper industry will be spending 23% of its allocated capital investment on purification equipment during the current Five-Year Plan is a serious step. Surely it should be assessed as to merit?

A. "It is a serious step, yes, but our main task is to use our financial and other resources in a rational way, so as not to spend them wastefully on expensive mechanical and biological purification systems. We must also remember that existing technology can be improved, with local purification at the point of origin used to protect the environment from pollution, and thereby preserve both it and life itself."

Lesnaya promyshlennost'
26 July 1988
Pages 1 and 2 (Full Text)

Translated by the Secretary of State Translation Bureau, Multilingual Services Division