

# Preface

This report presents some of the results from a four-year research project entitled 'The transferability of policy instruments: Modern environmental strategies and single-enterprise towns in Russia and Latvia 1997-2001'. The project was financed by the Research Council of Norway's Programme for East and Central Europe (project number 120469/730).

The project research was carried out by the Norwegian Institute for Urban and Regional Research in co-operation with its Latvian and Russian counterparts. The Latvian participant is the Institute for Environmental Science and Management – IESAM (formerly Cesams) at the University of Latvia, while Russia is represented by two Arkhangelsk-based institutions: The Institute for Northern Ecological Problems under the Russian Academy of Science, and the Institute of Management, Law and Retraining at Pomor State University. Not all the Arkhangelsk-based researchers who took part in the project appear among the authors of this report. They will contribute to later publications. Special mention should be made of Professor Iurii F. Lukin, Sergei V. Mikhailov and Galina Polovnikova-Feraru of Pomor State University, whose contributions have been of great importance. The same applies to Galina V. Elizarova and Vera V. Marieva at the Institute for Northern Ecological Problems.

The project team would also like to thank all those who were interviewed and who willingly took the time to respond to our questions. We are also particularly grateful to Ms. Varvara A. Nadolinskaia, former head of the Koriashma's Environmental Committee.

Finally, the authors want to extend their sincere thanks to Inger Balberg and Lynne Bolstad at NIBR for their able assistance to transform the text into a book manuscript.

Oslo, August 2002  
Arne Tesli  
Research Director



# Table of Contents

Preface .....	1
Tables.....	5
Figures .....	6
1 Introduction.....	7
2 A Russian-type single-enterprise town: the case of Koriakhma .	11
2.1 The state socialist single-enterprise town.....	11
2.2 How the town was established .....	13
2.3 Production and environment .....	16
2.4 Koriakhma – a single-enterprise town after state socialism.....	18
2.4.1 "Our task is to pay salaries on time and maintain employment" .....	19
2.5 Infrastructure controlled by the enterprise .....	22
2.6 Municipal authorities .....	23
2.7 Conclusion .....	24
3 Environmental conflicts as reflected in Koriakhma's two local newspapers.....	25
3.1 On conflicts .....	26
3.2 On ecological conflict .....	28
3.3 Interaction between enterprise and environment .....	29
3.4 Administrative structures .....	31
3.5 Health and the environment .....	32
3.6 Public involvement.....	33
3.7 Three aspects of environmental conflict .....	35
3.8 Solving environmental problems .....	37
3.9 Environmental problems not related to the pulp and paper mill.....	38
3.10 When accidents occur .....	39
3.11 The enterprise-owned 'Kotlas Paperworker'.....	41
3.12 Conclusion .....	43

---

4	Koriyazhma – the town, the river, and the enterprise: Self-perception of a single-enterprise town under and after state socialism .....	44
4.1	Koriyazhma – the giant on the Vychegda river.....	46
4.2	Koriyazhma – the garden city .....	54
4.3	Ecological problems as problems of mentality and culture.....	61
4.4	Syncretic town.....	65
5	Institutions for environmental protection in an industrial town of northwest Russia.....	71
5.1	Analytical framework.....	72
5.2	Environmental actors .....	79
5.3	The Environmental Committee .....	81
5.3.1	The Environmental Committee as controller .....	84
5.3.2	The Environmental Committee as source of Eco-funding.....	87
5.3.3	The Environmental Committee as source of inspiration: the environmental programme .....	92
5.4	The municipality .....	94
5.4.1	The local self-government of Koriyazhma as a policy actor.....	97
5.4.2	Local self-government as a target group.....	99
5.5	The pulp and paper mill .....	102
5.6	Summary and conclusions.....	106
	References .....	110
	Appendix 1 Glossary .....	115

---

## Tables

Table 2.1	<i>The population of Koriazhma (in thousands)</i> .....	14
Table 2.2	<i>The forest-industrial complex' share of total industrial production in the Arkhangelsk region (in per cent):</i> .....	15
Table 2.3	<i>Share of the workforce in the Arkhangelsk region employed in the forest-industrial complex (in percent):</i>	15
Table 2.4	<i>Municipal enterprises (1997)</i> .....	24
Table 5.1	<i>Percentage of water pipes not complying with sanitary norms and rules (Arkhangelsk oblast):</i> .....	74
Table 5.2	<i>Percentage of water tested in 1996 and not complying with sanitary requirements (Arkhangelsk oblast):</i> .....	74
Table 5.3	<i>Problems, by order of importance</i> .....	97
Table 5.4	<i>Emissions of methyl mercaptan into the air (by how many times the PDK is transgressed by one discreet, maximal occurrence)</i> .....	103

# Figures

Figure 2.1	<i>View of Koriazhma with the pulp and paper mill in the background.....</i>	12
Figure 2.2	<i>New dwelling houses in Kroazhma .....</i>	16
Figure 4.1	<i>The Nikolo-Koriazhma monastery founded in the 16th century.....</i>	49
Figure 4.2	<i>Koriazhma's coat of arms.....</i>	66
Figure 5.1	<i>The sports palace "Olimp" is owned by the pulp and paper mill .....</i>	76
Figure 5.2	<i>Culture House of the pulp and paper mill.....</i>	76
Figure 5.3	<i>Public transport is run by the municipality.....</i>	95

---

# 1 Introduction

*By Jørn Holm-Hansen, Norwegian Institute for Urban and Regional Research*

This report, entitled 'The environment as an issue in a Russian town', addresses the problems of making and upholding environmental protection as a political, popular, cultural and administrative issue in single-enterprise towns of Russia. The story told is that of one specific single-enterprise town in Northwest Russia, the town of Koriazhma.

The report emanates from a project that includes a total of four case studies of post-socialist industrial towns: two in the Arkhangelsk region of north-west Russia (Koriazhma and Novodvinsk) and two in Latvia (Preiļi and Roja). To take an in-depth look at one case, the report focuses on Koriazhma. Subsequent reports will exploit the comparative potential, focusing more directly on the question of how environmental instruments are actually used in practice, and not least on *why* they are used as they are.

There are single-enterprise towns in practically all industrialised countries. These towns are characterised by a high percentage of the population being employed by the same company, but even more by the dominant political position enjoyed by the company. The cornerstone enterprise, or as it is sometimes called in Russia, the 'town-constituting enterprise' (*'gradoobrazuiushchee predpriatie'*) has traditionally played a crucial role in local politics. Often, the local authorities emanate from the enterprise (corporate cadres become municipal cadres), as do links to decision-making structures at the national level (via the industry in question). From the environmental perspective, this might be described as PDP, '*the polluter decides principle*'.

Contemporary environmental policy instruments are based on the existence of a certain set of players who are sufficiently independent of one another to be able to act as policy actors (e.g. environmental authorities) and target groups (polluting enterprises), respectively. In

this context, differentiation is a keyword. It is defined by Jon Elster, Claus Offe and Ulrich Preuss (1998: 31) as the "splitting up of encompassing and multi-functional institutional compounds into smaller and more specific units". Differentiation is a keyword because the policy actors in Russian towns used to belong to a hierarchical system of decision-making during the era of state socialism. Although co-ordinated, the State apparatus and civil society were split into segments by industrial sector. Based on this, the local elite, e.g. Party leaders, enterprise directors, leading figures in the town *soviet* (elected council), etc. were all affiliated with the dominant enterprise and the industry in which it operated. Such people often used local activities as a springboard to making a career at the regional level, taking care not to forget where they came from.

The success of the new environmental policy tools hinges on a set of assumptions. First, for the policy instruments to function, the actors who are supposed to use, or to be governed by them, must be separate and autonomous. Careful orchestration of the interplay between environmental actors is at the heart of modern environmental policy instruments in Russia as in other European countries. Second, for policy instruments to function, the policy actor must be able to enforce its decisions. Third, the target groups must be able to internalise environmental concerns.

Chapter 2 discusses the basic features of Koriashma in particular and Russian single-enterprise towns in general, as described by Feliks N. Yudakhin, Andrei A. Ivanov, Aleksandr N. Davydov and Jørn Holm-Hansen. Koriashma is a small town, but the dominant enterprise is one of the largest pulp and paper mills in Europe. This basic fact raises issues of environmental protection as well as a range of other policy issues.

Chapter 3 is devoted to aspects of culture and perception in respect of environmental protection. Based on a thorough study of the local press in Koriashma as far back as to the 1960s, Galina V. Mikhailova and Aleksandr N. Davydov illustrate the role of the environment in the minds of people who live in state socialist single-enterprise towns. Spurred on by enormous optimism about the bright future expected as a result of massive industrialisation, the people of Koriashma put their hearts into the construction of a park to keep a green lung in town. And in the local newspaper, voices were raised about neglecting cleaning infrastructure as early as in 1963.

Chapter 4 addresses the themes from the preceding chapter from the perspective of 'culturology', or *Kulturgeschichte*, focusing on environ



mental conflicts and applying insights drawn from sociology and political science. One of the pillars of modern environmental policy is the existence of public opinion, at least in textbooks. Without necessarily being ecological activists, the general public counts the environment as one of its most important interests. As in chapter 3, Davydov and Mikhailova challenge the widely held assumption that inhabitants and key policy makers are totally indifferent to environmental problems and challenges. Furthermore, the chapter shows that the sustainability of environmental concern seems to depend on the enterprise's candour with the public.

In chapter 5, Jørn Holm-Hansen presents and analyses the institutional underpinnings of environmental protection at the local level. To what extent are the environment and environmental protection as a policy issue rooted in local institutions? To what extent are the major actors – polluters and controllers – independent of one another? And to what extent are the controllers, i.e. the environmental authorities, able to bridge the State-civil society gap to co-operate with potential partners? Not surprisingly, the local environmental authorities turned out not to be very strong. Yet they managed to get established and, working on a small scale, the Environmental Committee has managed to gain a foothold.

The authors of the various chapters identify, present and analyse the environmental concerns of the town. They have adhered to the parameters of the case study, i.e. taken a broad approach. There are several reasons for choosing a case study approach, and the case students themselves differ in terms of basic epistemological beliefs. When describing case studies, some authors use context to compete with traditional qualitative or variable-oriented researchers to see who can make the more robust generalisations. Others do what outsiders expect from case students; they seek to understand specific situations.

Nevertheless, it seems that practitioners and advocates of case studies have reached agreement on a minimum rationale for picking exactly that research strategy. *They share a wish to treat context as an inseparable part of any explanation or interpretation of a phenomenon.* They believe that, at least at times, research will suffer from trying to insulate the object being studied from its surroundings.

There is some confusion, or lack of cogency, both in the reference literature on and the practice of case studies as to what is meant by 'case' and what is meant by 'context'. As in this report, towns or cities are often used for case studies, and researchers often refer to their 'case towns'. This can be misleading unless it is the town *per se* being

studied. Otherwise, it would be more appropriate to refer to the town as the 'setting' or 'site' of the case study. The case study itself focuses on a '*phenomenon*' that unfolds against the backdrop of or is observable at the site. Thus the site offers the context that enables the study of the phenomenon in question. As for the present study, the phenomenon is environmental protection, the site is Koriashma and the case is environmental protection in Koriashma.

This study of environmental protection in Koriashma is based on a firm belief that context matters. The authors do not, however, postulate that Koriashma is unique in the sense that it would be of little interest to look for patterns and tendencies that might be common to a larger number of single-enterprise towns in post-socialist countries. This is exactly what will be done in later reports emanating from the joint research project.

This report has been fragmented intentionally. It is based on three main chapters (3, 4 and 5) that outline our approach to the case – environmental protection in Koriashma – from very different angles. One of them applies a conflictological perspective. A separate sub-discipline within Russian sociology, conflictology is the subject of lectures and textbooks. The second is based on culturology, which is a part of Russian ethnography and enjoys much the same status as conflictology. The third main chapter is based on insights drawn from sociology and political science. The researchers' ambition was to offer a 'triangulated' view of the case, set up by juxtaposing a conflictological, a culturological and a politological point of view.

---

## 2 A Russian-type single-enterprise town: the case of Koriashma

*By: Feliks N. Yudakhin and Aleksandr N. Davydov (Institute of Northern Ecological problems – Arkhangelsk); Andrei A. Ivanov (Pomor State University, Koriashma branch); Jørn Holm-Hansen (Norwegian Institute for Urban and Regional Research)*

### 2.1 The state socialist single-enterprise town

Single-enterprise towns are found in most industrialised countries. The countries that emerged from the former Soviet Union all have single-enterprise towns characterised by the distinctive features of state socialist industrial society. Soviet planned industrialisation was marked by a certain voluntarism that enabled the establishment of totally new enterprises in almost virgin locations, although generally in the vicinity of raw materials.

One distinctive feature of state socialist local politics was the important role played by large enterprises. The Czech sociologist, Michal Illner, puts it like this:

As elements of hierarchical, centrally administered organisational structures, enterprises acted in their territories as pioneers of modernisation as well as representatives of central power. Usually, they were economically the strongest and politically the most reliable institutions in their respective municipalities, and their resources were the most readily available for various community-oriented purposes (Illner 1992:40).

Towns grew up around these industrial enterprises, and might even be said to have grown up *within* the enterprises. No strict limits were drawn between the enterprises and the town, between the directors and the municipal authorities. Services which in other European countries have been regarded as public (State, municipal) were taken care of by the enterprises. This applies to the social sphere, e.g. holiday facilities, health centres, kindergartens and housing. Culture and sport were also under the auspices of the enterprises, which ran the cultural centre, various cultural clubs, libraries, the swimming pool, sports centre and sports clubs. Infrastructure, such as boilers, water supply, sewage and wastewater treatment, covered not only the enterprises but the towns as well, and was run by the enterprises. All in all, the cornerstone enterprise was a major decision-maker, within the confines of the state socialist system, when it came to economic, social, cultural and environmental issues.

Figure 2.1 *View of Koriazhma with the pulp and paper mill in the background*



(Photo: N. Zlobin).

With the dismantling of state socialism, new roles emerged. Koriazhma is a good example of a general pattern valid all over the former Soviet Union. An all-out division of labour, or differentiation of functions, is taking place between various institutions. Being in charge of infrastructure for heating flats, the pulp and paper mill is interested in selling infrastructure services as a part of its commercial profile. This is a seemingly paradoxical situation in which the state

---

socialist legacy (the enterprise that controls 'municipal' infrastructure) enables thrusts for comprehensive privatisation and the 'marginalisation' of the municipal sphere.

Earlier, decision-making used to be handled by party officials, specialised ministries, enterprise directors and, to a certain extent, local government. Now, decision-makers include owners, enterprise directors, the central government and, to limited extent, local self-government. Role expectations have changed. Modern environmental protection strategies expect enterprises and different branches of the public government and self-government to play a role. In fact, new environmental policy instruments are based on the idea that environmental management involves continuous interaction between groups and forces in society, public and semi-public organisations, institutions and authorities, private actors and special interest groups.

The introduction of new environmental tools and mechanisms into societies in the process of transition opens up opportunities to study the extent to which the main actors are able and willing to live up to expectations.

## 2.2 How the town was established

The settlement evolved from scratch in the early 1960s. It is located 40 kilometres east of Kotlas (population today 68 700), a major railway junction (Kotlas-Moscow, Kotlas-St. Petersburg, Kotlas-Vorkuta, Kotlas-Syktyvkar, Kotlas-Viatka, Kotlas-Arkhangelsk). The town was built by the Komsomol (the Young Communist League) as a so-called Komsomol construction, *komsomol'skaia stroika* (more on that in chapter 4).

The first chemical pulp (sulphur cellulose) was produced in 1961, followed by viscose pulp, which required special treatment of water. In 1964 the plant produced its first paper, followed by carton in 1966. The first station for cleaning water by biological means was inaugurated in 1965. At the beginning of 1967, the plant produced the first wood pulp sheets. In 1972 Koriashma began making printing paper, and two years later bleached cellulose was introduced into the plant's range of products.

When Koriashma was founded in 1961, it had the status of 'industrial settlement' (*rabochii posëlok*), gaining town status only in 1985. Unlike the Arkhangelsk region as a whole, which is experiencing a net reduction in population, Koriashma has been able to maintain a

population of about 44 000. Other towns in the Arkhangelsk region tend to loose between three and five per cent of their population per year.

Table 2.1 *The population of Koriazhma (in thousands)*

1995	44.1
1996	44.3
1997	44.3
1998	44.4
1999	44.3
2000	44.2

Sources: <http://www.msa.ru:80/statistics/demograf> and Arkhangel'skii oblastnoi komitet statistiki 2000)

Most of the working population (10 000 out of a total of 17 000) works for the Kotlas Pulp and Paper Mill (*Kotlasskii tselulozno-bumazhnyi kombinat: KTzBK*), Russia's largest pulp and paper mill. In terms of taxes, Koriazhma has always been a net contributor to the region to which it belongs: the Arkhangelsk *oblast'*.

In the mid-1990s, the pulp and paper mill produced approximately 940 000 metric tonnes of cellulose, 245 000 metric tonnes of paper and 250 000 metric tonnes of carton.

In 2000, the figures were: 840 000 metric tonnes of cellulose; 180 000 metric tonnes of paper and 175 000 metric tonnes of carton<sup>1</sup>.

The 1997 figures show that 64.8% of Koriazhma's working population is employed in manufacturing, 6.8% work in the building industry, 6.7% in the health-care and education and 4.8% in municipal infrastructure.

The Arkhangelsk region, where Koriazhma is located, is heavily dependent upon forestry, timber processing and pulp and paper, i.e. the forest-industrial complex.

<sup>1</sup> See: Lesnye Novosti, 20 October 2001, No. 14 (24).

Table 2.2 *The forest-industrial complex' share of total industrial production in the Arkhangelsk region (in per cent):*

1995	53.4
1996	35.7
1997	38.9
1998	42.7
1999	52.7

(Source: Arkhangel'skii oblastnoi komitet statistiki 2000)

Table 2.3 *Share of the workforce in the Arkhangelsk region employed in the forest-industrial complex (in percent):*

1995	44.4
1996	42.7
1997	43.1
1998	45.3
1999	47.8

(Source: Arkhangel'skii oblastnoi komitet statistiki 2000)

The figures above indicate that about half the industrial output and half the workforce of Arkhangelsk are affiliated with forestry, forest processing or pulp and paper production.

In 1995, 44.6 per cent of all those employed in industrial production worked in forestry related industries. The all-Russian average is less than 10 per cent (Arkhangelsk Region Committee of State Statistics 1996:25). The Kotlas Pulp and Paper Mill in Koriazhma and the pulp and paper mills in Arkhangelsk town and Novodvinsk therefore form cornerstone industries in the Arkhangelsk region. Novodvinsk and Koriazhma are typical single-enterprise towns with enterprises of Union-level significance during the Soviet period, and federal significance after. This means these towns were both directly subordinate to a central ministry – in this case, the Ministry of Forest Industry.

Figure 2.2 *New dwelling houses in Koroazhma*



(Photo: N. Zlobin)

In Koriashma, forestry, forest processing and pulp and paper production constitute no less than 96 and 97 per cent of the town's total production (labour, services) in 1996 and 1997 (Arkhangelsk Region Committee of State Statistics 1999:53-54).

### 2.3 Production and environment

Located in the centre of the central taiga zone with very productive coniferous and deciduous forests, the pulp and paper mill in Koriashma is located near raw materials. Until recently, the Kotlas Pulp and Paper Mill used about 4.5 million cubic metres of wood per year. As a large-scale consumer of timber, a pulp and paper mill is vulnerable to problems among suppliers. For instance, in 1997 the local newspaper '*Kotlasskii Bumazhnik*' reported that irregular and insufficient supplies of raw materials were the main reason that only 30 of the planned 44 loads left the enterprise one week in September. Ten loads of paper board were not shipped at all<sup>2</sup>.

The pulp and paper mill depends on a steady supply of raw materials, including energy. The Kotlas Pulp and Paper Mill is a customer of Gazprom, the gigantic Russian gas supplier.

---

<sup>2</sup> See *Kotlasskii Bumazhnik* 19 IX 1997, 'Ne dotianuli do 20 protsentov'.



---

Traditional production of pulp and paper is highly polluting<sup>3</sup>. This applies in particular to the production of viscose pulp, printing paper, wood pulp sheets (DVP) and sulphate-bleached cellulose. The Kotlas Pulp and Paper Mill is among the Arkhangelsk region's largest single consumers of water and producers of waste. The plant uses water for chemical compounds, in the production of pulp, for transport, as a coolant and for the transportation of waste and pollution from the industry. The pollutants most typical to this type of industry are lignins and dioxins.

Most of the organic pollutants in the waste generated by the pulp and paper mill contain sulphates and sulphites in alkaline solutions. The organic part of the compounds contains monosaccharides, polysaccharides, lignosulfonat, acetic acids, tar and albumen.

The sulphates and sulphites in alkaline solutions contain a mixture of organic and mineral substances, including acetic acids, phenols, fat acids, saccharides, tar, methanol, lignin and airborne sulphur compounds.

According to the data provided by the environmental department of the pulp and paper mill, the waters of Borshchëvka contain high concentrations of sulphides. According to the analyses made from 1990 to 1996, the water quality in Kopytovka does not correspond to hygienic and environmental standards due to:

- high BOD (biological oxygen demand)
- high KhPK (chemical oxygen demand)
- a high concentration of sulphides
- a high concentration of methanol
- a high concentration of lignins.

Drinking water is not taken from either of the two rivers. The town of Koriazhma gets its water from an intake two kilometres upstream from Vychehda. The town of Solvychehodsk gets its water downstream from the Kotlas Pulp and Paper Mill.

---

<sup>3</sup> See: Ivanov, 1996, 1997; Nadolinskaia, 1996; NTU Amekos, 1993; State Committee, 1996; Vestnik èkologii, 1995.

## 2.4 Koriashma – a single-enterprise town after state socialism

### **The pulp and paper mill**

The enterprise's strong position in the town is mainly due to the size of the enterprise. The fact that the enterprise came first, and the town second, also plays a role. "If the town had come first and the enterprise established afterwards, the dialogue would have been different", commented the head of the local Environmental Committee<sup>4</sup>.

The Kotlas Pulp and Paper Mill consists of 17 enterprises located in five municipalities in the southern part of the Arkhangelsk region. The pulp and paper mill used to belong to the Ministry of Forest Industry. Today, the Kotlas Pulp and Paper Mill is a joint-stock company, and the Board of Directors is the plant's main governing body. A mere 20 per cent of the shares belong to the State, and 10 per cent are in the hands of enterprise management. The largest share-owner is Ilim Pulp Enterprise (35 per cent), while First Boston holds a 15 per cent stake.

Following the advent of *perestroika* in the latter half of the 1980s, Russian towns experienced a shift in the formal roles to be played by the various actors (more on this in chapter 5). This change is more apparent in single-enterprise towns than in other towns. The enterprise is no longer part of the branch ministry, and it no longer produces to fulfil plans, but rather to turn a profit for the owners. Raw materials, i.e. timber, must be paid for, although payment often is made on a barter basis. As stated in an article in the company weekly 'Kotlasskii Bumazhnik':

We now have to work in a European way, that is, as long as means suffice to buy wood, that is the amount we can take. We are not used to working that way, but we have to. There are no alternatives<sup>5</sup>.

Gradually, the enterprises have been diverted away from their obligations to the local community. Social and cultural tasks have been transferred to the local authorities. As one manager at the Arkhangelsk Pulp and Paper Mill in Novodvinsk said:

---

<sup>4</sup> Interview in Koriashma 1997.

<sup>5</sup> See: Kotlasskii Bumazhnik, 20 IX 1997, 'V edinstve - nasha sila'.

---

### 2.4.1 "Our task is to pay salaries on time and maintain employment"<sup>6</sup>

Enterprises used to take direct responsibility for a wide variety of cultural, social and health-related tasks in 'their' towns. Such activities are still to a great extent financed by the enterprises, although now more indirectly, through taxes. However, as long as employees are paid irregularly, as has been the case both in Koriyazhma and Novodvinsk, and the enterprise is not profitable, local authorities' tax revenues are modest. This has put several welfare institutions at risk. Kindergartens have been closed, and cultural activities have disappeared due to a lack of funding.

Despite the massive transfer of social and cultural tasks from cornerstone enterprises to local authorities, a similar transfer has not taken place when it comes to technical and environmental infrastructure services. Wastewater treatment, sewage, heating and the water supply are still generally the purview of the enterprise. These services are sold to the town, sometimes resulting in large burdens of debt for the local authorities.

#### **Enterprise and local politics and administration**

Local self-government was introduced in Russia despite years of suffering due to the tug of war between legislative and executive institutions. Today local councils have been elected and established all over Russia, although only after a certain tug of war between the elected representatives and the administrative apparatus. The relative strength of local self-government institutions varies from town to town, but in general the administration seems to have the upper hand over the elected councillors. In single-enterprise towns, local self-government is under the influence of the dominant enterprise. On the other hand, the enterprise assists local authorities in defending local interests at the central, federal level, not least in Koriyazhma where the pulp and paper mill is of 'federal significance'. One vice-mayor remarked: "It is useful that the enterprise leaders are strong. They are of great help when making agreements with Gazprom, with the railways and in affairs at the federal level<sup>7</sup>."

The fact that leading positions in the enterprise appear to qualify for leading positions in the town facilitates communication. However, this exchange of leaders may impede the differentiation of functions

---

<sup>6</sup> Interview Arkhangelsk and Novodvinsk, October 1997.

<sup>7</sup> Interview in Koriyazhma, October 1997.

usually considered a prerequisite for a successful transition. This happens when old loyalties and allegiances turn out to be stronger than identification with the current role the cadre is expected to play.

### **The pulp and paper mill and the environment**

The Environmental Committee reports to the technical director of the enterprise, often the chief engineer. In the Kotlas Pulp and Paper Mill, there is a Department for Environmental Protection that employs more than 20 people, including trained specialists. In addition, the enterprise has a station for the biological cleaning of wastewater. All wastewater is processed at this station.

The pulp and paper mill has taken the problems linked to air pollution seriously and responded by introducing new technologies. Today, there is only about 10 per cent as much air pollution in the town as there was in 1978, mainly due to switching from coal to gas as an energy source. Although the mill can still use coal, it generally uses gas.

The pulp and paper mill is a large-scale consumer of water. Water is supplied from one central source, the River Vychegda. The inhabitants of the town consume an average of 30 000 m<sup>3</sup> per day, while KTsBK consumes 560 000 m<sup>3</sup> per day and discharges 420 000 m<sup>3</sup> (Buzinov and Gorbunova 1998: 64).

Pulp production technology has been improved greatly, due primarily to the modernisation of the boilers. There are four boilers altogether. One has been modernised and the second is currently undergoing modernisation. The environmental effect of modernisation is noticeable.

The enterprise is entitled to compensation from the Ecological Fund for implementing a technology improvement programme (*'ekologicheskaiia programma'*). In 1996, the enterprise spent 95 million rubles on environmental protection measures instituted in agreement with the Environmental Committee. The money the mill has spent on improving its environmental performance has been subtracted from the mill's debt to the Environmental Committee.

In 1996 a programme of *ekologicheskaiia ekspertiza*, environmental audits similar to elements in the Environmental Impact Assessment system, was introduced by the oblast' Environmental Protection Committee, and the enterprise strives to comply with these regulations.

When it comes to the environment as a policy issue, the local self-government plays a role. Until 2000, local environmental committees were under the auspices of the State Committee of Environmental Protection (*Goskomèkologii*). This made the committees less dependent on cornerstone enterprises. When the local committees were abolished in 2000, most became municipal committees (more on this in chapter 5). Although it is still too early to assess the impact of this institutional transformation, one hypothesis is that the committees became less independent, and less strict, when confronted with environmental problems caused by cornerstone enterprises. That is, environmental bodies emanating from the local authorities might be less willing to take issue with the cornerstone enterprise than authorities with federal backing might be.

### **Coverage of environmental issues in the mass media**

In 1997, there were two newspapers in the town. 'Kotlaskii Bumazhnik' was the weekly company newspaper of the pulp and paper mill, offering information on life inside the enterprise as well as figures on production, pollution and the like. The competitor, 'Trudovaia Koriashma', appeared three times a week and had a circulation of 6 500, despite the fact that it was considered expensive. Please note that a circulation of 6 500 in a town of 44 000 means that the newspaper was read in practically every household.

In 1998, this former local chronicle of the CPSU became independent, and made a point of being critical of the pulp and paper mill, citing the mill's environmental performance as one of its main concerns. The chief editor made it clear that she wanted the newspaper to be critical towards the enterprise *and* the Environmental Committee<sup>8</sup>. She accused the Environmental Committee of applying too much secrecy and of turning a blind eye to certain environmental problems: "The inhabitants do not know what they eat, what air they breathe, what soil their carrots are grown in. This information is withheld by the Environmental Committee and treated as secret. The press has difficulties getting hold of accurate data on the environmental situation", she said.

The editor was also critical towards the policies of the new owners of the enterprise: "The owners are only interested in making a large profit. After privatisation, the people who work in the enterprise are considered 'the work force', not individuals. When the decision-makers lived in the town themselves, they did something for the

---

<sup>8</sup> Meeting with the chief editor of the local newspaper 'Trudovaia Koriashma' and her staff, Koriashma, October 1997.

workers and the town", she said. A year later, in 1998, the owners of the pulp and paper mill bought this local newspaper.

## 2.5 Infrastructure controlled by the enterprise

Technical infrastructure and cultural infrastructure are still to a large extent the purview of the pulp and paper mill. In Koriashma, the water intake is run by the Kotlas Pulp and Paper Mill, as is the case with all pulp and paper mills. Municipal wastewater is cleaned at the mill's wastewater treatment plant. The pulp and paper mill sells water and buys wastewater. The pulp and paper mill sells drinking water like 'any energy resource' to the municipal enterprise for public services (*zhilkomkhoz*) which 're-sells' wastewater from the general public. The mayor sets the tariffs. The price the *zhilkomkhoz* charges the town is based on an agreement.

The town does not have a boiler. Energy resources are provided by the Kotlas Pulp and Paper Mill. There is a big power station which was privatised at the same time as the enterprise. Household gas (for gas stoves) is not part of the pulp and paper mill's provision of 'infrastructure'.

Health and cultural facilities are also controlled by the pulp and paper mill. At the start of this study, there were two health and holiday centres (*profilaktoriia/sanatoriia*), one of them – *Zar'ia* – owned by the Kotlas Pulp and Paper Mill. There were fears that the pulp and paper mill would dispose of its holiday centre, but in summer 2001, the local newspaper reported that the health and holiday centre would be refurbished.

Likewise, there were two cultural centres, one of them municipal, one under the pulp and paper mill. The latter was considered best and most popular. In 1997 the enterprise announced that it would no longer finance the centre, a decision that was not well received at town hall. The Kotlas Pulp and Paper Mill library had been very popular due to its technical journals and books. There was also one vocational school that prepared students for work in the mill.

Sports facilities are mostly operated by the pulp and paper mill. This holds true for 'Olimp', the town's palace of sport, which includes a swimming pool, and the 'Stadion TsBK'.

The pulp and paper mill used to be the main owner of flats in town, but during the 1990s flats were transferred from the enterprise to the municipality. Some of the flats have been bought by the inhabitants,

---

and they have established Homeowners' Associations (*samovladel'tsy*). Today, there are about 15 such associations.

## 2.6 Municipal authorities

Each municipality in Arkhangelsk oblast has its own statutes, in most cases based on a model set of 'master statutes' issued by the oblast. In Koriazhma, the elected council is called the town дума (*'gorodskaiia дума'*), while other towns have simply chosen 'council' ('sovet'). The Koriazhma town дума has 32 members (including the mayor), elected for four-year terms of office. The дума generally convenes once a month, but sometimes every two weeks.

The дума is chaired by the mayor, who also heads the administration. He is elected directly by the voters. Most municipal structures in the Arkhangelsk oblast are set up in a similar manner. One of the vice-mayors of the case town said: "This model features a strong mayor. There is also a model that features so-called weak mayors in other parts of Russia".

The mayor is assisted by three vice-mayors (local self-government; property; social affairs) with a firm footing in the administration. The local self-government administration has been extended to twice its previous size.

The mayor has a background from the pulp and paper mill where he advanced from engineer to vice-director. This background is said to be important for communication with the enterprise: "We find solutions that offer mutual benefits", according to the vice-mayor.

### **Municipal enterprises**

There are two types of municipal organisations: '*uchrezhdeniia*' (public institutions) and '*predpriiatiia*' (enterprises), with separate ownership rights, according to the Civic Code (*grazhdanskii kodeks*).

Municipal enterprises are 'commercial organisations' that have to generate revenues to cover their expenses. They sign contracts with the municipality. They are economically independent, but are not allowed to sell real property, for instance. Municipal institutions, on their hand, work in fields in which, according to the vice-mayor, 'profit cannot be a measure', i.e. culture, health and education. The public institutions are financed by their owner, i.e. the municipality.

Table 2.4 *Municipal enterprises (1997)*

<b>Enterprise name</b>	<b>Tasks</b>	<b>Employees, 1997</b>
Public Services Enterprise/ <i>Predpriiatiye Zhilshchno- Kommunal'nogo Khoziaistva</i>	housing; parks; town roads and streets	830
Passenger Transport Enterprise	two bus lines in town, one line to Kotlas and seasonal lines to the <i>dacha</i> areas	200
Lorry transport AO		
Office-technical stock-taking unit		10
Department for Rituals (burials)		10

## 2.7 Conclusion

This chapter presents some background information on the case town in question. The town is well situated for paper production, i.e. close to an important railway junction and in Russia's main forestry region. The pulp and paper mill in Koriyazhma is a major paper and pulp producer in Europe. We have examined a town where the pulp and paper mill used to be the only real policy player for most intents and purposes. This is still the case, although tasks and decision-making authority have to some extent been dispersed. The financial resources used to be in the hands of the mill and the specialised ministry to which it reported. This is still very much the same. As regards technical municipal infrastructure such as the water intake, wastewater treatment plant, drinking water supply and power station, they are all controlled by the pulp and paper mill. Almost all leading cadres in the town were employed by the dominant enterprise. Cadres from the enterprise were hired when the institutions of local self-government were to be staffed. This was the same for the local *sovet* as it is today for the local *duma*. Experts working in locally-based state institutions, such as the Environmental Committee, have been recruited from the enterprise. Nevertheless, the system of environmental protection is based on at least three major and separate actors: the polluting enterprise, the environmental authorities and the local self-government.



---

### 3 Environmental conflicts as reflected in Koriashma's two local newspapers

*By: Galina V. Mikhailova and Aleksandr N. Davydov, Department of Cultural History, Institute of Northern Ecological Problems, Arkhangelsk*

These days, the Kotlas Pulp and Paper Mill is three times the size it was in the period described in the preceding chapter. Cleaning installations are neglected, there are frequent accidents, and effluents are released into the river just as often. The park in the sanitary zone has practically ceased to exist: trees turn yellow quickly, the factory poisons the surrounding vegetation, there is no money to rebuild the cleaning facilities, etc.

The Kotlas Pulp and Paper Mill is the largest consumer of water in Arkhangelsk region. In 1996 it used 32 per cent of all the fresh water consumed in the region, and was the source of approximately the same percentage of the total effluents removed from wastewater. Methyl sulphur compounds from the plant account for about 60 per cent of the regional effluent. In 1996 the Kotlas Pulp and Paper Mill was the source of 57 per cent of all the decomposed substances deposited into the River Northern Dvina. Lignosulfonates account for 57 per cent of the total from all polluters. The water quality in the lower reaches of the river from Koriashma to Sol'vychegodsk has deteriorated due to "unsatisfactory functioning of the plant's station for biological cleaning of wastewater and an accident at the plant in April 1997."<sup>39</sup> The accident increased the level of lignosulfonates to 45 PDK (the maximum permitted concentration).

---

<sup>39</sup> Karpov V. How the Kotlas Pulp and Paper Mill protects nature. // Pravda Severa, 02 October 1998, p.3.

In 1994 the company 'Ilim-Pulp' became the new owners of the plant. Local residents' attitudes towards the company vary. In October 1998, a meeting was held between Deputy to the State Duma Aleksei Churilov and First Vice Prime Minister of the Russian Federation, Iu. Masliukov. A. Churilov was making an analysis of the consequences of privatising the Kotlas Pulp and Paper Mill. The regional press announced that "if it is shown that 'Ilim-Pulp', the new owner of the plant, has not fulfilled the terms of the agreement on the delivery of equipment for the years 1994 - 1997, drastic actions will be taken, perhaps even including the withdrawal of 20 per cent of the shares by the regional administration."<sup>40</sup>

Koriazhma is a prime example of the technocratisation of a mentality, a very common process.

This chapter details the environmental conflicts in Koriazhma as presented on the pages of the two local newspapers: *'Trudovaia Koriazhma'* ['Working Koriazhma'] and *'Kotlasskii bumazhnik'* ['The Kotlas Paperworker'], in 1997 and 1998.

### 3.1 On conflicts

Studies of conflicts are a comparatively new direction in research, formed in the inner reaches of sociology, but also receiving attention in works by philosophers, psychologists and political scientists (Boulding 1963; Coser 1956; Dahrendorf 1965). In Russian scholarly journals, conflict theories have been covered in works by Dmitriev (1997), Zdravomyslov (1995), Pronin (1993) and others. The common ground for most modern researchers is their recognition of conflict as an indisputable process in the history of mankind, that is, as a natural form of social relations.

In a broad sense, 'conflict' (from the Latin word *conflictus* — clash) refers to the peak critical point in a clash of interests.<sup>9</sup> Accordingly, in this context the term will be used to refer to living and non-living phenomena in nature. As Right (1957) points out, conflict is a term with many facets and it is used in the physical, biological, philosophical and social world. Referring to the never-ending war between the ocean and drought and between other natural phenomena,

---

<sup>40</sup> Chapurin E. The Kotlas Pulp and Paper Mill may change its owner. // Pravda Severa, 1 October 1998.

<sup>9</sup>Filosofskaiia èntsiklopediia (*Philosophical Encyclopedia*). Editor F.V. Konstantinov. Moscow. "Sovetskaia èntsiklopediia" 1964, vol.3, p.

---

Boulding concludes that nature, even in its non-living parts, is full of harsh conflicts.

Viewing conflict as an occurrence in social life requires a more closely defined framework since it implies social clashes of interests and is reflected in collisions between different social groups. Clashes can assume different forms. Describing one of the classics in western conflict theory, Dahrendorf emphasises that parliamentary discussions and civil wars, peaceful tariff negotiations and strikes, the slight interior tension due to a known disagreement between an individual and his profession, and mental illness as cause of a role conflict between origin and social status, all belong to the field of social conflict.

The diversity of manifestations of social conflict permits a large variety of definitions which either characterise social conflict in general manifestations or reflect some important distinctions. Krasnov (1992) defines conflict as a clash between opposing interests, opinions, views; serious disagreement; edged debate that brings complications to either of the opposing sides. Coser's understanding of conflict implies a touch of militancy when he defines it as a fight for values and pretension towards a certain status, power and resources, in which the opponents' goal is neutralisation, damage or the annihilation of the rival. Among Russian scientists, the definition of conflict as a form of social relations is widespread. Kandel (1990) writes: "Conflict is that kind of interaction between people, social groups and social institutions, in which the actions of one side, meeting resistance from the other, prevent the realisation of its goals (interests)". According to Pronin (1993), conflict is one of three basic forms of interaction, the remaining two being co-operation and suppression of the subject.

To distinguish conflict from similar societal phenomena, researchers have identified a number of features whose very presence indicates that a conflict really is taking place. The basis of any social conflict is the participants in the conflict (no less than two — a conflict is also possible with only one participant when there is a fight between opposite interests within the individual) with their non-conformity in goals (interests), and the object of the conflict. Otherwise, it is often emphasised that a conflict reveals itself when the participants deliberately undertake one or another form of action aimed at attaining their goals (interests). This means that a conflict situation has to be expressed both in consciousness and actions, i.e. in people's deeds by somehow forcing them to change their behaviour, to adjust, or to 'protect themselves' from a given situation.

There is no one single, acknowledged typology of societal conflicts. Like the author of the book 'The basis of conflict theory' (Dmitriev 1997) emphasises, the simplest and most easily explained typology is based on a division of the subjects in the conflict and the spheres in which they occur. By these features, conflicts can be categorised as economic, political, including international, everyday, culture and social (in a narrow sense).

### 3.2 On ecological conflict

The term 'ecological conflict' is often used in scientific and journalistic literature. It is understood as referring to a conflict between society and nature. In his classification of modern societal conflicts, Pronin (1993) distinguishes ecological conflicts as a certain type, and rightly places them amongst global societal conflicts. He writes that ecological conflicts have lately been reflected in the form of man's opposition to nature, and in the perspective of the cosmos as well. Since the random development of industrial privatisation is threatening to ruin nature and even mankind, achieving consensus is an absolute and urgent matter of necessity.

From this perspective, the participants in an ecological conflict are man (society) and nature. Any damage wrought on the environment by human civilisation or by individuals results from an open collision between the two participants. The peculiar aspect of this type of conflict is that it is the degree of environmental pollution that bears witness to the conflict's existence and severity. The relationship between nature and man (society) is regulated by law. In this instance, the government protects the interests of the side 'opposing' mankind. Consequently, an ecological conflict can develop between governmental administrative agencies and an enterprise, a group of people or an individual. When experiencing harmful effects, even an individual, as part of nature, can take some form of action to protect the environment. In the opinion of the authors, this means that any societal conflict based on ecological problems can be considered an ecological conflict.

To study ecological conflicts, we conducted a survey on the local paper 'Trudovaia Koriashma' (TK) ['Working Koriashma'] for 1997 and 6 months of 1998, and the enterprise-owned 'Kotlasskii bumazhnik' (KB) ['Kotlas Paperworker']. The survey resulted in the analysis of almost 50 articles from 'Trudovaia Koriashma' and almost 20 articles from 'Kotlasskii bumazhnik', all on ecological problems.

---

The main aspects of the study of ecological conflicts have been: the parties involved in the interaction, their interests, the reasons for the emergence of the conflicts and ways of resolving them.

### 3.3 Interaction between enterprise and environment

The interaction between the Kotlas Pulp and Paper Mill and the environment characterises the ecological situation in the town. The town of Koriashma is one of the most ecologically disadvantaged areas of the Arkhangelsk region [*oblast*]. The main reason for this, as emphasised in the local newspapers, is the impact the Kotlas Pulp and Paper Mill has on the environment. The plant's production constantly violates ecological standards regarding polluting effluents and waste disposal<sup>10</sup>. The press has devoted special attention to atmospheric pollution by methyl mercaptan. The articles compare maximum permitted concentrations (PDK) in towns like Arkhangelsk, Novodvinsk and Koriashma, and Koriashma is in the lead (more on PDK in chapter 5.3.1). In December 1996, the 'score' was Arkhangelsk 7 PDK, Novodvinsk 9 PDK and Koriashma 16 PDK<sup>11</sup>. In November 1997, Arkhangelsk 4 PDK, Novodvinsk 12 PDK and Koriashma 19 PDK<sup>12</sup>. In December 1997, — Arkhangelsk 8 PDK, Novodvinsk 6 PDK and Koriashma 22 PDK<sup>13</sup>. The peak was recorded on 17 September 1997, when the air in Koriashma was measured at 36 PDK. According to the Annual Reports of the State Committee for the Environment Protection in the Arkhangelsk region ("Sostoyanie i ohrana okruzhayushchey sredy Arkhangel'skoy oblasti" - "The Conditions and the Protection of the Environment in the Arkhangelsk region"), the average concentration of the methyl mercaptan in the air of Koriashma was about 16 PDK in the first half of 1998, that was about the level of the year 1997, the maximum concentration of this compound reached about 46 PDK. In 2000 the annual average of the concentration of methyl mercaptan in the air of Koriashma was 1.3 PDK, while the maximum concentration was 9 PDK. The Report for 1999 gave no information about the air pollution in Koriashma<sup>14</sup>. Reprints from different regional newspapers discuss ecological problems that are characteristic for the region as a whole, but are also

---

<sup>10</sup> TK, 1997, No. 128, from 6 November 1997, p.3

<sup>11</sup> TK, 1997 No. 12 from 6 February 1997, p.1

<sup>12</sup> TK, 1997, No. 150 from 30 December 97, p.4

<sup>13</sup> TK, 1998, No. 8 from 24 January 1998, p.2

<sup>14</sup> TK, 1997, No. 123 from 25 October 97, p.1

to some degree connected to the activities of the industrial plants, including the Kotlas Pulp and Paper Mill: The region of Arkhangelsk has the poorest quality of drinking water in the country<sup>15</sup>. The whole region, from Northern Dvina to the Onega, is polluted by dioxides. Large quantities of mercury have accumulated in the dumps of Northern Dvina and on the territories of the pulp and paper mills<sup>16</sup>.

According to the owners, the acute problems between the plant and nature are ascribable to a lack of financial resources for replacing equipment long overdue for change, and for conducting the necessary planning and preventive work<sup>17</sup>. "Everything is really getting older. In the end, mechanisms and equipment at the factories wear out, and careless people let mistakes happen. The result — accidents and catastrophes", writes Galin<sup>18</sup>. This situation is being exacerbated by "unreasonable tax burdens, prices and penalty sanctions on the natural monopoly, the burden of the social-cultural way of life", believes acting president of the joint-stock company 'Kotlasskii Pulp and Paper Mill', N.A. Pospelovskii<sup>19</sup>.

The adverse environmental impact of the plant also determines its relations with the government environmental agencies that oversee the activities of pulp and paper mills. The newspapers refer to inspections of the Kotlas Pulp and Paper Mill's environmental activities made by the State Committee on Environmental Protection in the Arkhangelsk Region in September 1997 and April 1998<sup>20</sup>, inspections of the pulp and paper mill's chloral production by the State Committee for the Supervision of Safe Conduct of Mining, the observance of safety rules when using gas in the different departments of the pulp and paper mill, and the inspection of the cardboard production by the State inspector<sup>21</sup>. These inspections examine the plant's compliance with environmental legislation, fulfilment of regulations issued by earlier commissions, reasons for violations, and other commitments. The environmental agencies are also involved in enforcement and punishment. At the end of 1997, an arbitration court ordered the plant

---

<sup>15</sup> TK, 1997, No. 18 from 1 February 1997, p.1

<sup>16</sup> TK, 1997, No. 74 from 3 July 1997, p.5

<sup>17</sup> TK, 1998, No. 8 from 24 January 1998, p.2; TK, 1997, No.44 from 19 April 1997, p.1

<sup>18</sup> TK, 1997, No.51 from 8 May 1997, p.5

<sup>19</sup> TK, 1997, No.44 from 19 April 1997, p.1

<sup>20</sup> TK, 1997, No.128 from 6 November 97, p.3; TK, 1998, No.50 from 10 May 1998, p.2

<sup>21</sup> TK, 1998, No.34 from 31 March 1998, p.2

to pay almost 50 milliards rubles to ecological funds<sup>22</sup>. According to the owners, however, environmental fines "further reduce industrial workers' chances to protect the environment from the wood chemical monster"<sup>23</sup>. At the same time, the effectiveness of environmental agencies' activities depends on the plant actually paying the federal, region and town ecological funds for its pollution of the environment. But the pulp and paper mill does not pay on time or the full amounts<sup>24</sup>. The town ecological fund's steep decline in income from 1995 to 1996 resulted in the spending of 98.8 million rubles on environmental protection and other measures during the first nine months of 1996, whis is 10.7 times less than the amount spent in the same period in 1995<sup>25</sup>

### 3.4 Administrative structures

There is a difference of opinion between regional and town administrative agencies on the question of increasing the effectiveness of the environmental agencies. On 29 June 1997, the Arkhangelsk regional government adopted a document "On the management of environmental activities at the regional and municipal levels", which resulted in the subordination of the Local Committee for Nature [*Raikomprirody*] to the Arkhangelsk Regional State Committee for Nature [*Goskomprirody*]. This document was adopted because there is a shortage of resources available for the implementation of ecological programmes and to support the environmental agencies that should be doing this work. When discussing the suitability of establishing a Department for Environmental Protection in the town administration, the majority of the members of the Koriashma town *duma* [council] voted against this, while the town's mayor, V.A. Malchikhin, spoke in favour of changing the structure of environmental activities, arguing that "the State will deal with these matters officially on a higher level than town level"<sup>26</sup>. In the same article, the most vehement opponent of the decisions was Koriashma's chief State Inspector on environmental

<sup>22</sup> TK, 1998, No.9 from 27 January 1998, p.2

<sup>23</sup> TK, 1997, No.44 from 19 April 1997, p.1

<sup>24</sup> TK, 1997, No.128 from 6 November 97, p.3

<sup>25</sup> TK, 1997, No.1 from 7 January 1997, p.2

\* Since the year 1998 the situation started to change. In the Annual reports (1998, 1999, 2000) of the Committee for the protection of nature environment of the Arkhangelsk region the KTSBK is not represented in the list of the main non-payers, the pollutants.

<sup>26</sup> TK, 1997, No.106 from September 16. p.2

protection, V.A. Nadolinskaia, who "tried to convince the meeting that there was no reason for destroying the established system. Over the past nine years, the town committee that deals with issues of environmental protection (its name has been changed several times) has gained much experience, and it actually has local, regional and federal interests. Koriashma is a special town, and its ecological situation is well known. There is a lot to be done. If there is to be a Department for Environmental Protection within the town administration, the committee's role will be reduced."

### 3.5 Health and the environment

The adverse effects of the plant on nature are also reflected in people's health: Koriashma ranks number one in Arkhangelsk when it comes to gastrointestinal diseases. One reason for this, the publications state, is the ecology of the town<sup>27</sup>. In the article "Our health as mirrored by statistics" E. Volkov writes: "The number of diseases amongst inhabitants of Koriashma, including children and juveniles, depends on many factors. This is what constitutes a threat to health: Pollution of the air by harmful effluents from the Kotlas Pulp and Paper Mill (...); the existence of harmful waste in the drinking water of the River Vycheгда, from industrial plants further upstream". The author remarks that "a decline in the living standards of most town residents" has also influenced disease figures<sup>28</sup>.

In a conversation with our journalist, Lev Fëdorov, a doctor of chemistry and chairman of the union called 'For Chemical Safety', stated his opinion about the interaction between the plant and the population: "As early as in 1992, I wrote in the magazine 'Ogonëk' that bleaching cellulose results in dioxins that are dangerous for people's health. At that time, almost all the directors, including the honourable Pavel Nikolaevich Balakshin (governor of Arkhangelsk 1991 – 96, *ed. note*), said that this was nothing but a western invention, adding that some Professor Fëdorov brought us this word (dioxins) and is using it only to achieve his own political ambitions. And now, at this conference I hear this same Balakshin proudly saying that the Arkhangelsk Pulp and Paper Mill is considering switching to a less dangerous process for bleaching cellulose (...)."

The town's inhabitants are well aware of the danger the plant represents in terms of health and the environment. A few days after an

---

<sup>27</sup> TK, 1997, No.40 from 10 April 1997, p.4

<sup>28</sup> TK, 1997, No.104 from 11 September 1997, P4 – 5



accident at the pulp and paper mill, there was a fire on a bridge for power supply cables. A. Galin writes: "life is getting ever more dangerous"<sup>29</sup> and in another article he concludes: "To observe laws on the protection of the environment is expensive for the enterprise, but to harm nature is even more expensive – for all of us"<sup>30</sup>. 'The town gets rid of its lighter fear,' that is how N. Zhikhareva characterises the incident of 28 August 1997 at the pulp and paper mill, when a welder accidentally cut through a chlorine pipe. As a result, six people were hospitalised. Luckily, the chlorine effluent was insignificant: 3 kilos. The chlorine cloud did not leave the industrial area<sup>31</sup>. An appeal from the veterans in Koriashma to the country's president demands compliance with all the provisions of the 'Act related to Veterans', calls for funding for this work and raises the question of climatic and ecological conditions<sup>32</sup>. A. Sakova ponders on the death of a whole row of poplars on one of the streets in town: "What is the reason for the death of the green beauties: ecology or age? Hardly can anyone answer this"<sup>33</sup>.

### 3.6 Public involvement

There is little public outcry about the environment on the part of the local population. Oral and written applications from residents to the town administration make no mention of any ecological concerns<sup>34</sup>. The only demands raised are socioeconomic, for example, workers' demands for their rights<sup>35</sup>, as in 'Resolutions from the town meeting in Koriashma' held on 9 April 1998<sup>36</sup>.

As a result, the conflict of interests between the local population and the plant has not been brought out into the open. Relationships like these might be described as 'hidden conflicts'. However, there are some forms of *open* ecological conflicts between the general public and administrative agencies. The two local newspapers have described a conflict between the residents of a multi-storied block of flats and the local Department for Interior Affairs. The conflict was caused by the antennas for radio telephony the Department installed on the roof

<sup>29</sup> TK, 1997, No.51 from 8 May 1997, p.2

<sup>30</sup> TK, 1998, No.50 from 9 May 1998, p.2

<sup>31</sup> TK, 1997, No.134 from 22 November 97, p.1 – 2

<sup>32</sup> TK, 1998, No.7 from 22 January 1998, p.2

<sup>33</sup> TK, 1997, No.76 from 8 July 1997, p.4

<sup>34</sup> TK, 1997, No.20 from 20 February 1997, p.1,3

<sup>35</sup> TK, 1998, No.30 from 21 March 1998, p.1

<sup>36</sup> TK, 1998, No.39 from 11 April 1998, p.2

of the building. The residents demanded that the relay transmitters be removed because they were convinced they were being exposed to dangerous electromagnetic radiation. The conflict was not resolved even after specialists from the regional centre of the State Medical-Epidemic Control concluded that the antennas on the roof constituted no hazard to people's health or lives<sup>37</sup>. The article entitled 'Poachers asked not to have their names in the paper' tells about the arrest of fish poachers by a group from the fishing inspectorate and police officers during the month when spawning fish are protected. The poachers protested the arrest, arguing that the harm they had done to nature was nothing compared with what the plant was doing: The men caught by the inspectors in the middle of their fishing ecstasy were confused: "What harm do we do to the river, when anybody who wants to poisons the fish. Go to war against the pulp and paper mill, but why against us?"<sup>38</sup>. This is reminiscent of the complaints and protests inhabitants lodged in October 1996 when the Arkhangelsk regional administration introduced taxes on pollution generated by owners who used private means of transport. The tax was paid into the Eco-funds, without ever calculating the real harm caused. As a result of this opposition, the tax was cancelled by a decree of 31 March 1998<sup>39</sup>.

A number of interpersonal conflicts concerning ecological issues can be mentioned. The article 'And still we imagine we're at the peak' aspires to protect the natural habitat on the island of Profsoiuzov, where complacent townspeople cut down trees, burn grass and litter<sup>40</sup>. K. Kubareva shows similar indignation when talking about children who burn leaves in parks and public squares and tear down trees and constructions in courtyards. She scolds the adults: "Adults often get annoyed at children's bad behaviour. But how often do we stop children from doing wrong things?"<sup>41</sup>. "We're choking on dust, getting deaf from noise", write gardeners, furious because of all the cars breaking the speed limit on the main street '*Sadovody Severa*' ['Gardeners of the North']<sup>42</sup>.

Accordingly, the ecological conflicts reported in the pages of 'Trudovaia Koriashma' can be divided into three groups. First, conflicts connected with the activities of the Kotlas Pulp and Paper Mill and developing along these same lines: the pulp and paper mill

---

<sup>37</sup> TK, 1998, No.38 from 9 April 1998, p.2

<sup>38</sup> TK, 1997, No.68 from 19 June 1997, p.2

<sup>39</sup> TK, 1998, No.45 from 25 April 1998, p.1

<sup>40</sup> TK, 1998 No.48 from 5 May 1998, p.4

<sup>41</sup> TK, 1997, No.76 from 8 July 1997, p.4

<sup>42</sup> TK, 1997, No.83 from 24 July 1997, p.4

---

and the environment; the pulp and paper mill and environmental agencies; the pulp and paper mill and the general public. The second group involves inter-institutional conflicts, i.e. disagreements between regional and local administrative agencies on the effectiveness of environmental measures. The third group comprises inhabitants' conflicts resulting from inter-human and inter-group relations and collisions with the powers-that-be.

### 3.7 Three aspects of environmental conflict

Ecological conflicts have economic, legal and socio-psychological aspects. The legal aspect is connected with violations of environmental law, by the plant as well as by individual inhabitants. For example, the fines imposed on the plant for environmental encroachment are decided by the court<sup>43</sup>.

At the socio-psychological level, public and private attitudes towards nature, as expressed through the motives for people's behaviour, are of special importance. Since personal safety and the opportunity to make a living are among the most important human requirements that depend on the plant's activities, we can assume that people have to make a choice about the direction in which they want to move. Accordingly, we can assume there is a conflict inherent in individuals, as that described by the German-American psychologist K. Levin. He characterises conflict as a situation in which equal and opposite forces act simultaneously.

Reflections on economic aspects differ to some extent, depending on the parties to the ecological conflict. In the relationship between the plant and the environment, the economic aspect is reflected in the fact that the purchase of new equipment and the modernisation of production help promote greater economic efficiency in production, prevent accidents and reduce polluting effluents. Ultimately, this is reflected in the size of fines for violating environmental legislation.

The duality in the direction of change at the plant is reflected in publications on the innovations introduced at the pulp and paper mill. In an interview with our journalist, the chairman of the Board of Directors of the Kotlas Pulp and Paper Mill said that using new technological equipment not only improves the quality of products and increases their ability to compete on domestic and foreign markets, but also improves the ecological situation and reduces

---

<sup>43</sup> TK, 1998, No.9 from 27 January 1998, p.2

wastewater<sup>44</sup> pollution. In the article 'Vycheгда is getting healthier', when discussing the development of the technical equipment to spread the emissions at the Kotlas Pulp and Paper Mill, the author stresses that this work is of tremendous ecological importance<sup>45</sup>. When describing financial gains from the ongoing modernisation of cardboard production at the plant, A. Galin writes: "But what is even more important is that modern technology reduces the harmful effects of production on the environment, and this is the essence of the work being done in cardboard production"<sup>46</sup>.

In the interaction between the plant and environmental agencies at the economic level, the amount and distribution of the financial resources the plant and the environmental authorities spend on environmental measures are of special importance. The problems involved in funding environmental agencies also call for a decision on the part of the Arkhangelsk regional government about changes in the organisational structure of the bodies. This decision was taken unanimously by the local representatives at Koriashma. The predominance of financial interests in inhabitants' interaction with the plant is, in the opinion of the authors, one of the reasons for the lack of open ecological conflicts. This is an example of how the relationship between ecological and economic interests is reflected in the newspaper: "The production fog above the pulp and paper mill has become smaller; the work at the sawmill has stopped. Our lungs are being filled with oxygen, and our pockets with clean air. Everybody understands that the region's economy is completely dependent on the pulp and paper mill"<sup>47</sup>. The delays in the payment of wages by the town's enterprises actually amounted to 50 million rubles. Compared with 1997, delays have only decreased by 5 per cent<sup>48</sup>. The number of unemployed people in Koriashma is also on the rise. According to the local employment centre, on 1 November 1997, it had 1914 registered job-seekers, 1767 of whom were unemployed. Compared with the first 10 months of 1996, the numbers had increased by 77.1 and 72.6 per cent, respectively<sup>49</sup>. The main requirement stated in workers' applications is prompt payment of wages, pensions and grants<sup>50</sup>. "Wages and dwellings are the primary concerns of the workers' collective at the

---

<sup>44</sup> TK, 1997, No.129, pp.1 – 2

<sup>45</sup> TK, 1997, No.141 from 9 December 97, p.1

<sup>46</sup> TK, 1998, No.43 from 21 April 1998, p.1 – 2

<sup>47</sup> TK, 1998, No.30 from 21 March 1998, p.1 – 2

<sup>48</sup> TK, 1998, No.30 from 21 March 1998, p.1

<sup>49</sup> TK, 1997, No.135 from 25 November 97, p.2

<sup>50</sup> TK, 1998, No.39 from 11 April 1998, p.2; TK, 1998, No.39 from 11 April 1998, p.2

---

Kotlas Pulp and Paper Mill". That is also the name of an article written about a conference organised by the workers' collective at the Kotlas Pulp and Paper Mill on 20 March 1998<sup>51</sup>.

### 3.8 Solving environmental problems

The chairman of the Koriashma State Committee for Environmental Protection, V.A. Nadolinskaia, suggests a way to reach an agreement between the plant and the environmental agencies, taking into consideration the interests and activities of both. She thinks harmful effects on nature can be reduced drastically through an agreement between the Kotlas Pulp and Paper Mill, the town council and environmental agencies regarding reductions in the plant's fines for polluting the environment, on the condition that the plant would modernise production. V.A. Nadolinskaia does not want to see the plant closed, but would prefer to see the directors make more active use of environmental measures<sup>52</sup>. The above mentioned doctor of chemistry, L. Fëdorov, also expressed an opinion on how to solve ecological problems. He does not agree with the journalist who thinks that this may not be the best time to resolve ecological problems: "We must not blame it all on the time, or the situation. I am sure that if they really want to, the directors of the pulp and paper mills can borrow money from western banks and use the money to modernise, and then pay the creditors back out of their additional production"<sup>53</sup>.

The use of financial instruments in respect of the Kotlas Pulp and Paper Mill is undoubtedly an important factor in resolving the town's ecological problems. However, in the authors' opinion, the environmental improvement methods suggested in the newspapers are of a fragmentary nature and cannot lead to lasting change. What the survey of publications showed is that the conflict between the Kotlas Pulp and Paper Mill and nature is not adequately reflected in inhabitants' relations with the plant. As a result, a heightening of the people's interest in improving the town's ecology is also an important factor.

The authors hasten to add that initiatives are taken in Koriashma on a regular basis to focus attention on ecological problems. Due to a sharp decrease in enterprises' contributions, in July 1996, the management of the town ecological fund decided that priority should be given to financing ecological education and the ecological training of

---

<sup>51</sup> TK, 1998, No.31 from 24 March 1998, p.2

<sup>52</sup> TK, 1998, No.9 from 27 January 1998, p.2

<sup>53</sup> TK, No.122 from 23 October 1997, p.4 – 5

children<sup>54</sup>. Different actions are being taken to achieve this: ecological marathons for lower and upper secondary school pupils<sup>55</sup>, ecological competitions<sup>56</sup>, conferences for students at the PGPU<sup>57</sup>, scientific-practical conferences<sup>58</sup> and seminars about problems relating to continuous ecological education<sup>59</sup>. The newspaper remarks that "the society for the protection of nature is working actively, and special attention is being paid to the ecological education of children"<sup>60</sup>. However, the above-mentioned initiatives have not attracted the interest and support of the broad majority of the town's inhabitants.

When comparing the discussions of ecological problems in the newspapers 'Trudovaia Koriashma' and 'Kotlasskii bumazhnik', we see a significant reduction in discussions of ecological conflicts in the pages of 'Kotlasskii bumazhnik'. For example, over the past six months, ecological subjects were commented upon less than half as often in 'Kotlasskii bumazhnik' as in 'Trudovaia Koriashma' (20 occurrences as compared with 50).

### 3.9 Environmental problems not related to the pulp and paper mill

The harshest discussions of ecological subjects in 'Kotlasskii bumazhnik' dealt with problems not directly related to the activities of the Kotlas Pulp and Paper Mill. As an example, we cite the articles 'The Christmas tree was not born in the wood', 'Death rays', and 'We all live on a pile of nuclear waste'.

In the first article, the author takes a clear position as an active participant in a conflict involving the barbarian cutting of fir trees in town before New Year's: "The fact that many people in Koriashma still care can be seen in the reactions brought about by the notice about the fir tree cut-down outside the former cinema 'Aurora'. People rang up in indignation. That fir tree was only the beginning. Huge fir branches were lying all over the road on New Year's Day. Thank God,

---

<sup>54</sup> TK, 1997, No.1 from 7 January 1997, p.2

<sup>55</sup> TK, 1997, No.50 from 6 May 1997, p.5; TK, 1997, No.126 from 1 November 97, p.2

<sup>56</sup> TK, 1997, No.122 from 23 October 97, p.6; 1998, No.22 from 28 February 1998, p.7; 1998, No.40 from 14 April 1998, p.3

<sup>57</sup> TK, 1997, No.53 from 15 May 1997, p.6

<sup>58</sup> TK, 1998, No.41 from 16 April 1998, p.1

<sup>59</sup> TK, 1998, No.47 from 30 April 1998, p.2

<sup>60</sup> TK; 1998, No.47 from 30 April 1998, p.2

a pretty fir tree like that is still alive outside the building of the former branch of the Arkhangelsk Wood Technology Institute, now a branch of the educational university. But the prettiest fir tree on the avenue to commemorate the Victims of the Great War of the Fatherland has been cut down. There it lies, beside the road. Evidently, the cutter was scared away or had regrets, which is hard to believe. Nonetheless, people call the act mean and cowardly."

Any normal person's heart aches due to such barbarian cruelty, but it is difficult to punish such evil. The citizens of Koriyazhma have suggested different ways of protecting the trees. They are hoping for help from the 'greens'. They suggest organising a public night patrol next New Year's Eve. They say: "In one way or another, we have to 'light out' and punish the scoundrels! If we do manage to expose them, we absolutely have to tell about them on radio and in the local press, with photos, so that we can recognise the faces of our antiheroes"<sup>61</sup>.

Another example of a local ecological problem not connected with the activities of the plant was detailed in R. Buzinov's notice 'Be aware'. The chief state sanitary doctor in Koriyazhma, R. Buzinov, warns citizens about dangerous filaments in lamps made by the firms 'ANCHOR', KNR, 'DUCK SAN' from Korea<sup>62</sup>.

No less emotionally charged are the notices about general ecological hazards, for example, radioactive pollution in the north: "We all live on a pile of nuclear waste"<sup>63</sup> and there are problems from electromagnetic radiation in the town. For example, in the article 'Death rays' under the headline 'Worth thinking about', the author writes: "Electromagnetic rays have become a national disaster for Russia"<sup>64</sup>.

### 3.10 When accidents occur

At the same time, the sweeping majority of the articles related to the ecological situation at the Kotlas Pulp and Paper Mill maintain a neutral or even sympathetic tone. Details about the accident at the Kotlas Pulp and Paper Mill in the paper 'Kotlasskii bumazhnik' were reported in a restrained tone. The conflict between the plant and nature is not going to be allowed to evolve into a conflict between 'Kotlasskii

---

<sup>61</sup> Kotlasskii bumazhnik, 1997, No.4 from 18 January 1997, p.3

<sup>62</sup> Kotlasskii bumazhnik. 1997, No.28 from 5 June 1997, p.2

<sup>63</sup> Kotlasskii bumazhnik, 1997, No.17 from 19 April 1997, p.1,3

<sup>64</sup> Kotlasskii bumazhnik, 1997, No.25 from 14 June 1997, p.2

bumazhnik' and the Kotlas Pulp and Paper Mill. Thus, the 'Kotlasskii bumazhnik' maintains its impartiality.

Information on an accident at the plant ('Report on accident at the Kotlas Pulp and Paper Mill') was not written by the employees of 'Kotlasskii bumazhnik', but was, on the contrary, reprinted with reference to the newspaper 'Volna': "At 3.50 on 17 April, the chairman of the Koriashma State Committee on Environmental Protection in Arkhangelsk received a telephone call about an accident at the Kotlas Pulp and Paper Mill. As a result, the whole plant was closed down. (...) A control reading showed that during the first hour after stopping the biological cleaning of wastewater at 22.25 on 16 April, 14 000 cubic metres of wastewater were released into the River Borshchëvka. Over the next 20 hours, the effluent was gradually reduced to an average of 5 000 cubic metres per hour. The real volume of water that flowed from the River Borshchëvka during this period was 5 900 cubic meters per hour (...)"<sup>65</sup>.

In the article 'Things will be easier for flora and fauna', I. Sakharova devotes attention to one of the most important environmental measures planned at plant number 32: The building of equipment to spread effluents from the plant. "The metal pipelines of the past are so worn that there is no use repairing them". The old metal catchment chamber was replaced with two iron concrete ones with a diameter of 1400 cm<sup>66</sup>.

In the same article, we find a description of an ecological conflict: "An old, but still decent and clean bus passes by the station for biological cleaning, a so-called dam aerator, over which restless, fat seagulls circle and cry. It has been said that swans used to rest here not long ago... We stopped by the new iron concrete installation. The water is directed through a deep channel towards the main catchment chamber and further underground — to the river, to the water spreading mechanism, that is already resting at the bottom. Narrow pipes are sticking out from underground, like signboards. These are ventilators, through which foam is coming out. It was because of this foam the old catchment chamber was abandoned"<sup>67</sup>.

The description of the work on the catchment chamber was continued in several articles in 'Kotlasskii bumazhnik', e.g. 'Works hold back quicksand': "From chamber N10 (of the well), which is situated between TES-3 (TES is short for electric heating station) and the

---

<sup>65</sup> Kotlasskii bumazhnik, 1997, No.20 from 19 April 1997, p.1

<sup>66</sup> Kotlasskii bumazhnik, 1998, No.21 from 23 May 1998, p.1

<sup>67</sup> Kotlasskii bumazhnik, 1998, No.21 from 23 May 1998, p.2



---

evaporation station, three segments of the new catchment chamber have been placed in the direction of chamber N6, and each of the boxes is three meters long. Considering that the length of the whole 'trench' is more than 300 metres, progress has been insignificant so far"<sup>68</sup>.

### 3.11 The enterprise-owned 'Kotlas Paperworker'

The newspaper 'Kotlasskii bumazhnik' generally puts a positive slant on information about the environmental improvement work being done at the plant. "The environmental improvement measures undertaken by OAO 'Kotlas Pulp and Paper Mill' in 1997" included the installation of new pipeline (at a cost of 1520 million rubles), modernisation of electrofilters (120 million rubles) and a general overhaul of the aeration tank (220 million rubles). The object was to decrease the effluent of dissolved substances that passes through the electrofilters, improving the quality of wastewater and stabilising the process for the biological cleaning of wastewater"<sup>69</sup>.

O. Ugriumov's article 'Tied together by one chain' concentrates exclusively on the socio-economic problems of the Kotlas Pulp and Paper Mill. We are reminded of the plant's debt to Gazprom (170 billion rubles), of the unbalanced budget (the local budget expects to receive approximately 40 billion rubles, but needs a minimum of 78.6 billion rubles). Not a word about the environment"<sup>70</sup>.

'Kotlasskii bumazhnik' printed a response to an interview by the journalist V. Alekseev with the chairman of the union 'For chemical safety', Lev Fëdorov, published in 'Trudovaia Koriazhma': "The interview was about the destructive effect of dioxins on people's health. Dioxins are highly toxic substances. They are capable of knocking the most important life processes in the human organism off balance, destroying the immune system. They are generated during the combustion of industrial waste, and also in the paper industry when cellulose is bleached with chlorine. As L. A. Fëdorov so rightly points out, a whole group of ecologically dangerous substances is formed during combustion. Dioxins, the most toxic of them, have been

---

<sup>68</sup> Kotlasskii bumazhnik, 1998, No.24 from 13 June 1998, p.1

<sup>69</sup> Kotlasskii bumazhnik, 1997, No.11 from 8 March 1997, p.3

<sup>70</sup> Kotlasskii bumazhnik, 1997, No.16 from 12 April 1997, p.2

discovered in the waters of Vychegda and Northern Dvina. They constitutes a serious risk to human health.

And here is a piece of information from the journal 'Cellulose, paper, cardboard', №5 – 6 from 1997. "In the summer of 1993, the Bavarian Department for Water Supply performed a large-scale research project in the river areas of Northern Dvina and Vychegda to measure pollution. What characterises this class of pollutant is that the substances are extremely toxic and not particularly soluble. Dioxins are created as unwanted by-products of different types of combustion and in industrial processes that involve molecular chlorine.

In the summer of 1993, 38 sediment samples and 40 water samples were drawn over a distance of 400 km and analysed for dioxins, among other substances. The results showed a very low level of pollution involving the compounds on the checklist. On average, pollution there was just a tenth of what it was in the upper layers of soil in Germany, and 230 times lower than soil pollution in areas close to waste combustion facilities<sup>71</sup>.

The attitude to ecological conflicts on the part of the industrial sector itself and the pulp plant is evident in the relevant documents. For example, the 'Sectoral wage agreement for the timber industry in the Russian Federation 1998 – 1999' was published in 'Kotlasskii bumazhnik' on 7 February 1998. In part III, 'Protection of work, health and ecology', there is not one single mention of environmental protection<sup>72</sup>.

Thus it is possible to trace the newspaper's biases on ecological issues. 'Trudovaia Koriashma' published a report on a conversation between a journalist from the regional paper 'Pravda Severa', V. Alekseev, and doctor of chemistry L. Fëdorov under the title 'Time bomb'. The article told about dioxins' harmful effects on human health. And dioxins originate in pulp and paper mills and other places that burn industrial waste (enterprises get rid of waste by burning it on their own territory, usually with the permission of the sanitation authorities). Dioxins were discovered in the Northern Dvina. "But I just don't think the northerners were very well informed about the results". "... information can be communicated in different ways. One way can be superficial, while another can ring the bells", said L. Fëdorov<sup>73</sup>.

---

<sup>71</sup> Kotlasskii bumazhnik, 1997, No.51 from 13 December 1997, p.1

<sup>72</sup> Kotlasskii bumazhnik, 1998, No.6 from 7 February 1998, p.1 – 3

<sup>73</sup> TK, No.122 from 23.10, 1997, p.4 – 5

### 3.12 Conclusion

The environment is an issue in the local newspapers of Koriashma. Information is given on the emissions from the pulp and paper mill, and the transgressions of the maximum permissible discharge are reported regularly. On the other hand, the improvements in environmental behaviour on the part of the enterprise are also reported. The readers are kept updated on the controls that environmental authorities carry out in the enterprise. The environmental plans of the town are presented in the papers. For a period the two local newspapers differed in their coverage of the pulp and paper mill. 'Trudovaia Koriashma' made a point of being independent of the town-constituting enterprise, which was reflected in its articles on the enterprise's environmental performance. 'Kotlasskii Bumazhnik' on the other hand, as the enterprise's own paper, focused on technological improvements that benefited the environment. The environmental themes that really seem to engage people are either related to human health or to the urban environment, the town's green areas (see next chapter).

## 4 Koriazhma – the town, the river, and the enterprise: Self-perception of a single– enterprise town under and after state socialism

*By: Aleksandr N. Davydov, Galina.V. Mikhailova, Department of Cultural History, Institute of Northern Ecological problems, Arkhangelsk*

This chapter aims at interpreting the ecological situation in Koriazhma in the light of the consciousness of the local population and of the official Soviet ideology. Mentality is culture's subconscious, its own version of cultural subtext, an aid to perception, a way to feel and think, a social-psychological attitude.<sup>74</sup>

We will, together with the general term *mentality*, make use of the terms derived by V. I. Korotaev: traditional and revolutionary mentality.<sup>75</sup> The first is based on the heathen-orthodox tradition, the second on the tradition born with the great French Revolution, which the socialist utopians started.

In Russian self-consciousness historical periods typically are conceived as being dramatically opposed to each other. For instance, after the Christening of Rus it stood in opposition to its heathen

---

<sup>74</sup>See: Korotaev V. I., 1993, *The destiny of 'the Russian idea' in the soviet mentality (the 1920s–30s)*, –Arkhangelsk, Pomor University,; Gurevich A. Ia., 1989, "Death as a historical anthropological problem: on the new direction in foreign history writing". *Odyssey. Man in history*. . pp.115–116; Gurevich A. Ia., 1990, "'Life after death' or something about our own time and of the dark ages", *Knowledge-power*. –, no. 11, p.55ff.

<sup>75</sup>Korotaev V. I., op.cit., p. 7.

surroundings. The seventeenth century was perceived as "sitting on the edge of time", Russia at the time of Peter the Great "was opposed to the time prior to the reign of Peter the Great..."<sup>76</sup>

*Understanding traditions* is of paramount importance. Peter the Great rejected a chronology starting with "the creation of the world" choosing instead the new-European "birth of Jesus Christ". In the same manner, the October "revolution" introduced a new way of measuring time, based on *Weltanschauung*, although in essence sacral. Kurotaev says: "From that moment it was as if Soviet Russia shaved off the beginnings of its history and placed the beginning to the true era of the proletarians of the world, under the banners of the coming world revolution (dreams)".<sup>77</sup>

A very illustrating – quintessential – case is offered by the history of the town park in Koriashma. The town park was built in the 1960s as an example of ecologically clean industry in the immediate presence of the factory. In this chapter we will analyse the meanings of this park to show in what ways the environment is conceived in a typical Russian industrial town. We make use of newspaper articles as well as other materials studied during fieldwork.

The town was thought to be a town of the 'bright tomorrow of Communism'. The idea of the industrial town being a town of future was based not only on the common principles for the construction of a country where emphasis is on specialised production. The idea of that country is a utopia. And the idea of the garden-town was based on the ideas of Thomas More and found its form in the necessity of the garden, especially as the garden was situated in the vicinity of the industrial area.

Let us now take a look at the founding of Thomas More's Utopia:

In Utopia there are fifty-four towns, all big and gorgeous. They are all the same when it comes to language, character, establishment and legislation; they even have the same arrangement, and they are also situated alike as far as the landscape allows.... it [the town] is almost square in shape.... The garden borders on the back of the houses in the streets' full length, wide and surrounded on all sides by the inner side of the rows. There is not a single house where there is not a door onto the street as well as into the garden.... As the Utopians do not have a

---

<sup>76</sup>Korotaev V. I., op.cit., p.12.

<sup>77</sup>Korotaev V. I., op.cit., p.15.

distinct characteristic, they even draw lots and switch houses every ten years. They really love their gardens.<sup>78</sup>

In the mythological perception of the mass consciousness the Communist ideals contaminated with the Christian images and the idea of heaven were transformed from 'space' to 'time' (Communism – the bright future of the human kind).

The Khrushchëvian "thaw" of the 1960s entailed the abolishment of the personality cult of Josef V. Stalin followed by a noticeable progress in the enthusiasm of the masses. The notion of *the worker* – the creator – did not only become one of the most important ideological categories, but also received praise in the mass consciousness by becoming one of the most important symbols of Communist mythology.

#### 4.1 Koriazhma – the giant on the Vychegda river

The romance of construction work and the enthusiasm of the construction workers were clearly represented in newspaper publications in those years. The newspaper articles, of course, were heavily loaded with official optimism, although they also reflected the general mood of the masses to a certain extent, especially the youth.

In an editorial article in the newspaper '*Severnyi Komsomolets*' (Young Communist of the North) it is stated: 'Kotlas pulp and paper mill.... The name of that building of the seven-year plan is known beyond the borders of our country. *By the Party's will, the people on the Vychegda ... shore have built powerful workshops, a new socialist city is being built.*'<sup>79</sup>

The purpose of this selection has to do with the number of basic features in orthodox theological literature. Apart from that it will also 'function' in eschatological utopias and in Marxism (revolutionary mentality).<sup>80</sup> The collective appears as the most important creative power in the making of *the new man*, and the ideal form of collective is the working collective. 'To the Marxists the proletarians, the industrial workers, were appointed the chosen ones amongst "the oppressed and humiliated"'. Also the line between the real proletariat

---

<sup>78</sup> Thomas More. *Utopia*. Moscow, "Nauka", 1978, pp. 172–174, 179.

<sup>79</sup> *Severnyi Komsomolets*. 1960. no. 69, 8 June 1960, p. 1.

<sup>80</sup> Korotaev V. I., *ibid.*, p. 14.

and the idea of the proletariat was vague and hardly perceptible one, to the Russian Marxists as well as to their predecessors (the revolutionary democrats) – 'the idea of the people'.<sup>81</sup>

The *temple* had a dominating position in the formation of space in Christianity. The temple is a place inhabited by God and where believers gather to pray, to occupy themselves with the *making of the soul*. **The soul is made and the man created in the factory according to Communist mythology.**

Time – as an attribute to the cultural system – had a very sacred expression in all its forms, at that time in political form. A few posters from the first years of soviet power are amongst others proofs of this: 'The proletariat is the creator of the future, not the heir of the past', and: 'The future – our only goal'.<sup>82</sup>

The construction of a new enterprise of complementary industrial plants – a new '*kombinat*' – was given priority to the extent of competing with the fight for the Fatherland. In fact, often terms from war-dictionaries were used in newspaper articles to evoke associations of the working enthusiasm from the time of the great war of the fatherland:

You, my young friends, are of course familiar with the Resolutions of the CPSU Central Committee and the USSR Soviet Council of Ministers 'Of attempts/efforts to liquidate delays in the pulp and paper industry'. You know what impact the party and the government have on bringing Kotlas pulp and paper complex in action as soon as possible. It will be one of the world's most prominent chemical giants in manufacturing pulp, paper, cardboard.... Komsomol members and youth constitute a big part of our collective. Almost three thousand young construction workers work on the construction sites of Koriazhma.... By the end of the day the whole collective will have to decide on very tough and difficult matters. In order to solve this successfully, we need skilled, strong hands – young hands. This construction work needs an experienced staff of construction-engineers, more than a

<sup>81</sup>See: Batygin G. C., "The metamorphosis of the utopian consciousness", *The Quintessence*, p. 266; Korotaev V. I., *ibid.*, p. 16.

<sup>82</sup>A. M. Rodshenko, V. F. Stepanova, , 1989, Moscow, pp.18, 20; Korotaev V. I., *ibid.*, p. 14.

thousand concrete-workers, fitters, form workers, carpenters, plasterers and workers of other professions. We do hope that the local branch of the Komsomol – the sponsor of this construction work – will help us. *Reinforcing ourselves we will win this war of hardship – we will in time have a chemical giant first in line by the Vychegda.*<sup>83</sup>

Thousands of people travelled to the place of the small village of Koriashma. They were to build the giant mill and the city of the future. Here is a note from 'Past warriors are our friends':

A group of servicemen from the garrison in Arkhangelsk express a wish to organise a brigade of Komsomol youth after the demobilisation and come by Komsomol authorisation to build the Kotlas pulp and paper mill/complex.

We ask you to tell us about the conditions of life in the business, the payment of the labour and how to fill in all the necessary documents.

On behalf of the servicemen who wish to participate in this seven-year plan construction, private V. Kolesnikov.

Dear friends!

We, recently soldiers, but now workers constructing this chemical giant – the Kotlas pulp and paper mill, read your letter with pleasure.

We really liked your patriotic impulse. It is exactly the kind of behaviour which Nikita Sergeevich Khrushchëv approved of. In his answer to the group of warriors which asked to be sent to the virgin land, to the toughest area after demobilisation, he wrote

'It is very good that, after demobilisation, you decided, organised, as a harmonious collective, to come to work on the virgin land. I am convinced that you will display a soldier's sense, that you will show examples of work and feel yourselves at home. I also hope that you will find your personal happiness there.'

---

<sup>83</sup>Mystakov D. Ia. "In a decisive mood". *Severnyi Komsomolets*, no. 69, 8 June 1960, p. 1.



Your initiative will hopefully serve as an example to other warriors who have been demobilised from the army.'

You are leaving the footprints of a noble initiative, and we approve of your deed with all our hearts.

Now a few words of how we live/are. The harmonious collective of workers has received us well. We have been granted rooms in a hostel. We got family flats. We have acquired professions.... We do not just find conditions of work here in Koriashma, but also of education and relaxation. We have our own technical college here, a part of the institute. There is a movie theatre, a stadium and a palace of culture.<sup>84</sup>

The Christian ideology was considered hostile, and during the soviet period the churches were perceived as bearers of 'harmful ideological infections'. These perceptions were displayed particularly in the 1920–30s, although anti-religious tendencies were strong in official ideologies even in the 1960s. That was why the new planning of the city was oriented towards the factory, and the Nikolo-Koriashma monastery seemed to be on the outskirts, 'in the back-yard' of the young city. The monastery buildings were being used as storehouses.

Figure 4.1 *The Nikolo-Koriashma monastery founded in the 16th century*



(Photo: N. Zlobin)

<sup>84</sup>"We await you!" *Severnyi Komsomolets*. 1960. no. 69, 8 June 1960, p. 2.

To overcome nature was the predominating motive in the public consciousness, which continued the ideas of the founders of the Soviet government. A. V. Lunacharskii wrote of man and the overcoming of nature: 'We are still as long way from conquering nature.... We have to take away our confidence in the world beyond, because we know it is a lie, a faulty vision, self-comfort. We wish to educate a man who could be a collectivist of our time, who would live for public life more than private interests. The new citizen should be filled with the economic politics of the socialist construction, live/feed on them, love them, and in them see the purpose and the contents of his life.'<sup>85</sup>

The building was done in a rush and because of this the technical requirements were not always fulfilled. Enthusiasm from extra-economic categories became economical. Leaning on the enthusiasm of the young workers the huge building on the Vychehda developed. However, not all the problems could be solved with enthusiasm. Here is a typical example:

The construction of the Kotlas pulp and paper mill started in a intense and decisive period. The collective of workers took on the responsible obligation – to perform a trial boiling of cellulose by 7 November the present year.

The workers were full of decisiveness and pride to keep to their word – in a short period of time to carry out the considerable size of building and installation work.

*But enthusiasm of fulfilling such a big task alone is not enough. You need a powerful construction base and mechanism.*<sup>86</sup>

The construction work was efficient, and already in 1960 a newspaper noted:

A little more than a year has passed since we were in Koriazhma. A small amount of time. And there it appeared again in front of us – familiar and at the same time changed, a strengthened young construction and at the same time as before. It may be that we got this impression because we caught spring in Koriazhma, the best season when nature starts waking up for real, when

---

<sup>85</sup>A. V. Lunacharskii in dispute with the metropolitan A. I. Vedenskii. 21 September 1925. A. V. Lunacharsky's paper, *On the eve...*, p. 297.

<sup>86</sup>By the orders of Koriazhma, "A green street!", *Severnyi Komsomolets*, no. 69, 8 June 1960, p. 1.

the blue Vychegda seems bottomless, and even the old birch wood trees, putting on their shawls of green down, look affectingly young. Or maybe it is because *Koriazhma is a Komsomol construction, a construction of the young, and it is not destined to grow old....* Within a year the new village improved: the construction site waste disappeared, new houses came about and new streets appeared.

In those beautiful houses lived, learned and rested good, hard-working people. It is the changed appearance of the old Koriazhma, changed with their hands. The effort and the fight changed even themselves: they became more persistent, more brave in their dreams, in their aspirations forward.<sup>87</sup>

The idealised person for the workers of the 1960s: Communist, engineer, *romantic*.<sup>88</sup> Let us quote another note which quite accurately describes the pattern of the *construction-romantic, the founder and the worker of the complex, the bud of the supporting Communist tomorrow*:

In many examples from the life in the collective of the thousands of creators of the Kotlas pulp and paper mill you can see the *sprouts of the Communist tomorrow*, a broad creating activity in the construction of the material-technical base of communism.

Communists show examples of all the best beginnings. It is hard to talk about all the different people thoroughly. Without taking time into account they return everything to the building; all their knowledge, their creative works, their enthusiasm, in the collective they cultivate a Communist attitude towards labour, their companion. These people have a bright aspiration for the future, and they do not save their strength for its approach. With a great respect for the collective the leading worker N. Lozhkin, who has put a lot of energy and experience into the construction of railways, uses the good and

<sup>87</sup>Naumov V. "A few great years passed...", no. 69, 8 June 1960, pp. 2–3.

<sup>88</sup>Kozhevnikov G., "Communist, engineer, romantic", *Severnyi Komsomolets*, no. 69, 8 June 1960, p. 3. (The author of the article is the assistant of the head of the department of Komsomol organs of the regional committee VLKSM. The article is devoted to the biography of Dmitrii Zaporozhtsev.)

demanding organiser-brigadier carpenters I. Kabikhin and A. Mitiugov and many others....

The complex of industrial enterprise was the first one in the building to enter the competition of what to call the collective of Communist hardship. The fitting section of the complex already has a solemn name. That wonderful united collective has a very strong influence. The collective skilfully raises the newcomers and struggle with the peoples' deficiencies. Since last year the shifts of O. Chumanov and E. Bystrov have been working on a common assignment ("*na odin nariad*"). It really united the collective and raised the common responsibility in this case. Many interests, joy and grief were joined here. They discussed books together, went to the movies, to concerts, visited each other at home and gave a hand in every day life. On birthday occasions they presented their comrades with common gifts. Everybody in that collective educated themselves – at the institute, the technical college, in school for worker youth, in groups, working on technical courses. Almost everybody mastered adjoining professions. The slogan 'One for all – all for one!' became a rule for the life in the collective. The fitters related very responsibly to the sponsorship of the growing generations. Their warm and demanding friendship with the seventh graders had an enormous educating impact.<sup>89</sup>

The construction of the complex was declared to be a Komsomol construction. The newspaper wrote:

The construction of the first instance of the Kotlas pulp and paper mill will at least be completed in 1961. They will start constructing sulphide-viscose-cellulose and sulphide-spirits factories to reconvert the waste from the sulphide production.... The next instances are planned to be:

a sulphide-cellulose factory and a neutral sulphite semi-cellulose;

– a section for by-products;

---

<sup>89</sup>"Towards the Communist tomorrow". *Pravda Severa*, no. 194, 17 August 1961, p. 2.

- a paper-cardboard factory;
- a chlorine factory, an aluminium section and other helpful productions.

The factory of the second instance will produce more than two times the cellulose

of the first instance.... *The Komsomol project of constructing the Kotlas pulp and paper mill was called the Lenin Komsomol. It is an honourable name. It is also a committing one. Komsomol workers and the young have to mobilise all their powers to fulfil the construction of the second instance of the pulp and paper industry giant.*<sup>90</sup>

The workers in the complex were brought up under reinforced ideological pressure. To many inhabitants of Koriashma the words from the song 'my young Komsomol town Koriashma' was a particular motto of the town, and the song itself an unofficial town hymn.

The workdays in young Koriashma were officially marked by Komsomol enthusiasm:

In September last year the VLKSM (Komsomol) Central Committee announced the construction of the Kotlas pulp and paper mill to be an urgent All-Union Komsomol project.... Already during the first quarter of 1961 the harmonious Komsomol collective in Koriashma had won the VLKSM Red challenge-banner of the Central Committee and the first place among the new sprouts of the paper industry.... It is particularly interesting to speak of the Komsomol staff in Koriashma, of their victories and losses. The staff were organised as soon as the construction became an urgent Komsomol matter. The chair was held by the young engineer Anatolii Miroshnichenko. *The staff is the soul and heart of the project of the young Komsomol collective. They should look after the steps carried out by the combined draughtsmen's rigging of the construction, they should organise the competitions of the young Komsomol*

---

<sup>90</sup>Juzhnevskii Iu., "The second instance of the chemical giant", *Severnyi Komsomolets*, 19 February 1961, p. 3.

*brigades, make sure that all the young workers fulfil the standards.*<sup>91</sup>

A newspaper announced that it would bring interviews with the people who worked at the complex on the day of the opening of the complex because 'their efforts, will and creativity have given birth to the giant on the bank of the Vycheгда'. The welder Victor Shramov: 'My family has also grown to love Koriashma. My wife works in the laundry section, my oldest son Vladimir in the "Zhilstroi" [municipal house building company].'

The foreman of the boiling plant Arkadii Ershov: 'We all participated in the building of the complex. Maybe that is why we experience love towards our new plant.'

The mechanic of the acid section Arkadii Lichutin: 'I think that I have grown a bit happier. After my education I came to work in Koriashma. In the beginning I had to learn a lot of planning for the future enterprises. I could already at that time feel a great and gripping effect. The scale of the future complex was affecting.... On the construction site I met extraordinary industrial workers and learned a lot from them.'

Crane driver of the cable-crane Ivan Tolokontsev says: 'We are proud of getting to work on an extraordinary enterprise.'<sup>92</sup>

## 4.2 Koriashma – the garden city

Koriashma was called the garden city, the town of the future, the town of the bright Communist tomorrow. 'The construction of the "sun-town" – the utopian proletarian area – could not start immediately after the October revolution, because there were not enough goods even for the gratification of the very essential needs.... In the middle of the 1920s the soviet architects started proposing projects on the socialist town, and then discussions started about the socialist settling and about the socialist-town.'<sup>93</sup> The idea of the Sun Town actualises itself in the monoindustrial towns of the 1960s.

---

<sup>91</sup>Liubov N., "The working days of the young Koriashma", *Severnyi Komsomolets*, no. 107 6 September 1961, p. 2.

<sup>92</sup>*Pravda Severa*, no. 194, 17 August 1961. This issue is dedicated to the opening of the complex.

<sup>93</sup>Korotaev V. I., *ibid.*, p. 28.

---

The creation of the Komsomol parks coincided with a mass explosion of enthusiasm and optimism in the country and was connected to an event of world-wide significance: Gagarin's flight into space on the 12th of April in 1961. Practically half of that edition of the regional newspaper was dedicated to Gagarin's flight.<sup>94</sup>

The town of Koriashma was intended to be a town of the future, and this idea was realised in the planning and building. This is how the place for the park was found:

The town will consist of separated blocks, which will seem like micro-regions. The streets will run from south to north, to keep the cool winter winds from blowing in the front of the houses, so they will blow on the sides of the houses and the houses always have a lot of sunlight. In every block we will lay out squares and young trees will greet us with the rustling of their leaves. The gardening will be carried out from early spring until the frost. Farming enthusiast N. V. Seravin – an elderly, lively man, pointed out that the summer gardens are not at all less beautiful than the autumn – and spring gardens, and they are also a lot cheaper. In the town now we have more than 50 squares, little gardens and parks, in which almost a hundred thousand trees and bushes have been planted out.

*The Komsomol park is the pride of the citizens of Koriashma. It is clean, ennobled, young hands have enclosed it with a fence, and in its centre there is a stadium and an artificial lake with a boat station. In the holidays the park is full of strolling villagers. The builders carefully maintain the ancient cedar groves.... Pushing away the taiga, the roads and streets go on; Severnaia, Molodēzhnaia, dedicated to Gogol, Lermontov, the workers.... New buses run along the streets. The town grows. During the last five years about 70 thousand square metres of housing have been let. The building of multi-storeyed brick buildings start this year. In the new town everything smells of youth. That is probably because of the fact that the youth built it.*<sup>95</sup>

---

<sup>94</sup>*Pravda Severa*, 14 April 1961.

<sup>95</sup>Valentinov I., "Songs ring by the river", *Pravda Severa*, no. 194, 17 August 1961, p. 4.

The idea of the *garden-town*, challenging associations with the towns in Thomas More's *Utopia*, is heard in the description of the Koriazhma under construction. Thus:

On the project of the village Koriazhma it is important to detach a so-called sanitary zone – a broad green zone – from the sections of the Kotlas pulp and paper complex. In the chaos of the first years of construction the trees and bushes of that 'zone' were cut down, eradicated and crushed by the machines. Only to the left of the road was a small wood left untouched. And behind it hovered the menace. Nikolai Vikent'evich Seravin intervened. At that time he was in charge of the gardening in the village.

He went to the regional committee, to the Kotlas chief architect, he wrote articles in the newspaper, and then he addressed the Komsomol:

– Come to the rescue!

And the youngsters got very eager. They decided to have a park on the site of the small wood and to name it Komsomolskii Park. On Sunday evenings they went to the park to do voluntary work: they dug out the roots/stubs and bushes, they dug drains, planned the cutting of the trees and cleared away the weak ones. And Nikolai Vikentievich supervised all this.

The park turned out wonderfully well. They even blocked the tiny river Kopytovka and created a lake with boat stations....

On the other side of Koriazhma there are cedar groves. Marvellous relict trees. They are more than 200 years old. Once the grove was fenced in, it was looked after. It was a beautiful spot, the gigantic beauties proudly lifted their crowns towards heaven....

*A garden-town! In the north this sounded a bit unusual.  
What gardens are here, when there is such a frost?  
Nikolai Vikentievich has a different opinion.*

Once he held a lecture for the construction-workers and the future exploiters. All the clauses stated that a lot of parks and a lot of squares had to be created in Koriazhma, and about 200 thousand trees and bushes had



to be planted. And only to think about flowers was terrible: some astronomic figures appeared....

More and more people in Koriazhma became nature-lovers. Here and there apple-trees rose, gooseberry-bushes grew, currant bushes and raspberry bushes. Not far from the village, on the wasteland, the workers of the complex lay out a collective fruit garden. In Koriazhma they also built an orangerie, and by the complex a small architectural planted area was made not long ago. The workers there planted a thousand trees and bushes, and tropical flowers.... Koriazhma grows. Time passes and the young shoots powerfully rustle their leaves in the parks, on the streets and avenues of the paper-workers' town. And the people, admiring the beauty and the joy of the nature life, say: 'Thank you! Thank you, Nikolai Vikentievich'.<sup>96</sup>

In the press there is even a discussion going on about the possibility of renaming the town:

When now a young big town grows, its hosts will probably replace the word 'Koriazhma' with a new and bright one, full of great joyous sense. Or maybe they will not replace the name, they will let it be. Because in that word there is now a sense pride of its own, it sounds like a symbol of the working romantic, to thousands of people it is connected to the days of fight and work of thousands of people....

And the pride of these people is fully understandable, their joy over their discoverers: *there it is, their creation – they have put a powerful complex-giant into life.*<sup>97</sup>

It is not possible to totally agree with V. I. Korotaev, who wrote that 'The Stalin government succeeded in creating a mass-culture, a united culture for all, united by five-year plans for all, with ideas of socialist-competition, socialist realism, mass-songs and so on, with a Communist way of living formed after the spirit of the Middle Ages,

---

<sup>96</sup>Illarionov V., "Give the people joy". *Pravda Severa*, no. 285, 5 December 1964, p. 2.

<sup>97</sup>*Pravda Severa*, no. 194, 17 August 1961. This issue is dedicated to the opening of the complex.

which has been strengthened and renewed during the innovations of the 1930s.<sup>98</sup>

During the Khrushchëv period the new wave of enthusiasm was connected with the 'Khrushchëv –thaw' and with the knowledge that the creation of the *bright Communist tomorrow* was also possible 'right now'. The enthusiasm of all these people was strong, and their intentions pure. Our own field work conversations with inhabitants of Koriazhma convince us of this.

*The changes that occurred in Koriazhma were described in the press as man-made wonders. That is why the ecological matters were been discussed. It was understood and maintained, that the complex would not damage the surrounding environment. Here is an example, V. Illarionov's article 'The giant by the Vychehda'. The author is the editor of the newspaper Stroitel', which has a large circulation. The article was published in the regional paper Pravda Severa under the heading 'The 32 most important construction works':*

There is a legend that says that four hundred years ago, in a remote place by the river Koriazhma, thirteen versts from Sol'vyhegodsk, Longin felt called to lay down the foundations for a village called Koriazhma. In four centuries 35–40 small houses were built within the monastery walls. Until the revolution, the farmers of Koriazhma lived a sad life, without happiness.

*Nowadays an astounding sight is revealed at that place on the banks of the Vychehda. On an area almost thirty kilometres square rise the Ferro-concrete and brick-red buildings of the factory and of the power stations, which let out smoke into the sky with tens of towers, we see the well-planned quarters of the toilers' town.*

The Kotlas pulp and paper complex will be one of the most powerful in the world. It will give the country's national economy hundreds of thousands of tons of high quality cellulose, cardboard, paper, rosin glue, turpentine, yeast, enormous amounts of ethyl-alcohol – the most valuable chemical raw material, and many other wood products.

*The magnitude of the complex is astounding. Its main chemical divisions stretch out for more than half a*

---

<sup>98</sup>Korotaev V. I., *ibid.*, p. 60.

---

kilometre, the height of each of them is like a four-storied building. There will be more than 12 thousand machines and aggregates in each division.

The complex for pulp and paper industry in Koriyazhma is a single-conveyer complex. The wood needed comes down the Vychehda and by railway.... On the lumber market some specially designed cranes will be erected to get the floating timber up on the shore. The sulphite and sulphate production line markets are operated by four cranes which have a lifting capacity of 20 tons and passageway of 800 metres.... On areas of the markets about a million cubic-metres of wood can be placed.

From these markets the wood goes to the wood-preparation section where it is chopped into splints and stored in the warehouses along the transportation galleries. The building in which the splinters are stored extend about ten metres below the surface and almost 70 metres above ground. Through the bunkers and along the conveyers the splints run along the sloping gallery to the boiling department where 10 unique bimetal boilers are found, never before used in the country's cellulose and paper sector.

At the acid section, the regeneration section, the boiling section, the refining section, the washing section and the irrigation section, the bleaching section and the drying section a lot of new equipment has been introduced which even the most experienced cellulose workers has never heard of....

The irrigation of the cellulose is executed through vacuum filters. This not only reduces the loss of fibres and improves the excretion of lye, it also improves the quality of the cellulose significantly. The most recent equipment creates the opportunity to bleach the cellulose in nine stages and to release products of any grade/sort.

*When the complex starts up with all its powers, it will consume 26 million litres of water every hour. A whole river runs through the underground reservoir, which has a diameter of almost the height of a human being, to the filter-cleansing part of the building, and from there to the main sections to feed the power heating plant. But what will become of the water after it has been utilised? Some*

*special purification machines for the industrial sewer have been planned, which will render the chemical content of the water harmless and let it out into the Vychegda again after enriching it with oxygen. That way the start-up of the enterprise will not threaten the fishing in the rivers of the North.* The economy in most of the region profited from the new-built heating station TES No.1.... Many collective farms, the town of Koriashma, Sol'vychevodsk, the railway and the village Vychegodskii will already this year get their electric power from the TES No.1.... The working collective for Komsomol shock construction works keeps its word.... A new town rose on the boggy fields. The Koriashma of yesterday is no longer recognisable. Before the revolution one could only find one primary school in the countryside, now there is a whole network of pre-school institutions, three schools, a new boarding school is being built, a technical school of civil engineering, an evening school, a consultation centre for the technical school of the pulp and paper industry, and a children's musical school. The seven-year plan has seen the start of the construction of new educational institutions. In 1962 the workers handed over a cultural centre to be used by the inhabitants of the town. Every year the town grows and improves. During the last years about 40 thousand square metres of well-equipped accommodation has been utilised. In 1961 the construction of more than 20 square metres for homes will be initiated. This summer the construction of a factory that prefabricates elements for blocks of flats will be initiated, and will have the capacity of constructing 30 thousand square housing metres of a year.... In the spring night when the humid wind blows over the darkened taiga, the construction site is never free of the rumble of the machines and the roar of the engines. The electric glow is visible for many kilometres. The town toiler never sleeps: the workers strive towards the significant event – the production of the first tons of cellulose by the sections of the giant-complex on the Vychegda.<sup>99</sup>

In accordance with A. F. Losev's conclusion, the mechanical conceptions of time and space introduced by Newton corresponded

---

<sup>99</sup>Illarionov V., "The giant by the Vychegda", *Pravda Severa*, 5 April 1961.

---

with the nihilist mythology, which, in turn, leaned on the 'studies of the never-ending progress of society and culture'.<sup>100</sup>

In the essay 'The higher virtue of the oppressed' Bertrand Russell writes that the admiration of the proletariat is typical of the most recent period, and that the praise of the proletariat, like the praise of the dam, the power plant and the aeroplanes, is a part of the ideology of the mechanised century.<sup>101</sup>

### 4.3 Ecological problems as problems of mentality and culture

As mentioned by G. I. Shvebs,<sup>102</sup> the industrial era in Russia began in the first third of the nineteenth century, but was only completed in the 1930s, during the period of super industrialisation, when the new recruits of that time succeeded in accomplishing the project of constructing the mechanics factory industry more than fulfilling expectations, a project involving all the main and subsidiary branches of the national economy. It is no wonder why the slogan 'to catch up and overtake' the future-oriented capitalist countries was transformed into the slogan of 'early fulfilment' and the final over-fulfilment of the five-year plans. The goal of the early capitalism, 'to get there – no matter the cost', was reincarnated for the toiling USSR into 'the plan – at any cost' (naturally, unofficial). Now this is not favourable for the conservation of the environment and human kind, even less so for the relations between man and nature. Rapacious attitudes prevailed towards man and the environment which are, philosophically, typical of the countries of early industrialism.<sup>103</sup> V. I. Korotaev notes that 'The main thing about the predominating dogma is that the idea of reforming society also includes nature, as man is a bio-social being and nature is the environment of his habitat and the object of his labour. The natural consequence of this teaching is alienation from nature. In general the soviet regime imitated/adopted the consumer relationship to nature from the capitalism of free enterprise'.<sup>104</sup>

---

<sup>100</sup>Losev A. F., "The dialectics of the myth", *Philosophy, Mythology, Culture*, 1991. no. 7, p. 36. Moscow.

<sup>101</sup>Russell, B., "The higher virtue of the oppressed", Moscow, 1990, p. 419.

<sup>102</sup>See: Shvebs, G. I., "The idea of the new sphere and the social ecology", *Philosophical Questions*, –1991, no. 7, p. 36.

<sup>103</sup>Korotaev V. I., *ibid.*, pp. 102–103.

<sup>104</sup>Korotaev V. I., *ibid.*, p. 97.

*To construct the complex as soon as possible, to start it up ahead of schedule and to announce this, that was the main task for the workers and the organisers of the complex. An early start was possible due to violations of a number of technological conditions, for instance at the expense of an even later introduction of cleansing installations.*

Production was the first goal they stressed: 'The days are hot on the Kotlas pulp and paper complex construction site these days. The start of the enterprise is getting closer..

The big collective of construction workers, fitters and operators passed a resolution – to ensure that the complex was on line by 1 August this year – two months ahead of the government schedule issued.<sup>105</sup>

V. Illarionov, a member of the peoples' control commission on the issuing of objects from the Kotlas complex noted not only the workers enthusiasm but also the *uncoordinated nature of the work*. He wrote:

On the walls of the section buildings the slogans glow: 'We will give our Fatherland cellulose by 1 August 1961!' This is being discussed in workers' assemblies, at meetings of the Party committee and the unions' construction committee.... All this is having a negative effect on the speed with which construction of the huge technological sections can go ahead,, on the most powerful basis of power engineering technology, and, finally, it is damaging the beauty of the surroundings with the new village spreading out along the banks of the Vychehda. It is all provoking a sense of dissatisfaction, even anxiety, when you visit the site. In places the machines and workers are at a stand still. Here and there you hear complaints about the lack of material, lack of efficiency of the masters and foremen. On the construction site you can not feel the productive effort.... *To complete the work in time to start up the complex must become the most important task for the whole collective of workers, fitters and exploiters.*<sup>106</sup>

The reference to the purification facilities sounds very reassuring. See, for instance, V. Illarionov's article 'Vychehda remains clean' (under the heading 'Reports from the new chemical construction site'):

---

<sup>105</sup>Safian, M., "The day before the beginning – At the KTsbk construction site ", *Pravda Severa*, 16 May 1961.

<sup>106</sup>Illarionov, V., "Contrasts in Koriashma"., *Pravda Severa*, 24 February 1961, p. 2.

'During the first years, the active sections of the chemical giant by the Vycheгда worked with a temporary system of cleansing the industrial sewer. Now it has grown. At the same time the management of the seventh building and installation collective under the supervision of N. V. Vasiliev has erected a difficult complex of permanent cleansing systems. Next summer the construction of the cleansing installations will be initiated.'<sup>107</sup>

In 1967 the first issue of the paper *Kotlasskii Bumazhnik* (The Kotlas Paperworker) came out, and in the editorial entitled 'For the readers' could be read: 'Dear readers! Today you have received the first issue of our paper *Kotlasskii Bumazhnik*. You will be acquainted with the hard-earned successes of the complex' collective, you will read the working reports from October, become familiar with the diverse information about the life of our village.'<sup>108</sup>

*Information about local environmental conditions in the 1960s was extremely limited. An example, the ecological information in Kotlasskii Bumazhnik during 1967: a photo, 'The station for biological cleansing of the sewage',<sup>109</sup> and that was it!*

The standards/level of production problem was openly discussed only from the end of the 1960s. One example can be found in Illarionov's article 'The campaign for high standards of production' (subtitled 'A costly start for the Kotlas paper-workers') in the regional paper *Pravda Severa*: 'Are things really in order, when in many sections the water from the technological systems is poured out into the fields like before? Quite a considerable amount of cellulose runs out in the sewerage system together with the water. That is a great waste. When we experience overflows it is even difficult to walk in normal shoes in many of the sections. These overflows occur in both the bleaching and the cleansing sections.'<sup>110</sup>

For the first time a critical question was asked about the cleansing installations by T. Skorokhodova in the article 'The cleansing installations – an important matter'<sup>111</sup>.

<sup>107</sup>Illarionov, V., "Vycheгда remains clean", *Pravda Severa*, no. 295, 19 December 1963, p. 1.

<sup>108</sup>"For the readers", *Kotlasskii Bumazhnik*, no. 1, 1 June 1967.

<sup>109</sup> *Kotlasskii Bumazhnik*, 20 July 1967, p. 1.

<sup>110</sup>Illarionov, V., "The campaign for high standards of production". *Pravda Severa*, no. 192, 17 August 1963, p. 2.

<sup>111</sup> "Udarnaia stroika" ed. note.

The Kotlas pulp and paper complex is in sharp competition with 'nature's work', with the various organisations working for the preservation of the environment like the Glavsevybvod (fisheries), the regional department of water management and the sanitary epidemiological station. *It started on the very day that the construction of the complex by the Vychegda began. From that day on the environmentalists never ceased demanding that the Vychegda should not be polluted. And the manager of the complex answered roughly as follows: 'What, d'you want us to close down the whole complex?'*... The plant was constructed according to technical know-how. Serious attention was devoted to the cleansing of the industrial sewer during the planning. Here, for example, a station for biological cleansing of the industrial sewer should be built. On the plans it looked absolutely astonishing.... But the matter had hardly been realised as a project before all the professional and industrial bodies, starting from the client-complex to the contractor trust 'Kotlasbumstroj', seemed to be captives of inertia.

'Cleansing installations? How are we going to get them!' – in their hearts they ignored the unrelenting controllers. And hurried on with the construction of anything but the cleansing installations, including the biological cleansing section – the most complicated one in the complex.

In the trust Kotlasbumstroj's 'copy-book of deficiencies', its manager M. S. Safian does not confirm any work at all concerning cleansing installations.

The trust Kotlasbumstroj did not begin constructing the cleansing installation until a year after Giprobum had given all the needed documentation. Of the resources the plant's department for invested capital gave to this project, only 6 per cent was used on the biological cleansing station, and at the beginning of this year – almost 12 per cent. At this tempo, the station for biological cleansing, ooze tanks and collectors are calculated to last only for one year. They have been loyal servants for almost two terms, and still no end to this can be seen. But the foundation pits which were intended to collect salty, muddy water containing fibres and lye are not endless. Operators are already working at the limit. In 5–6 months



---

time the plant will have nowhere to put its polluted industrial waste.

A lye-storage facility is intended to collect the alkaline water. But it has not yet been built. Temporarily an ooze tank needed in the spirit factory is being used under the alkaline water. And the building of the precipitate collector the trust stopped in April, after finishing only 30 per cent of it. Meanwhile this cleansing installation should have been come on stream already in early May this year.

After completely failing to meet the time limits, the directors of the trust Kotlasbumstroï came up with their own variants for the cleansing of industrial wastewater. They suggested an endless widening of the cleansing facility at the expense of open fields, or the building of a whole water-depository in the fluvial basin of Vychegda's tributaries — Nizovka and Staritsa. Projects like these are only half-hearted measures that in no way can solve the problem of the cleansing of industrial wastewater.<sup>38</sup>

#### 4.4 Syncretic town

In the 1990s the Nikolo-Koriazhenskii monastery was revived, and figures on the coat of arms of modern Koriazhma are quite eclectic. There are two key symbols on the crest: the image of an Orthodox Church symbolising the first settlement (the monastery) *and* the roll of papers symbolising the main enterprise – Kotlas Pulp and Paper Mill.

---

<sup>38</sup> Skorokhodova, T., "Constructions for cleaning — a matter of importance" *Pravda Severa*, no. 189, 14 August 1963. p. 2.

Figure 4.2 *Koriashma's coat of arms*

The change of state ideology in Russia resulted in the formula: 'the Pulp and Paper Mill was given by God'. On the occasion of the fortieth anniversary of the pulp and paper mill an essay competition for school pupils was organised, and the winning essay was presented in the local newspaper. It was called 'Trudovaia Koriashma' and its author was Evgeniia Pozdniakova, a schoolgirl of class 11, school 5. She composed her essay around an elderly couple she had got to know since they were war veterans and she was assigned the honorary task of handing over a congratulatory token on the Day of Victory. She was liked a great deal by these elderly people, who had spent most of their life in Koriashma as workers in the pulp and paper mill.

On several occasions the girl came back to the couple to listen to stories about their life with the pulp and paper mill. Here is a quote from her composition:

The fact that Kotlas pulp and paper mill was constructed right here, in Koriashma, they explained very simply: 'God ordered it to happen'. At the end of the 1950s Koriashma was still a small village with some 35–40 low

houses with small windows, a monastery and an elementary school. However, the planners found a flat, natural platform on a part of the river shore that never flooded. This meant that timber could be delivered easily to a future pulp and paper mill. Besides, the nearest railway was only seven kilometres away.

The pride in the pulp and paper mill, for having participated in this enterprise, which has survived even the most difficult years of economic disorder in our country, has simply struck me, forced me to look in a different way at my city, at its inhabitants, and especially at these elderly people who have given their youth, powers, and health to the industrial complex.<sup>112</sup>

On the occasion of the fortieth anniversary of the Kotlas pulp and paper mill a celebration was arranged. It was done in a traditional way – by organising a demonstration. This is how it was reported in *Trudovaia Koriazhma*:

As in the past, in workers' demonstrations, people marched in columns. There were flags, balloons and banners as if hired in from the past. For most spectators this 'nostalgia' did not look artificial, on the contrary – attractive and nice. Everyone came to the central square of town, veterans of the pulp and paper mill, students of Koriazhma's educational institutions, sportsmen, workers of culture, native people and visitors. Everything was dynamic and cheerful, everyone was dynamic and cheerful. One and a half thousand people took part in the procession.

And there is the large stage or platform. The spectator tribunes are overcrowded. It's time. The fanfares are loud, the march music too. They announce the beginning of the serious part. The announcer speaks. Standard bearers are making a formation. And again – songs, from the fifties and sixties. The spirit of that time, it seems, is bound with the spirit of today. The dancing ensemble 'Mosaic' enters the stage. And again – music, flowers, songs. Suddenly and unexpectedly garlands of flowers appear on the stage. Almost simultaneously mortars are fired. General

---

<sup>112</sup> Pozdnyakova, Eugeniya, "God gave the order to construct Kotlas pulp and paper mill here", *Trudovaia Koriazhma*, 6 November 2001, p. 5.

exultation followed by something everybody knows, the song called 'Our town of builders, chemists, and paper workers', performed by a singer from Kotlas, Pëtr Tarasenko. And the people on the square listen to the well-known words– 'The Komsomol, young city ours – Koriazhma'.<sup>113</sup>

### **Conclusion**

Single-enterprise towns are not a state-socialist invention. The tradition of building single-enterprise towns in the North of Russia dates back to the seventeenth century and the foundation of Solombala (1693). Today, Solombala is one of the districts of Arkhangelsk town. Solombala was Russia's first state shipyard. It was a military settlement, based on Amsterdam's city plan with canals and islands. The architectural plan of Solombala was centred on the shipyard, situated in the shores the river Dvina near Nikol'skii island. The central part of the community was a square with the Cathedral of Transfiguration in which a special side-altar is dedicated to St. Nicholas. The idea of the cathedral was to show the historical role of Russians in the North (transfiguration of the wild north by Christians), as the holy Nicholas is the patron saint of maritime culture, sailors and merchants. Until the 1860s Solombala was administered by Russian navy officers, even policing was done by a kind of navy patrol. One could call Solombala the architectural predecessor of the central part of St. Petersburg (1703) and the first Russian single-enterprise town. This tradition of naval single-enterprise town continued for several centuries, in Kronstadt for example. In the Soviet period in the north of Russia there two famous (although initially covert) military single-enterprise towns were built: Severodvinsk (the submarine shipyard) and Mirnyi (the space rocket launching centre). The idea of a Russian town based on Christian tradition is closely connected with the idea of a haven city (Yu. Lotman, B. Uspenskii). The main cathedral is situated in the centre of the town which is constructed in a ring formation. It was surrounded by the city wall in medieval times.

Most of the single-enterprise towns in the north of Russia were built in the Soviet period (i.e., Nikel', Monchegorsk, Vorkuta, Kondopoga, Novodvinsk, Koriazhma). They were built in order to enable industrial specialisation of the regions and the towns. In fact this kind of specialisation was held to be pivotal to state socialism, and their building was tightly connected to the general plan of the economic development of the socialist country. At the same time we need to

---

<sup>113</sup> *Trudovaia Koriazhma*, 4 October 2001, no 112, pp. 3,6.

---

take into consideration the changes in the philosophy related to the town in the Communist ideology in general.

The basic change consisted in converting Christianity into atheism. 'Scientific Communism' became a kind of a religion in the traditional consciousness. At the same time, Christian ideas were adopted to a kind of 'new religion' in which ideas of time and space formed part. The idea of a Christian haven was a transformation of space (in the Christian tradition) into time: Communism as a happy future of all nations. In the mass consciousness a contamination of the ideas of Christianity with the ideas of Communist ideology took place.

There were several changes in the system of chronology in Russia. The traditional Russian system of chronology took as its point of departure the moment of the creation of the world. The new system of chronology in Russia (starting with Anno Domini) was introduced in 1700. In Soviet times an attempt was made to change the chronological system again, starting with the Great October Socialist Revolution. The idea of the creation of a new world was expanded to include the philosophy of the town also. The new view was based on the ideas of Thomas More and Tommazo Campanella.

The inhabitants of Koriashma called their pulp and paper mill the 'Father Factory'. Such enterprises are the strongest identity-markers of people living in single-enterprise towns. The single-enterprise town in the Soviet period was created as 'a town of the bright communist future', as 'a garden city'. The image of the Christian temple – as a sacred place, a place for spiritual transfiguration of the people – was changed into the idea of the industrial plant. The industrial plant was made into a place where ordinary people were to undergo a spiritual transfiguration. They were to be transformed into *proletariat*, the main power of the new Communist "religion". Today, the emblem of Koriashma is based on two main images: the church of the local monastery and a roll of paper from the pulp and paper mill.

Koriashma grew up around the biggest pulp and paper mill in the European part of Russia. It was built by enthusiastic members of the Komsomol in the 1960s. This was the period of 'the Khrushschëvian thaw'. People felt that things were going in the right direction. The system had been liberalised after the Stalinist years, and Yuriï Gagarin had conquered space. Young people from different regions of the USSR came to the shores of Vychegda river in order to build 'a giant industry'. Utopian ideas were prevalent, and the idea of the garden city was not forgotten. A city park was arranged near the walls of the pulp and paper mill.

People worked under a slogan reflecting the Soviet mode of production: 'The plan is law, to fulfil the plan is your duty, to overfulfil the plan is an honour'. But there was more to it. The unofficial slogan went like this: 'The plan has to be fulfilled at any price'. The builders of the pulp and paper mill worked ahead of schedule, whereas housing and other infrastructure for the inhabitants lagged behind, reflecting the Soviet preference for production. Further, on several occasions the environmental situation was critical. In the 1990s even the City Park, the symbol of the garden city, virtually died as a victim of pollutants from the pulp and paper mill. After Gorbachëv's 'perestroika' and Gaidar and Chubais' 'privatization' Kotlas pulp and paper mill ended up in the hands of a private company, Ilim Pulp Enterprises. Again an unofficial slogan directed the activities, this time a capitalist one: 'Profit at any price'. For the environment the situation is still not ideal.

---

## 5 Institutions for environmental protection in an industrial town of northwest Russia

*By: Jørn Holm-Hansen, Norwegian Institute for Urban and Regional Research*

Environmental protection is a policy issue in the industrial towns of Russia, as in industrial towns elsewhere. Russian environmental legislation offers a toolbox of policy instruments for use at the local level: environmental fees and fines, Eco-funds, Environmental Impact Assessments and ecological expertise reviews. In other words, there is a political issue and there are policy instruments. However, this does not necessarily result in environmental activities. This chapter aims to pin-point environmental actors and institutions operating locally in Koriazhma, a single-enterprise town in northwest Russia<sup>114</sup>. The facts and analyses in the previous chapters provide background for this discussion.

How are environmental policies rooted in local institutions in industrial towns in Russia? This chapter also analyses the capabilities of these institutions and examines the ways in which the main actors, i.e. polluters, controllers, and potentially concerned citizens, interact. Are they sufficiently independent of one another to really make use of the policy instruments available to them? Are the environmental authorities capable of working with external social networks and actors to implement their policies?

---

<sup>114</sup> For a presentation of a similar issue in Latvia, see Ernšteins, Builevics and Sīle (1999), and Holm-Hansen (1999). For more information on local elites and the independence of institutions in a Russian single-enterprise town, see Holm-Hansen (2001).

## 5.1 Analytical framework

### **Actors and institutions**

This chapter defines 'environmental actors' quite narrowly: the Environmental Committee, the local authorities and the polluting enterprise (pulp and paper mill). Other actors such as the sanitary-epidemiological or meteorological service are also important. The point is to identify actors with a specific stake and defined tasks in relation to environmental issues.

'Environmental institution' is a broader concept. We looked for institutions with a clearly environmental 'job description', like the environmental programme and the Eco-fund. Choosing a single-enterprise town as the site for the present study provides us with a host of institutions. Even the single-enterprise town *per se* is an institution rife with implicit norms and rules of good conduct.

It may be objected that the environmental institutions are identical to the new environmental policy instruments. This is partly true, but 'environmental institutions' and 'environmental instruments' are not completely congruent. The intention of the Eco-fund concept is to set up a policy instrument that helps justify environmental fees and fines by earmarking funds for environmental purposes. Establishing an Eco-fund is, however, tantamount to creating the basis for an institution in the sense that it is a set of rules and norms that influence the behaviour of the participants. At least that is the intention. Other instruments could hardly be analysed as institutions. For instance, the system of levying fines on polluters who transgress the 'maximum permissible discharge' cannot be said to be an institution unless seen in combination with the Eco-fund.

### **The single-enterprise town**

Altogether, there are 75 single-enterprise towns in Russia with more than 10 000 inhabitants and 138 single-enterprise towns with fewer than 10 000 inhabitants<sup>115</sup>. To be classified as a single-enterprise town or, as the Russian expression goes: '*a municipality with a town-constituting enterprise*', more than 30 per cent of the town's workforce must be employed by one enterprise (Iyer 1997). In addition, at least 30 per cent of the engineering, transport and social infrastructure must be in the hands of the enterprise, and no less than 50 per cent of

---

<sup>115</sup> See: Trudovaia Koriashma, 26 III 1998, "Status gradoobrazuiushchego eshchë nado zasluzhit"



---

municipal budget revenues must come from the dominant enterprise (Dregalo and Ul'ianovskii 1999:66 – 67).

We have chosen to analyse environmental actors and institutions and their interactions by making a case study of a single-enterprise town. This type of community clearly illustrates the problems facing former socialist states. Single-enterprise towns provide researchers with abundant material for understanding how state socialism used to work. Keywords are: Preference for production, organisation of the state apparatus by industry, paternalism instead of welfare, de-politicised politics combined with a politicised economy and, not least, the prevalence of multi-functional institutions.

Consequently, single-enterprise towns also help researchers study processes that characterise the *dismantling* of state socialism. Going from state socialism to a market-oriented system requires a more clear-cut division of labour between the institutions responsible for production on the one hand, and for regulation and policy-making in general on the other. These processes are more clearly observable in single-enterprise towns than in towns with a more plural range of actors.

Single-enterprise towns constituted an extreme version of the state socialist system in the sense that the system's emphasis on production left the cornerstone enterprise practically unchecked, perhaps even more so than its equivalents in capitalist societies. Furthermore, the tendency under state socialism was to govern not as the doctrine prescribed, directly through the Party, but through industrial constellations which further strengthened the position of the enterprise in question. Decisions were made as a result of striking a balance between specialised ministries and central planners, a system described as and termed 'centralised pluralism' by Alec Nove in 'The Soviet Economic System' (Nove, 1977).

Paternalism seems to go hand-in-hand with single-enterprise towns everywhere, and socialist states were no exception to this rule. Compared with rural dwellers and the inhabitants of similar-sized towns, the inhabitants of Russian single-enterprise towns are usually well-off. This holds true both for their wage level and general living conditions. This is because the enterprise provided inhabitants with welfare benefits such as flats, kindergartens, cinemas, sports clubs, and holiday centres of high quality (Illner 1992; Shomina 1992; Jacobsen 1999).

In Koriazhma, as in Novodvinsk, the fact that the town was based on the forest industry gave it high status in Soviet policy-making. Wood

was increasingly used to make products as the 20<sup>th</sup> century progressed. Wood has traditionally been an important source of foreign currency for the Soviet Union. A fully-fledged forest-industrial complex developed, consisting of lodgings, sawmills, wood processing facilities, pulp and paper mills and wood chemical plants. The period from 1960 to the 1980s was the golden age of the forest-industrial complex (Lukin 2001:216). It was also the period when Koriashma developed.

One prime indicator of the high standards found in single-enterprise towns is the standard of basic everyday facilities. Water supply into the flats, sewage, waste disposal systems and heating were available to practically all the inhabitants of single-enterprise towns (Arkhangel'skii komitet 1999:57). As illustrated in the table below, the technical standard of local infrastructure tends to be higher when it is owned by the dominant enterprise rather than by the municipality.

Table 5.1 *Percentage of water pipes not complying with sanitary norms and rules (Arkhangelsk oblast):*

Water pipes	1994	1995	1996	1997	1998	1999	2000
Municipal	53.3	52.0	48.9	43.2	43.8	44.1	39.6
Enterprise-owned	38.1	36.7	31.5	31.8	30.5	28.2	27.6

(Source: Tsentr 1997:14 and Tsentr 2001:14)

Although the enterprise-owned water pipes are better, the water in them appears to be of largely the same quality as the water flowing through the municipal pipes (table below).

Table 5.2 *Percentage of water tested in 1996 and not complying with sanitary requirements (Arkhangelsk oblast):*

	According to sanitary-chemical indicators	According to micro-biological indicators
Municipal water pipes	61.0	15.2
Enterprise water pipes	60.0	18.0

(Source: Tsentr 1997:14)

---

### **First set of problems: Differentiation into policy actors and target groups**

Two sets of problems unfold quite clearly in single-enterprise towns. Both are pivotal to the prospects of introducing new environmental policy instruments in particular, and to the prospects of transition/transformation in general. The first set of problems involves the need for differentiation of the multifunctional institutions of state socialism. The second set of problems relates to the need for state – civil society co-operation.

The first set of problems (differentiation) is a point made by Elster, Offe and Preuss (1998:31) in their treatise on transition: *"Much of the ongoing process can actually be conceptualised in terms of the splitting up of encompassing and multi-functional institutional compounds into smaller and more specific units"*.

Differentiation involves the extent to which elites are plural, i.e. diversified organisationally, specialised functionally, and the extent to which they enjoy autonomy from each other and the State. Consequently, differentiation is at the heart of the entire transition process.

The present study has been carried out partly against the backdrop of Claus Offe's metaphorical description of successful transition, or the consolidation of political agency, based on two types of differentiation (Elster, Offe and Preuss 1998: 28). *Vertical differentiation* is achieved when every actor's decision-making is constrained by higher order decision-making rules, e.g. when actors resist the temptation to revise the rules on the basis of short-term needs. *Horizontal differentiation* describes the degree of insulation of institutional spheres from each other. The concept is based on the assumption that state socialism was – or tried to be – monolithic. In the present study on the use of environmental policy instruments, differentiation is a central concept since the introduction of new instruments presupposes actors and institutions that are differentiated both horizontally and vertically, to use the distinction postulated by the three authors.

In our case town, the dominant enterprise used to take care of everything from producing pulp and paper to culture, welfare and, in practice, local government. Now, it is becoming a purely economic institution dedicated solely to making money for its owners. Likewise, the public sector is divided into local self-government and local state units, representing either the federal government or the individual specialised ministry.

Figure 5.1 *The sports palace "Olimp" is owned by the pulp and paper mill*



(Photo: N. Zlobin)

Figure 5.2 *Culture House of the pulp and paper mill*



(Photo: Jørn Holm–Hansen)

For the clarity of the present analysis, it might be useful to divide the actors into two main types. First, 'policy actors', as represented by the environmental authorities, and second, 'target groups', that is, the

---

actors whose activities need to be made more environment-friendly, such as enterprises, farmers and consumers. Modern environmental policy instruments may be described in terms of intake and providing resources (such as money, goods, time and information). The instruments applied by environmental authorities in Russia and other European countries are based on the seemingly obvious assumption that actors try to increase their stock of resources and reduce the risk of having to reduce their resources<sup>116</sup>.

Analysing local institutions in the light of the concepts of policy actors and target groups presupposes a certain differentiation of functions between these actors. For environmental instruments to work, policy actors and target groups must be separate and independent of each other. To what extent is this the case? Can an enterprise openly enter into conflict with a representative of the state authorities on environmental questions? Can the town Environmental Committee challenge the 'almighty' enterprise around which the town was built?

### **Second set of problems: The need for state – civil society co-operation**

New environmental policy instruments are based on the idea that environmental management involves continuous interaction between groups and forces in society, public and semi-public organisations, institutions and authorities, and private actors and interest groups (Sairinen 2000:20). Let us assume institutions have differentiated sufficiently for us to talk about clear-cut policy actors as well as target groups (Klok 1995). How do they relate? Is the policy actor insulated from civil society, or do they co-operate? The second set of problems revolves around state-civil society relations. David Stark and László Bruszt (1998) argue that the predominant models for State-civil society relations after the collapse of state socialism have failed. The neo-liberals that dominated in the first half of the 1990s maintained that the State should withdraw whereas the neo-statists, who gained some momentum the latter half of the decade, recommended that the State be insulated from civil society to avoid being contaminated by vestiges of the old order. Stark and Bruszt direct attention at a third alternative, the State entering into co-operation with civil society. In so doing, they draw on Peter Evans and his seminal studies of the Third World, where he concludes that development relies upon a State which is able to take advantage of social networks. It is the *embed*

---

<sup>116</sup> This way of thinking is described by P.-J. Klok, who terms it "a Simple Model of Human Activity" (Klok, 1995: 22).

*dedness* of the State in its community, not its insulation from it, that promotes development, according to this view. Evans' point (1996a, b) is that development results from synergies at the local level between civil society and the various branches of the State.

In other words, there is no zero-sum game between the State and civil society. With some modifications, Evans' point from the Third World may also be valid for former state socialist countries in Europe, according to Stark and Bruszt. The transformation of these countries is dependent upon co-operation between the State and 'deliberative associations'. This co-operation gives the State what it needs to implement its policies.

Co-operation with deliberative associations results in 'intelligence' or 'situated knowledge – intimate, deeply proprietary knowledge – of present best practices and already-present futures' (Stark and Bruszt, 1998: 123). According to this, implementation requires allies, e.g. partners willing to co-operate. The two authors base their theories on empirical findings from economic politics, but their perspective may also be applied to other policy fields, e.g. environmental politics. For instance, it might be assumed that the capacity of the environmental authorities is dependent upon their embeddedness in their social setting.

Stark and Bruszt argue that former state socialist countries have something to build on. State socialism did not leave behind an institutional vacuum. After all, these societies had been industrialised and had had extensive networks of economic co-ordination that emerged as unintended consequences of attempts to apply scientific principles to the management of a national economy. Negotiations went on locally between managers and informal groups at enterprise level to cope with shortages and bottlenecks, a second economy alleviated allocative distortions, enterprises made informal agreements to fulfil economic plans. Accordingly, there was no vacuum after state socialism, but rather "routines and practices, organisational forms and social ties that can become assets, resources, and the basis for credible commitments and co-ordinated actions" (Stark and Bruszt 1998:128).

Our question is: To what extent do the environmental authorities enter into co-operation with the local community? Are there deliberative associations in Koriashma? Are the practices described by Stark and Bruszt discernible in our case study town? To what extent do the authorities benefit from co-ordinated actions in the sphere of environmental protection?

---

The sections below present the actors and institutions that have a stake in environmental protection in our case town. We will discuss both the sets of problems presented above, i.e. the ones related to differentiation and the ones related to co-operation between the policy actor and target groups.

## 5.2 Environmental actors

Three main environmental actors can be identified in our case town: local state bodies (the Environmental Committee), local autonomous authorities (town authorities), and economic enterprises (the polluter is a huge pulp and paper mill in our case town).

In this context, the Environmental Committee is a policy actor, and the pulp and paper mill a target group. Local self-government is both. All three actors have institutionalised environmental concerns. The State has its environmental expertise located in the Nature Resource and Environmental Protection Committee at *oblast* level, with inspectors working at local level. The municipality has set up its own environmental department. There is an environmental department at the pulp and paper mill. These three environmental actors, under auspices of the State, the municipality and the enterprise, respectively, will be treated below. To what extent does differentiation, as outlined by Elster, Offe and Preuss (1998), shed light on the actual processes? To what extent are the actors able to do as Stark and Bruszt (1998) recommend, i.e. co-operate across the strongly felt State – civil society dividing line?

The institutional underpinnings of environmental efforts are not solely dependent on the environmental actors emphasised in this study (the Environmental Committee, the municipality and the enterprise). Several other institutions have a say, and are prone to support the environment when confronted with other interests. In fact, a host of institutions under public administration have a stake in environmental protection. The Environmental Committee and the municipality serve a co-ordinating function.

Apart from the Environmental Committee, the main environmental policy actors are the:

- Sanitary-Epidemiological Supervision
- Agency for Hydrometeorology and Environmental Monitoring
- Mining and Industrial Inspection

- Fishery Committee
- Water Management Committee
- Committee for Land Resources and Land Use
- Committee for Geology and Use of Mineral Resources
- Agency for Geodesy and Cartography
- Forestry Agency

The Agency of Hydrometeorology (*Gidromet*), which has the task of assessing environmental quality and pollution levels, analyses trends and makes forecasts. The data used is partly *Gidromet*'s own, partly data from the sanitary-epidemiological supervising offices and partly from polluting enterprises' own laboratories.

In former state socialist countries, medical and epidemiological institutions are generally important environmental actors since they focus on detrimental effects on *human beings*. They often play a pivotal role in trying to secure a clean and healthy environment for local inhabitants. The State Sanitary-Epidemiological Supervision (*Gossanèpidnadzor*) must be mentioned as a major actor in environmental matters in Russia. The Moscow-based Institute of Hygiene, among others responsible for stipulating PDK, is another institution under the Ministry of Health that plays an important role in environmental matters. The institute stipulates the maximum permissible levels of payment for using nature.

Since 1993, the oblast-level offices of the *Gossanèpidnadzor* have issued regional health reports<sup>117</sup>. These reports contain a surfeit of information on the environmental situation in towns and cities, much of which is directly related to the everyday problems of their inhabitants<sup>118</sup>.

The *Gossanèpidnadzor* is responsible for the so-called socio-hygienic aspects of the town environmental programme. It is entitled to levy fines for violations of regulations related to working conditions and hygiene. The money goes into the town's social welfare fund.

---

<sup>117</sup> Interview with the head of the Koriashma *Gossanèpidnadzor*, 28 May 1998.

<sup>118</sup> Tsentr gosudarstvennogo sanitarno-èpidemiologicheskogo nadzora v Arkhangel'skoi oblasti (1997): Regional'nyi doklad o sanitarno-èpidemiologicheskii obstanovke v Arkhangel'skoi oblasti v 1996 godu, Arkhangel'sk



---

Furthermore, Gossanèpidnadzor monitors the environment. In and around Koriazhma, there are eight monitoring points under its auspices (Yudakhin, Davydov and Ivanov 1998:9).

### 5.3 The Environmental Committee

Koriazhma's Environmental Committee has taken the first set of problems (differentiation) seriously. The committee has emphasised its role as representative of the State, which its director explains by citing the need to insulate the committee from the dominant pulp and paper mill. In the light of this, the second set of problems (co-operation) was addressed. The Environmental Committee has entered into close co-operation with the local community, and not least with the polluting enterprise.

#### **The current status of the Environmental Committee**

For most of the period covered by the present study, 1997 to 2001, decentralised units of the central environmental authorities operated at local/town level in Russia. However, on 17 May 2000, a presidential decree was issued 'On the structure of federal bodies of the executive authority'. The decree implied a massive reorganisation and streamlining of the state bureaucracy. The State Committee on Environmental Protection (Goskomèkologiia) was abolished. Its functions were assigned to the Ministry of Natural Resources. This was also the case at the regional level with the former regional committees of environmental protection. They were dissolved and their functions were taken over by the regional committees of natural resources. The committees were also abolished at the local level, although in many towns the committees became municipal.

The dismantling of a separate environmental sector in Russia's public administrative structure did not come like a bolt out of the blue. Throughout the latter half of the 1990s, the environmental sector had seen substantial cutbacks as part of the streamlining of the public administration in general. The central apparatus of the Goskomèkologiia had 630 staff members in 1994, but only 330 by 1999. The number of state employees in the 'territorial units' of the Goskomèkologiia diminished from 11 624 in 1994 to 5 400 in 1999 (Goskomèkologiia Rossii, 2000).

The weak position of environmental protection as a policy field was lamented by the chairman of the Goskomèkologiia, V.I. Danilov-Danil'ian, in his annual statement in February 2000. He predicted that

environmental protection was still going to become a national issue. The only way to make environment stronger as a policy field was to strengthen non-state ('social') organisations. Apparently, the chairman of Goskomökologiia was thinking in terms of alliances and networks across the dividing lines between the State and civil society. As mentioned above, this way of thinking had been suggested earlier by social scientists like Bruszt and Stark (1998), and Evans (1996a, b). In fact, the dismantling of the Goskomökologiia and its committees led to a strong NGO protest nation-wide. There was a feeling among environmental activists that they had lost 'their part' of the State, although prior to the decree, they had been very critical of the environmental authorities for being too 'soft'.

### **The experience of the Koriashma Environmental Committee**

Until 1998, the Environmental Committee was the main environmental policy actor in Koriashma, and it was a respected one. The Koriashma Environmental Committee gained a reputation oblast-wide throughout the 1990s for being efficient. Its head was held to be strong and devoted to 'the cause'. She made use of the committee's status as a decentralised unit of the federal environmental authorities, i.e. of state power.

In fact, the Koriashma Environmental Committee was abolished as early as in 1998. The committee was actually abolished prior to the 17 May 2000 decree due to the rule that the scope of the activities of federal units at local level was restricted to strictly federal problems. This made it financially unfeasible to maintain environmental committees at the local level, even in a highly polluting town like Koriashma.

Having field offices of federal-level authorities was considered useful in single-enterprise towns since in most cases, e.g. the town in the present study, where the dominant enterprise was of federal importance and no entity without proper, federal-level backing would dare to say anything against it. Likewise, to be independent of local power structures, practically all of which evolved around the dominant enterprise, environmental officers need to be attached to power structures higher than the local level. Large polluting enterprises exercise more caution in dealing with federal institutions than with those at local level which, for a variety of practical intents and purposes, are dependent upon the same enterprises.

The committee in the present case town stressed its status as a state unit far more than its counterpart in the otherwise very similar Novodvinsk, another single-enterprise town built around a pulp and

---

paper mill<sup>119</sup>. Insulation from the surrounding community was held to be useful, although it may be asked whether the practices of the committee were commensurate with that idea.

The fact that the local Environmental Committee was abolished did not necessarily mean that the environmental authorities lost any independence. Environmental authorities remain at oblast level, and they are still decentralised. Now the Oblast Committee for Environmental Protection and Natural Resource Use represents the State in environmental matters vis-à-vis the pulp and paper mill in Koriashma. Oblast-level environmental authorities played a significant role at local level earlier as well. What worries several Russian environmentalists now is the fact that the environmental authorities were merged with the natural resource use authorities.

Five people used to be employed by the environmental committee, which also covered the activities of the local Eco-fund (the committee head also served as executive director of that fund). Two of the five employees were state inspectors, one was an accountant for the Eco-fund and one was technical staff. There used to be more employees when they had their own laboratory. However, in the mid-1990s these services were transferred to the PU ZhKKh, the enterprise for municipal services.

The Environmental Committee was well prepared to deal with enterprises, as its employees were mainly technologists. In fact, Environmental Committee officers in single-enterprise towns were frequently recruited from the technological departments of the enterprise. This was the case for the head of the Environmental Committee in the present case town. The Environmental Committee used to work with the Department of Environmental Protection at the pulp and paper mill, as well as with the chief engineers and directors. The close relations between the local technologists, all of whom were or had been employed by the pulp and paper mill, may have pierced through some of institutional insulation between the committee and the enterprise, which would otherwise have been ensured by the committee being a state unit.

Although the Koriashma Environmental Committee was abolished, the people who used to work there still work with environmental issues. The well-respected head of the committee still works as chief inspector, but now in the framework of a committee covering all seven municipalities in the Kotlas region. The committee is under the

---

<sup>119</sup> For more on Novodvinsk see Lukin, Mikhailov and Polovnikova (2000).

Regional Committee of Natural Resource Use and Environmental Protection, meaning it is still federal. It has a staff consisting of eight employees, i.e. one head and one inspector per municipality.

In the town of Koriazhma, four people still work with environmental issues: the previous head of the Environmental Committee, who still has her office in Koriazhma, one municipal employee responsible for the environment and two employees of the regional environmental fund. Ironically, they all have offices in the same wing of the town hall where they used to be when they were all working for the Environmental Committee. "We are like five fingers, whereas we ought to be a clenched fist", said the former head of the Environmental Committee.<sup>120</sup>

The Act related to Environmental Protection (1991) equips the regional committee with a set of instruments that enables them to play different types of roles locally, all of which are aimed at promoting environmental interests. The committee shifts between its roles as controller (with legal powers), source of funding (through the Eco-fund), and source of inspiration (e.g. through the town environmental programme).

### 5.3.1 The Environmental Committee as controller

Russian environmental standards are strict and the Environmental Committee in the case town has a reputation for being a sharp-eyed *controller*. When carrying out its control functions, the committee has several financial instruments at its disposal.

As a basic rule, in Russia, all use of nature and natural resources, including intake as well as emissions, is to be paid for. The system of payment is established by the Act related to Environmental Protection of 1991, but was introduced as early as in 1988 as a part of *perestroika*. Like all other industrial enterprises in Russia, the pulp and paper mill in the case town must calculate the cost both of using natural resources and of exceeding the maximum permissible levels of pollution. Russian polluters are charged according to the amount of pollution they generate. The pollution fees (emission limits and rates to be paid for transgressions) are fixed by agreements between the enterprise and the regional environmental committee.

---

<sup>120</sup> Interview with (former) head of the Environmental Committee in Koriazhma 7 December 2001. (Also interviewed 22 October 1997 and 28 May 1998).

The concept of PDK prevails in Russian environmental literature. PDK is the Russian abbreviation for 'maximum permissible concentration'. For each polluting substance, a PDK is stipulated by the Institute of Hygiene in Moscow, part of the sanitary-epidemiological structures (Gossanëpidnadzor) under the Ministry of Health. PDKs are used to protect human health and are based on sanitary norms. PDKs have been established for chemical substances, micro-organisms and other biological substances, and indicators have been devised for air, water and soil. There are two PDK standards. First, the maximum one-time PDK stipulates what discharge level a human being can tolerate over a short period without suffering harm. Second, the average 24-hour PDK stipulates what discharge level an organism can tolerate over time. For discharges into the air, PDKs have been stipulated for 479 harmful substances, for water, there are PDKs for 1925 substances and for soil 109 substances (Bogoliubov 1999:103).

In addition to PDKs, there are PDVs and PDSs, denoting 'maximum permissible discharges' into air and water, respectively. There is a fundamental distinction between the two types of maximum level. Whereas PDK refers to the *concentration* of polluting substances (gram/per m<sup>3</sup>), PDV/PDS denote a limit on the *actual discharge* (gram/second). The PDK is there basically to make sure *humans* are not harmed whereas the maximum permissible discharges, PDV, for emissions into the air and PDS for emissions into water, aim at preventing *harm to nature*.

The PDVs and PDSs for chemical substances are set by the environmental authorities, and by the sanitary-epidemiological authorities for micro-organisms and biological substances. Controls are carried out by the environmental authorities and fines are calculated on the basis of PDV/PDS, which are stipulated on the basis of the PDK. The PDK itself has been criticised as being draconian, and in fact they do not differ from region to region. There are extreme variations between Russian regions in terms of topography, climate and geography. There are arguments in favour of adapting the maximum permissible levels to local conditions. Today a lot of environmental officers and experts in several regions spend their time reducing pollution that does little harm in its actual context (Zeleznev and Zelezneva 1998).

For each enterprise, the regional environmental committee stipulates PDVs/PDSs for each pollutant. The PDVs/PDSs are set in co-operation with the ecological service unit in the polluting enterprise and the Environmental Committee in the town. The levels are confirmed by the Environmental Committee at regional (i.e. Federation subject) level. Where an enterprise's emissions exceed the

PDV/PDS, rates are five times higher than the basic rate. PDVs/PDSs are stipulated on the basis of scientific knowledge regarding what nature and the human organism can tolerate. Thus they are well suited for an ideal situation in which enterprises run smoothly. There is, however, also the question of what enterprises can tolerate. As a result, crisis-ridden post-Soviet enterprises have been given so-called 'temporary compliance levels' above the PDV/PDS norms. When the temporary level is transgressed, the penalty is 25 times the basic rate.<sup>121</sup>

Kjeldsen (2000) concludes that the system did not offer sufficiently strong incentives until 1994 when a Pollution Charge Exemption Scheme was set up. The scheme allows an enterprise to apply for a maximum 50 per cent reduction in payment on the condition that the enterprise spends the same amount of money on environmental measures. In addition, the Eco-fund may help co-finance projects. But the level of the charges seems to be too low to influence polluters' behaviour. In 1997 this system was applied in Koriazhma with promising results. The pulp and paper mill was fined more than 100 million new rubles due to pollution from one of its boilers. This sum was converted to an environmental project to build a new boiler based on clean technology. The new boiler reduced discharges by 100 per cent.<sup>122</sup>

In January 1998, the Arkhangelsk regional authorities decided to make the municipalities temporarily responsible for reducing the charges imposed on the pulp and paper mills. In Koriazhma, this meant that the pulp and paper mill, the municipality and the local Environmental Committee agreed that the mill would carry out environmental improvements for the same amount of money it otherwise would have spent on fees.

In the case of non-payment, the Environmental Committee had the authority to close the enterprise. In Koriazhma, the level of pollution would have permitted such a solution at times, but according to the head of the Environmental Committee, that would have been impossible due to the enormous importance of the mill for the town and its inhabitants. According to the head, generating more interest in

---

<sup>121</sup> For a detailed description of the Russian system of environmental charges, see Kjeldsen, 2000. Kjeldsen's article is based on field work in Iaroslavl'.

<sup>122</sup> Interview with environmental inspector and former head of the Environmental Committee in Koriazhma, 7 December 2001.

---

technological modernisation among the directors of the enterprise was a better strategy<sup>123</sup>.

The Environmental Committee performed its role as a controller somewhere between the strict provisions of the law and the most liberal interpretations of the opportunities for making exceptions. This meant the committee maintained a dialogue with the pulp and paper mill. In this dialogue the local committee, as long as it existed, worked closely with the regional committee and commanded respect because it was a unit of the federal State Committee on Environmental Protection.

Not only in practice, but also in explicit terms, the Environmental Committee renounced the use of the strictest methods of control. Instead, it struck deals, reached understandings and made agreements with the polluter. In this way, the Environmental Committee was able to make environmental concerns take root on a small scale. The effects of 'municipalisation' and the fragmentation of the environmental sector following the decree of 17 May 2000 remain to be analysed. According to people working in the environmental sector, the adaptive approach applied by the committee risks being overly adaptive when the committee is under local control.

### 5.3.2 The Environmental Committee as source of Eco-funding

In addition to being a controller, the committee is a *source of funding*. This function is closely related to its role as controller since the funds gathered by collecting fees and levying fines end up in an environmental fund, the *Eco-fund*, which provides the environmental authorities with a certain amount of earmarked means. This turned out to be one of the main environmental instruments used in Russia throughout the 1990s, and is considered by far the most effective of the economic tools. Formally, it is independent of the environmental committees. Eco-funds exist at central/federal level and regional/Federation subject level, as well as at local level. Eco-funds used to be among the so-called extra-budgetary funds, meaning their money is earmarked and out of reach of the politicians who set up central, regional and local budgets. In 2001, the Eco-funds, like other formerly extra-budgetary funds, were incorporated into the budget.

---

<sup>123</sup> Interview in Koriashma May 1998 and Trudovaia Koriashma 27 I 1998, "Uvazhat' sebia zastavit matushka – priroda".

In the case town, the local Eco-fund has been crucial for the existence of several environmental projects. As a result of the reorganisation of the environmental sector, Eco-funds at local level were abolished at the same time as the local environmental committees. The oblast-level Eco-funds still exist, although not as an extra-budgetary source of funding. Local environmental projects have to be financed through the oblast Eco-funds. In fact, the two employees of the former local Eco-fund still work in Koriazhma, but now as employees of the oblast Eco-fund. The Federation subject receives 81 per cent of the 'revenues' of the Eco-fund, while the federal level receives 19 per cent.

How do the Eco-funds work? In Koriazhma, as elsewhere, the money collected in the fund is divided between mitigating measures and projects that aim at helping polluters improve their performance.

Let us take 1998 as an example. The project receiving the largest amount of rubles that year was the establishment of a landfill for household waste. Of the seven million rubles in the fund in 1998, four million rubles were set aside for the landfill. (In 1999, a total of 6.6 million rubles was set aside by the Eco-fund for this purpose.) When completed, this project will give Koriazhma with the only landfill of this kind in the oblast. The municipality is the developer, and the Environmental Committee is co-sponsor.

Among the projects financed by the Eco-fund:

- ultrafiltration installation (with Institute of Northern Ecological Problems)
- establishment of Siberian pine vegetation
- a specially protected area close to the children's hospital
- draining the forest close to the town cemetery

The board of the Eco-fund in Koriazhma has applied a wide definition of environmentally relevant projects while not forgetting about more classically nature-oriented projects like the planting of Siberian pine. In 1996 the Koriazhma branch of Pomor University could not pay its electric bills to the municipal housing enterprise. In 1996 the municipal enterprise and the Eco-fund went together to waive the debts, and they did the same thing in 1997<sup>124</sup>. Is this environmental protection? Well, the local university branch teaches subjects such as ecology and chemistry, which are considered to have positive effects

---

<sup>124</sup> See Kotlaskii Bumazhnik 13 IX 1997, 'Zdes' iunye litsa, molodye golosa'.



---

on environmental awareness and the capabilities of young professionals in the local area.

Money from the Eco-fund has also been used to improve public health, e.g. by providing some support to sanatoriums. In Russia, health and environment are closely associated in the minds of the people<sup>125</sup>. Besides, as we saw above, the sanitary-epidemiological sector plays an important role in environmental protection.

The debts of the pulp and paper mill to the Eco-fund have partially been repaid by letting children swim for free in the enterprise-owned swimming pool. This kind of non-monetary swapping of debt is also used elsewhere in Russia, for instance in Iaroslavl' (Kjeldsen, 2000). The Eco-fund supports sewage projects, e.g. one for the local police whose huge building was without sewage disposal. The Sanitary Service, which has a strong position in Russia, has the right to fine polluters, but the service has no earmarked funding. Accordingly, the Eco-fund also gets involved in fields otherwise under the auspices of the Sanitary Service.

One might object that environmental interests are not very well defended when the Eco-fund is used to pay electric bills and run swimming pools. On the other hand, these practices may help strengthen the environmental cause since they link environmental issues with social welfare issues. The practices may help local environmental authorities as well as the environment by encouraging issues to take root locally. As was the case when the Environmental Committee acted as a controller, it performs its function as a source of funds in a pragmatic, adaptive way. And the pragmatic approach helps it gain social acceptance even if it is at the expense of achieving purely environmental gains.

However, as indicated above, the Eco-fund also deals with polluters. The Eco-fund can offer incentives for polluters to improve their cleaning technologies. The pollution charge exemption scheme described above means that the Eco-fund can in fact swap debts on the condition that the polluting enterprise carries out environmental measures for the sum it otherwise would have had to pay the Eco-fund. For instance, in 1999 a total of 15 projects carried out by and in the pulp and paper mill were financed or co-financed by money that

---

<sup>125</sup> An illustrative example is offered by delegate to the Oblast assembly from Koriazhma, E. Zaruma, who accuses the people responsible for environmental protection in the regional administration for not being concerned about people's health. Instead they are after the money in the Eco-fund, he says. See: Volna, 13 XI 2001, "Oblasti nuzhno pravitel'stvo".

would otherwise have ended up (temporarily) in the Eco-fund. In addition, the Eco-fund financed one project in the wastewater treatment plant owned by the pulp and paper mill directly<sup>126</sup>.

### **Regional level**

In 2001, Eco-funds ceased to exist as independent, extra budgetary, organisations. Polluters' payments will henceforth be incorporated into oblast budgets<sup>127</sup>. The Eco-funds continue to exist, but they deal exclusively with technical tasks<sup>128</sup>.

It is no longer up to the Eco-funds themselves at oblast or local level to decide what to spend money on. Spending is now a political question under the aegis of the oblast-level Assembly of Deputies. This means the Eco-fund as a policy instrument has changed hands from people who deal with the environment on a professional basis to democratically elected members of the Oblast Assembly. The people who used to serve on the boards of regional and local Eco-funds mainly represented environmental *policy actors*. The Eco-fund was an important instrument in the hands of the policy actors, who sometimes defined the environment very widely. From now on, the application of the Eco-funds will be a purely political question. From the perspective of transparency and democracy, this is a step forward, but that does not necessarily enhance the policy instrument. Nor will it necessarily benefit the environment.

Yet an element of earmarking still remains. In the Arkhangelsk region, total Eco-fund funding is divided 40/60 between environmental measures at oblast and local level, respectively. It was the task of the oblast administration to present an environmental programme for 2001, but it proved difficult to distinguish between environmental and other kinds of projects. The Oblast Assembly, whose task it is to adopt the programme, could not agree on how to divide the spending between industrial towns and other parts of the region. After all, the industrial towns are by far the largest contributors to the fund. On the

---

<sup>126</sup> Ëkologicheskaja programma MO "Gorod Koriazhma" na 1999g. Reshenie ot 2 sentiabria 1999 No. 234.

<sup>127</sup> This was established in an oblast-level act "On the oblast budget for 2001". Section 45 of that act stated that the revenues in question were based on "payments for emissions into the air above as well as below the standards, emission of harmful substances, waste disposal and other harmful impacts on the environment".

<sup>128</sup> According to a resolution (postanovleniie) by the Arkhangelsk oblast administration (of 25 April 2001, no. 215), the Eco-fund is a "regional-State" issue.

other hand, environmental problems, e.g. lack of clean drinking water, is a serious problem in the countryside. In connection with the same issue, a controversy arose over a proposal to let the polluting enterprises keep more of the environmental payments without circulating the money through the Eco-fund and back again to environmental measures in the enterprise<sup>129</sup>.

The controversy was triggered by diverging ideas on how the money should be spent. Two main positions were discernible: one favouring distributing the money among environmental projects all over the Arkhangelsk region, and a second position that wanted to let polluters make environmental improvements rather than pay into the Eco-fund.

The first position was supported by the oblast administration, which wanted a mere 30 per cent of what the pulp and paper mills pay to the Eco-funds to be refunded in the form of environmental measures under the oblast or town environmental programmes. Deputies from the three industrial towns in the region, Koriakhma, Novodvinsk and Arkhangelsk, fought for the second alternative, suggesting that 60 per cent of what is paid by a given municipality be earmarked for use in that municipality<sup>130</sup>.

Proponents of the first position argued that polluters should remedy the harm they have caused. In the case of Arkhangelsk oblast, this means the pulp and paper mill should pay for curing people who have fallen ill due to pollution. That could be done by spending money from the Eco-fund on specific healthcare programmes. For instance, the vice-head of the Arkhangelsk oblast administration suggested supporting prophylactic measures such as immunisation programmes for children growing up in polluted areas. A deputy from a remote part of Arkhangelsk oblast argued that money should be spent on a clean water supply. In her home municipality, there were almost no polluting activities, and getting back 60 per cent of what was paid in would translate into practically nothing. Besides, she argued, the drinking water in her town comes from the Northern Dvina River which is highly polluted by the Kotlas Pulp and Paper Mill in Koriakhma. She was therefore opposed to the idea of returning the money collected from polluters back to their host municipalities. However, the vice-chairman of the oblast Environmental Committee, A. Miniaev, defended the second position, that of spending money in the municipalities where payments were generated. He even argued

---

<sup>129</sup> See: Volna 24 IV 2001, "Kak razdelit' èkologicheskii pirog".

<sup>130</sup> See: Pravda Severa, 25 IV 2001, "Deputaty osvoili èlektronku, no zabuksovali na èkologii".

that 20 – 25 per cent of the means the polluters were required to pay to the Eco-fund should stay in the enterprise for environmental measures without being circulated through the Eco-fund. His argument was that Eco-funds are currently the only economic mechanism that offers environmental improvement incentives for polluters<sup>131</sup>.

Interestingly, the Oblast Commission on Environmental Protection is headed by V. Krupchak, who is elected from Novodvinsk, and Evgenii Zaruma, from Koriashma. In other words, the two heads of the environmental commission represent the two biggest polluting towns in the region. As for Krupchak, he is the main owner of the pulp and paper mill in Novodvinsk and owns a lot of other valuable assets in Arkhangelsk. In other words, it was hardly surprising that the commission suggested that a 60 per cent share of environmental payments be set aside for use in the municipality of the paying enterprise.

The town-level environmental programmes have been established by the local government with the participation of various departments of the oblast administration. The programmes are run by the Oblast Committee on Environmental Protection<sup>132</sup>. The oblast committee, which is administrative, must not be confused with the oblast commission, which comprises the deputies.

### 5.3.3 The Environmental Committee as source of inspiration: the environmental programme

In its role as a *source of inspiration*, the Environmental Committee applies softer methods than those used when performing its role as controller or funder, and it works more closely with the local self-government. Here, its main tool is the town's ecological programme, which contains a list of the most important environmental measures. The list is further elaborated upon by the Environmental Committee, and then confirmed by a resolution handed down by the head of administration. In Koriashma, the mayor is also the head of administration. As part of his annual report to the town дума, the mayor reports on the activities mentioned in the environmental programme<sup>133</sup>.

---

<sup>131</sup> See: Volna 24 IV 2001, "Kak razdelit' èkologicheskii pirog".

<sup>132</sup> The committee was established by oblast level Act No. 15-3-03 of 20 February 2001 "O skheme upravleniia Arkhangel'skoi oblast'iu".

<sup>133</sup> See for instance: Munitsipal'nyi vestnik, No 6 (aprel') 1998.

The programme is divided into seven sections: air, water resources, land, vegetative life (including forests and the urban environment), ecological control, public health and ecological education. Interestingly, all environmental projects are included in the programme, regardless of how their source of funding. Even projects financed by the pulp and paper mill are included, e.g. the modernisation of parts of the most polluting production technology. These are, in fact, the most ambitious projects listed in the programme. Other projects are typically jointly financed by the Environmental Fund and the town budget. This applies to projects aimed at modernising municipal infrastructure (e.g. wastewater and household waste treatment) as well as projects concerning parks and vegetation in the town.

In 1997 the environmental programme cost 32.5 million rubles, and in 1999 the cost was 37.3 million rubles. Most of the truly expensive projects involve the pulp and paper mill. In 1997 the main projects were the reconstruction of one of the boilers in the mill (air), the building of a household sewage unit in the wastewater treatment plant of the pulp and paper mill (water) and preparations for the establishment of a landfill (soil). In 1999 the main focus was on non-chlorine bleaching.

The items in the programme are not always implemented on time. For instance, the 1999 annual progress report on the programme showed that nine of the 15 projects involving the pulp and paper mill had yet to be initiated. Nevertheless, some 37 295 000 rubles were spent on projects that were started, continued or completed by the pulp and paper mill<sup>134</sup>.

### **Summary: The Environmental Committee**

We have seen what Offe, Elster and Preuss described as a "splitting up of encompassing and multi-functional institutional compounds into smaller and more specific units", but we have also seen tendencies in the opposite direction. In fact, one may speak about a backlash into re-establishing 'multi-functional institutional compounds'. Since the late 1980s, the environmental sector has managed to gain ground within the Russian state apparatus, also at town level. What used to be an industry-related concern has been singled out as a separate activity: environmental protection. Locally, we observed an Environmental Committee able to assert itself. The changes introduced by the

---

<sup>134</sup> Vypolnenie ékologicheskoi programmy MO "Gorod Koriashma" na 1999g. (Issued by the Department of Environmental Protection on the town administration for the mayor and the chairman of the permanent commission on social affairs of the town duma).

presidential decree of May 2000 have reversed the tendency towards a specific unit working with and for the environment. Environmental protection has now been merged with nature resource use.

As for the second question, i.e. co-operation between the State and civil society, the Environmental Committee seems to have played on this deliberately. The case town showed no tendency towards 'antiseptic insulation' of the state authorities (Environmental Committee) from the community (the polluting enterprise). This is true despite clear statements from the head of the Environmental Committee and her reputation in town for running the committee as an impervious and unbending representative of the environmental cause as defined by the State Committee for Environmental Protection.

To sum up, the Environmental Committee rarely took advantage of economic instruments, although there was one example of a very successful application of the debt swapping mechanism introduced in the mid-1990s. In fact, the system of environmental charges paved the way for extensive co-operation between the policy actor (the Environmental Committee) and the target group (the pulp and paper mill). This holds true for the process of setting maximum permissible levels, the system of charge exemptions and the ways in which the actual fines are established. Through the Eco-fund, the committee took advantage of the funds collected in a low-scale and low-key manner when communicating with the local population through the environmental programme. All in all, the Environmental Committee was able to gain a foothold by asserting itself cautiously, and seeking adaptation, co-operation and communication with the community. We observed more embeddedness than institutional insulation.

## 5.4 The municipality

The municipal sector is organised differently from country to country, so it is no surprise that municipal environmental policy responsibilities vary as well. Nonetheless, in most European countries municipalities are eligible to apply at least one of the following instruments: environmental protection institutions, financial instruments, environmental control and/or land use planning. In other words, municipalities are 'policy actors' in one sense or another. In addition, they are 'target groups'. In their capacity as owners and managers of large municipal enterprises responsible for infrastructure, e.g. wastewater treatment plants, heating stations and landfills,

municipalities are among the actors whose actions are supposed to be modified by the new environmental instruments.

Figure 5.3 *Public transport is run by the municipality*



(Photo:Jørn Holm–Hansen)

'Municipality' is a broad concept. In this context, it includes the municipal council, municipal administration and municipal institutions, as well as the enterprises under them. As noted above, the fact that the Environmental Committees used to belong to the state structure, making them independent of the local powers-that-be, was considered a great advantage because they could pressure local polluters. This point of view testifies to a certain lack of confidence in local self-government and its ability to pursue policies based on established principles and longer term goals. Nevertheless, in the Russian system, the municipality is an environmental actor, deriving its authority in the field both from the Act related to Environmental Protection (1991) and the Act related to Local Self -Government (1995). Section 6 of the latter law lists the policy fields under the jurisdiction of the municipality. Several items on the list refer to environmental issues:

- Land use planning and building
- Land use control

- Regulation of water use and use of minerals for activities of local importance
- The organisation, maintenance and development of municipal energy, gas, heating, water and sewage disposal services
- Heating for the general public and municipal institutions
- The use and processing of household waste
- Participation in environmental protection on municipal territory

In other words, the municipality is a policy actor that supports the Environmental Committee in its endeavours to pursue environmental policies. But the municipality also has additional functions that make its role dual. As owner and manager of municipal infrastructure, e.g. wastewater treatment plants, heating stations and sewage disposal facilities, the municipality is a major polluter and target group for the environmental authorities. This duality of roles (policy actor and target group) is clearly observable in our case town.

Since Russian municipalities are governed by elected councils, the way they carry out their duties as policy actors and target groups may ultimately be influenced by the local inhabitants. In Koriashma, people are concerned about the environment, but apparently they do not consider environmental problems a nuisance to themselves personally. An opinion poll carried out in Koriashma in 2001 showed that the environmental problems were the main problem for the town, but that each respondent ranked these problems after six other problems at the personal level. On the other hand, health (and safety) was identified as the main individual problem. The close links between good health and low pollution make it tempting to interpret the opinion poll as reflecting clear concerns among local residents for the well-being of man and nature.



Table 5.3 *Problems, by order of importance*

'Problem for the town'	'Problem for me personally'
1. environment	1. safety and 1. health
2. employment	
3. security	3. alcoholism
4. low pay,	(-)
5. alcoholism, drugs, health	(-)
6. (-)	(-)
7. (-)	7. environment

Source: Trudovaia Koriazhma, 19 October 2001 'Sprashivaiut – otvechaite!'

#### 5.4.1 The local self-government of Koriazhma as a policy actor

Although Russia has considerable expertise in the field of environmental protection, it was only in the late 1990s that towns of Koriazhma's size established special municipal committees to deal with the environment. In 1998 the issue was discussed twice in the town council of Koriazhma, and a committee was appointed<sup>135</sup>. The point of view advocated by the mayor of Koriazhma was that the self-government ought to have its own departments on all issues addressed by state bodies. Hence, a municipal Department of Environmental Protection under the town administration was established as a parallel to the de-centralised Environmental Committee in the hands of state authorities. The department is manned by one person, a former inspector with the Environmental Committee.

The Municipal Department of Environmental Protection is accountable to the mayor, vice-mayor and chairman of the Committee on Municipal Property. Its activities are guided by decisions made by the regional assembly and the town дума. The department is to work with the Environmental Committee within a unitary system of environ

<sup>135</sup> See, for instance: Trudovaia Koriazhma, 13 January 1998. In the overview of the agenda for the upcoming meeting of the town council, it was stated that one of the vice-mayors responsible for local self-government issues was going to speak about the introduction of a Department of Environmental Protection "in the structures of the town administration".

mental protection at the local level. The department is in charge of co-ordinating the environmental activities of enterprises in the town (the main instrument here is the environmental programme). It makes decisions on the need for ecological expertise in respect of planned construction or reconstruction projects. The department also prepares resolutions to be made by the town дума in the sphere of environmental protection. As mentioned above, in 1998 the local self-government was assigned an important role in the scheme for environmental charge exemptions for the pulp and paper mill.

There was a risk of duplicating the activities of the Environmental Committee. For instance, like the Environmental Committee, the Department of Environmental Protection co-ordinates the activities of the environmental services of the enterprises in town, irrespective of their form of ownership. Furthermore, the Department is entitled to check the environmental performance of all the enterprises in town and it licenses certain types of nature use, including emissions of harmful substances<sup>136</sup>.

Since the dismantling of decentralised environmental state bodies at town level (the 17 May 2000 decree), local environmental tasks have been divided between the Department of Environmental Protection and the Environmental Committee at a higher, i.e. regional, level.

In late 1999, the town administration initiated several measures to prevent mercury pollution<sup>137</sup>. This may illustrate how the Department of Environmental Protection works. With two laws in hand, i.e. the Environmental Protection Act and the Act related to Waste from Production and Consumption, the Department set out to get rid of the mercury from used luminescent lamps and instruments containing mercury.

Step One: Make an inventory of all items containing mercury (copy of inventory was to be submitted to the Department of Environmental Protection by 20 January 2000).

Step Two: Prohibit the deposit of mercury in the landfill.

---

<sup>136</sup> Decree on the department for environmental protection of Koriazhma town administration, in Russian: Polozhenie ob otdel'noy okhrany okruzhaiushchei sredy administratsii goroda Koriazhmy (21 December 1998).

<sup>137</sup> Decree on the prevention of pollution from metallic mercury (Rasporiazhenie o predotvraschenii zagriazneniia okruzhaiushchei sredy metallicheskoj rtut'iu" (15 December 99).

---

Step Three: Recommend punishment for those responsible for the illegal disposal of mercury.

Step Four: Recommend that enterprises ensure mercury be recycled by reliable firms (copy of agreement between enterprise and firm to be submitted to the Department of Environmental Protection by 20 January 2000).

Step Five: Strengthen the municipal enterprise's (PU ZhKKh) control of the material deposited in the landfill and refuse to accept items containing mercury.

Step Six: Step up controls for the collection, use and disposal of items containing mercury. The Sanitary-Epidemiological Centre, the Environmental Committee and the Department of Environmental Protection are responsible for controls.

The overall control in respect of this action plan (although it is not called that) is the responsibility of the head of the Department of Environmental Protection. In all, 82 enterprises were contacted, but only 28 submitted the required information on time. Large enterprises like the pulp and paper mill, the municipal *zhilkomkhoz* enterprise (PU ZhKKh), the chemical factory and the hospital complied with the decree.

To sum up, local self-government was assigned numerous environmental tasks in the latter half of the 1990s. It is frequently incumbent upon local self-governments in single-enterprise towns to execute the wishes of the dominant enterprise, and environmentalists fear enterprises will exercise more influence on environmental policies<sup>138</sup>.

#### 5.4.2 Local self-government as a target group

Municipal enterprises are responsible for the routine operation of basic infrastructure that has an impact on the environment, e.g. sewage systems, water intakes, wastewater treatment plants, heating (boilers and pipes) and waste disposal. Consequently, municipal enterprises play an important role in implementing environmental strategies in Russian towns. For instance, the modernisation of infrastructure being carried out by municipal enterprises has a strong impact on the environment.

---

<sup>138</sup> Such fears were observable among environmental inspectors in Koriashma.

Through its management of municipal enterprises, the municipality of Koriazhma is a target group for the environmental policies pursued by the policy actor. Municipal enterprises are major actors in Russian environmental policies. They control large-scale infrastructure that has considerable impact on the environment.

Municipal services in Russia are defined as:

- Heating
- Supply of cold water
- Supply of hot water
- Sewage
- Waste disposal
- Supply of gas and fuel (for the private sector)

To fulfil these duties, Russian municipalities have their own *zhilkomkhoz* enterprises for housing and the municipal economy<sup>139</sup>. The *zhilkomkhoz* enterprise in Koriazhma employs a total of 800 people<sup>140</sup>. The inventory below lists the different kinds of infrastructure in the hands of the municipal enterprise:

- 220 blocks of flats
- 23.5 km of heating pipelines
- 40 km of water pipes
- 63 km of external sewage drains
- 40 km of electrical grids
- 45 km roads
- 466 square metres of parks, lawns, public squares
- Public bath and laundry facilities
- Car and bus parking (90 units)

---

<sup>139</sup> In Russian "Proizvodstvennoe upravlenie zhilishchno-kommunal'nogo khoziaistva (PU ZhKKh)

<sup>140</sup> See, Kotlasskii Bumazhnik, 17.I.1998, "Tarify i rify zHITEISKIKH perekrestkov".

---

As in most other European countries over the past decade, municipal enterprises in Russia have been made more independent of the municipality. They are far from fully independent, but the degree of independence granted them is part of a strategy to make them more financially self-sufficient. As a result, they have become more vulnerable to financial instruments such as fines and fees. They are also expected to be more efficient, for example, not to waste energy.

Making the municipal enterprise responsible for heating flats raises a host of environment-related issues. For instance, what sources of energy does the local heating system use: Fuel oil, coal or gas? A lot of energy is lost in Russian towns due to leakage. What technologies are used to transfer the heat?

The questions pertaining to municipal services are not merely technical, but also political. And they are not merely local, but also regional and national. The services provided by municipal enterprises are subject to political discussions, and are of great public concern. In an era of privatisation, housing policies raise several controversial issues. Even heating is a 'hot' political topic in the Arkhangelsk region. Not all inhabitants of the region can rest assured that their flats will be warmer than 12 – 15 degrees on cold winter days. The problem of heating flats is related to comprehensive energy supply policies involving different actors representing different sources of energy (gas, fuel oil, coal) and different means of transporting it. The railway lobby would like to see Arkhangelsk use coal and oil, which are transported by train. The building and construction sector would like to build and maintain pipelines for gas.

Having to deal with municipal enterprises that must now try to run on a balanced budget is a new experience for the inhabitants of the towns in the Arkhangelsk oblast. In a situation of severe recession and wage arrears, it is difficult to pay 'real prices' for housing, heating, water and sewage services and waste disposal. Besides, these issues are considered political. An article in the Arkhangelsk newspaper 'Volna' illustrates this. The author of the article represents a group called the Regional Non-Commercial Fond 'For Legality'<sup>141</sup>. This group complains about the way municipal services are priced, citing examples from the energy supply situation. Prices are lower for consumption below the norm than for consumption above this limit. This is definitely an economic mechanism for reducing consumption, as well as being a sphere of commercial activity for municipal enterprises. However, the issue of where to set the norm is a political issue

---

<sup>141</sup> See: Volna, 19.V.1998, "Normativy... s potolka?".

under the jurisdiction of the municipal head of administration. The article shows that there are significant variations between towns in the oblast as to where the limit is set. In Koriazhma, the limit is 60 kWh per person/month, in Arkhangelsk town, 40 kWh, and in Primorskii municipality, 30 kWh. This shows that the further north one moves, the lower the limit for 'over-consumption'. In the northern parts of Arkhangelsk oblast, the towns are not connected to the gas network. In recent years, coal and fuel oil supplies have been too irregular and too small to ensure proper heating in winter. In these towns, electric power is also used for space heating, in addition to running household appliances, sewing machines and the like.

#### **Summary: Local self-government**

It is clear that local self-government institutions are now more clearly defined as a separate actor in local politics than they were in the Soviet period, and environmental protection is one of the most important tasks in the hands of municipal authorities. In fact, local self-government was given more responsibility in this field during the 1990s. Its role in the charge exemption scheme is one example. Furthermore, the abolishment of environmental committees at town level and the municipalisation of its 'remnants', like in Koriazhma, make local self-government even more of an environmental actor.

The institution of a 'town environmental programme', described in the section on the Environmental Committee, has made the town authorities set priorities in collaboration with the committee, also in the period when the latter was a state body. Interestingly, as will be elaborated upon below, the pulp and paper mill also is a subject for the town environmental programme. Thus a certain amount of collaboration takes place between the state authorities and community (local self-government and the enterprise).

## **5.5 The pulp and paper mill**

The Kotlas Pulp and Paper Mill (KTsBK) is the dominant enterprise in Koriazhma, and it is the obvious 'target group' for any environmental policy-maker. It is a large-scale polluter primarily because its core activity requires the use of huge amounts of water that are released into the river and because large amounts of methyl mercaptan, with its characteristic smell, is released into the air. The regional Environmental Committee stipulates standards for each enterprise, so-called 'maximum permissible discharges' (PDV/PDS), for each polluting substance (see chapter 5.3.1). 'Maximum

permissible concentrations' are stipulated to prevent serious harm to human health in densely populated areas.

Table 5.4 *Emissions of methyl mercaptan into the air (by how many times the PDK is transgressed by one discreet, maximal occurrence)*

	<b>Koriazhma</b>	<b>Novodvinsk</b>	<b>Arkhangelsk</b>
December 1996	16	9	7
December 1997	19	12	4
December 1998	22	6	8

The enterprise is a major polluter first of all because of its primary production – pulp and paper. In addition, the mill pollutes due to the fact that large parts of the town infrastructure are in its hands, e.g. the wastewater treatment plant, the water intake and the power station. The pulp and paper mill sells drinking water to the municipality or, more precisely, to the municipal enterprise for housing and housing service (PU ZhKKh). As for wastewater, the PU ZhKKh 're-sells' it from the citizens at tariffs set by the mayor. The price between the pulp and paper mill and the town is based on an agreement.

Being a major polluter, the pulp and paper mill is under permanent observation by the environmental authorities. The inspectors from the Environmental Committee monitor the production processes of the pulp and paper mill, as well as general environmental conditions in the area. Inspectors from the committee make systematic analyses of the lake water. They visit the enterprise regularly to prevent violations of the technological process and to check compliance with environmental quality standards, also in periods of inclement meteorological conditions.

The enterprise and the Environmental Committee interact according to rules based on environmental legislation, and in our case the two actors seem to be assisted by a mutual willingness to compromise and reach practical solutions. The Environmental Committee reports to the technical director in the enterprises, in some cases the chief engineer. Serious breaches of norms and emissions standards, more than 5 times the PDK, are reported in the annual reports issued by the regional Environmental Committee. The same is true of large fines levied for environmental reasons. For instance, in June 2000 the pulp and paper mill in Koriazhma was fined 74 000 rubles for letting wastewater flow

directly into the river due to non-compliance with technical regulations. The pulp and paper mill also had to pay 85,000 rubles in August that year for an industrial accident that led to emissions of wastewater into the river<sup>142</sup>.

The pulp and paper mill has set up a *Department for Environmental Protection* – an ecological service unit – to make sure the enterprise complies with the provisions of the Act related to Nature Protection from 1991. A similar ecological service also existed prior to enactment of this law. The department controls the enterprise's production process with regard to the environment. More than 20 people work in the department, among them trained specialists. In addition, the enterprise has a Station for Biological Cleaning of Wastewater. All wastewater moves through this station. Among other things, the department checks the water at six different points.

The main tasks of the Department for Environmental Protection are to:

- control the technical process (maps showing the technological procedures have to be displayed at the workplace)
- control the wastewater treatment facilities, checking their effectiveness
- control industrial emissions into the atmosphere, sewage emissions into reservoirs and permitted industrial emissions and waste disposal
- engage in inventories of the enterprise (*inventarizatsiia*) to identify the sources of environmental pollution: air, water and soil
- develop standards for maximum permitted concentrations (PDK) in accordance with the town Environmental Committee (standards are confirmed by the regional level Environmental Committee)
- develop plans for measures to reduce adverse impacts on nature
- make reports for the bodies that control wastewater treatment facilities, industrial emissions and the disposal of harmful substances
- analyse the sanitary conditions at the workplace and the surrounding area
- control the use and protection of natural resources (Marieva 1999)

---

<sup>142</sup> See. "Informatsiia o gosudarstvennom kontrole za sobliudeniem Zakona ob okhrane okruzhaiushchei sredy v Arkhangel'skoi oblasti v 2000 godu", Arkhangel'sk oblast Environmental Committee, 2001.



The practice of making environmental inventories (*inventarizatsiia*) is compulsory and aims at providing information on which to build environmental strategies and, not least, to set the maximum permissible emissions. The enterprises perform their own inventories based on instructions issued by the environmental authorities (Environmental Committee). The process aims at identifying the amounts of raw materials that have been used and the amount of pollutants emitted (Marieva 2000).

As we saw above in the case of the environmental programme and the Eco-fund, the pulp and paper mill interacts closely with the public environmental organisations in the town. The *agreement* made in February 2000 between the pulp and paper mill (the 'nature user'), the oblast level Environmental Committee and Eco-fund and the Eco-fund of Koriazhma (represented by the mayor) is a prime example. The agreement states that a sum of 63 million rubles is to be transferred from the pulp and paper mill to the Eco-fund at oblast level every year. Then the Eco-fund is obliged to re-distribute the money according to the following scheme. The Eco-fund in Koriazhma gets 42 million, of which ten million is set aside for the town environmental programme. The remaining 32 million received by the local Eco-fund are transferred to the work on the gas pipeline. This latter project is allocated an additional three million directly from the oblast fund, and ends up with a total 35 million. The remaining 18 million (of the original 63 million) remain at oblast level and are assigned to the regional environmental programme.

Interestingly, the amount does not seem to be contingent on the amount of money the enterprise owes the environmental authorities (fines and fees). In addition to the 63 million rubles, the pulp and paper mill is required to make environmental improvements for the sum it owes the environmental authorities (the Eco-fund). Furthermore, under the agreement the enterprise is required to provide a 20 million ruble grant to the medical-sanitary centre in Koriazhma.

### **Summary: the pulp and paper mill**

In many ways, the ecological service unit in the enterprise is an integral part of a wider environmental sector in Russian society. The employees belong to the sector in the sense that they relate to environmental regulations, use an environmental vocabulary and make the same type of analysis as the external controllers. Despite its status as 'internal controller' by being a part of the polluting enterprise, it is a target group, and despite having more or less the same educational

background, often even having been colleagues in the enterprise, the people in the environmental department of the enterprise complain that the external control unit creates problems. It should be noted that the people in the ecological service unit within the enterprise are not major decision-makers. Nevertheless, the unit may be a point of entry for environmental authorities wanting to co-operate locally across the dividing line between State and civil society.

## 5.6 Summary and conclusions

This chapter has identified and analysed the presence, nature and performance of environmental protection institutions in one particular industrial town. Two sets of questions were addressed. Russia's modern environmental protection system presupposes a certain differentiation that makes actors liable to use and react to the set of environmental policy instruments at hand. Accordingly, we started by asking whether there are environmental actors that can be considered separate enough to take advantage of environmental policy instruments. Second, we asked whether the environmental policy actor entered into relationships with the surrounding community in order to strengthen the environmental cause. This question was motivated by the fact that several policy instruments presuppose an ability and willingness on the part of the actors on both sides of the State-community dividing line to enter into co-operation.

For the purpose of this chapter, we accepted the argument put forward by Elster, Offe and Preuss that the splitting-up of multi-functional institutional units is a hallmark of transition from state socialism. Russian single-enterprise towns, or rather their constituting enterprises, are excellent examples of the encompassing and multi-functional institutional compounds identified by the three authors as being characteristic of state socialism. Our town was no exception. The three main actors in the study, i.e. the Environmental Committee, the municipality, and the polluting enterprise, were hardly distinguishable prior to the *perestroika* period of the late 1980s. Environmental protection was integrated in the activities of the specialised ministries, and local government in single-enterprise towns was, for all practical purposes, a subsidiary of the dominant enterprise. Differentiation has been taking place since the latter half of the 1980s. First, the dominant pulp and paper mill made its way into private hands far from Koriazhma, geographically speaking. It is no longer a part of the ministerial structure governing the forest industry. Second, local policies are made by local self-government bodies that are not

under orders from higher level institutions. Third, decentralised units of central power tried to implement the policies of their respective ministries at the local level. In the case of the environment, they attempted this from the oblast level of governance.

We were curious about how a policy sector like the one responsible for environmental protection could establish its own institutional policy actor locally. In particular, we wanted to know how it interacted with the surrounding community. Did it forge links with 'like-minded' entities, i.e. environment-oriented segments of society and the economy?

The formal set-up is clear. There is one key policy actor in the field of environmental protection in Russian towns – the *Environmental Committee* – although there is reason to mention the role played by the sanitary-epidemiological institution as an 'assisting policy actor' in the field of environment. The institutional set-up was stable throughout the 1990s. The period under focus in this chapter, 1997 – 2001, is no exception. However, the committee has changed. In 1998 it was abolished at the local level on financial grounds. This implied that its functions, which used to be covered by the oblast-level committee and the local committee together, were entrusted to the oblast committee alone. The people working on the local committee continued working with environmental issues at the local level, but were dispersed among several organisations. The head of the former committee continued working as an inspector at local level as an employee of the oblast committee.

In May 2000, two years after the Environmental Committee closed down in Koriazhma, a presidential decree did away with all remaining local level environmental committees. Environmental power was concentrated at federal and oblast level, a situation not very different from the realities prior to the decree. The local committees worked in close co-operation with committees at higher levels of governance.

Another element in the presidential decree also evoked protest. Most environmentalists considered the merging of the environmental sector with the Ministry for Nature Resource Use a major set-back for the environment. They expected the environmental sector to 'drown' or to be subdued by the strong, self-confident resource exploitation sector. The inclusion of the environment into natural resource management, a major source of revenues for Russia, is hardly concordant with the differentiation described by Elster, Offe and Claus.

The Eco-fund lost its local foothold and is now only present at federal and oblast levels. The Eco-fund was – and still is – an important tool

for financing environmental projects and for forging links between environmental protection and the community. The abolishment of the local Eco-fund may prove not to be too dramatic. Two people still work for the Eco-fund in Koriazhma (although no longer employed locally, but by the oblast committee) and money will be spent locally anyway.

More problematic is the fact that the Eco-fund is no longer independent of public budgets. Decisions about how to spend the funding are no longer made by the Eco-fund's board, but by the self-government assembly at oblast level. This blurs the distinction between the environmental sector and other sectors since politicians may be expected to be less one-sidedly concerned about the environment than the former Eco-fund boards comprised of full-time environmentalists. Again, we see that the environmental sector grows less distinct from other sectors of public policy.

In fact *the environmental policy actor shifted* from the local to the regional (oblast) level in 1998, and in 2000 from having separate status to being one of the sections of the oblast level committee for Natural Resource Management and Environmental Protection. The immediate effect of these changes is that the environmental sector is less present and less visible at the local, regional and federal levels. To some extent, the environmental sector has moved not only *from*, but also *at* the local level due to the establishment of an environmental unit under the local self-government council. Such units have also been established at regional level.

To a certain extent, the 'disappearance' of the environmental sector at the local level has been remedied by the local self-government being assigned considerable formal jurisdiction on environmental matters throughout the 1990s, although the follow-up was not especially active. A municipal department for environmental protection was set up in our case town in 1998. Interestingly enough, according to the mayor, the justification for this step was the local self-government's need to 'balance' all policy fields covered by decentralised state bodies. Today that local state body has been eliminated. From the Koriazhma experience, however, it is too early to conclude that we are witnessing the municipalisation of the role of environmental policy actor. After all, the environmental department under the local self-government consists of one person.

What does all this mean for the environmental policy maker's ability to enter into alliances with societal actors that share its main environmental aims? The system that lasted until 1998 was a combination of

---

institutional insulation and inter-mingling with the surrounding community. The Environmental Committee worked at the local level as a local, decentralised unit of central state power. It had very close links to the polluting enterprise since most of the employees of the committee came from jobs in the enterprise. The existence of a separate environmental unit in the enterprise enabled close communication between people who largely spoke the same professional language. At the same time, the Environmental Committee was not dependent upon the enterprise. This is what makes it qualitatively different from the environmental department under the local self-government.

Even if the municipal department for environmental protection were to expand considerably, it would be less independent from the enterprise than the former Environmental Committee. The reason is simple. For all practical purposes the pulp and paper mill finances the town by providing jobs for the inhabitants, paying surplus taxes to the town, and continuing to finance several cultural and health institutions. For its part, the Municipal Department for Environmental Protection might be expected to be more adept at forging links with the local community. Looking at the environmental programmes and the ways in which the local Eco-fund was used prior to the abolishment of the local committee shows that it was far from insulated from the surrounding community. Some of its decisions showed a surprising willingness to depart from a purist interpretation of its tasks, for instance, by paying electric bills for educational institutions.

To summarise: In our town, we observed institutions with a defined responsibility in environmental affairs. The main policy actor was the Environmental Committee, but it was flanked by other institutions such as the Epidemiological Service and the Hydrometeorological Service. Being aware of the peculiarities of a single-enterprise town, the chairman of the local Environmental Committee chose to insulate the committee from undue influence from the dominant enterprise. However, this insulation has not impeded close co-operation with the enterprise, as well as with local self-government institutions. The role of the Environmental Committee has therefore been to engage these other actors in some environmental policies.

## References

- Arkhangel'skii oblastnoi komitet gosudarstvennoi statistiki (1999):  
*Goroda Arkhangel'skoi oblasti*. Arkhangel'sk
- Arkhangel'skii oblastnoi komitet statistiki (1999): *Goroda Arkhangel'skoi oblasti*. Arkhangel'sk: Izdatel'stvo Arkhangel'skogo oblastnogo komiteta statistiki
- Arkhangel'skii oblastnoi komitet statistiki (2000): *Èkonomika i sotsial'naia sfera Arkhangel'skoi oblasti – Statisticheskii sbornik*. Arkhangel'sk: Izdatel'stvo Arkhangel'skogo oblastnogo komiteta statistiki
- Bogoliubov, S.A. (ed.) (1999): *Kommentarii k Zakonu Rossiiskoi Federatsii 'Ob okhrane okruzhaiushchei prirodnoi sredy'*. Moskva: Institut zakonodatel'stva i sravnitel'nogo pravovedeniia pri Pravitel'stve Rossiiskoi Federatsii
- Boulding, K. (1963): *Conflict and Defence: A General Theory*. New York
- Buzinov, P.V. and Gorbunova, L.G. (1998): "K probleme obespecheniia ustoichivogo vodopol'zovaniia v iuzhnom regione Arkhangel'skoi oblasti". In: Tedder, Iu.R. (ed.) (1998): *Osnovnye ètapi stanovleniia i razvitiia sanitarno-èpidemiologicheskoi sluzhby v Arkhangel'skoi oblasti (k 75-letiiu Gossanepidsluzhby Rossii), Arkhangel'skaia gosudarstvennaia meditsinskaia akademiia*. Tsentr gossanèpidnadzora v Arkhangel'skoi oblasti: Arkhangel'sk
- Coser, L.: (1956): *The Functions of Social Conflict*. Glencoe
- Dahrendorf, R.: (1965): *Classes and Class Conflict Society*. Stanford

- Dmitiev, A. (1997): *Osnovy konfliktologii*. - Moskva
- Dregalo, A.A. and Ul'ianovskii, V.I. (1999): *Problemy sotsial'noi bezopasnosti gorodov s ékologicheskimi vrednymi gradoobrazuiushchimi predpriiatiami*. Ékologičiia Severnoi Dviny, Arkhangel'sk: Arkhangel'skii Zelënyi Krest i Gosudarstvennyi komitet po okhrane okruzhaiushchei sredy Arkhangel'skoi oblasti
- Elster, Jon, Offe, Claus and Preuss, Ulrich K. (1998): *Institutional design in Post-Communist Societies: Rebuilding the Ship at Sea*. Cambridge University Press: Cambridge
- Ernšteins, Raimonds, Builevics, Ainis and Sīle, Silvia (1999): *Environmental policy practices and instruments in Latvia, Preiļi*. Unpublished project note 1999:4 from Modern environmental strategies and single-enterprise towns (Norwegian Institute for Urban and Regional Research)
- Evans, Peter (1996a): "Introduction: Development Strategies across the Public-Private Divide". *World Development*, Vol. 24 no. 6 pp. 1033-1037
- Evans, Peter (1996b): "Government Action, Social Capital and Development: Reviewing the Evidence on Synergy". *World Development*, Vol. 24 no. 6 pp. 1119-1132
- Goskomékologičiia Rossii (2000): *Doklad predsedatelia Goskomékologičiia Rossii V.I. Danilov-Danil'iana na zasedanii kollegii Goskomékologičiia Rossii po itogam raboty komiteta i ego territorial'nykh organov v 1999 godu i zadacham na 2000 god*. 9 fevralia 2000
- Holm-Hansen, Jørn (1999): *Actors and environmental policy instruments in a Latvian town*. WG/GT A5; 6, 9<sup>th</sup> EADI Conference; no. 259, Paris: EADI
- Holm-Hansen, Jørn (2001): "Elites at the local level and their application of new policy instruments: The case of pollution and environment in a Russian single-enterprise town". In Steen, Anton and Gel'man, Vladimir (eds.) (2001): *Elites and Democratic Development in Russia*, Research Report 01/2001, Department of Political Science. University of Oslo

- Illner, Michal (1992b): "Municipalities and industrial paternalism in a 'real socialist' society". In: Dostál, Petr; Illner, Michal; Kára, Jan and Barlow Max (eds.): *Changing Territorial Administration in Czecholovakia*, Amsterdam: Instituut vor Sociale Geografie, Faculteit Ruimtelijke Wetenschappen, Universiteit van Amsterdam
- Ivanov, A.A. (1996): "Èkologicheskie problemy Kotlasskogo promyshlenno-transportnogo uzla". In: *Materialy Mezhdunarodnoi i VI Vserossiiskoi nauchnoi konferentsii "Èkologiya i okhrana okruzhaiushchei sredy"*. Vladimir
- Ivanov, A.A. (1997): "Prirodnye usloviia goroda Koriazhmy i ikh vliianie na rasprostraneniye pylegazovukh vybrosov kotlasskogo TsBK". In: *III Mezhdunarodnaia konferentsia. Pomor'e v Barents regione: èkologia. èkonomika. sotsialnye problemy, kul'tura*. Arkhangel'sk, pp.41-42
- Iyer, Seema (1997): *The Urbanization Transition in Russia*. NRE 545 Monograph. Ann Arbor: University of Michigan
- Jacobsen, Birgit (1999): *Enterprise, environment and political change in Koriazhma*, Unpublished project note 1999:5. Oslo: Norwegian Institute for Urban and Regional Research
- Kandel, P.E. (1990): "Sotsial'nyi konflikt v monisticheskoi sisteme". *Rabochii klass i sovremennyi mir*. N6.P
- Kjeldsen, Stig (2000): "Financing of Environmental Protection in Russia: The Role of Charges". *Post-Soviet Geography and Economics*, 41 No. 1, pp. 48-62
- Klok, P.-J. (1995): "A Classification of Instruments for Environmental Policy". In: Dente, Bruno (ed.), *Environmental Policy in Search of New Instruments*, Dordrecht: Kluwer Academic Publishers
- Krasnov, B.N. (1992): "Konflikty v obshchestve". *Sotsial'no-politicheskii zhurnal*, nr 6
- Lukin, Jurii F. (2001): *Istoriia, Èkologiya, Èkonomika v meniaiushcheisia Rossii: Vzgliad iz Arkhangel'ska*. Arkhangel'sk: Pomorskii Gosudarstvennyi Universitet im. Lomonosova



- Lukin, Jurii F., Mikhailov, Sergei V. and Polovnikova, Galina S. (2000): *Otchët po proiektu 'Mestnoe samoupravleniie i okruzhaiushchaia sreda v dvukh rosiiskikh gorodakh'*. Unpublished project note. Arkhangelsk and Oslo: Institute of Management, Law and Retraining at the Pomor State University, Arkhangelsk and Norwegian Institute for Urban and Regional Research – Oslo
- Marieva, Vera V: (1999): *Environment and environmental policies in Koriazhma – the legal framework*. Unpublished project note 1999:1. Oslo: Norwegian Institute for Urban and Regional Research
- Marieva, Vera V: (2000): *Provedenie inventarizatsii vybrosov zagriazniaiushchikh veshchestv v atmosferu promyshlennymi predpriiatiami*. Unpublished project note 2000, Oslo/ Arkhangelsk: Norwegian Institute for Urban and Regional Research/Institute of Ecological Problems of the North (RAN)
- Nadolinskaia, V.A. (1996): "Èkologicheskie problemy iuga Arkhangel'skoj oblasti". In: *Materialy I regional'nogo seminarà po problemam nepreryvnogo èkologicheskogo obrazovaniia v iuzhnom regione Arkhangel'skoi oblasti*. Koriazhma, pp. 5-13
- Nove, Alec (1977): *The Soviet Economic System*. London: Allen and Unwin
- NTU "Amekos" (1993): *Normativnye dannye po predel' no dopustimym urovniam zagriazneniia vrednymi veschestvami ob"ektov okruzhaiushchei sredy*. Spravochnyi material. St. Petersburg
- Pronin and others (1993): *Sotsial'nye konflikty v sovremennom obshchestve*. Moskva
- Right, K. (1957): "The Journal of Conflict Resolution". Vol. I, Nr. 1, P.3. Quoted from Nechiporenko, L.A. *Burzhuaiznaia sotsiologiia konfliktov*. Moscow: Politizdat. 1982
- Sairinen, Rauno (2000): *Regulatory Reform of Finnish Environmental Policy*. Centre for Urban and Regional Studies, Publications A 27. Helsinki: Helsinki University of Technology

- Shomina, E.S. (1992): "Enterprises and the urban environment in the USSR". *International Journal of Urban and Regional Research*, Vol.16, no 2
- Stark, David and Bruszt, László (1998): *Postsocialist Pathways*. Cambridge: Cambridge University Press
- State Committee of the Russian Federation on Statistics/Arkhangelsk Region Committee of State Statistics (1996): *The Arkhangelsk region in figures*
- Tsentr gosudarstvennogo sanitarno-èpidemiologicheskogo kontrolya v Arkhangelskoi oblasti (2001): *O sanitarno-èpidemiologicheskoi obstanovke v Arkhangelskoi oblasti v 2000 godu – Regional'nyi doklad*. Arkhangelsk
- Tsentr gosudarstvennogo sanitarno-èpidemiologicheskogo nadzora v Arkhangelskoi oblasti (1997): *Regional'nyi doklad o sanitarno-èpidemiologicheskoi obstanovke v Arkhangelskoi oblasti v 1996 godu*. Arkhangelsk
- Vestnik èkologii (1995): *Ezhegodny otchët komiteta okhrany okruzhaiushchei sredy*. Koriashma 1990-1995
- Yudakhin, Feliks N., Davydov, Aleksandr N. and Ivanov, Andrei A. (1998): *Environment and environmental policies in Koriashma: A field report*. Unpublished project note 1998:1 from Modern environmental strategies and single-enterprise towns (Norwegian Institute for Urban and Regional Research)
- Zdavomyslov, A. (1995): *Sotsiologiya konflikta. Rossia na putiakh preodolenia krizisa*. Moskva
- Zeleznev and Zelezneva (1998): "Metodika raschëta predel'no dopustimykh sbrosov i vremennno soglasovannykh sbrosov veshchestv v poverkhnostnye vodnye ob"ekty so stochnymi vodami", *Èkologiya i promyshlennost' Rossii*. December

# Appendix 1

## Glossary

<b>Russian</b>	<b>English</b>
BPK (biologicheskoe potreblenie kisloroda)	BOD, biological consumption of oxygen, indicates water pollution by measuring the amount of oxygen dissolved over a defined period of time
KhPK (khimicheskoe potreblenie kisloroda)	Chemical consumption of oxygen, indicates water pollution by measuring the amount of organic compounds needed to fully oxidise polluted water. KhPK is used to measure the efficiency of wastewater treatment plants
Komsomol (Kommunisticheskii Soiuz Molodëzhi)	Communist Youth League
Methyl mercaptan	The substance that makes the odour associated with pulp and paper mills
OBUV (orientirovochnyi bezopasnyi uroven' vrednosti)	Level of discharge in cases where PDK cannot be established

PKD (predel'no dopustimaia kontsentratsiia)	Maximum permissible concentration
PDS (predel'no dopustimyi vybros)	Maximum permissible discharge into air
PDV (predel'no dopustimyi sbros)	Maximum permissible discharge into water
Oblast'	Region (Russia is as federation composed of 89 Federation subjects, most of which are oblasti, while others are republics, e.g. Karelia and Komi)
TÉTs (têplovaia èlektrotsentral')	Heating station
VSS (vremenno soglasovanyi sbros)	Temporarily agreed permissible discharge into water
VSV (vremenno soglasovanyi vybros)	Temporarily agreed permissible discharge into water
Zhilkomkhoz	Municipal enterprise for housing and housing service