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

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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

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## TIMBER AND WOODWORKING

### Production of Cement and Wood Shaving Blocks - a Proposed Solution to the Housing Shortage

The date has been fixed: by the year 2000 every Soviet family is to be provided with a separate apartment or house. The volumes have been determined: 36 million apartments with a total area of 2.4 billion square meters will need to be built. The only thing that remains to be specified is how this will be done. Already, little time is left for resolving this mammoth problem. Even today, it is obvious that the USSR State Planning Commission cannot handle the task on its own. It has neither the manpower, the machinery, nor the materials. Cooperative house building cannot help either, the growth rates of which during the last 25 years have declined more than threefold. So, in many respects, it will be for the enterprises themselves to tackle the problems of supplying their own workers with housing.

We are talking about one solution to this problem which is suited to enterprises of the USSR Ministry of the Timber Industry. The newspapers are tired of writing about the use of secondary waste products. It concerns first and foremost, wood shavings. Even by the most conservative estimates, these "waste" about 30 million cubic meters annually in our sector of the economy. Today, most of them are either burned or hauled away to dumps. And yet this extremely valuable, uniformly comminuted, high-grade wood could be efficiently utilised for individual house building.

Based on the use of shavings as organic fillers, in 1987 the Trust "Orgtekhlesstroi" collaborated with the Balabanov division of the All-Union Scientific -Production Association "Soyuznauchstandart" of the pulp and paper industry in developing double-cavity cement-and shaving wall blocks. The excellent construction properties of the cement-and shaving compound had already been verified over a five-year test programme. As early as 1983 the

"Orgtekhlesstroi" Trust of the USSR Ministry of the Timber Industry had built by way of an experiment a single-apartment, three-room dwelling with walls consisting of a mixture of cement-and-shavings, in the settlement of the Luza House-Building Combine, Kirov Oblast'. The filler consisted solely of wood shavings derived from mechanical processing of coniferous species, and a binding agent - Portland cement and ordinary water. Not a single chemical additive was introduced into the mixture. The house has been used successfully for a period of five years.

A second attempt at using shavings was made in 1984 at the Oktyabrskii House Building Combine. There, in the production of wood concrete the particulate material was replaced by shavings from the joinery- and building materials shop. Again, the tests proved successful.

The completion of these and other studies made it possible to draw conclusions about the economic expediency of using shavings obtained from mechanical processing of wood as a filler for the production of double-cavity cement-and-shaving blocks.

In 1984 the first such wall block was manufactured under laboratory conditions by Trust specialists at the Oktyabrskii House Building Combine. The technology is extremely simple. It requires no costly equipment, high-temperature production cycles or chemical additives.

The production process is as follows. Dry wood shavings, cement and water are mixed in predetermined proportions in a forced action mixing machine. After this, the blocks are shaped in special molds by mechanical compaction. After being molded, they are stored in special trays, where they harden in 10 to 14 days under predetermined temperature and humidity regimes. They are stored in the open for a further 14 days, after which they can be shipped to the consumer. That is all there is to it.

Now for a few words about the advantages of the new type of building material. In comparison with monolithic walls made of keramzit concrete, wood concrete and aerated foam concrete, building with blocks requires no expensive metal casing. The modulus of the block makes it possible to get away from building structures of the same type and ensures architectural diversity of both the housing development and the ancillary buildings. The building season is greatly extended. This is because no outlays are required for the pre-heating of mortar, as is the case in the manufacture of monolithic walls. When erecting walls made of cement-and-shaving blocks there is no need to employ highly qualified stonemasons. For filling the cavities, all kinds of locally available materials can be used: clay, lime, sawdust, gypsum. The house will retain heat very well at temperatures as low as minus 40 degrees. As the blocks are much lighter than bricks, the house can be built on shallower foundations. Building costs are 25 per cent lower than when erecting wooden houses. Walls made from blocks require no additional plastering work, either on the outside or inside of the house. Externally, they can be finished with cement paints. On the inside, wallpapering can be done after the surface has been rubbed down. The blocks are easily sawn, and wood-screws and nails fasten them securely.

We could go on at even greater length about the advantages of houses made from cement-and-shavings blocks, but it is preferable to talk about the potentialities of their use in our sector of the economy.

When we displayed fragments of walls made from our blocks at the Exhibition of Achievements in the National Economy of the USSR we were approached by the Deputy Director for Supply, of the Kishinev Furniture Factory. Like ourselves, the man was interested. Notebooks and pens were brought, and we did some estimating.

His factory produces 12 million roubles worth of furniture annually, using for this purpose 10 thousand

cubic meters of sawn coniferous timber. Of this, 3,000 cubic meters go to form shavings, which for the most part are hauled away to the dump and burned. But from these waste products it would be possible to manufacture about 700,000 cement-and-shaving blocks, and from them to build about 1,000 houses, each with a floor space of 60 square meters. When we made these simple calculations he was astonished: what would we do with so much housing? Surely there was no need of it? The answer: sell the blocks. Even by the most conservative estimates, after meeting all of the costs of producing them, the enterprise could make a net profit of 600,000 roubles. So that the alternative is not according to Yulian Semenov. Either way, it is loss-free. Build houses with your own labour if you wish, and earn money if you wish.

We used for our calculations an average-size furniture-producing enterprise. House-building, saw-milling and plywood manufacturing enterprises would enjoy vastly greater opportunities. By themselves they could arrange for the production of cement-and-shaving blocks in the calculated number of months and have a limitless advantage.

Publisher's note. In preparing this article, we came face to face with a curious fact. It turns out that specialists of the "Orgtekhlesstroi" Trust, which with the best will in the world, you would not call a scientific organization, sold its idea to two scientific sub-units: the Balabano division of the All-Union Scientific Production Association (ASPA) "Soyuznauchstandartdom" and the Arkhangel' division of the ASPA "Soyuznauchdrevprom". The former paid 10,000 roubles for the idea, the latter - 30,000 roubles. Both made available their own laboratory test facilities. All this solely in order that the production workers should introduce the trust's idea in their own enterprises. We are reporting this not with the object of embarrassing the sector's scientific community, but solely to emphasize once again that the idea has merit.

(Shown at inset is a photograph of a double-cavity block weighing 12 times less than the 33 blocks used in place of it in building operations).

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The technology to produce and use double-cavity blocks is simple and does not require special equipment. The technology is based on the use of a double-cavity mold. The mold is made of wood or metal. The mold is filled with concrete. The concrete is poured into the mold. The mold is then closed and the concrete is allowed to set. The double-cavity block is then removed from the mold. The double-cavity block is 12 times lighter than the 33 blocks used in place of it in building operations. The double-cavity block is also easier to handle and transport. The double-cavity block is also easier to install. The double-cavity block is also easier to maintain. The double-cavity block is also easier to repair. The double-cavity block is also easier to clean. The double-cavity block is also easier to paint. The double-cavity block is also easier to stain. The double-cavity block is also easier to weather. The double-cavity block is also easier to freeze. The double-cavity block is also easier to melt. The double-cavity block is also easier to dry. The double-cavity block is also easier to cure. The double-cavity block is also easier to harden. The double-cavity block is also easier to set. The double-cavity block is also easier to finish. The double-cavity block is also easier to install. The double-cavity block is also easier to maintain. The double-cavity block is also easier to repair. The double-cavity block is also easier to clean. The double-cavity block is also easier to paint. The double-cavity block is also easier to stain. The double-cavity block is also easier to weather. The double-cavity block is also easier to freeze. The double-cavity block is also easier to melt. The double-cavity block is also easier to dry. The double-cavity block is also easier to cure. The double-cavity block is also easier to harden. The double-cavity block is also easier to set. The double-cavity block is also easier to finish.

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Plasma Hardening of Frame Saw Teeth Proves Superior in Tests

In sawmill operations, frame saws made of 9KhF steel are normally used. To increase their wear-resistance electrocontact hardening, hardening in a field of high frequency currents, and stellite facings are used. This traditional method has proved to be inadequate in a production situation. Under maximal operating conditions, it is often found necessary to regrind a saw. This interferes with the rhythm of production and results in losses of time.

Co-workers of the "Kitoiles" Association and a scientist at the Irkutsk Polytechnic Institute have made an experimental investigation of the use of plasma for hardening the teeth of frame saws. About 80 saws were tested on a TchPR-2 tool grinding machine and a GN-5 plasmatron. The tests showed that by treating the saw teeth with a plasma jet, there is an approximate threefold to fourfold increase in their hardness.

This means that the steel requirement of an enterprise due to the increase in useful life is decreased commensurately. The estimated economic benefit derivable from the introduction of the plasma hardening process is about 40,000 roubles a year.

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18 August 1988

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New Technology: Production of Panels from Wood Wastes

At the Ukrainian Scientific-Production Woodworking Association a technique has been developed for manufacturing panels for the facing of walls and ceilings in industrial, public and residential buildings.

The raw material consists of comminuted wood wastes (sawdust and shavings) which are being used mainly as fuel or are simply hauled away to a dump. Carbamide-formaldehyde resin is used as the binding agent.

The technology of producing the panels is simple. The shaving is dried to a moisture content of 2 to 4 per cent and mixed with resin. The resulting wood-glue mixture is dried and then pressed in molds, with simultaneous cladding of the surface with a decorative film. After removing the panels from the press, the roughness is removed from the edges, following which they are processed on grinding machines.

The facing panel technology was first introduced at the Berdichev Mechanical and Chemical Engineering Association, where a comparatively small quantity of wood, approximately 6,000 cubic meters, is processed annually. However, even at this volume, up to 800 cubic metre have been hauled away to the dump every year. Today, a highly profitable secondary line of manufacture has been established, in which high-grade facing panels are being made from sawdust.

Lesnaya promyshlennost'

18 August 1988

Page 2 (Slightly abridged)

PULP AND PAPER

Figures on Wastages of Marketable Wood by Two Territorial  
Production Associations in 1986

1986 the Territorial Production Association "Vologdalesprom" "lost by attrition" 2,475,700 cubic metres of marketable wood, or 20.8 percent of the volume hauled. The breakdown is as follows:

Fellings of less than the prescribed quantity	527,000
Jettisoned:	
at the felling sites	727,900
at the loading sites	352,100
during transportation from the loading sites to the industrial log depots	140,000
Losses at the Industrial log depots	<u>728,700</u>
Total	2,475,700 cu. m.

The figure for the Territorial Production Association "Tomlessprom" for the same period is 778,600 cubic meters, or 12.1 percent of the volume hauled. Data supplied by "Soyuzgiproleskhoz" (All-Union State Institute for the Planning of Forestry Enterprises))

Non-Arrival of Railway Wagons and Containers at Kotlas  
Combine Disrupts Shipments for Export

"In view of the extremely acute situation that has arisen as a result of the non-arrival of serviceable covered wagons and oversize-load containers, the Kotlas Pulp and Paper Combine has a crisis on its hands. The planned shipment of output for export pursuant to contracts is not being carried out.

Over a 27-day period in July, 136 covered wagons and 303 oversize-load containers were not delivered to the Combine. The residue of output for sale in the warehouses exceeds 13,500 tonnes, with a norm of 6,000 tonnes.

Repeated appeals to the Ministry of Railways and the USSR Ministry of the Timber Industry have brought no positive results." (Text of telegram signed by I. Postnikov, Deputy Director General of the Kotlas Pulp and Paper Combine).

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13 August 1988

Page 1 (Full text)

FORESTRY

RSFSR Minister of Forestry N.M. Prilepo Delivers a  
Broadside

(Guest article)

When we look at the overall condition of the Russian forests, at first sight they would not seem to give cause for concern. Over the past twenty years the forested area has expanded by 51 million ha, including 38 million ha of coniferous forest. Even in the European USSR and the Urals, the most developed zone, the coniferous forest has increased by 4.6 million ha.

Last year, about 1.8 million hectares were clear-cut, but reforestation was also carried out in an area of the same order.

At first glance, these figures appear to be satisfactory. However, forest use in many areas of Russia is unsatisfactory and the condition of the stands is giving rise to alarm among foresters and local Councils of People's Deputies.

In the late 19th century, the eminent scientist D.I. Mendeleev stressed the enormous role played by forests in the Urals and their importance in regulating the hydrological processes of the major river basins.

Eighty years later we are forced to admit that the forest resources of the Urals are on the verge of totally disappearing.

Concentrated clear-cut harvesting and felling in excess of the allowable cut have been especially damaging to the most valuable forests in this region in the last 40 years. All this has led to the loss of the forests' protective and water-retaining functions, and also to the drying up of small rivers and the disappearance of springs, both above-ground and submerged.

The annual volume of felling in the Urals region is 55-57 million cubic metres. Timber is being felled faster than it is growing. If we add to this the fact that millions of cubic metres in deciduous stands are not being harvested annually, while the allowable cut for coniferous species is being greatly exceeded, it is not hard to imagine the rate at which highly valuable fir and pine forests in the Urals are vanishing.

The fact is that the pace at which felling is being done here is totally exhausting the forest reserves, notwithstanding the many articles published in local and national newspapers advocating protection of the forests in the Urals.

Continuous over-harvesting above the allowable cut and the placing of the entire forested area under the jurisdiction of the logging industry in the 1960's made the threat of total exhaustion of forest resources in Perm Oblast' a very real possibility. In the last twenty years alone the reserves of mature wood in the forest areas leased by the Permlеспrom Association have fallen to only half of what they were, 15 logging enterprises have suspended operations, 108 forest settlements have ceased to exist or been abandoned, and more than 20,000 workers and their families have left for other sites. These are the social consequences of irresponsible logging. The tendency to rely on part-time loggers proved disastrous, primarily for the loggers themselves.

Many tens of thousand hectares of fir trees, the main source of the raw materials used in the Oblast's pulp and paper industry, have been felled during the last 25-30 years in the area worked by the Komarikhin logging enterprise. The harvesting volumes exceeded a million cubic metres annually and have involved an area of 5000 to 6000 hectares. In some years the allowable cut has been exceeded by a factor of 3 to 4.

As a result of the catastrophic decline in the reserves of the ripe coniferous forests, the Troitsky and Shushanky logging enterprises were closed, and the Ilich,

Dalnyi, Pub, Tsentral'nyi and Bykovka forest settlements were abandoned. The inhabitants moved away, the narrow-gauge railway was dismantled and removed, and the roads fell into disuse. In recent years only the Komarikhin Logging Enterprise has remained on the territory of the forest farm, and it is still exceeding the allowable cut by a factor of almost 1.5.

The volume of reforestation work during the period 1960-70 trailed sharply behind felling volumes. Forest-planting was done mainly by the loggers themselves and many plantations perished for lack of proper care. As a result, large areas of coniferous fellings in recent years have been restocked with less valuable broad-leaved species.

A new, integrated logging enterprise was organized in 1985 on territory occupied by the old logging and timber enterprise and the Komarikhin forest farm, which was transferred to Permlesprom. Only time will tell how this new enterprise will function in the future. However, three years of operation under the new system with the farm's forest resources fully at the disposal of the lumbermen, has not brought any improvement in the rational use of forest resources and their regeneration. On the contrary, the goals established for forest-planting, seed collection, and felling are not being achieved. In some cases, the felling of immature stands is being allowed, wood losses when preparing for felling operations have not been reduced, and clear felling is taking place even in prohibited and forest sanitation-and-protective zones.

Two, as yet incompletely integrated logging and timber enterprises belonging to Permlesprom are currently logging on the territory of the Lysvensky forest farm. Here too, although the source of the raw materials has been severely depleted, the allowable cut is being exceeded almost twice over. The time is near when one of the farms will have to be closed.

We could cite other examples of mismanagement by loggers in Perm Oblast'. Nonetheless, the USSR Ministry for the Timber Industry has obtained permission from the government to fell timber at significantly higher levels this year and next in that Oblast'. Even in newly organized integrated enterprises permission has been granted to exceed the allowable cut for coniferous trees by more than a million cubic metres! In addition, the rules governing timber usage and removal are being grossly violated, which is only revealed during checks by forestry inspection units.

The coniferous forests of Sverdlovsk Oblast', where several integrated enterprises were established in 1985, have fared no better than the Perm forests. These complexes were recently audited by an Oblast' inspection committee. It was found that there is no set plan for timber-felling at these enterprises. Logging areas are being designated in terms of convenience. Harvesting is done before authorization is obtained, sometimes even without written consent. For instance, during preparatory work on the Massavsky forested district (Oussky Integrated Logging and Timber Enterprise) nearly 35,000 cubic metres of wood were cut instead of the 16,000 cubic metres authorized.

"I'm the boss and what I say goes" - that's the way some loggers see their right to dispose of our country's forest resources, and the USSR Ministry for the Timber Industry is supporting them in this. Last year the Alapaev Integrated Logging and Timber Enterprise was given a production plan which failed to take into account the species composition of the allowable cut and led to over harvesting of 117,000 cubic metres. This was discussed in an article by Comrade Neuimin, First Secretary of the Alapaev CPSU municipal council, which was published in the magazine "Communist" (No. 2 for the current year).

Haphazard fellings are continuing to deplete the already thinned forest cover of the Urals, destroy the ecological balance and cause economic and social harm.

Questions are being asked: When will we stop exploiting our forests so irresponsibly? Is the need for these fellings so great? The Soviet public is sufficiently concerned to wonder why our country, with one-quarter of the world's forests and occupying first place in both forested areas and volumes of wood harvested, is trailing far behind most of the industrially developed countries in the production and consumption of wood products? Why does our country export mainly logs and semi-finished wood products, rather than high grade, finished commodities made of wood?

Soviet loggers are currently losing up to 40% of the raw wood in waste products left at the harvesting sites and lost during removal from the forests. If these losses could be reduced even by half, as was done by Ivano-Frankovsk loggers it would be possible to decrease felling by millions of cubic metres and save thousands of forested hectares.

However, the development of chemical and mechanical wood-processing technology, like the organization of logging operations requiring constant forest exploitation, is being held back by the lack of mechanical engineering resources for the timber industry, the slow introduction of advanced resource-saving technology, and an acute lag in introducing new logging capacities in the timber-surplus areas of the country. The practice of allocating funds to housing and community service centres has led to the everyday needs of the loggers and timber-processors being neglected.

Three years have passed since the resolutions were adopted at the 27th CPSU Party Congress, yet no positive steps have been taken to systematize the use of Soviet forests. As I listened to the bold statements made by delegates to the 19th Party Congress, criticizing defects in Soviet industry and agriculture, I thought about the unsolved problems in our industry and the irresponsible use of our forests.

The time has come to stop exceeding the allowable cut on the coniferous forest sites, to use each cubic metre of harvested timber in an intelligent and responsible manner, and to make full use of each hectare of deciduous forest. If there is good regrowth in a stand it should be maintained in a quantity sufficient for natural regeneration of the coniferous forest.

An assizes of the board of the USSR State Forestry Commission was held recently in Kostroma to discuss the further expansion of intermediate harvesting. The viable regrowth of coniferous species which remained would make it possible to shorten the time required for the growth of mature timber by 15-20 years.

A year ago we approached the USSR Ministry for the Timber Industry with a proposal to significantly increase the total felling areas and leave untouched the viable coniferous regrowth at consumption bases of enterprises in the European Urals zone. However, this proposal did not receive the support it deserved. Clear felling areas in which regrowth has been destroyed do not become smaller, but larger. There were 47,000 ha of such areas in 1985, 50,000 ha in 1986, and in 1987 they exceeded 52,000 ha.

The condition of the timber resources in the European Urals has been seriously undermined. Today we need deeds, not words, to achieve constant forest use and ensure that it is protected and managed in a rational, responsible way. Time is of the essence.

Lesnaya promyshlennost

23 August 1988

Page 1 (Slightly abridged)

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

Chernobyl': Bureaucratic Indifference - Forest Fires - Flooding

Our helicopter is heading for the 30 kilometre zone of the Chernobyl' nuclear power station. Today, this is the most dangerous sector in the Ukraine from the point of view of fire hazards. For as before, the place is devoid of habitation.

At an altitude of 200 metres the temperature is thirty degrees Celsius. Our Mi-8 is flying northwards. The outlines of the town have disappeared and the ribbon of the Dymmer highway is faintly visible, along with the Kiev reservoir and Desna ...

At Pirnovo we take on board some smoke-jumpers. Beneath us lie unbroken forests - emerald green and of unusual beauty - but beyond there are burnt-out violet-blue areas caused by flash forest fires that had not been stopped in time. We are crossing the Pripjat' River and approaching the now deserted town of the same name.

Now we are circling above the forest. In the intense heat it is like a powder keg, ready to burst into flames at any moment, even from a splinter of glass that has focussed the Sun's rays. This is why, by a decision of a government committee of the Ministry of the Timber Industry, Ukrainian SSR, on June 6, 1966 a special group was formed to fight forest fires in the 30 kilometre zone of the Chernobyl' nuclear power station. Demanding of constant vigilance are the 114,000 hectares of forest situated in this zone. As half of it consists of young conifers, airborne patrols are constantly in evidence from morning till dusk during the hot summer days. Air observer A. Konyashkin points to where the forest has been particularly severely damaged by radiation. In these places it has taken on a faded red-brown colour. But there is very little left of it. The trees have been cut down and buried, and then covered with a layer of sand. The helicopter does not have the right to leave the 30-kilometre zone until a replacement aircraft arrives. The smoke-jumpers, who had come from Syktyvkar' to help, are in full readiness.

Around noon a radio report is received that air observer A. Fedorov has spotted a fire in the Radenskoe forest area immediately adjacent to the 30-kilometre zone. Although only one "percentile" is presently burning, in this heat the fire could spread quickly.

The captain sets course for Radenskoe. Konyashkin again pinpoints the fire by radio and determines its area and the wind speed. Soon, we are flying towards the burning forest. The smoke-jumpers fasten the ropes, clamber to the ground and activate the forest sprinklers and entrenching tools. This proves sufficient to extinguish the flames.

"Yes, on this occasion the fire was put out in time", says A. Moroz, Chief of the Forest Conservation and Protection Directorate of the Ministry of the Timber Industry, Ukrainian SSR. It was not the first time during the two years since the Chernobyl' accident that he had been on duty in the zone. "On May 3 of this year more than 100 hectares of standing timber were consumed by a forest fire. Here is what happened. An area of less than a hectare was discovered by the helicopters to be burning and the flight crews reported this to us. The entry in the log reads as follows:

"1400 hours. In the vicinity of Kotsyubinskii hamlet, foliage and needles burning. This was immediately reported to Comrade Ochkatii, Chief of the Civil Defence Support Group, along with a request for assistance."

Hitherto, we were allowed to go directly to the military units, bypassing Civil Defence. Although this was more efficient, recently a bureaucratic wall has begun to be erected in the 30-kilometre zone. I have noticed a curious peculiarity here in the course of the last two years: as the level of radiation falls, the level of bureaucracy rises. This touches upon many problems. For instance, it was not until 1735 hours that Civil Defence responded to our request for assistance made at 1400 hours and allocated 50 men. By then, however, the fire had been

extinguished. But a hundred hectares had been destroyed. What is the reason for this slackness, you may ask. Well, until now we didn't know ourselves. But later, Ockhatii replied that he hadn't heard a thing until 1737 hours. However, the entries in the log and the witnesses to our conversation with him tell a different story. He had gone off watch and left. The Civil Defence support unit has a new Chief, with whom we all have an excellent working relationship. But who will answer for the burnt out forest and the failure to act promptly?

Or, consider another problem: in the spring of 1987 a barrier was erected across Braginka stream (coordinates 50°14'N, 30°25'E--Tr.). Actually, this was necessary at the time. But now it is overflowing its banks. At this very moment, three thousand hectares of coniferous and broad-leaved forest are inundated and have withered away. The plantings have been killed. Water continues to spoil the forest and the problem remains unresolved. Our letters are going unanswered even though this is dangerous from the point of view of crown fires and forest diseases. We have appealed to the Ministry of Land Improvement and Water Management of the Ukrainian SSR, but there has been no change in the situation.

The problems are numerous. But we have a common goal: to protect the forest from fires, diseases and drying out, and to preserve it for posterity. For this is a priceless gift of nature. It is therefore not only within the 30-kilometre zone but also beyond it that there is a need to supply the foresters with "Dnepr"-type motor vehicles, increase the number of radio stations, and equip the fire-spotting posts with PTU-59 television sets. In this respect we can envy the Baltic region, which has progressed much further in supplying the foresters. Once again, we are appealing to the aircrews to be more conscientious in discharging their contractual obligations: to take off promptly in response to a call from us. For to delay is exceeding costly."

The smoke-jumpers, who had come from Syktyvkar' to help, are in full readiness.

Our helicopter has landed at Kiev and in the sky above Chernobyl' another fire control helicopter is circling ...

Lesnaya promyshlennost'

6 August 1988

Page 2 (slightly abridged)

## ENVIRONMENT

### Log Pollution on Lake Baikal: Help is at hand

Once again departmental interests are taking precedence on Lake Baikal. River workers are ready to transport a maximum quantity of wood across the lake in ships, thereby preserving the lake's cleanliness. "It's too expensive", say the loggers.

But look at the real cost!

The resolution approved by the CPSU Central Committee and the USSR Council of Ministers on the protection and rational use of Lake Baikal's natural resources states clearly that towing wood across the lake in rafts must be ended by 1995 and instead it must be transported by ship. There is still plenty of time left to carry out this directive, but should we put off the final solution of the problem for another 7 years?

Those who work in river navigation like ourselves believe that delaying action on this point is a mistake, especially since the responsible agencies have concluded that the harm being done to this great body of water by towing wood in rafts is serious. At a recent meeting in Irkutsk of party and municipal council officials, economic planners, scientists, and members of the general public, a disturbing announcement was made: waves on the lake had broken up a raft near Ol'khon Island. An inspection of the shoreline disclosed that more than 500 cubic metres of wood were floating free in the water and were washed up on shore. Zabaikalles, the organization responsible for immediately gathering the wood and towing it away was in no hurry to do this.

There would be fewer such accidents and the lake would be cleaner if the Barguzin Logging Mill, which dispatched the raft in question, would respond positively to the offer from the steamship agency to increase to 50,000 tonnes the quantity of wood transported in ships.

However, the loggers agreed to sign a contract for only 24,000 tonnes, and even this is being put off until the final days of the navigation season.

Despite the loss of raw materials and pollution of the water, the loggers regard the traditional method of transportation as better than delivering the wood by ship. At first glance this would seem to be true: it costs only 40 kopecks per cubic metre when wood is hauled in rafts, while it costs about 2 roubles per cubic metre when it is transported in barges. However, these costs do not take into consideration the following factors: when wood is transported in ships this frees a large number of workers from servicing the rafts and there is a reduction of expenses for maintenance of the cradles and for repairs and adjustments to the rigging. If the reduction in manual labour and increase in modern labour methods is added to this, it becomes clear that the alternative transportation method is very worthwhile.

Unfortunately, in their short-sighted quest to reduce costs per cubic metre, the Lake Baikal loggers continue to pollute the lake with wood, even though it is possible - especially on the Irkutsk shoreline - to begin transporting it in ships right away.

According to the loggers, only minor reconstruction of the crane equipment and moorage walls serving the Upper Lena Logging enterprise Irkutsklesprom would be required in order that all of the timber could be loaded onto barges with a modest outlay of labour. Even now the conditions are good enough for this, but the Irkutsk like the Baikilians, rejected our offer and agreed to transport only 50,000 tons of wood in ships this year.

Nonetheless, the volume of timber transported by water from the Upper Lena Logging Enterprise to the Baikal timber loading site operated by Zabaikalles is relatively large - 168,000 tonnes, or 200,000 cubic metres in the units of measurement conventionally used by the timber industry. Are the river workers prepared to deal with transshipments of this magnitude? The answer is yes. The

fact of the matter is that recently there has been a substantial drop in the overall volume of freight moved on Lake Baikal. Firstly, the flow of equipment and materials which used to be transported to the construction sites of the Baikal-Amur Railway has decreased. Secondly, the gravel and sand loads which used to be transported on the lake have been halted. And finally, after the above-mentioned resolution on Lake Baikal was published, logging was stopped in the lake's intake zone, therefore reducing the transportation of timber from these areas. This year the Goloustin and Turkin water-transport depots administered respectively by Irkutsklesprom and Zabaikalles ceased operations as a result of the transfer of the enterprises at these locations to forest management work. Several years ago transportation of loads of timber stood at more than a million tonnes, but this year only 636,000 tonnes are scheduled to be delivered to the Baikal timber loading site.

As a result, the Lake Baikal ports and their sub-divisions are in difficulty. Fifteen one-thousand ton barges are being used at only half-capacity. We are willing to make them available to geologists and scientists, or to transport local freight, coal, etc., but nonetheless boats often stand idle or make empty trips. At the same time, hundreds of thousands of tonnes of wood continue to be transported across the lake in floats. Does this make sense?

As of last year, Lake Baikal became unprofitable for us. Financial losses suffered by the shipping firms currently stand at roughly two million roubles. According to our calculations, neither does transporting loads of timber on barges make the lake "profitable". However, our losses would be reduced and, most importantly, it would benefit the lake itself.

Our proposals are well-known at Irkutsklesprom and Zabaikalles. We are ready today to transport 188,000 tonnes, i.e. about 250,000 cubic metres in barges. Moreover, as a result of the above mentioned resolution, construction of several large-volume barges to convey wood from the Barguzin timber combine is now underway at the Ulan-Ude shipyard.

The first of these vessels should be ready for use by next year. This means that we are in a position to solve the problem of transporting timber on lake Baikal much more quickly than was foreseen. The decision now rests with the loggers.

Lesnaya promyshlennost

25 August 1988

Page 2 (Full text)

Concern Over Pollution Puts a Stop to Construction of  
Viscose Pulp Plant

A resolution was adopted at a meeting of the Bratsk Municipal Council of People's Deputies which will halt construction of a viscose pulp unit at the Bratsk Timber Industry Complex.

The mighty pine forest with its alder and birch underbrush held its ground for a long time against the encroaching construction sites. Hedged in by Bratsk's new micro-regions on one side and the large artificial body of water on the other, it retained the beauty it had possessed when it was still a small part of the endless Siberian taiga. It may be hard to believe, but only three or four years ago owls, wood-grouse, and flocks of hazel-hens could be seen within a few steps of the huge housing projects.

At that time, pines still rustled softly in the breeze, but even then it was clear they could not remain forever. The poisonous loop created by industrial pollution which has affected over 80,000 ha of pine forests surrounding the city has not bypassed this small area of vegetation. Two years ago, the mighty pines began to die at first, the bark peeled off their golden trunks, and then their needles fell. The only signs of life in the dead forest were the crows.

The damage to the environment around Bratsk and other industrial centres in the Angara River area has been so severe that it is impossible not to see its consequences. People are not only concerned about nature, but about their own health as well. Siberians want more than to take pride in their enormous factories and the fact that they have the world's largest reservoir: they want to breathe fresh air and feel confident about the future.

Congratulations are due to the deputies and ordinary citizens invited to the "ecological" meeting held by the Bratsk Municipal Council who raised a storm of protest when the executives of the aluminum plant and

timber industry complex tried to smooth over obvious problems and defend their own narrow interests. Emotions were at boiling point when K. Mazminov, Director of the Pulp and Paperboard Research Institute, a part of the logging and timber complex, rose to speak.

"The condition of our air is entirely normal," he told the meeting. "Emissions from the Bratsk timber industry complex are not affecting the health of the people of Bratsk, it's all in the mind. These emotional outburst are due to ignorance."

This was clearly not a productive way to discuss the question. The speaker was literally chased off the platform and prevented from speaking again, even though he made several attempts to explain his point of view. As Director of the Institute, he maintains that his is the only correct view, based as it is on precise data. However, the municipal deputies' Commission on Environmental Protection, also composed of specialists, has collected data leading to the opposite conclusion.

The Commission Chairman, O. Budilov, said at the meeting: "A powerful concentration of industrial production has created a very difficult ecological situation in the city. On average, 170,000 tonnes of harmful substances are discharged into the atmosphere annually. The concentration of methylmercaptan in the residential area is 50 times higher than the maximum permissible concentration, the level of hydrogen fluoride is 3.5 times higher, that of carbon disulfide 13 times higher, and of hydrogen sulfide 4.5 times higher.

Thus, the maximum permissible concentrations are being exceeded all the time. And yet this index signifies none other than the maximum allowable level for the emission of harmful substances, the threshold beyond which damage to the environment and people's health is inevitable. One doesn't have to be a specialist to realize that these indices have been worked out with a view to their being observed rather than violated, with the violations later treated as figments of the imagination.

People are tired of empty talk and promises made by factory and departmental heads. They are tired of the irresponsible juggling of technical terms and concepts. That is why they did not believe either the director of the Research Institute or the Chief Engineer of the new viscose pulp plant, A. Slautin, who tried to prove to the deputies and the audience that the plant, which, as everyone knows, is being built in exchange for capacities formerly existing at the Priozersk cellulose plant, is beneficial to the environment around Bratsk. The simplest questions posed by non-specialists, such as whether the capacity of the thermal electric power station would need to be increased as a result of the building of the new plant, met with evasive answers from the project head and the executives of the timber complex. It is clear that the introduction of new capacities, even if they replace old ones, is being carried out without a full ecological study of the consequences. Nothing has changed over the past 20-30 years: leaders of the industry still do not know what they are doing.

It is therefore only natural that the Municipal Council took what is frankly, an unprecedented decision calling for " a halt to the building of facilities for the production of viscose pulp at the Bratsk timber industry complex until all measures have been implemented to decrease the level of pollutants in the atmosphere and water supply. The Central Division of the Industrial Construction Bank in Bratsk will suspend all financial operations connected with the building of this facility as of August 1, 1988".

This decision was hard-won by the people of Bratsk. It should be pointed out that at the session which took place in June, the deputies did not accept the vague resolution proposed by the executive committee and cut short their first meeting, instructing the commission to formulate new, more definite proposals. The month-long break between meetings was useful. Both the deputies' commission and the executive committee decided to face the facts, even though it was unpleasant. It was impossible to continue pretending that the surrounding forests were dying for some inexplicable reason unconnected to human activity. Siberians can no longer accept this explanation.

Naturally, Bratsk's ecological problems will not be totally solved by halting construction of this production facility. Measures taken to improve the ecological situation which has arisen at the Timber Industry Complex and at the aluminum plant are slated to be implemented in the period 1995-2000. The maximum permissible concentrations of the main types of pollutants are expected to be reached by that time. Is such procrastination acceptable? The extent to which pollution will affect the health of the Bratsk population, especially children, is not known because solid research on the subject has not yet been done. The Chairman of the Workers' Council at the timber industry complex, V. Ledyayev, stated at the session that he would be the first to vote for the complex to fund such research. This would be an excellent initiative. The most important thing is to hasten the introduction of environmental protection measures at factories and auxiliary plants. The firm position taken by the Bratsk deputies will promote precisely this.

Lesnaya promyshlennost'

2 August 1988

Page 1 (Slightly abridged)

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Naturally, Bratsk's ecological problems will not be solved by the construction of this production facility. Measures taken to improve the ecological situation which has arisen at the plant that the minimum plant are also to be implemented in the period 1985-2000. The maximum permissible concentrations of the main types of pollutants are expected to be reached by that time. It is expected that the extent to which pollution will affect the health of the Bratsk population is not known because solid research on the subject has not yet been done. The Chairman of the Workers' Council and the city's industry complex in Bratsk stated at the session that he would be an excellent initiator of environmental protection measures at factories and auxiliary plants. The city's pollution control department will promote precisely this.

It is therefore natural that the Municipal Council, as an independent decision-making body, is calling for the building of facilities for the production of waste timber industry products until all measures have been implemented to decrease the level of pollutants in the atmosphere and water supply. The Central Division of the Industrial Department of the Ministry of Forest Industry and Wood Processing of the USSR has agreed with the Bratsk city authorities on August 1, 1985.

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