

**[] TL: AUSTRIA'S ROLE, CUTTING RUSSIA'S BOREAL FORESTS**

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**RUSSIA**

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## **AUF DEM HOLZWEG**

**a study on the Participation of Austria  
in the Destruction of the Boreal Forests**

**by**

**Robert Kovacs**

**translated**

**by**

**Ulrike Staerk**

**Irmgard Zach**

**commissioned by**

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**RUSSIA**

### **RUSSIA - THE COUNTRY WITH THE LARGEST FOREST RESERVES**

With regard to its forest cover Russia maintains an outstanding position: one fifth of all the world's forested area and more than two thirds of the world's boreal coniferous forests are found in Russia. An estimated 40% of Russia's boreal forests, the taiga, are virgin old-growth. Behind the Ural Mountains the Siberian forests form the world's largest single forest expanse - 600 million hectares, more than 70 times the size of Austria. Overall, Russia contains 25% of the world's timber reserves, in other words almost double those of the Amazon forest.<sup>1</sup> About 90% of Russia's forests are state-owned, the remaining 10% are owned by collective farms.<sup>2</sup>

The taiga is of utmost importance for the global climate. At least 40 billion tons of carbon are stored in its trees and, in particular, in the humus and peat forest soils. By comparison, an estimated 80 billion tons is found in the rain forests of the Amazon basin. But clear-cutting these forests does not only mean the loss of an important sink of carbon. Whenever forest soils are exposed as a result of logging operations, biological degradation processes emit large amounts of carbon dioxide, which, in turn, enhances global warming. All over the world an annual 5 billion tons of carbon are converted into carbon dioxide by the combustion of fossil fuels, 1 to 2 billion tons are generated by

forest degradation.<sup>3</sup>

According to an FAO statistics, in the former Soviet Union between 355 and 385 million m<sup>3</sup> of timber were logged between 1980 and 1991.<sup>4</sup> After cutting rates had temporarily increased at the end of the 1980s, the collapse of the communist government has brought about a period of serious economic and social unrest, which led to a decrease in cutting rates; an improvement of the situation will presumably reverse this trend. Other sources provide still higher figures: in Siberia alone about 410 million m<sup>3</sup> of wood are said to be cut in an area of 4 million hectares, which corresponds to about half the size of Austria.<sup>5</sup> This implies that the taiga will disappear at a pace which nearly doubles that of the destruction in the Amazon basin.

Due to a lack of roads and railways, large parts of the Russian forests are inaccessible for loggers. Logging is concentrated in European Russia, the Siberian Far East and corridors along the railways of Central and Western Siberia. Thus, on a regional level, over-cutting occurs due to the massive concentration of logging operations around suitable sites. While European Russia only holds 20-30% of the country's total growing stock, more than 60% of the annual cut takes place here.<sup>6</sup>

According to Sten Nilsson, forest expert of the IIASA (International Institute for Applied Systems Analysis, Laxenburg, Lower Austria), in some areas logging by far exceeds a sustainable yield,<sup>7</sup> over-exploitation being particularly high in the Arkhangelsk and Vologda regions as well as in the Karelian and Komi republics.<sup>8</sup>

Already in the summer of 1989 Soviet experts established heavy over-exploitation in the Siberian Far East. In a report summarizing this two months' scientific expedition it is stated that two thirds of the whole area are underlain by permafrost, most of the accessible timber is in mountainous areas, vast regions are exposed to higher risks on account of strong volcanic activity, violent storms, etc. Besides, consideration must be given to the fact that nature protection, the fishing and hunting industries, and conserving the traditional territories of the indigenous peoples require special protective measures. These are the reasons why only about one quarter of the total forest resources as given in the statistics is really suitable for forestry, a fact which, in the past, had rarely been taken into consideration by the competent authorities in decision making and consequently led to severe mismanagement. Designating for logging vast areas which turned out to be completely unsuitable for exploitation on account of their stock and inaccessibility led to excessive over-exploitation of other stands. In planning no account was taken of the millions of hectares of clearings resulting from clear-cuttings, forest fires and other natural disasters.<sup>9</sup>

Expressed in figures the situation in Eastern Siberia is as follows: in the (administrative) region of Magadan 21% of the forests were cut, 34% in the Primorsky and Khabarovsk regions, 39% on Sakhalin Island, and no less than 42% in the Amur region.<sup>10</sup> In European Russia cuts exceeding the natural regeneration rates were made in Arkhangelsk, Vologda and the Komi republic.<sup>11</sup> Other important timber harvesting areas are Irkutsk, Krasnoyarsk and Tyumen.<sup>12</sup>

## **THE RUSSIAN FORESTS ARE EXPOSED TO A NUMBER OF DIFFERENT THREATS**

The industrial exploitation of nature and of the mineral resources, in particular oil and natural gas, and the construction of dams for power generation has necessitated the logging of extensive forested areas. These logging operations have further increased the risk of forest fires. It is estimated that about the same amount of forest is lost through forest fires and clear-cuttings. Unfortunately, neither the financial means nor the appropriate equipment for sound fire prevention

is available. The situation has been further exacerbated by air pollution, which has caused the die-back of hundreds of thousands of hectares of forests, and an even far bigger area is endangered by the ever-increasing concentrations of air pollutants.<sup>13</sup>

The biggest threat to Russia's forests, however, is their industrial exploitation. In this connection it should be stressed that the hardly accessible forests of Siberia were opened up for industrial exploitation only with the beginning search for natural resources and the construction of gigantic hydroelectric power plants, for which the power plant near Bratsk on the river Angara, a tributary of the Yenisey, is a good example. Built between 1954 and 1966 the power plant was to supply the energy needed for the industrialization of the region. In order to make way for the reservoir and the settlement, a dense network of strips of 500 km length was cut into the forest. To make things worse, the reservoir then flooded millions of m<sup>3</sup> of the Angarian pine. A similar amount of forest fell victim to another gigantic hydroelectric power plant situated near Ust-Ilimsk on the river Angara. After the construction of the Bratsk power plant, which, from the beginning, has yielded more than 22 billion kWh of energy, and the reservoir near Ust-Ilimsk, big timber corporations, the demand of which is also satisfied by the surrounding taiga, were established. In the Bratsk combine about 7 million m<sup>3</sup> of wood are processed annually, in Ust-Ilimsk 6.3 million.<sup>14</sup>

The Bratsk timber combine occupies an area of about 8 sq km. In three shifts 15,000 workers mill 700,000 m<sup>3</sup>, 400,000 m<sup>3</sup> are used to produce plywood, 5 million m<sup>3</sup> are manufactured into sulphate pulp, cardboard and brown paper. The collective combine's hinterland is characterized by a dense network of clear-cut strips and extensive clear-cut loggings.<sup>15</sup> The Ust-Ilimsk combine produces 10% of the total output of chemical pulp of the CIS.<sup>16</sup>

## **MOST FORESTS ARE HARVESTED BY CLEAR-CUTTING**

Clear-cutting is the technique still used equally by Russian and foreign companies to fell 90% of the commercially logged timber in Russia.<sup>17</sup> Clear-cutting leads to increased leaching of nutrients from the soils, soil acidification and changes in soil temperature, which inhibits tree regeneration. Lower precipitation retention capacity changes the water balance, the siltation of streams causes damage to spawning sites and increases the risk of floods. Studies show that the rate of forest regeneration is ten times lower in Russia than in western Europe.<sup>18</sup> In subarctic Siberia the regeneration of forests takes centuries. The average diameter of trees in Siberia is only 20-30 cm, and, compared to the German oak, the Siberian larch takes more than 5 times to reach a height of 6 m.<sup>19</sup>

Since clear-cuttings completely destroy the canopy, the peat-rich forest soils are left devoid of shelter from solar radiation. The enormous amounts of carbon dioxide stored in soils, which are emitted in the wake of clear-cuttings, enhance global warming.<sup>20</sup> The situation is further aggravated by the lack of appropriate replanting schemes. Besides, due to the extreme climatic conditions in Siberia, by far not all replanting efforts are successful. For example all regeneration efforts in clear-cut areas made by the Russian-South Korean joint venture Svetlaya (the foreign partner of the Russians being the Hyundai corporation) in the Siberian Far East have failed. Only about 7% of the planted trees survived the first few months, almost half decayed within 15 days.<sup>21</sup> Moreover, due to increased exposure to solar radiation in the wake of clear-cuttings, permafrost soils rapidly degenerate into swamps, which makes replanting much more difficult or even impossible. Since young forests need more water and thus tap ground water and running water resources, changes in the water balance are inevitable.<sup>22</sup>

## **Forest (mis-)management**

Although ecologists and timber manufacturers will always disagree on clear-cutting, as far as the efficiency of the Russian forest industry is concerned there seems to be unanimity: the Russian forest resources are being exploited in a careless and wasteful way. Every second tree is left in the forests for decay. For every hectare of timber that is cut down, 30 to 50 m<sup>3</sup> of wood are left behind at the logging sites. As much as 60 million m<sup>3</sup> of timber are lost annually, far more than the total annual cut in countries such as Finland and Sweden.<sup>23</sup> In Siberia about 85% of the timber harvested is transported by floating logs downstream on 12 big rivers. Thus, about 3.5 million m<sup>3</sup> of wood drift off annually, blocking the rivers. At the mouth of the Lena logs are said to have piled up to a height of a multi-storeyed building which nobody seems ready or capable of removing.<sup>24</sup> Between 4 and 20(!)% of the logs sink during transport, the resin dissolves in the water, which is polluted by the phenols generated in this process. To these losses the waste from timber processing has to be added. After milling about 40% of the timber is disposed of as waste. In the worst case only 30% of the timber felled is actually used.<sup>25</sup>

The chaotic situation in forest management is further aggravated by economic chaos and social and political unrest. Up to date the Russian government has failed to pass laws with regard to forest ownership, organization of state-owned forests and the relationship between forest owners and users. Some republics and administrative regions have already taken advantage of the central authorities' inability to decide upon these important issues and have enacted forest laws of their own, which, unfortunately, are not always in line with forest protection. Julia Levin has summarized the current situation as follows: "Power struggles between the different levels of government have left a gap in authority which prevents effective forest regulation and management by any potentially responsible branch of government."<sup>26</sup>

With regard to the exploitation of state-owned forests quotas were set and licences issued which also apply to foreign companies which entered into joint ventures. Founded at the end of 1992, Roslesprom, a company charged with the administration of the timber industry at the federal level, defines export quotas while the Russian Federation, the republics and other regional authorities grant licences. Arbitrarily, local administrators of separatist regions within the Federation, such as the Primorsky region in the Russian Far East<sup>27</sup>, issue licences, thus deliberately ignoring the federal law. For example, licenses were issued to the Hyundai corporation, which wanted to extend its timber rights in the Bikin valley in the Sikhote-Alin Mountains to over 1 million hectares after having already carried out illegal logging operations outside the designated logging area.<sup>28</sup> Given the economic disaster, the timber companies have little interest in cooperating with the forest industry. In any case, exporting sawn logs is at least 10 times more profitable than selling in Russia. Local bureaucrats are bribed to give export permissions.<sup>29</sup> Last year the customs authorities in Vyborg at the Finno-Russian border prevented the export of 700,000 m<sup>3</sup> of timber after the export licence had turned out to be a fake.<sup>30</sup> In view of the ever-increasing incidents of violations of the law the number of companies licensed to export this "strategic raw material" shall (again) be reduced to 4-6.<sup>31</sup>

## **HUMAN RIGHTS VIOLATIONS IN THE FOREST INDUSTRY**

Violations of the law are not limited to illegal practices in the field of forest management. 15,000 to 20,000 North Korean workers are logging Siberian forests for two big Russian-North Korean timber companies, Tyndales and Urgalles. Officially, these workers are volunteers, but they live and work under conditions similar to those in Russian prison camps. The logging camps are under strict North Korean police control. Workers trying to escape are caught by the police and sent home to North Korea, where they simply disappear. The North Korean joint ventures can be seen as part of a much larger scheme under which prisoners carry out logging operations - a remnant from the

GULAG system. Currently about 200,000 prisoners work in the forest industry. In fact, the Ministry of Internal Affairs, which still manages the forest prison camp system, has been the third largest timber company in the former USSR. In 1990 the prison camps produced 20 million m<sup>3</sup>. At present there are camps in Karelia, in the Arkhangelsk, Kirov, Perm, Yekaterinburg and Irkutsk regions as well as in the Komi republic.<sup>32</sup> The timber industrialist Schweighofer, who holds shares in a timber company with its site adjacent to the logging area of a prison camp, reported that prisoners, among whom there were supposedly also political detainees, worked in the forests throughout the year and that human rights violations occurred very frequently. Timber harvested under these circumstances is then also exported to Austria by the Russian state export companies.<sup>33</sup> Also in Yakutsk, capital of the Yakutia-Sakha republic, there is or at least used to be a sawmill run by forced labour.<sup>34</sup>

The operations of the timber companies also infringe upon other human rights aspects: in all boreal regions including those of Russia the traditional way of life and the economic and social basis of the indigenous peoples are threatened by industrial logging. Among the more than 30 indigenous peoples of Siberia and Russia's Far North, of which some do not number more than a few hundred members, especially the fate of the Udege in the Primorsky region in the Siberian Far East has attracted international attention. Whereas the Nanai, whose territory borders that of the Udege, adopted a sedentary way of life under the pressure of Russian and Chinese colonization, the Udege retreated into the forests, where they were able to longer resist Soviet compulsory collectivization. The exploitation of the forest resources of the Sikhote-Alin Mountains, which has been going on for a couple of years and which has taken another turn for the worse with the Hyundai corporation's plans in the Bikin valley, heavily threatens one of the last regions of the world in which the culture of the Udege - in any case suppressed during 70 years of Soviet dictatorship (only less than a third of the Udege still speak Udege as their mother tongue) - may survive.<sup>35</sup>

This people's livelihood totally depends on the forest since they traditionally live on hunting reindeer, elk, fur-bearing animals and birds as well as on fishing and gathering berries, nuts and mushrooms. Due to the bad state the state collective economy is in, subsistence economy is again gaining importance, more and more indigenous peoples returning to their traditional ways of life.<sup>36</sup>

In the Ussuri taiga logging operations have been carried out for some decades. The Iman group of the Udege in the Krasnoarmeisk district, Primorsky region, has been almost extinguished. Their numbers are down to less than a hundred, their territory being fragmented they have come to live in small families in Russian villages. The forest around the village Ostrovny, in which they used to live together, is completely deforested, the village itself has vanished.<sup>37</sup> The Udege of the Samarga valley north of the river Bikin were better off. In 1990 the logging operations had reached such an extent that the Supreme Soviet and the Regional Soviet were successful in convincing the State Committee for Forestry to leave the whole valley to the Samarga Udege.<sup>38</sup> The territory was finally handed over after the Udege had threatened to defend their territory by force of arms if necessary, and with the help of the Cossacks, local environmentalists and Greenpeace, the Bikin-Udege also stood their ground.

Another example are the Evenks from Khanda, north of Lake Baikal. The Khanda-Evenks, who used to live on reindeer breeding, have become professional hunters. In the late 1980s the government encouraged industrial logging all over Siberia in the course of which the taiga around Khanda was carved into small fragments by progressive clear-cutting and the building of forest roads. The number of game steadily decreased, hunting success left much to be desired. Studies show that in 1989 the elk population had shrunk to about 80% of the population recorded in 1975, the numbers of wild reindeer had decreased by 90%. The clear-cuttings further led to increased soil

erosion and the sinking of the water level of rivers and lakes which went hand in hand with a drop in fish catch. The inhabitants of Khanda are especially affected by this problem, since their livelihood depends to more than 50% on fish.<sup>39</sup>

The Evenks living in the village Tyanya in Yakutia-Sakha had a similar fate: in 1987 this group living on reindeer breeding and hunting was by decree deprived of 450 sq km of forest (i.e. a wood reserve of 5 million m<sup>3</sup>) of their traditional hunting and grazing grounds.<sup>40</sup>

In fact, similar to the Evenks and the Udege, practically all the indigenous peoples living in the taiga are threatened by the quick advance of timber corporations into the Siberian forests. The Nivkhi and Oroks, for example, living on Sakhalin Island do not only suffer from clear-cuttings in their traditional territories but also from the exploitation of their oil resources, which, carried out with the least environmental awareness possible, has entailed severe soil and water pollution. Another example are the Orochi, who still live on catching fish and other marine animals and on hunting in the taiga. A part of the Orochi live in the Botcha river basin (north of the settlement area of the Bikin and Samarga Udege), where the US timber giant Weyerhaeuser plans to clear-cut more than 100,000 hectares. Ecologists praise the uniqueness and biological diversity of this region. The Botcha valley – like the Bikin valley - is home to many rare and endangered plant and animal species including the Siberian tiger of which only 200-250 are left in the wild. Since 1976 plans have been made to establish a nature reserve in this area.<sup>41</sup>

## **THREATENED NATURE RESERVES**

Not only but especially in European Russia nature reserves are threatened by extinction and plans concerning the establishment or extension of nature reserves are often discarded for the sake of short-term profits. In the Podporozhsky region between the lakes Ladoga and Onega, north-east of St. Petersburg, roads have been built and logging operations begun in virgin fir groves that had been preserved up until only very recently. In 1991 the creation of a national park, "Vepski Les", in the St. Petersburg region was announced to prohibit further cutting of the already affected forests. But up to now all efforts to protect this area of 260,000 hectares have been thwarted by timber companies which decidedly refrain from discontinuing their logging activities in this area. In the Karelian republic proposals of the government to set up a natural park of a size of about 760,000 hectares were heavily attacked by the forest industry. Concessions regarding the extension of the park have already been made, but the project's future remains uncertain.<sup>42</sup>

In the Komi republic a further nature reserve's survival is currently at stake. In April 1993 the Ministry for Forestry of the republic decided to open up stands in the buffer zone of the natural park Pechoro-Ilyinsk to a timber company, thus violating a law adopted by the council of ministers of the republic in February 1992. Furthermore there exists a contract on the lease of the forest in the buffer zone of the nature reserve together with other stands in the Troitsko-Pechorsk region to a Russian-French joint venture. Although there are three game preserves and four natural monuments in this area, no assessment was carried out as to whether or not the contract was in line with the environmental and nature protection legislation currently in force.<sup>43</sup>

Lake Baikal, another unique natural monument, is also endangered. It contains about one fifth of the Earth's freshwater reserves, and with a depth of 5,314 ft (1,620 m) it is the deepest water body on Earth. Baikal is home to about 2,000 different animal species, about three quarters of them being endemic, e.g. the Baikal seal. Although parts of the Baikal are being protected, this unique ecosystem has come to the brink of collapse on account of logging operations on its shores and heavy pollution caused by waste waters from pulp mills.<sup>44</sup>

Although this study concentrates on the state of the boreal forests, it should not go unmentioned that the last subtropical forest of Europe is also threatened by extinction. In the tropical wet climate of this moist forest situated near Sochi, the well-known Russian seaside resort on the Black Sea near Abkhazia, hundred years old yews, huge boxers, orchids and rhododendrons grow. This paradise is what has remained from the subtropical forest which had covered all of Europe prior to the last ice ages, i.e. more than 6 million years ago. Increasing tourism, industrial emissions and uncontrolled logging operations threaten this last refuge of many rare and endangered plants, which are also sold to collectors from western countries. The chopping down of trees some of which are more than a thousand years old has risen dramatically since the introduction of perestroika. The timber is mainly used for the construction of dachas in Russia and Georgia. According to Boris Tuneyev, the person responsible for the nature reserves in the Caucasus, it is hardly possible to put an end to the felling of the trees given the slovenliness and corruption of the authorities; logging concessions can be obtained in return for almost everything.<sup>45</sup>

In the north as well as in the south of Russia the forests are being recklessly exploited. Some Austrian companies already have their fingers in the pie, others are waiting in the wings.

## **THE ROLE AUSTRIA PLAYS IN THE DESTRUCTION OF RUSSIA'S FORESTS**

In 1992 Austria imported about 329,000 m<sup>3</sup> of timber and timber products from Russia. The major part of these imports, i.e. 287,000 m<sup>3</sup>, were sawlogs. Compared to the figures of 1991, there was a slight decline in the overall import of sawlogs, which confirmed a trend already observed in 1990. The imports of softwood, however, increased by 15%.<sup>46</sup> In the first quarter of 1993 (compared to the period of January to March 1992) the imports of this product augmented even by a rate of 68%. Likewise, there was an increase in the imports of hardwood, pulpwood and sawnwood.<sup>47</sup>

In the years prior to the early 1990s the development as regards the imports of roundwood - this product has always made up the by far largest share of all timber imports - was as follows: in 1985, 182,000 m<sup>3</sup> were imported from Russia or the former USSR, in 1986 the figure amounted to about 190,000 m<sup>3</sup>. In 1987, the year 2 after perestroika, however, a sudden upsurge to not less than 575,000 m<sup>3</sup> was registered, and in the years 1988 and 1989 812,000 m<sup>3</sup> and 761,000 m<sup>3</sup> of roundwood were imported, respectively.<sup>48</sup> In 1990 this upward tendency was reversed. It must be mentioned, however, that during this period of time under review Austria as importing country of Russian roundwood had always ranked below megaimporters such as Japan (5.5 to 6.5 million m<sup>3</sup>) and Finland (4.5 to 5.5 million m<sup>3</sup>) in the 4th or 5th place.<sup>49</sup> Between 1985 and 1991 Austria occupied on average the 8th place as regards its total timber imports; in the years 1987 and 1988 Austria was the number 6.<sup>50</sup>

The statistics on the roundwood exports of the former USSR confirm this development: the years 1986-1989 showed a far higher export volume than the years before, since 1990 figures have dropped, however, and have settled again at the "target level" set by the planned economy.<sup>51</sup> As soon as the political situation in Russia stabilizes, a steady rise of imports can be expected since several Austrian enterprises, many of them alien to timber trade, have voiced their intention to choose Russia as their trading partner.

Russia's domestic requirements in terms of timber are very high. Under the present conditions, however, only a small fraction of the actual timber harvest can be used to meet domestic demand (see above). Since at the same time the Russian timber industry highly depends on exports to gain foreign currency, it may occur that Russian timber-processing plants have to buy domestic timber using foreign exchange.<sup>52</sup> If, as can be expected in the years to come, the export figures of timber

rise, several Russian firms will presumably go bankrupt in this need for exchange. 30% of the foreign exchange earnings will go to the state, 20% to the foreign exchange market at the current rate of exchange, and the rest, 50%, will stay with the exporter.<sup>53</sup>

Timber-importing companies in Austria:

Agri-Konda, Baumax, L. Bertolini, Blumenfeld, Buben & Fried, Contex, Frischeis, Gruendler, Intrade, J. Kogler, Holzindustrie Leitinger, Mafi-Deckenwerk, Manhart, Holzindustrie Pfeifer, R. Pisec, R. Placzek, Holzindustrie Preding, Russles, SCA Laakirchen, Schoenegger, Holzindustrie Schweighofer, Wertholz, Wolf Systembau.

### **HOLZINDUSTRIE SCHWEIGHOFER IN RUSSIA**

One of the most notable importers of Russian timber is Holzindustrie Schweighofer GmbH. In its parent company, located in Brand in the Austrian Waldviertel - the north-western part of Lower Austria -, 350,000 m<sup>3</sup> of sawlogs are manufactured into sawnwood. On their own showing, their second works in Ybbs an der Donau, Lower Austria, is the largest sawmill in Central Europe and has a cutting capacity of 650,000 m<sup>3</sup>.<sup>54</sup> Of the about 1 million m<sup>3</sup> of sawlogs processed by this company 40% are bought in Austria (either acquired from farmers by way of the association of rural cooperatives or from forest enterprises), 60% of the timber is imported, with 80% of these imports coming from Eastern countries.<sup>55</sup> Apart from regional timber the sawmill Wieland in Sollenau, which was taken over by the Schweighofer company end of August 1990 and which has a capacity of 250,000 m<sup>3</sup>, also processes sawlogs from Russia.<sup>56</sup>

According to Mr Schweighofer, about one third of the timber that is processed in his three works comes from Russia, i.e. between 300,000 and 400,000 m<sup>3</sup> per year.<sup>57</sup> These incredibly high figures exceed the values given in the official statistics for 1992 and would imply that the Schweighofer company is the only importer of Russian timber. This, however, is denied by other Austrian timber importers, but when questioned on the reason for this discrepancy they can hardly provide a plausible answer.

Nevertheless, Mr Schweighofer would like to import even more timber and regrets the fact that in Russia the number of trees logged has sunk continuously. According to him, it is deplorable that the logging rates have been reduced by 50% since Russia has plenty of forests and virgin forests to be exploited. The Schweighofer company is also represented with five joint ventures, one of them is to be found in Siberia. The joint venture Avstrofor in Vologda in European Russia (an area already over-exploited<sup>58</sup>) is not only a processing plant but also carries out import and export operations.<sup>59</sup> Timber is transported to Austria and Finland via this firm in Vologda as well as a further commercial enterprise. The firm Troitsko-Pechorsk in the Komi republic (which also ranks among the over-exploited areas in Russia<sup>60</sup>) is run as a forest enterprise only, a sawmill, however, is being constructed. This enterprise, which employs 1,600 people, is organized on a private basis, and Schweighofer owns 44% of the shares. This joint venture in Komi holds the timber rights to 418,000 hectares of forest, 70,000 hectares being virgin forest. Deforestation is only done by clear-cutting. In the virgin forest progressive logging is used, too. Thus, 400,000 m<sup>3</sup> of timber are produced per year and it is planned to increase the logging rates to 600,000 m<sup>3</sup> until 1995. About 50% of this timber (mainly pulpwood for the production of pulp as well as boards and panels) remains in Russia, the rest is exported.<sup>61</sup>

### **SCHWEIGHOFER IN GERMANY**

Intentions of the Schweighofer company to start business in Hesse, Germany, some time ago were thwarted by a citizens' initiative. According to Hans Hosenfeld, a local sawmill owner, the residents

wanted to protect themselves against gigantism (the construction of a sawmill with a cutting capacity of 500,000 m<sup>3</sup> had been planned) and against a collective combine structure having its origin in socialism. Furthermore, it was feared that the organizational pattern of the sawmills in the area could be disturbed and that interdependencies between suppliers and mill owners, almost inevitable when enterprises of this size are involved, could be created.<sup>62</sup> The Schweighofer company and its supplier, respectively, have made another bad impression in Germany since, according to the local association of sawmill owners, the Forest Service of the federal state of North Rhine-Westphalia had violated the "budgetary law" by selling sawlogs to the Austrian enterprise. The financial loss was estimated to amount to DM 4.5 million.<sup>63</sup> This means nothing else but that the Forest Service had passed over the local sawmill owners by not submitting a tender and delivering directly to the Schweighofer GmbH.

The "market leader in the Austrian (timber) trade",<sup>64</sup> the Vienna-based enterprise Rudolf Pisek KG, which has run a branch in Moscow since 1991 and also takes part in several joint ventures in Russia (the first one was Vyatko Woodindustries in the area of Kirov<sup>65</sup>, created a stir when it proclaimed its plans already 2 years ago to expand the import volume of a USSR joint venture from 1 million m<sup>3</sup> of timber of Russian origin, shipped to and through Austria, to 2 million m<sup>3</sup> in order to guarantee the supply with raw material for the Austrian but also for the European paper industry.<sup>66</sup>

This expansion, however, did not take place. A large part of the original import volume comes into Austria, but this is somehow not reflected in the statistics. According to a personal communication from a staff member of the Pisek enterprise, great attention is paid to the declaration of the country of origin since particularly Russian timber is a sales hit because of its quality. Thus he could not explain the discrepancy between the import figures given by the importers themselves and the official ones. Mr Pisek, who apart from timber also imports pulp (in addition to the furniture company Styl Einrichtungshaus, Vienna, Mr Pisek also holds shares in the timber and paper-trading enterprise Paged Industrieholz-, Holz-und PapierhandelsGmbH), was the first Austrian in Russia who has not only been active in the timber trade but who has also invested in production, i.e. logging.<sup>67</sup>

Together with the Carinthian machine-building enterprise Schilcher, Mr Pisek has also put into operation an electronically controlled topping and sorting machine for sawlogs with an annual capacity of 400,000 m<sup>3</sup> in European Russia.<sup>68</sup>

Another important and pioneering timber-processing enterprise apart from the Schweighofer company is Holzindustrie Preding. Since September 1991 this company holds a share of 51% in the Holzindustrie Lesprom/Nowgorod.<sup>69</sup> The joint venture Novgorodles Preding is used to import sawnwood and sawlogs into Austria and, furthermore, a sawmill is being constructed there the products of which will be used to satisfy domestic requirements as well as for export.<sup>70</sup>

Likewise, the firm Agri-Konda WarenhandelsGmbH, Klagenfurt, holds shares in a joint venture. On their own showing, they import timber into Austria via Agri-Konda in the Tyumen region in Western Siberia, one of the regions in Siberia with the greatest logging activity.<sup>71</sup> Agri, a trading enterprise dealing with goods of all kinds, holds a partnership agreement with the company Varnakov.

Wolf Systembau GmbH, located at Scharnstein and working in the building sector - among other things it has already constructed railway stations and showhouses near Moscow -, participates in several joint ventures in Russia and has supplied Austria with, as asserted, small amounts of sawlogs and sawnwood before. Their main trading partner, however, is Japan. Furthermore, the Wolf company holds timber rights which, as declared, have not been made use of yet. The joint

venture Wolfagroles, which is planned to produce mainly furniture, wooden parts for technical use and log cabins, is being established. A further timber-processing plant is the joint venture Wolf-Baikal in Irkutsk (it is situated in an area of intensive logging<sup>72</sup>).

Another firm which is primarily interested in establishing trade with the Far East is the Skomasch HandelsGmbH, Vienna. Apart from participating in the joint venture Skomega in Obninsk, south-west of Moscow, solely a commercial enterprise, Skomasch holds shares in the enterprise Aldan, located in a place with the same name south of the Siberian city Yakutsk. This company, too, is active in timber trading and a sawmill is being constructed.<sup>73</sup> In the Yakutia republic logging is primarily carried out in the catchment area of the river Lena extending 50 km. Reafforestation in this area is still renounced in the hope of natural regeneration.<sup>74</sup>

For the sake of completeness two other firms of builders and contractors should be mentioned which participate in joint ventures in Russia. One of them is Rogner GmbH, Villach, which has landed orders for construction work in Moscow, St. Petersburg and Alma Ata and which, according to information provided by the BWK (Bundswirtschaftskammer), the Austrian Federal Economic Chamber, also holds shares in two joint ventures in Moscow (Intoagro and Vasinkraft) which are said to be also involved in timber processing. Robert Rogner jun., however, does not know anything about their existence and thus assumes that they are not actively engaged in business. Nevertheless, he cannot definitely exclude the existence of a contract.<sup>75</sup>

The second enterprise is Maculan Holding AG, which had entered the commercial and financial news only recently because of its urge to expand mainly into the German Neue Laender (this group is presently holding about 180 firms).<sup>76</sup> In Russia the Maculan company could successfully secure several orders for the construction of flats for military personnel. In March 1993, after having executed the order worth ATS 1.8 billion in Krivoi Rog (Ukraine) in 1991, the enterprise received an order to the value of ATS 1.9 billion to build another 3,000 flats for soldiers returning from East Germany in Tver and Vyasma.<sup>77</sup> In addition, by way of the Yakutsk joint venture Tuimada, Maculan constructed a hospital in Yakutsk. Rumours saying that in return for building the hospital Maculan had received timber rights for a region corresponding to the size of Austria are untenable according to a representative of Maculan International, who confirmed that the hospital had been paid in cash. On his own showing, it may well be that in the course of the negotiations on the hospital construction an offer of this kind had been voiced, but it had never been seriously taken into consideration. One further cause for such a rumour could have been Maculan's efforts to receive a contract for building a railway line in Siberia (the 530-kilometer-long "Amur-Yakutsk Mainline"). According to Russian law, the developing company has the right of use for the railway corridor extending 5 kilometers left and right of the rails. Thus, although in general only 500 meters are actually used, the railway company is one of the largest forest owners in Russia. As added by Maculan International there had also been plans for entering the timber trade in Yakutia that have not yet been realised. Nevertheless, plans for entering the timber business in general exist as well as potential partners willing to participate. The intention, however, is not to export but to satisfy home requirements, but for the moment the company is occupied with the realization of projects in the wake of the construction of the hospital in Yakutsk.<sup>78</sup>

The enterprise Nordex GmbH, Vienna, too, envisages to enter the timber trade. It is the same Nordex company that only recently had been mentioned in an article of the Austrian financial paper "WirtschaftsWoche" as having close contact with the trading group Seabeco AG with its seat in Switzerland, from which, in turn, there are tracks leading to the enormous fortune worth billions of the Russian Communist Party which had miraculously disappeared and to one of the principal wire-pullers of the Moscow unrests in the autumn of 1993, the "counter president" Aleksandr Rutskoi. At present, Nordex is said to refrain from participating in any joint venture actively involved in timber trade. The joint venture Sovastor in Moscow the Vienna-based enterprise is associated with

according to data provided by the Austrian BWK is not known to the Nordex company.<sup>79</sup>

Likewise, the trading company Vectra HandelsGmbH, Vienna, is or at least used to be involved in several joint ventures. In contradiction to the information obtained from the BWK, the joint venture Victoria-JU in Moscow Vectra still participates in does not deal in timber. In the meantime, the shares Vectra had been holding in the joint ventures Vektor in Ulan-Ude (Buryatia) (also timber processing) and Forest Action in Moscow have already been sold.<sup>80</sup>

The company Glorithaus Vertriebs Gmb H&CoKG seems to have hesitated too long to rid itself of its shares in time. Only in 1991 had Glorit 22 working joint ventures between the Baltic and the river Amur,<sup>81</sup> among them firms like Sib-Glorit in Novosibirsk, Orel-Glorit in Orel, Afips-Glorit in the Sversk region and Amur-Glorit in Svobodny, Amur region. According to the data provided by the BWK, all of them trade in timber. In the following year, to be precise in June 1992, bankruptcy proceedings were instituted against Glorit, which had already been insolvent for some time. This insolvency had been caused by payments not effected by its trading partners in the CIS.<sup>82</sup>

Apart from the firms which take the risks of participating (many of the enterprises listed in the documents of the BWK no longer exist or have not taken any further active steps after the conclusion of the contract due to the insecure political and economic situation) there are several Austrian companies supplying the Russian timber industry. Mention must be made of the engineering company Maschinenbau Koenigswieser GmbH, which, in 1991, had taken over the forest technology department of the Austrian machine-building group Steyr and had also supplied the CIS with its attachment processors (part of semi-automated timber harvesting machines) conceived in the USA and built by Steyr,<sup>83</sup> and of the company Foerderanlagen und Maschinenbau Wien GmbH (FMW) at Kirchstetten in Lower Austria. Client of the FMW was among others the combine Balakhna near Nizhny Novgorod, one of the largest timber-processing and paper-producing companies in Europe (hoisting and transport equipment for timber depots; an order worth ATS 480 million).<sup>84</sup> In addition, the Austrian shipbuilding yard Oesterreichische Schiffswerften AG Linz-Korneuburg (OeSWAG) supplied Russia with 10 transport vessels. These ships, with Arkhangelsk as their home port, were mainly planned for the transport of packaged sawnwood but are also suitable for the transport of sawlogs and bulk goods.<sup>85</sup>

At last the fibreboard-producing company Funder Industrie GmbH, located in St. Veit an der Glan, Carinthia, has to be mentioned, which belongs to the industrial group Constantia. It entered into contracts regarding the selling of know-how in the field of resin production and the impregnation of paper with synthetic resin.<sup>86</sup>

## **THE PULP AND PAPER SECTOR**

In 1992 Russia's 161 paper mills produced more than 6 million (metric) tons of paper and cardboard and 6.8 million tons of pulp in its 50 pulp mills. The production, however, is still declining.<sup>87</sup> In 1989 more than 11 million tons of woodpulp and about the same amount of paper and cardboard had been produced. Only approximately 10% of this output are exported (main importing nations of pulp are the EC countries and Hungary).<sup>88</sup> One major ecological problem is the environmental pollution caused by the numerous pulp and paper mills. The equipment of the mills is old and, thus, cannot meet the air and water pollution standards. So e.g. a mill in Priozersk at the Lake Ladoga north of St. Petersburg had to close down under the pressure of environmentalists.<sup>89</sup>

Imports of pulp and paper into Austria amount to a not very overwhelming 15,000 tons. They

could, however, go up in the near future because Russian manufacturers increasingly tend to organize the marketing of their products themselves. They are also interested in selling large quantities of their output at once. Austria's paper manufacturers, however, are very restricted in their capacities and can only import several tons at a time. Here the commercial enterprises come in and have recently opened up various new possibilities which are also used by firms from a different branch of industry.<sup>90</sup>

Due to mainly large orders, the delivery of Austrian products to the Russian (or Soviet) pulp and paper industry has always been of far greater importance. The engineering company J.M. Voith AG, St. Poelten, Lower Austria, for example, can look back on 20 years of partnership with Russian companies. After the foundation of the joint venture Petrovoith in Petrozavodsk, Karelia, end of 1987, a plant producing machines and equipment for the production of paper, the Voith AG has now been named as a potential partner for the envisaged denationalization of the paper-producing collective combine Petrozavodsk-Bumash (almost one third of its output is exported).<sup>91</sup>

Clients of Voith, which also has a branch in Moscow, are among others the combines Kotlas and Arkhangelsk in the northern part of European Russia as well as the timber-processing combine Balakhna with an annual output of 220,000 tons of newsprint.<sup>92</sup> Arkhangelsk also belongs to the clients of the Voest Alpine Industrieanlagenbau GmbH (VAI), which repeatedly receives orders to the value of billions of Austrian schillings for its steel works.<sup>93</sup> Large orders in the pulp and paper sector could, apart from the Voith AG, be secured by the VAI in the course of the restructuring and modernization of existing production plants planned for the period of 1991-1995. Altogether 17 projects with an estimated worth of ATS 10-12 billion have to be mentioned, most of them in European Russia and three in the Baltic.<sup>94</sup>

The already mentioned FMW has received an order to the value of ATS 1.2 billion from the pulp and paper mill Solikamsk, located in the Urals. The machine factory Andritz Sprout-Bauer as well as Purator Waagner-Bir" act as suppliers. The order is paid by paper shipments from the combine, which produces 600,000 tons of paper annually. For reasons of quality these deliveries are mainly assigned to go to Asian countries.<sup>95</sup>

Even though the Austrian Control Bank has stopped to accept guarantees for export trade with Russia (there are still a few exceptions from former guarantee cases) and despite the decline in big orders by 20-30% that had been the case for decades, a far greater and more diverse number of Austrian export firms now even holds market shares.<sup>96</sup>

## **FOREST DESTRUCTION AND OIL PRODUCTION**

Ten of the 15 republics of the former Soviet Union are producing oil, with a share of 90% Russia being by far the biggest extractor among them. In 1988 Russia achieved its highest output of 545 million tons. 68-73% of the oil comes from Western Siberian oil fields. With 73.5% Western Siberia possesses the majority of the Russian oil reserves.<sup>97</sup> The "Tyumen complex" - named after the administrative centre of the Western Siberian crude oil and natural gas fields, a city of 450,000 inhabitants - comprises 486 fields which in terms of size and supply equal those of Saudi Arabia.<sup>98</sup>

But in spite of or even because of these resources deposited under its permafrost soil, the Tyumen region has degraded into an ecological disaster area. Heavy trucks on their way from well to well leave deep tracks in the tundra soil, making it impossible to further use these roads in the following year. Thus, endless strips of a few kilometres' width are cut into the forest and mosses and lichens of the tundra, which take decades to regenerate, are being destroyed. Pipelines sink into the permafrost soil and start to corrode. Experts of the environmental department of the administrative authority

responsible for crude oil extraction in Tyumen estimated the thus incurred losses to amount to 15-60 million barrels ( 160l) a year. In 1985, 343 leaks were recorded in the pipeline network of 65,000 km length of the former Soviet Union. The number of leakages is supposed to still have risen since then.<sup>99</sup> Leaking pipelines have led to vast oil spills of up to 11 km length and 2 m depth. Via oily drilling wastes and drilling muds oil is introduced into the ground water (the drinking water resources of most Siberian towns are contaminated by oil) and the environment. Due to the low temperatures in the Subarctic, oil degenerates only very slowly. The natural gas pipelines of 200,000 km length are leaking as well, their methane emissions enhancing global warming.

Crude oil and natural gas exploitation also causes severe damage to the Western Siberian forests. Every year between 24,000 and 28,000 sq km of taiga are being destroyed.<sup>100</sup> Another burning problem for the forests are the gas flares. In Western Siberia 12 billion m<sup>3</sup> of gas are burned off annually in order to prevent it from enriching and exploding, each of these vast flares consuming 24 hectares of taiga.<sup>101</sup> The social conditions are also appalling: not only does a third of the 700,000 oil workers have to live in shacks or railway containers, severe pollution has deprived the indigenous peoples of most of their social and economic basis.

Many rivers with their spawning grounds were destroyed, the fishermen among the 20,000 Khants and Mansi were thus deprived of their means of subsistence.<sup>102</sup> In the now rutted and oil-contaminated tundra and tundra forest formerly the reindeer herds of the nomadizing Nenets used to graze. Within a few years the reindeer breeders in the Autonomous Region of the Yamalo-Nenets lost almost 600,000 hectares of pasture and more than 24,000 reindeer.<sup>103</sup>

The indifference of the oil industry does not only affect Siberian peoples. Due to the increasing pressure exerted by oil companies, the Blackfeet (Pikuni) in Montana, USA, are in danger of losing Badger Two Medicine, their spiritual centre on the eastern slope of the Rocky Mountains, the mainstay of their cultural identity.<sup>104</sup> The Lubicon Lake Indian Nation in the Canadian province Alberta is continuously fighting against the destruction of their hunting grounds by the development of new oil reserves and the contamination of their territory by oil leaking from wells and pipelines. By the end of the 1970s more than a hundred oil drilling companies had entered their territory and constructed 400 wells within a radius of 25 km around their community.<sup>105</sup>

Since 1988 oil production in Russia has declined by 30%, exports reduced by half. In order to put a halt to this development, Russia intends to invest US\$ 1 billion in the further development of crude oil reserves in Western Siberia and to attract more private investors to the oil sector.<sup>106</sup> This goal in mind, talks have been started about Russia's joining the European Energy Charter, which - initiated by the Netherlands in 1990 - aims at encouraging private investment in the energy sector in Eastern Europe. Within this framework the European Community and non-European industrialized nations shall provide technical know-how in exchange for gas supplies. Western companies will certainly make huge profits but hardly contribute to an improvement of the environmental situation in Western Siberia. Quite on the contrary. It is expected that increased exploitation of oil and gas resources will cause ever more damage to the environment and further production and transport facilities will affect hitherto pristine areas.<sup>107</sup>

Western technology is not all too promising either: even the Alaska oil pipeline is leaking, failing computerized detection of leaks has caused major spills, corrosion is gaining ground.<sup>108</sup>

Despite all reservations the World Bank granted Russia a loan of US\$ 610 million for re-activating its abandoned oil fields in June 1993. This was the biggest project-oriented loan the World Bank ever made in its 48 years of existence. In addition to US\$ 169 million from Russian oil companies and US\$ 6 million from the Dutch government the European Bank for Reconstruction and

Development (EBRD) will contribute US\$ 250 million.<sup>109</sup> In this loan there is also Austrian money.

But the EBRD, founded in 1990 by 39 states, the European Investment Bank and the EC Commission to provide financial means and technical know-how for restructuring the national economies of Eastern Europe, is not only known to borrowers. It was given public attention when it became known that Jacques Attali, director general of the EBRD, had spent more money on restructuring and decorating the bank's London headquarters than on its true purpose.<sup>110</sup> The bank has a share capital of ECU 10 billion, of which 51% are held by the EC via the Commission or its member states. With 2.28% Austria, which shares its vote with Malta, Cyprus and Israel, has a comparatively high share in the capital.<sup>111</sup> Out of the US\$ 100 million the bank invested in 1991 US\$ 5 million were of Austrian origin.<sup>112</sup>

It goes without saying that Austria also supports projects which are highly questionable from the ecological point of view, e.g. the one in the Tyumen region, the Austrian oil company OMV having imported about 5 billion m<sup>3</sup> of natural gas from Western Siberia in 1992 alone.<sup>113</sup> It was already 25 years ago that the OMV concluded a contract guaranteeing the supply of about 30 billion m<sup>3</sup> of natural gas for a period of 23 years. In 1974 and 1975 two other contracts were signed providing for an annual supply of 500 million m<sup>3</sup> gas until the year 2000. In 1982 a fourth supply contract expiring in 2008 was made, guaranteeing an annual supply of 1.5 billion m<sup>3</sup> plus an option for an additional annual supply of 1 billion m<sup>3</sup>. The annual natural gas supply from Russia has a market value of more than ATS 5 billion.<sup>114</sup> Already at a time when the Soviet Union was still existing the OMV, together with the foreign trading company Soyusgasexport, established the Vienna-based commercial enterprise GWH Gas- und WarenhandelsGmbH, which coordinates cooperation in the natural gas trade.<sup>115</sup> Austria's minister for the nationalized industries, Viktor Klima, also seeks new ways of cooperation, wanting to use the gas pipelines as a means to secure Austrian exports to Russia, for which the Austrian Control Bank does not accept any guarantees. The money due from the natural gas supplies shall serve as security.<sup>116</sup>

But the OMV is not the only enterprise importing natural gas from Western Siberia. The Austria Ferngas GmbH (AFG), the holding company of the provincial natural gas companies, has signed a cooperation contract with the Western Siberian gas company Zapsibgaspromstroi, providing for the supply of Austrian know-how with respect to natural gas extraction. In return, the AFG will receive gas worth ATS 30 million. In 1991 Zapsibgaspromstroi provided about 600 of the 830 billion m<sup>3</sup> of gas required in the former USSR.<sup>117</sup> Besides, the Energieversorgung Niederoesterrreich AG (EVN), the Lower Austrian energy company, has launched a pilot project (investment ceiling: ATS 50 million) in Tyumen, where in cooperation with the Russian company Gasprom a local supply network for natural gas shall be established to which about 4,000 consumers shall be connected.<sup>118</sup>

Austria does not only obtain natural gas from Russia but also crude oil. According to the latest figures, crude oil imports amount to almost 300,000 tons, compared to about 580,000 tons in 1989. And it is in this light that the activities of the OMV in Yakutia-Sakha have to be seen. Two years ago the OMV, which has also a branch in Moscow, entered into a joint venture with the Yakutian government and the oil and gas company Lenaneftegasgeologia and staked a claim to two fields of 21,000 sq km.<sup>119</sup> In the course of the preliminary negotiations the deputy prime minister of the republic gave to understand that although crude oil extraction was primarily aimed at satisfying domestic requirements, the OMV would be compensated for its capital expenditures with crude oil supplies from Western Siberia.<sup>120</sup>

The OMV, which at the beginning of 1993 still held shares in crude oil and natural gas fields in the Canadian province Alberta (with a daily output of 8,300 barrels of oil and liquefied petroleum gas

as well as 400,000 m<sup>3</sup> of natural gas according to the latest figures),<sup>121</sup> has still other plans in store for Western Siberia. It was planned to establish a joint venture to develop crude oil reserves around Urengoi, the region which holds most of Russia's natural gas reserves; this project, however, was never realized.<sup>122</sup> According to a newspaper article published recently, plans of the OMV to develop an oilfield north of the Western Siberian village Surgut in cooperation with Shell and the US company Quintana are finally taking shape.<sup>123</sup> This was denied by the press office of the OMV,<sup>124</sup> but no further information was supplied on this issue.

Since the OMV, over the medium term, aims to supply half of its annual oil needs of an average of 7.5 million tons of crude oil by its own extractions,<sup>125</sup> further engagement of the OMV in ecologically questionable projects in Western Siberia has to be reckoned with, especially now that western oil companies are racing to exploit Russia's resources.

## MISCELLANEOUS

A considerable increase in timber imports from CIS countries observed in the first quarter of 1993 has given rise to concern since it was suspected that in this way also radioactively contaminated timber might enter Austria. The department for measuring gamma radiation of the Institute of Ecology in Vienna has already been notified, samples were taken, but no radioactive timber was found.<sup>126</sup> The Research Institute Seibersdorf also conducted a series of measurements, but according to Dr. Mueck of the department for radiation protection even thorough investigations did not yield any alarming results.<sup>127</sup> Since timber is not investigated for radioactive contamination at the customs controls, there is still reason to be concerned.

This is not the only problem the Austrian timber industry is faced with. Despite regular border controls, Austrian companies again and again import timber infested with bark beetles. The consequences for the domestic stands of which more than 1 million m<sup>3</sup> have already been damaged by bark beetle infestation are especially unforeseeable as time and again beetle species still unknown in this country are imported - inter alia from Russia - into Austria. Since in the course of the last years Siberian species were repeatedly encountered, experts of the Institute for Forest Protection of the Federal Research Institute for Forestry, Vienna, assumed that these pests had been brought into Austria together with timber imported from Russia. Bark beetles of Siberian or northern European origin were found in depots for Russian timber, i.e. at the Danube river port in Vienna as well as in Laakirchen, Lenzing, Preding, Steyermuehl and Ybbs an der Donau. In Preding on the 7th of May 1990 a bark beetle specimen indigenous to Siberia and northern Europe was caught which had never been seen in Central Europe before.<sup>128</sup>

Together with imported timber still other dangerous material comes to Austria. In the summer of 1993 a cargo crane driver detected a Russian hand grenade in a goods waggon bound for the pulp and paper mill Laakirchen, Upper Austria, giving rise to the assumption that this remnant from the Second World War had been imported together with the logs from Russia. Experts of the Linz mine disposal squad deactivated the grenade, and for safety reasons the whole cargo was searched for further war relics.<sup>129</sup>

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- 1 Quick Cash for Old-Growth: The Looting of Russia's Forests. Ed. by Greenpeace International. Amsterdam, June 1993
- 2 The Taiga. A Treasure - or Timber and Trash? Ed. by Taiga Rescue Network. 3rd ed., Aug. 1993
- 3 Petrof, Divish: Amazonien am Polarkreis. Kahlschlag in der sibirischen Taiga. In: Thurn, Valentin; Benhard Clasen (Hrsg.): Klassenfeind Natur. Die Umweltkatastrophe in Osteuropa. (OekoZidextra.) Giessen: Focus. 1992
- 4 FAO: Forest Products - FAO Yearbook 1991. FAO Forestry Series No. 26, FAO Statistics Series No. 110. Rome 1993
- 5 Petrof, op. cit.
- 6 The Taiga
- 7 APA-Journal Holz/Papier 52, 28.12.1992
- 8 Nilsson, Sten et al.: The Forest Resources of the Former European USSR. Carnforth, New York: Parthenon. 1992
- 9 Allgemeine Forst-Zeitschrift 17, 1991
- 10 Vakhtin, Nikolai: Native Peoples of the Russian Far North. A Minority Rights Group International Report. August 1992
- 11 Nilsson, op. cit.
- 12 GreenNet, 19.10.1993
- 13 Levin, Julia: Russian Forest Laws - Scant Protection during Troubled Times. Ecology Law Quarterly, Vol. 19, Winter 1992
- 14 Heuler, Werner: Ein doppelter Abschied. Von der Umgestaltung der Natur zur Begradigung der ethnischen Landkarte der Sowjetunion. In: Stueben, Peter E. (Hrsg.): Nach uns die Sintflut. Staudaemme - Entwicklungshilfe", Umweltzerstoerung und Landraub. (OekoZid 2.) Giessen: Focus. 1986
- 15 Holz-Kurier 2, 11. Jaenner 1990
- 16 Pulp and Paper International (PPI), August 1992
- 17 Rosencranz, A.; A. Scott: Siberia's Threatened Forests. Nature, Vol. 355, January 23, 1992
- 18 Quick Cash for Old-Growth
- 19 Petrof, op. cit.

20 *ibid.*

21 Martone, Francesco: Logging in Russia - A Chainsaw Massacre Revised? 2nd Greenpeace International Draft Russian Forests Report (Ms, 1993)

22 Mayer, Franz: Kahlschlag in der sibirischen Taiga. Die Zerstörung der Lebensräume der Udehe und der Orotschen in Suedostsibirien. Menschenrechtsreport Nr. 12: Indigene Voelker. Hrsg. Gesellschaft fuer bedrohte Voelker - Oesterreich. Juni 1993

23 Quick Cash for Old-Growth

24 Representative of the Maculan enterprise, pers. comm.

25 Petrof, *op. cit.*

26 Levin, *op. cit.*

27 The Economist, Sept. 11, 1993

28 Martone, *op. cit.*

29 The Taiga

30 GreenNet, 1.6.1993

31 Holz-Kurier 19, 13. Mai 1993

32 Taiga-News 6, June 1993

33 Franz Schweighofer, pers. comm.

34 Holz-Kurier 2, 11. Jaenner 1990

35 IWGIA-Newsletter 4, 1992

36 Mayer, *op. cit.*

37 pogrom 155, Sept./Okt. 1990

38 IWGIA-Newsletter 4, 1992

39 Cultural Survival Quarterly, Winter 1992

40 Vakhtin, *op. cit.*

41 The Taiga

42 Quick Cash for Old-Growth

- 43 Background Information on the Samarskaya Luka National Park.  
Ed. by Greenpeace Russia. (1993)
- 44 Kurier, 13.6.1993
- 45 APA-Journal Holz/Papier 34, 21.8.1992
- 46 Oesterreichisches Statistisches Zentralamt (OeSTAT): Der  
Auaenhandel Oesterreichs 1992. Wien 1993
- 47 Holz-Kurier 20, 20. Mai 1993
- 48 FAO: Forest Products - the Direction of Trade. 1985-1989.  
Vol. 1: Roundwood, sawnwood, woodbased panels. Rome 1991
- 49 ibid.
- 50 ibid.; FAO: Forest Products - FAO Yearbook 1991
- 51 FAO: Forest Products - FAO Yearbook 1991
- 52 Holz-Kurier 51/52, 19. Dez. 1991
- 53 Holz-Kurier 19, 13. Mai 1993
- 54 Holz-Kurier 15, 9. April 1992
- 55 APA-Journal Holz/Papier 17, 30.04.1993
- 56 Holz-Kurier 32, 9. Aug. 1990
- 57 Franz Schweighofer, pers. comm.
- 58 Nilsson, op. cit.
- 59 Joint ventures mit oesterreichischen Firmen auf dem Gebiet  
der ehemaligen UdSSR, "Bereinigte Fassung". Firmen mit Sitz in  
der Russischen Foederation (Stand: 1. Jahreshaelfte 1991).  
Hrsg. Bundeswirtschaftskammer (BWK). Ms
- 60 Nilsson, op. cit.
- 61 Franz Schweighofer, pers. comm.
- 62 Hans Hosenfeld, pers. comm.
- 63 Oesterreichische Forstzeitung (OeFZ) 11, 1992
- 64 Der Standard, 17. Sept. 1991
- 65 Joint ventures mit oesterreichischen Firmen
- 66 Der Standard, 17. Sept. 1991
- 67 Franz Pisec, pers. comm.
- 68 Holz-Kurier 39, 24. Sept. 1992
- 69 Der Standard, 17. Sept. 1991
- 70 Mr Margl, Holzindustrie Preding, pers. comm.
- 71 GreenNet, 19.10.1993
- 72 ibid.
- 73 Joint ventures mit oesterreichischen Firmen ...; informationobtained  
from different firms
- 74 Holz-Kurier 2, 11. Jaenner 1990
- 75 Robert Rogner jun., pers. comm.
- 76 Der Standard, 24. Juni 1993
- 77 Bank Austria Investment Bank AG: Aktienanalyse Maculan  
Holding. 29. April 1993
- 78 Representative of Maculan International, pers. comm.
- 79 Joint ventures mit oesterreichischen Firmen ...; Mr  
Soumarokov, Nordex, pers. comm.
- 80 Joint ventures mit oesterreichischen Firmen ...; information  
obtained from Vectra company
- 81 Internationale Wirtschaft (IW) 35, 29. Aug. 1991
- 82 Salzburger Nachrichten (SN), 12. Juni 1992

83 Holz-Kurier 11, 18. Maerz 1993  
84 Holz-Kurier 44, 1. Nov. 1990  
85 Stahlbau-Rundschau 77, 1991  
86 industrie 20, 15. Mai 1991  
87 PPI, July 1993  
88 FAO: Forest Products - FAO Yearbook 1991  
89 PPI, April 1991  
90 Mr Schuster, Transaco, pers. comm.  
91 APA-Journal Holz/Papier 7, 19.2.1993  
92 Papier aus Oesterreich (PaOe) 1, 1990  
93 Der Standard, 28. Dez. 1991; WirtschaftsWoche 49, 3. Dez. 1992  
94 APA-Journal Holz/Papier 22, 1.6.1990  
95 APA-Journal Holz/Papier 45, 6.11.1992  
96 IW 28, 15. Juli 1993  
97 Erdoel Erdgas Kohle (EEK), Mai 1993  
98 Die Zeit, 23. Aug. 1991  
99 Der Standard, 4./5./6. Jaenner 1992  
100 Die Europaeische Energiecharta. Hintergrundinformationen von Greenpeace Oesterreich. 16. Dez. 1991  
101 SN, 8. Juni 1991  
102 Die Zeit, 23. Aug. 1991  
103 Vakhtin, op. cit.  
104 Menschenrechtsreport Nr. 12: Indigene Voelker. Hrsg. Gesellschaft fuer bedrohte Voelker - Oesterreich. Juni 1993  
105 Coyote special: Lubicon Cree. Hrsg. Big Mountain Aktionsgruppe. Juli 1992  
106 IW 29/30, 22. Juli 1993  
107 Die Europaeische Energiecharta  
108 Der Standard, 4./5./6. Jaenner 1992  
109 IW 29/30, 22. Juli 1993  
110 profil 30, 26. Juli 1993  
111 IW 45, 7. Nov. 1991  
112 IW 10, 5. Maerz 1992  
113 Der Standard, 16. Sept. 1993  
114 APA-Journal Energie 23, 8.6.1993  
115 EEK, Dez. 1991  
116 Der Standard, 12. Okt. 1993  
117 EEK, Febr. 1992  
118 industrie 18, 29. April 1992  
119 profil 51/52, 16. Dez. 1991  
120 Der Standard, 29. Aug. 1990  
121 APA-Journal Energie 8, 23.2.1993  
122 Mr Michelitsch, OMV, pers. comm.  
123 Der Standard, 14. Aug. 1993  
124 Mr Michelitsch, pers. comm. 125 Der Standard, 14. Aug. 1993  
126 Der Standard, 7. Juli 1993  
127 pers. comm.  
128 Forstschutz Aktuell Nr. 2, 1989; Nr. 3, 1/1990; Nr. 5, 12/1990, Nr. 7, 8/1991; Nr. 11, 1/1993  
129 Kurier, 4. Juli 1993

