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Institutional Change in the Russian Forest Sector: Stakeholder Participation in Forest Policy Formulation in Murmansk, Karelia and Arkhangelsk

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Approved by

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Preface

Since the spring of 1997, the Forestry Project at IIASA has been engaged in a study called "Institutions and the Emergence of Markets — Transition in the Russian Forest Sector." The IIASA research group has looked at problems related to the forest sector institutions in eight Russian regions. In order to share the results of the study with the people it most concerns, the people living in the case study regions and working in the regional forest sector, IIASA decided to return to Russia to present the study results and invite regional forest stakeholders to discuss the findings and initiate a process with the aim of generating recommendations for improving the regional forest policy. The *policy exercise* was chosen as the tool for achieving these goals.

This report discusses the experiences gained through three policy exercises organized by IIASA in the regions of Murmansk, Karelia, and Arkhangelsk between October 2000 and March 2001. A pilot exercise conducted in Tomsk in June 2000 provided important experiences for use in the subsequent exercises. (The Tomsk exercise was discussed in IIASA Interim Report IR-01-061.)

The present report should be possible to read independent of earlier published reports from the IIASA study of Russian forest institutions. It provides a summary of the findings previously reported in the case studies of the forest sector institutions in Murmansk, Karelia and Arkhangelsk. (All of the reports produced in the previous IIASA study are listed in Appendix A.) It is hoped that the report will be of interest to researchers and politicians engaged in the planning of similar participatory policy development initiatives in Russia or elsewhere in the world.

Finally, on behalf of Sten Nilsson, IIASA Deputy Director and Leader of the Forestry Project, I would like to express our gratitude to the local study coordinators in the Russian regions we studied, Vigdis Nygaard and Lyudmila Ivanova in Murmansk, Minna Piipponen, Svetlana A. Gurova, and Nadezhda B. Polevshchikova in Karelia, and Mikhail Yu. Varakin in Arkhangelsk. Without their dedicated work neither the previous case studies of these regions nor the policy exercises would have been possible.

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About the Author

Mats-Olov Olsson was a research scholar in IIASA's Forestry Project between 1997 and 2001. Together with a colleague from Sweden, Lars Carlsson, he was engaged in the study "Institutions and the Emergence of Markets — Transition in the Russian Forest Sector". Since January 2002, Mr. Olsson returned as a research scholar to his home institute, the Centre for Regional Science at Umeå University, Sweden.

Institutional Change in the Russian Forest Sector: Stakeholder Participation in Forest Policy Formulation in Murmansk, Karelia and Arkhangelsk

Mats-Olov Olsson

1 Introduction

1.1 Background

The management of natural resources has always been a high priority area for government control. The operative management activities have often been entrusted special government agencies — in the case of forests this agency was typically the state forest service (variously named in different countries). Governments have kept a decisive say in the management of important natural resources even if they have not always been the lawful owner of the resource. In countries where the resources have been (primarily) privately owned, governments have typically embedded the use and management of the resources with detailed regulations. The Swedish forests are a good example of a largely privately owned natural resource embedded in an institutional framework that gives the state a decisive say in its management and use. In Russia, forests were always owned by the state and there are no clear signs of any fundamental changes in this situation, even if the *form* of public ownership of the forest lands — federal, regional or municipal — is nowadays frequently being discussed.[1]

It would seem that public ownership would give the state excellent control over the management and use of the natural resources found on the territory under its jurisdiction. The degree of popular influence over the management and use of such resources would then be determined by the degree to which people are able to influence political processes, that is, it would be decided by the workings of democracy. However, during the last decade or so governments have been meeting increasing

[1] However, recent articles in the press indicate that some changes in forest land property rights might be contemplated by the government. For instance, according to *The Moscow Times* (June 19, 2002) President Putin, in a speech to the State Council (a group of regional leaders), called for the introduction of long-term leases of forest lands. The Ministry of Natural Resources (which is responsible for Russia's forestry) is said to propose an increase in lease terms from 1–5 years to a minimum of 49 years or up to 100 years if lease holders agree to take care of reforestation. It could be noted that the discussion about privatizing agricultural land has reached further (see, e.g., Skyner, 2001). As ITAR-TASS reported on July 25, 2002, President Putin recently signed a bill legalizing the sale and purchase of agricultural land. A Land Code allowing free purchase and sale of non-agricultural land was already adopted last year.

difficulties in their natural resource management, at least this seems to be the case for forest resources. A fundamental reason for these difficulties is of course that a number of independent actors (state authorities, government agencies, enterprises (both state owned and private), civic organizations, private citizens) are engaged in various ways in the actual management and use of a nation's forests. These actors have (at least partly) different objectives and different "cultures" of natural resource utilization causing conflicts and (often) an inefficient and unsustainable resource use.

While, for a long time, these inbuilt causes of conflict and inefficiencies did not upset traditional state controlled resource management systems, there are other factors that have gained an increasing importance during the past decade and today these factors are causing a profound rethinking of forest management policies and practices all over the world. So, for instance, have property rights patterns shifted in some regions of the world (notably in Central and Eastern Europe), political power has become more decentralized (giving regional and municipal authorities increasing influence), democratization and multi-party politics have emerged with the decline of centrally planned one-party states, demographic transitions have shifted the population structure towards higher urbanization (with changing perceptions, interests and objectives in forest management), governments are being down-sized due to financial restrictions making them only hold on to basic functions (such as policymaking, planning, legislation, etc.), functions earlier belonging to a single natural resource management institution have become increasingly contradictory (cf. conservation and production) and sometimes various functions have eventually been separated through institutional reform and the breakup of organizations (Anderson *et al*., 1998).

These developments have made people engaged in forest sector issues — forest managers, users, and researchers — start thinking about how to improve forest management performance and avoid conflicts that are detrimental for the efficiency and sustainability of forest use. Suggestions for improvements have often included calls for an increased "pluralism" in forest management[2] and collaborative or participatory approaches for engaging stakeholders in the development of efficient forest policies have frequently been suggested (see, e.g., Carter, 1999; Warburton, 1997; Buchy and Hoverman, 2000; Burley *et al.*, 2001; Kennedy *et al*., 2001).

Reforming policy-making procedures in Russia and other transition countries was, as one should have expected, no simple and fast process. It was assumed that the transition would somehow automatically, through the workings of the emerging market forces, lead to an economy characterized by a greater allocative efficiency and an increase in the population's living standards (see, e.g., Kolodko, 2000). However, after more than ten years of transition, evidence of unambiguously positive effects of the changes is still scarce. During Soviet times, resource allocation and the redistribution of income used to be entirely in the hands of the Communist Party elite. Here, there were no market forces in operation and very little influence was left with the political representation system.

[2] For instance, the FAO journal *Unasylva*, No. 194 (1998) contains a number of articles presented at a FAO hosted workshop in December 1997 on "Pluralism and Sustainable Forestry and Rural Development".

Thus, expectations were high for this situation to change rapidly as transition started to make an impact.

However, as is now clear for everyone to see, the transition only brought efficiency and profits to a few sectors and enterprises in the economy — here, the new free market allocative efficiency might indeed have made an impact — while leaving the majority of enterprises with small chances of survival.[3] It also brought personal wealth to a few citizens while an increasing number of people were left with very little to share. Thus, the market reforms failed on two major goals (see, Kolodko, 1999).

Since transition did not often bring about a change of (or in) the people in charge of important social functions, such as, in our case, Russian forest managers and forest users, reform measures proposed by such circles are sure to be viewed with suspicion not only by the general public, but also by the new emerging group of business managers with a modern outlook and (often western) economic training. Efforts to reform the Russian forest policy through participatory processes engaging broad stakeholder groups (business managers, politicians, citizen initiative groups, etc.) should therefore be both welcome for its democratic content and efficient in the sense that it would stimulate profound institutional changes.

1.2 Purpose of the Study

The general purpose of this study is (a) to assess the need for institutional changes in the Russian forest sector and (b) to discuss possibilities to improve the regional forest sector institutions through the use of participatory policy formulation methods engaging Russian regional forest stakeholders.

The research on which this report is largely based was conducted between April 1997 and December 2001, when the author was a member of a small team of researchers in IIASA's Forestry Project.[4] The main aim of this IIASA study called "Institutions and the Emergence of Markets — Transition in the Russian Forest Sector" was to try to understand the institutional framework governing the Russian forest sector and the changes in this framework that have taken place since the disintegration of the Soviet Union in 1991.[5] To this end a series of case studies were conducted in eight Russian

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[3] It is this division of the economy that has been labeled the *virtual economy*. The concept is further discussed in Section 3.1.

[4] Information about IIASA can be obtained from the institute's web presentation on the Internet at URL: http://www.iiasa.ac.at.

[5] The IIASA in-house research team that worked with the IIASA institutional framework study consisted of four people. Lars Carlsson (Luleå University of Technology, Sweden) worked full time in the project between September 1997 and June 1998. After that he worked on a part-time basis (50%) until the end of 2000. Nils-Gustav Lundgren (Luleå University of Technology, Sweden) spent a total of about three months working for the project during various visits to IIASA in 1997–2000. Mats-Olov Olsson (Umeå University, Sweden) worked full time for the project at IIASA between April 1997 and June 2000, after which he continued his work at IIASA on a part-time (50%) basis until the end of 2001. Soili Nysten-Haarala (University of Lapland, Rovaniemi, Finland) worked full time at IIASA between January and August 2000 focusing on the legal aspects of the transition in the Russian forest sector; between September and December 2000 she was affiliated with the project on a part-time basis.

regions, among them the regions of Murmansk, Karelia, and Arkhangelsk (cf. Figure 1).[6]

Figure 1: The eight Russian regions studied in the IIASA project.

When the eight case studies were completed the IIASA team initiated a series of so-called *policy exercises* with the purpose of disseminating the results of the case studies to forest stakeholders in the respective regions and to generate a discussion among these stakeholders about possible ways of improving the institutional framework in the regional forest sector.[7] The current report provides a theoretical background to these policy exercises and assesses the practical experiences gained in IIASA's policy exercises in Murmansk, Karelia, and Arkhangelsk against the theoretical findings.[8]

The kind of assessment that we attempt here entails an analysis that hopefully will be able to shed light on a number of more *specific issues*, such as:

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[6] The five other regions included in the study were Moscow, Tomsk, Krasnoyarsk, Irkutsk, and Khabarovsk. Several of the case studies performed in these regions were conducted by Ph.D. students participating in IIASA's Young Scientists Summer Program (YSSP) in the summers of 1997–2000. The results of these studies have been reported in IIASA's Interim Report series. A summary and digestion of the results of the eight case studies was published in the September 2001 issue of *Europe-Asia Studies* (cf. Carlsson *et al.*, 2001). A complete listing of the publications produced by the "institutional framework study" can be found in Appendix A.

[7] So far (by the summer of 2003), four such policy exercises have been conducted; the first in Tomsk in June 2000, the second in Murmansk in October the same year, the third in Karelia (Petrozavodsk) in late November 2000, and the fourth in Arkhangelsk in March 2001.

[8] A report detailing the performance and outcome of the policy exercise in Tomsk was published in December 2001 (see Olsson, 2001).

- What are the general prerequisites for participatory policy processes and for initiating (creating) such processes?
- What are the specific prerequisites for the successful establishment of a participatory policy process in the Russian forest sector?
- To what extent are these prerequisites in place? (Are participatory/emancipatory systemic interventions at all possible in today's Russian society, a society that quite recently was entirely governed by the Soviet command system?)
- To what extent can the necessary prerequisites be created, imposed or "fostered" from "the outside"? (To what extent are trust/legitimacy issues important in this context?)
- What lessons can be learned from our policy exercises in Murmansk, Karelia, and Arkhangelsk (and from the previous IIASA studies on Russian regional forest sector institutions) for initiating and conducting successful policy processes in the Russian forest sector (and elsewhere)?

Obviously, answering such questions would in principle require a discussion of broader political and economic issues, such as issues concerning the nature of the former Soviet and the present Russian society, the development of democratic institutions and institutions governing the emerging Russian market economy, the nature of institutional change, etc. Here, we will have to focus on what we believe to be the most important aspects of theory for our purpose. The "shortcuts" we take in this discussion are indicated in the next section.

1.3 Methodological Considerations

The policy exercises with forest stakeholders in the regions of Murmansk, Karelia, and Arkhangelsk (that are discussed in the current report) were actually part of a *second series* of IIASA case studies concerning institutional problems hampering the development of the Russian forest sector. Four of the eight Russian regions that were included in the *first series* of case studies conducted in 1997–2000 by the IIASA research team were also included in this new series. While the focus in the first series of case studies was mainly on contextual factors determining the rules (*institutions*) governing actors' behavior in the regional forest sector and on the character of those rules, the second series of case studies was undertaken with the purpose of assessing the possibilities of initiating participatory policy formulation processes through the use of policy exercises.

Methodologically the study reported here — a study dealing with an externally initiated activity aiming at influencing the performance of an economic sector in a region of a foreign country — might be characterized as a *systemic intervention* with the purpose of improving on an existing problem situation. The approach is compatible with (and inspired by) modern *systems thinking*, especially recent developments in "Critical Systems Thinking" as elaborated, for instance, in Flood and Jackson (1991) and

Midgley (2000).[9] However, while we are inspired by and in fact using various aspects of these methodological approaches, the purpose here is *not* to assess the value of various methods of systemic intervention. It is rather to see if the method we have chosen — the "policy exercise method" — really can accomplish what we intended or hoped for. Thus, in our context the policy exercise was seen as a method for stakeholders in the Russian forest sector to identify — or rather to establish a consensus on — the institutional problems existing in the regional forest sector and for facilitating a discursive elaboration of adequate and implementable designs (policies) for institutional change with the purpose of eliminating the observed problems. In fact, everything that is said in this report one way or another relates to the use of policy exercises in this capacity, i.e., as a method (or even a *tool*) for elaborating functional policies for improving the workings of the Russian forest sector through adequate institutional changes. Thus, the purpose of this report might be said to be to assess the value of the "policy exercise tool" in the Russian forest sector context.

Turning now to a motivation of the "methods" used in this study we will primarily focus on two things:

(a) the way in which we have approached the task that we have set ourselves (which was stated in Section 1.2 above), i.e., the *study design*, and

(b) the choice and use of theories, analytical methods, and empirical data, with the help of which we have performed our analysis.

The choice and use of theories, analytical methods and empirical data — as in (b) above — should be determined on the basis of an assessment of their *quality* and *applicability* for a particular analysis.

More will presently be said about our reasoning concerning these factors. However, before entering that discussion, we should at least note the rather long "series" of assumptions that lie behind the specification of the particular purpose of this report. These assumptions should be seen as part of the method used in the study, since they framed the selection of questions to be discussed.

1.3.1 Assumptions Behind the Purpose of This Study

The task that the stated purpose of this study (cf. Section 1.2) requires us to solve is not entirely simple and straightforward. In fact, a number of assumptions have to be made in order set the stage for our analysis. A basic assumption behind the whole issue is that a fundamental systemic change has been taking place in Russia after 1991 in the sense that the old Soviet "command economy" has been abandoned in favor of a transition to a market-like system. The statement that Russia is currently in transition toward a market-like system is indeed an assumption, but it is an assumption that most people — both laymen and experts in the field of economic systems — today consider viable. We

[9] For an overview of systems thinking see, e.g., Olsson (2004). In the last 10–20 years a lot of literature has emerged on "participatory processes", or "participatory development", "action research", etc. Recent examples and theoretical elaborations of such approaches can be found, for instance, in Nelson and Wright (1995); Stringer (1999); and Clarke (2000).

also assume (and this is likewise commonly considered to be a viable assumption) that the situation in the Russian forest sector is dismal in the sense that resource allocation is highly inefficient judged from a market economic point of view. In practice, this means that the sector is not contributing as much as it could do to the country's economic development. A third assumption is that it is crucial to learn more about the functioning of the Russian forest sector *at the local and regional levels* in order to understand how the efficiency of the sector's performance might be improved. Behind this assumption lie a set of other assumptions. So, for instance, we assume that the suboptimal (in the market sense) performance of the Russian forest sector is the result of (a) an obsolete sector structure (both the administrative and company structure is largely incompatible with the requirements of a modern market economy) and of (b) an inadequate behavior on the part of the actors in the system.

Consequently, since both the structure of the forest sector and the specific behavior of its actors are, at a specific point in time, a result of the set of rules that has governed actors' behavior *prior to* that moment, we assume that understanding how changes are introduced in this set of rules — the "rules-in-use," or *institutions* — is of central importance both for our understanding of the problem situation and for our ability to actually improve on this situation. In this sense, then, one could claim that the current problems of the Russian forest sector are fundamentally related to the institutions governing the actors' behavior and that changing inefficient institutions is crucial for the possibilities to improve the situation (efficiency) in the sector.

On the basis of these assumptions we hypothesize that it is possible to learn about the prerequisites for institutional change in the Russian forest sector by studying the behavior of its actors at the local and regional levels.

The theoretical underpinning and the viability of some of these assumptions are further discussed in Section 3.

Together these considerations form the "point of departure" for the task that was specified in the purpose of this study (cf. Section 1.2).

1.3.2 The Approach Used to Solve the Task — Study Design

We try to solve our task by looking at three separate but related approaches to institutional change in the Russian forest sector. First (in Section 2), in order to frame our analysis in the context of existing knowledge, we look at some theories, which we believe can contribute to an understanding of the problem of institutional change in transition countries, especially Russia. Second (in Section 3), we give an account of three previous case studies (in which the author participated) of the institutional problems hampering the development of the forest sector in the regions of Murmansk, Karelia, and Arkhangelsk belonging to Russia's North economic region. Third (in Section 4), against the background of the discussion of the two previous approaches, we look at the implementation of a certain participatory policy formulation method, a so-called *Policy Exercise*, that was first tested with forest stakeholders in Tomsk in June 2000, and subsequently used by IIASA in Murmansk, Karelia, and Arkhangelsk.

It is the first and the third of these approaches to institutional change that are especially focused in this report. The second approach — the previous case studies of institutional problems in the forest sectors of Murmansk, Karelia and Arkhangelsk that are recounted in Section 3 — is included primarily as background to the policy exercises that are analyzed in Section 4. (The results of the earlier case studies of the forest sector institutions in Murmansk, Karelia, and Arkhagnelsk have been reported elsewhere. See Ivanova and Nygaard, 1999; Jacobsen, 1999; Piipponen, 1999; Carlsson *et al*., 1999; Kotova, 2001.) In order to make sense of the discussions that took place during these policy exercises, it is, however, essential to have some understanding of the situation in the regional forest sector and the institutional problems hampering the improvement of the sector's performance. This is the reason for including an account of the methods and results of the previous case studies in this report.

Based on the discussion and analysis concerning the three approaches to institutional change that we consider in this report some conclusions will be ventured (in Section 5) concerning the general purpose of this study as well as the more *specific issues* listed in Section 1.2.

1.3.3 The Choice and Use of Theories, Analytical Methods, and Empirical Data

Assuming, as we do, that Russia is a country in transition from a "command economy" to a more market-like system, and also assuming that this transition mainly consists in achieving profound institutional changes in the current Russian system (where the institutional framework still preserves many features from the old Soviet system) we obviously have to consider recent theoretical developments relating to (a) the transition process and (b) institutional change.

In so doing we have become convinced that it is possible to achieve institutional change *by design*, i.e., existing "rules-in-use" can be deliberately changed through citizens' collective action with the purpose of achieving specific changes in the rules. A feature of the old Soviet system, of which there seems to be an almost universal agreement, was its fundamentally undemocratic nature. The lack of democracy is also believed to be one of the root causes of the failure of the system to survive. The ongoing transition is therefore required to improve the functioning of the new Russian market-like system while simultaneously improving democracy. Looking for ways to achieve institutional improvements through democratic means also urges us to review some of the recent developments in the theory of democracy.

This is the reasoning behind the choice of theories that we believe can inform our study. These theories are dealt with in Section 2.

The methodology employed in the studies of forest sector institutional problems in eight Russian regions that IIASA conducted was based on the so-called the Institutional Analysis and Development (IAD) framework developed during many years of collaborative research by Elinor Ostrom and her colleagues at Indiana University in Bloomington, USA. As already stated above, the account of the previous case studies given here should mainly be seen as background to the subsequent discussion about the policy exercises in Murmansk, Karelia and Arkhangelsk that are at the center of interest

in Section 4. Even so, it seems motivated to include a brief account of the methods employed in the case studies that eventually led to identifying a number of institutional shortcomings and some conclusions concerning what measures might be required to improve the situation in the forest sectors of Murmansk, Karelia and Arkhangelsk. This brief overview of the IAD framework is given at the outset of Section 3, in which the results of the three case studies are summarized.

The case studies conducted in Murmansk, Karelia and Arkhangelsk, like the other five studies performed in the first IIASA case study series, also made surveys among managers of forest enterprises in the three regions. Many of our conclusions were derived on the basis of information obtained through these surveys. The surveys consisted of interviews conducted with about 25–35 forest enterprise managers in each of the eight regions that were part of our case study set. Questions in the survey mainly related to the behavior of the respondents in their capacity of managers working in a new and unfamiliar market context. The surveys were conducted with the help of local Russian study coordinators. The answers were reported in writing (in both Russian and English) and delivered to IIASA where the answers were analyzed. In the present context there is no need to further expand on the results of these earlier studies. (Interested readers are referred to Carlsson *et al.*, 2001.)

1.4 Structure of the Report

In Section 2, in order to fit the discussion that follows into the modern discourse on the recent developments in Russia and other parts of Eastern Europe, an overview is provided of the emerging thinking about transition, theories of institutional change and relevant extensions of theories of democracy. This discussion provides the background to the approach used in the IIASA study to try to improve the institutional framework governing the behavior of the Russian regional forest stakeholders through the organization of policy exercises.

In Section 3, as background to what follows in Section 4, an overview is given of the methods and results of IIASA's previous study of the forest sector institutions in Murmansk, Karelia and Arkhangelsk.

In Section 4, the focus is on the actual policy exercises conducted by IIASA in Murmansk, Karelia and Arkhangelsk in the period October 2000–March 2001. Here we have a closer look at the specific regional conditions that shaped the performance and outcomes of the policy exercises. This is done against the account of the situation in the forest sector of the respective three regions given in Section 3. The purpose is to see if it is possible to make sense of the relation between the preconditions of the exercise and its outcome, to try to understand — against the previous theoretical discussion — what contextual features determine the performance of such an exercise.

In the final section (Section 5) some tentative conclusions are drawn on the basis of the previous discussion about the possibilities to influence institutions in the Russian regional forest sector through the use of the policy exercise tool. A reconnection is made to the questions formulated at the beginning of the report.

2 Transition, Institutional Change and Democratization in Russia — A Note on Theory

2.1 Background

With *Perestroika* and, especially, with the collapse of the Soviet Union in 1991, life in Russia — normal habits and ways of conducting business — suddenly and drastically changed. Market economic features (like market set prices) started to emerge. However, the change was not smooth and uniform. It proceeded unevenly in time as well as in space. Since what happened to price formation, even if it was not a simultaneous and uniform change all over Russia, affected the basic functioning of the economy — producers started to react on "real" income-cost relations — its impact was profound and immediately noticeable. The "driving force" in the economy was no longer the plan but rather the potential of making profits. The subsequent privatization only added further momentum to this fundamental transformation process (for recent overviews of what has happened so far during the Russian transition process, see, e.g., Colton, 2000; White, 2000; Glinski and Reddaway, 1999; Ellman, 2000; Lane, 2000; Lavigne, 2000; Randall, 2001).

However, as soon became evident, such a profound system change was no fast and easy process. A multitude of basic characteristics of the old system had to be radically changed or discarded altogether. In the twelve-year period since the disintegration of the Soviet Union quite a lot has indeed happened. Radical reform measures (such as the much debated privatization process) were heavily subsidized by the western world. But it is equally clear that much of the highly raised expectations of those directly or indirectly promoting and supporting these changes have not yet been met. Still, a large number of Russian business firms operate under rules that have little or nothing to do with conditions prevailing in a "normal" market environment. The question is: why? Here we do not find much useful knowledge in the literature.

In general, it seems that, while a lot has been written about what constitutes an efficient market economy and what might make it work even more efficiently, we do not know very much about how to build such an economy from scratch or how to transform a non-market economy into an efficient market system (North, 1997). While the existing literature on transition mainly deals with changes of non-democratic states into democratic states (which is also of course relevant for the Russian transformation), there has not (yet) been so much written about the transition from a Soviet type of command economy to a market oriented economy, i.e., about the institutional changes needed to "convert" the Soviet society to a well-functioning market system. A factor complicating such writings has to do with the difficulty to understand exactly what changes in Russian reality the transition is *aiming* to achieve and what it is *able* to accomplish. Furthermore, as for instance Kolodko (2000) has pointed out, in order to be able to say something about where the transition is going one also has to know from where it is coming. In order to decide where to go you must understand from where you are coming and where you currently are, since this limits your choice of future directions, at least in the short term. This is the idea that social changes are *path-dependent*, as suggested in the post-socialist context by, for instance, Nielsen *et al*. (1995) and North (1997).

As stated in Section 1.3.1, a central *assumption* in this study is that Russia is currently in a transition from its old Soviet "command economy" system to a more market-like system. This assumption is of course not taken out of the blue. It is, in fact, based on our assessment of a great amount of theoretical and empirical work already made by scientists around the world. This is work concerned with the quality of the Soviet system (both its political and its economic aspects) as well as the causes of and mechanisms through which the Soviet system ultimately disintegrated.

While we will *not* give much attention in this report to issues concerning *the reasons* for the disintegration of the Soviet Union, or to *ideological issues* related to the nature and direction of the transition process, these intensively debated issues nevertheless deserve serious attention, especially since the views that an observer of transitional Russia holds on these issues intriguingly affect the selection and interpretation of facts that are deemed important for explaining past and forecasting future developments in the country. Past ideological cleavages undoubtedly still affect the way current Russian reality is understood.[10] Let us, therefore, start this "note on theory" by having a brief look at the theories underpinning some of the fundamental assumptions on which this study is based. The purpose is just to emphasize the significance of these theories and *state the position* adopted by the IIASA research team on certain issues of basic importance for the present study.

2.2 Theoretical Foundations of Our Basic Assumptions

More specifically, in the IIASA study, "transition" was taken to represent a shift in Russian institutions (both in the sense of modified existing and newly installed "rules-in-use") and in the "mind-set" of the country's citizens that would contribute to a more efficiently functioning forest sector (and economy in general). The "baseline" criteria used to assess the progress of the transition in the forest sector describe some basic functions effectively in operation in any western market economic system. In effect, this imposes a normative restriction on what could be considered, in the context of the IIASA study, a positive institutional change in the Russian forest sector. Thus, in characterizing the changes we simply assume that the goal of the transition in the Russian forest sector is to make it function the way the sector functions in Western Europe and North America.

This view on transition is in a sense related to the understanding of the reasons for the Soviet disintegration, which is still a hotly debated issue. Very briefly, the view (more or less implicitly) adopted in the IIASA study of Russian forest sector institutions puts the main blame for the Soviet disintegration on the *allocative inefficiency* of the command economy. The system was wasteful and could eventually not satisfy the needs

[10] Many examples might be provided to illustrate the often radically differing views on these issues that are held by various observers of the drastic changes that have taken place in Russia and Eastern Europe during the last decade. But since we are not pursuing this topic further in the present paper only a few references to interesting observations on the importance of ideology for the interpretation of current Russian developments will be made. See, e.g., Robinson (1995) who discusses the role of ideology in the development and failure of Gorbachev's reforms, and a Marxist analysis offered by Ticktin (1992; 1999), who interprets the reform movement that started with *perestroika* as a vain attempt by the old *nomenklatura* to remain in power.

of its citizens. Productivity was increasingly lagging behind the standards of the market economies. The main bottlenecks in the Russian economy was not the availability of natural resources, rather it lay in the inability to produce (and use) modern advanced technology (ultimately, thus, the scarce resource being good-quality labor).[11] This development put an increasing pressure on the Soviet government to reform in order to improve the functioning of the economy. Eventually, however, it was clear for everyone to see that the fundamentally undemocratic political system — economic policy reforms in the Soviet Union were designed and instituted by the political sphere — could not come up with a working solution to the economic insufficiency problems. This development paved the way for Gorbachev and his *perestroika* attempts, which opened the door to new initiatives in Russian political and economic life. The relatively short Gorbachev era (1985–1991), when efforts were still (at least initially) aimed at reforming the old Soviet system,[12] ended even before it was clear what effects the reforms might have been able to produce (see, e.g., Cox, 1996; Kotz and Weir, 1997).

With Yeltsin's takeover (in 1991) the development took a different direction, now under a strong influence of foreign actors, notably the World Bank, IMF, and US development aid. A strong case can be made for the view that the events that finally triggered the actual overthrow of the Soviet Union were the result of manipulations of a rather small group in the Russian elite, which was (mainly) supported by U.S. financial aid and advisors (cf., for instance, Wedel, 1998). After its initial success, when several profound reforms in principle transformed the Soviet command economy into a rudimentary market system, the "Washington Consensus" (as "shock therapy" came to be officially known) has been the target of an increasing criticism for not taking into account the social costs of the reform process and the fact that profound social changes actually cannot be introduced and expected to work smoothly in a short period of time. Perhaps the most important criticism was (somewhat unexpectedly) mounted from the (then) chief economist of the World Bank and (later) Nobel Laureate, Joseph Stiglitz (see, e.g., Stiglitz, 1999), but many other prominent western researchers also contributed to this criticism (cf., for instance, Desai, 1995; Nielsen *et al*., 1995; Ellman, 1997; North, 1997; Raiser, 1997; Kolodko, 1999, 2000; Hedlund, 2000).

This interpretation of the background to, and the immediate reasons for, the Soviet disintegration helps to explain the general hesitation on the part of Russian citizens about all "reform proposals" affecting Russian political and economic life. Russians in general seem to be extremely skeptical to any reforms proposed by their political representatives, even if these representatives nowadays have been appointed through legitimate elections.[13] In such a situation — and this was in fact *one* hypothesis behind

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[11] This was early suggested by Ticktin (1992).

[12] We should note here (cf. Brown, 2001; Fish, 1995) that the final disintegration of the USSR (in December 1991) was preceded by the "transition from communism", i.e., the fact that the Communist Party had to abandon its monopoly of power. In 1990, the Party's "leading role" in society was formally abandoned through a change in the Soviet Constitution. In reality it had disappeared earlier with the rise of numerous sociopolitical movements. See also Sergeyev and Biryukov (1993).

[13] See, e.g., Solnick (1998) who explains the main causes of this popular skepticism of political reforms in the Soviet Union and why this skepticism remained prominent during the first decade of transition, showing how officials in the political and economic sphere were able to pursue their own self interests at the expense of public good. Brown (2001:38) describes how the Russian political elite regularly has "put

IIASA's policy exercises with Russian forest stakeholders — all endeavors to engage citizens in participatory policy processes should be seen as an attempt to improve democracy and make the results of political deliberations more legitimate, thus increasing chances of successful implementation of political decisions.

We are not going to pursue these issues further here. Suffice it to say once again that the analyst's understanding of the Soviet economy and society constitutes a restriction on the types of changes/reforms that he or she can envisage. And the fact remains: there is no unanimously agreed upon understanding of the character of the Soviet system nor, for that matter, of the reasons for its disintegration or the most efficient route of transformation.

This is why here we should outline the most important points of departure for our study of institutional change in the Russian forest sector. In the following sections, therefore, we will (1) state our views on the character of the Russian transition and refer to some of the emerging theorizing about the process; (2) have a look at theories of institutional change, since the Russian transition is largely about changing inefficient rules to improve the institutional framework; and we will (3) briefly look at theories of democracy, especially modern developments of these theories elaborating so-called deliberative (or discursive) democracy, since these extensions of the theory seem to be highly relevant for policy-making in a political situation characterized by popular distrust, which seriously hampers policy implementation.

2.3 Transition the Russian Way

The literature on transition mainly deals with changes of the political governance system from a non-democratic to a democratic rule (Carothers, 2002). This literature has appeared in the last twenty years and it was occasioned by what seemed to be a clearly discernible trend among non-democratic countries to move towards more democratic rule. The literature offered an analytical framework that made it possible for the organizations (mainly in the US) promoting democracy abroad "to conceptualize and respond to the ongoing political events" (Carothers, 2002:6). Thus, "transitology" emerged as an academic field and, when the changes in Eastern Europe started in the late 1980s, American "democracy promoters extended this model as a universal paradigm for understanding democratization". Carothers (2002) now suggests that it is time to dismiss this "transition paradigm," which might have been of some use earlier, but which is not any more able to describe reality.

According to Carothers (2002:6 ff.) five "core assumptions" define the transition paradigm:

(a) Any country moving away from dictatorial rule can be considered a country in transition *toward* democracy;

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the pursuit of naked power and personal wealth ahead of respect for democratic institutions, political accountability, and the general welfare." He concludes: "When so much of what has been dignified with the title of 'economic reform' has involved dirty deals behind the voters' backs, it is hardly surprising that public opinion turned against the 'really existing democracy' of the Second Russian Republic".

(b) Democratization tends to unfold in *a set sequence of stages*; opening, breakthrough, and consolidation;

(c) *Elections* are believed to be an absolutely essential ingredient in the transition process;

(d) The paradigm does not consider *underlying conditions* in transitional countries, such as the economic level, political history, institutional legacies, ethnic makeup, sociocultural traditions or other "structural" features, to be major factors in either the onset or the outcome of the transition process; and

(e) The paradigm also assumes that the democratic transitions are being built on *coherent, functioning states* where only some institutions need to be redesigned.

Clearly, the transition process in Russia has run into problems on all these accounts. It is not obvious (even if this was assumed in the IIASA study of forest sector institutions) that the transition is really moving Russia toward democracy. (Doubts about this direction has, for instance, been expressed by Gerner *et al.*, 1995.) While it seems that the Russian transition is unfolding in stages it is not quite clear which stages and how long the development is halted at a particular stage (see, for instance, Csaba, 1995). Elections have indeed been organized on many occasions already. The problem here rather concerns deficiencies in the emerging party system (too many parties with too few members and supporters) to articulate the needs and opinions of the electorate. After more than a decade of Russian transition it is quite clear to observers that underlying conditions have played a decisive role and severely restricted the unfolding of the process. It has also become evident that a major problem in the Russian transition has been the very limited power of the state. This has to do with the fact that many comprehensive institutional changes have been attempted, although these changes have not always (perhaps even rarely) produced intended results due to the "stickiness" of old patterns of behavior (again the so-called "path-dependence").

As the transition in Eastern Europe evolved it became increasingly clear that the process took different roads in different countries and that development was to a significant degree determined by the "initial conditions" that were obtained in the respective countries, including the existing institutional structure and political culture. Many analysts also emphasized that the kind of fundamental social changes that transition entails would take a long time to design and implement. The implementation, furthermore, requires a strong and well-organized state power. This is not to say that some reforms that were advocated by the early "shock therapists," like macro-economic stabilization, ought not to have been introduced and implemented quickly once the political decisions were taken. On the contrary, certain reforms require quick action. One such reform was the macroeconomic stabilization undertaken at an early stage of the Russian transition.

The two basic ingredients of the macroeconomic stabilization were *price liberalization* (that is, prices should be set free to be determined on markets reflecting supply and demand relations) and the enforcement of *hard budget constraints* for enterprises (meaning that the state should discontinue its practice of subsidizing unprofitable production that, in practice, amounts to allowing enterprises to go bankrupt). These reforms were intended to produce an improvement in *enterprise governance*, making

enterprise leaders adopt new and better rules to guide their behavior, a change that would make their behavior more similar to "western" management standards. It is, in principle, difficult to imagine how such reforms could be *gradually* introduced. And, indeed, these reforms were quickly introduced early on in the transition process.[14] However — and this was an unexpected development — the reforms triggered a spontaneous reaction in the Russian economy effectively forcing a large part of all Russian enterprises not to comply with the proposed changes, but rather maintain much of their behavior from the days of the Soviet command economy. The alternative would have been bankruptcy and social distress.[15] This development moved a large part of the Russian enterprises into the so-called *virtual economy*.

The notion of the virtual economy has proved very fruitful in explaining enterprise behavior in Russia.[16] It was also taken as a fundamental hypothesis about the structure and functioning of the Russian economy in the IIASA study of forest sector institutions. The virtual economy is in fact a name for a specific institutional configuration (an institutional set-up).

The theory of the virtual economy offers an explanation of the fact that much of the relations characterizing the Soviet economy can still survive in today's Russia, although the system has changed fundamentally. In short, the virtual economy explains why so comparatively few Russian enterprises have gone bankrupt, although they would not be competitive if their performance were valued at true market prices. If prices for *all* goods and services in the economy were actually *always* set in the market, that is, through the interplay of supply and demand, it can be assumed that a large portion of Russian enterprises would be unprofitable. When price liberalization was instituted enterprises seemed forced to meet and respond to signals transferred through the market price system, but since this would "kill" a large number of enterprises unless very drastic efficiency improving measures were taken, a large portion of the existing enterprises chose to "insulate" themselves from the influence of the market price system and not let themselves be exposed to the severe competition that true market relations trigger. By reverting to barter trade at negotiated prices many Russian firms managed to

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[14] In a recent review Tompson (2002) concludes that while the Gaidar government made "its share of avoidable errors, and its successors made many more" (one mistake being their failure to find broad social support for the reforms) it is nevertheless hard to see how the government could have adopted another strategy than it actually did. Tompson concludes: "In short, the Russian state in early 1992 was far too weak to pursue a "gradualist" approach. Unfortunately, it was also too weak to pursue radical policies effectively."

[15] One has to keep in mind that enterprises then still ran a variety of services for their employees, services that are provided by the public sector in most market economies (like housing, food supply, child care, schools, etc.) These services were subsequently transferred to the local administrations (for an account of this process see, e.g., Struyk *et al*., 1996; Freinkman and Starodubrovskaya, 1996; Healey *et al*., 1999).

[16] The *virtual economy* concept was originally introduced by a Russian government committee and subsequently picked up and elaborated by two American researchers, Clifford Gaddy and Barry W. Ickes, in their studies of the Russian economy in transition. The discussion here is based on a number of publications by Gaddy and Ickes (1998a,b; 1999a,b; 2002a) and other authors discussing their theory (see, e.g., Phillips, 1999; Åslund, 1999; Ericson 1999; Slay, 1999; Chang, 1999; Woodruff, 1999; Gaddy *et al.*, 2000; Carlsson *et al*., 2001). Gaddy and Ickes recently (2002b) compiled a book based on the material that they issued earlier as journal articles, chapter contributions to edited volumes, working papers, and manuscripts available via Internet.

stay alive (and keep their personnel) although what they produced and traded in this "virtual market" would not be possible to produce profitably if their input prices had been set in the market and their output (products) would have to be sold at prices reflecting market demand. Thus, through the virtual economy an inefficient resource allocation is being maintained in the economy, contributing to a continued economic "waste" of resources.

How come, then, that such an inefficient system could be established and maintained? Efficiency is ultimately determined at the social level and, since the centrally planned system inherited by Russia from the Soviet Union had created an economy with a regional specialization that did not at all reflect demands as they are expressed in a market system, there were (and still are) whole regions, cities, and districts with a one-sided production structure that cannot be changed overnight. There are, for example, forest communities entirely based on one enterprise (a harvesting company or a wood processing factory), which might turn out to be entirely unprofitable if market based prices would be allowed to operate. That would mean the bankruptcy not just of a single enterprise, but of a whole community. If this development were widespread it would of course create a very serious (and dangerous) social problem. But by reverting to operating in the "virtual economy" these enterprises and communities have managed to stay alive for the time being. However, investments are insignificant in the virtual economy and when investments are actually made there is a high risk that resources are invested in the production of unprofitable (in the market sense) products. Thus, life in the virtual economy is non-viable in the long term if society is moving towards a market economy.

The real issue is how to create incentives that make enterprise owners and managers want to stop operating in the virtual economy and start to restructure enterprises' production to become competitive in the (real) market sense. The issue is whether it is possible to somehow impose changes in the behavior of enterprises, their managers as well as their workers. Thus, changes are needed in the rules governing the behavior of economic actors. Such "rules-in-use" are in effect what we mean by *institutions*. Let us now turn to a discussion of institutional change in general and institutional change in the Russian forest sector in particular.

2.4 Institutional Change in the Russian Context

The Russian transition, which presumably is moving the country towards becoming a democratic market system, requires institutional change to make the rules of the game more conducive to economic efficiency. This is our point of departure. Transition is, in effect, social change brought about as a result of institutional change.

To clarify, once again, by "institutions" we mean "rules-in-use," that is, rules that govern the behavior of actors in society. Such rules can be formalized through law or regulation (both private and public), but they may also be informal rules, i.e., rules that are adhered to although they have never been sanctioned by any collective decision (see, e.g., North, 1990). Thus, it should be noted that not all laws are institutions in the sense that they actually govern the behavior of actors. (There may be laws that no one obeys, that is, a law that is actually *not* in use, which is *not* an institution.) Examples of formal

institutions in the Russian forest sector might include rules for allocating forest plots to forest users, harvesting rules, taxation rules (not all existing taxation rules, however). Examples of informal institutions might include the rule of advance payments, the rule that governs investment behavior and excludes bank loans, etc.

A prominent feature of the Russian transition (and also, for that matter, the transition in other East European countries) is the much debated and dubiously legitimate *privatization* of state owned enterprises. Here, we shall not go into any further details of this process.[17] To us privatization serves as an illustration of *institutional change*. Through privatization the formal and informal rules regulating the use of economic resources were radically changed. "Property rights," as such rules are commonly called, constitute fundamental institutions in any society. "Property" may designate any resource and the "property rights" regulate the relations between different resource users. The fact that property rights do not only regulate *ownership* rights is often forgotten. Property rights — and this is all the more important since we are dealing with the Russian forests here, which are (still) owned by the state — also regulate *rights of access* to the resources. Table 1 illustrates the more complex notion of property rights.

Table 1: Different kinds of resource claimants and their varying rights. Source: Ostrom and Schlager (1996:133).

	Owner	**Proprietor**	**Claimant**	**Authorized user**	**Authorized entrant**
Access	X	X	X	X	X
Withdrawal	X	X	X	X	
Management	X	X	X		
Exclusion	X	X			
Alienation	X				

The table draws attention to the fact that other types of resource claimants than owners have a right to use the resource in various ways, except the right of alienation, i.e., the right to transfer the *ownership* of the resource to a buyer. Thus, in the context of our study of Russian forest resources, the table reminds us that, while the Forest Code stipulates that forest management units (the so-called *leskhozy*) as the representatives of the forest owner (the state) are not allowed to actually sell forest land to private companies or private citizens, there are, in fact, many other rights of access and use that they might (in principle) be able decide about.

[17] There is extensive literature discussing the Russian privatization, its intended scope and character as well as its results. See, for instance, Cox (1996) for the background of the Russian privatization; Sutela (1998) and Hedlund (2001) for the character of privatization; Perevalov *et al.* (2000) for the effects of privatization on enterprise performance; and Debardeleben (1999) for attitudes towards privatization in Russia. There are also some accounts of how privatization happened in Russia published by people who were deeply involved in the process (see, e.g., Boycko *et al.*, 1995; Kokh, 1998) The legitimacy of the whole process has been seriously questioned and today court procedures are under way to rectify unlawful acquisitions.

The proclaimed ultimate purpose of privatization was to achieve better corporate governance, i.e., to install more efficient "rules-in-use" for enterprise management. Thus, one institutional change was expected to trigger another. Private ownership was expected to create a new middle class that embraced market economic thinking and worked to improve enterprise management. However, as it turned out, the reformed property rights did not remain stable and secure in Russia and the privatization process itself was in many cases manipulated illegitimately installing new owners and managers (often the former enterprise directors, so-called "insider privatization") who primarily looked after their own short term interests and often stripped their enterprises of assets or brought them into the virtual economy pursuing goals that were suboptimal from a market economic point of view (see, e.g., Sprenger, 2002, for a recent analysis of the effects of privatization).

Barter trade (goods traded for goods, not for money) is another prominent institution in transitional Russia. Barter is actually what made the virtual economy possible. It is, in fact, the predominant characteristic of the virtual economy, much in the same way as money is the dominant institution in a market economy.[18] The main problem with barter is that it makes transactions intransparent, which opens up opportunities for fraud. The provision of goods (or services) has also been *de facto* accepted as a means of payment by public authorities — enterprises' tax payments may sometimes be made with products. This means that the state has been drawn into — and is, in effect, sanctioning — transactions in the virtual economy, perhaps the most serious consequences of which is that it undermines normal budgeting procedures.[19]

As has been shown in previous studies (i.a., in the IIASA study, see Carlsson *et al*., 2001) the rules governing the behavior of Russian forest stakeholders are often intransparent, confusing, and contradictory creating an "institutional deadlock," which makes consistent behavior difficult or impossible. Such a deadlock can only be resolved through changes of the system of rules governing actors' behavior, i.e., by institutional change.

Given this insight our interest should focus on questions like the following: How do institutions change? Obviously, institutions *do* change, but can institutions be changed by human *fiat*? Is it possible to modify existing institutions (rules-in-use)? Can new rules be designed and put in use? Who can (or wants to) make such institutional change happen?

Clearly, formal institutions (rules sanctioned by law or other public or private regulation) are amenable to change through various forms of collective decisions. While

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[18] As in the case of privatization, a lot has also been written about barter trade. Barter features prominently in the works by Clifford Gaddy and Barry W. Ickes, who launched the theory of the virtual economy (cf. footnote 16). Other recent studies of the barter phenomenon include Woodruff (1999); Guriev and Ickes (2000); Yakovlev (2000); and Gara (2001).

[19] An example: In Chelyabinsk some construction companies offered to build an underground railway system in the city instead of paying their taxes with money. As reported in IEWS Russian Regional Report, Vol. 3, No. 13, 2 April 1998, the project was actually started. When accepting such an offer a significant part of the local budget (money) income is immediately withdrawn, thus preventing the city of providing other services that might be more in demand.

it is quite possible to design and decide about new rules to govern the behavior of all or specific actors in the social system, implementing such rules is another matter. Rules are obeyed either because compliance is achieved through some enforcement mechanism (in the case of laws through the work of the police and courts) or because the norms expressed by the formal rules are internalized by the actors, who then try to obey the rules on their own accord. (Some kind of monitoring and enforcement mechanism is still necessary as probably not all actors will obey the rules, but "internalization" is nevertheless likely to reduce the need of "formal" rule enforcement.) The lesson is that institutional design (the design of formal rules) works best in an environment where actors find the procedures through which new rules or changes in existing rules are elaborated to be legitimate, i.e., in situations characterized by some degree of *social trust*.[20]

But this is not the complete picture. We also have to consider *informal institutions,* i.e., rules that have emerged and are obeyed — and enforced — without ever having been sanctioned by any formal collective decisions. How do such rules come to exist, how do they change, can they be purposefully manipulated by the actors in the system? Informal institutions are slowly formed under strong cultural influence, which means that they are not easy to affect and change. They are in fact, as North (1990) has pointed out, an important source of path dependence, making actors stick to old patterns of behavior in the face of changes in their environment that would require new responses to be better accommodated.

Institutions (both formal and informal) do change, however. They may, for instance, change as a consequence of *external shock* (major events like wars or technological changes that radically alter opportunities in economic systems, etc.) or they may rather more slowly emanate "autonomously" from within the institutional framework itself (for instance through changed behavior in organizations entrusted with monitoring rule compliance, decisions taken by governments to change formal rules, etc.). However, as suggested by Raiser (1997:11) there is also another avenue available for governments to achieve institutional change:

> *…governments can attempt to influence positively the interaction between formal and informal institutions by engaging civil society in a policy dialogue. However, this will depend on the given level of trust in government and its formal institutions. When social capital is low, the government's best chance is to enhance its credibility through signaling reform commitment and hoping that real economic improvements will in time feed back into a higher level of social trust.*

This view also recognizes that "spontaneously" changing informal institutions may exert an influence on the design and implementation of formal institutions. Using such "policy dialogues" that Raiser is talking about in the citation above requires that participants trust that deliberations will be free and that the outcomes of these

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[20] For more about the importance of social trust (or generalized or "extended" trust in contrast to "interpersonal" or "ascribed" trust) for changes of formal institutions in the context of transition, see, e.g., Raiser (1999). In the IIASA study the establishment of trust in the Russian forest sector was discussed by Fell (1999).

deliberations will mean something, that they will be taken into account, in the process of forming new policies (installing new formal institutions). A prerequisite is that state power is strong enough to guarantee a certain political stability that makes it worthwhile for actors to engage in policy processes. One of the problems with the Russian transition process has been that the state (at least until recently) has not been strong enough to preserve other than moderate stability.[21] A crucial task for the state in a transition country is to try to increase social trust by modifying incentive structures so that actors move towards changing the rules governing their behavior in a direction that will improve economic efficiency. Raiser *et al.*, (2001) have presented some empirical evidence indicating that changes in the "social capital" in transition countries are indeed happening. Some evidence was found that trust in public institutions is positively correlated with "civic participation". The authors conclude with the following policy recommendations (p. 27):

> *The negative correlation between income inequality and social capital that had evolved by the mid-1990s suggests that policies aimed at reducing high levels of income inequality could be important in a strategy of increasing trust in others and in public institutions. … Finally, …, based on the success of East Asia, the ways for governments to build trust in public institutions are by offering a dialogue to members of the public and consulting over important policy changes. Low trust in public institutions is one of the predicaments politics in transition countries are faced with. But it is a predicament politics can deal with at least in many important respects.*

2.5 Democracy, Democratization and Trust-building Policy-making

The "transitology" literature is being criticized for its teleological assumption that the transition is pushing society along a trajectory towards democracy, rather than towards something else. Today, after close to twelve years of transition, issues of the character of the emerging Russian political system can be put in some perspective. And, as it turns out, the issues raised are highly pertinent.

"Overall," claims Brown (2001), "the system is a hybrid — a mixture of arbitrariness, kleptocracy, and democracy." Solnick (1999) reminds us that when Gorbachev in 1991 rejected central planning without adopting a liberalized market an unprecedented economic recession started. Such extreme conditions might have left the field open for the government to install new institutions on a large scale. However, the development also gave the transition "a highly improvisational character". Actors had difficulties in perceiving their own interests or their own strength. But, surprisingly, while institutions crumbled there was a "striking continuity in the composition of the ruling elite". The privatization process and the "loans-for shares" scheme of 1995 concentrated enormous

[21] This was true for the Russian transition period at least until Putin's presidency. It seems that Putin after less than three years in power has managed to stabilize state power to the point where western observers become cautious. Thus, for instance, Fish (2001) warns: "Putin's path may lead directly to hard authoritarianism. Yet it is also possible that some aspects of it will — even if inadvertently — spur a resumption of democratization. In whichever direction it leads, Russians are to a large extent getting what they want". The importance of the role and function of the state during transition has been increasingly noted in the literature. See, e.g., Alexander, 1998; Solnick, 1998.

economic resources in the hands of a few so-called "oligarchs"[22] and it is now a matter of contention how much influence these oligarchs really exert over Russian political life. While the oligarchs clearly affected events in connection with the "loan-for-shares" scheme and Yeltsin's re-election in 1996, it seems that today their direct influence on political events is more limited (cf. Schröder, 1999).

But the problem for democracy might rather lie at the "systemic level." Russia can be seen as an "oligarchy," where the "rule of the few" is maintained through a balance of power — a stalemate — between the oligarchs making sure that no single oligarch can obtain a decisive influence over the economy, but also preventing the state to consolidate its power at the national level. It suits the oligarchs to have a weak state power.[23]

Another interpretation of the system emerging from the Russian transition takes its departure in the center-periphery relations, in the relations between the Federation and the "Subjects of the Federation," or the regions. Several observers have suggested that the Russian system might be characterized as a form of feudalism![24] It is noteworthy that the federal government has not been able to enforce federal laws within the country's 89 regions. Solnick (1999:811) finds that the "regional leaders share the national oligarchs' need for a federal government to preserve the integrity of the Russian state … but they also share the oligarchs' preference for that federal government to remain anemic". He continues:

> *Thus, as with the oligarchy model, the feudal system exhibits powerful equilibrium characteristics: the central government is too weak to effectively define its sphere of competence, and those regional leaders whose consent is most crucial to a re-establishment of effective federal authority are precisely the ones with the most to lose from having a central government able to play the role of neutral arbiter.*

Whichever it is of the two "models" outlined above that best describes the current Russian system, the implications for democracy are worrying. The models suggest that fundamental institutional deadlocks (at the constitutional and collective choice level) need to be resolved if the state should be able consolidate and exert a power comparable to what is normally in the hands of governments in modern democracies. If these deadlocks, which are keeping the central state weak, cannot be resolved the consolidation of democracy may even become irrelevant. With the entrenchment of elite powers (both oligarchial and regional), which allows members of the elite to engage in

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[22] "Russia's Big Seven" as the oligarchs' financial groups (FIGs) are referred to, were briefly presented in the World Bank newsletter "Transition" (February 1998).

[23] This notion of Russia as an oligarchy is related to what Brown (2001) called "kleptocracy." The way events unfolded and the relation between the presidential power and the oligarchs produced the arbitrariness (the "improvisational" character) of the Russian transition. It is also related to the notion of a "privatized state," as the issue has been raised by, e.g., Schröder (1999).

[24] Ericson (2000, 2002) has suggested an "industrial feudalism" and Shlapentokh (1996) sees parallels to feudal societies in the early Middle Ages. Here we follow Solnick (1999) who suggests that "the feudalistic model turns on its head some of the basic assertions of modern political economy of federalism".

rent-seeking, practically all incentives for further democratization have been removed (Solnick, 1999:813):

> *The coincidence of political transition with property re-distribution, a distinctive feature of the Russian transition, created strong incentives for elites to secure their own share of the transitional spoils. Once they did this, the process of "democratic" institution-building was subordinated to their desire to protect the property and power already accumulated.*
>
> *In practice, this meant ensuring that central state institutions were defanged, and once weakened these institutions found it impossible to enforce the regulations (including tax collection) that would revive them. Russia thus fell into a classic weak state trap (the fate of Italy comes to mind here). The state lacked the resources it needed to even acquire the resources that would make it effective.*

Even in this somewhat gloomy perspective Solnick maintains that "an oligarchic or feudalistic balance of power *with* electoral contestation is not entirely the same as a similar elite balance *without* it." The discussion so far has primarily dealt with the somewhat limited notion of democracy that is sometimes called "electoral democracy," which basically sees democracy as a move from authoritarianism combined with the introduction of popular elections. However, if we consider the more advanced notion of "liberal democracy," which apart from the qualities embraced by "electoral democracy" also emphasizes other qualities in society allowing citizens to take an active part in governance, the prospects for democracy in Russia may perhaps not necessarily look that bleak. Qualities belonging to the so-called *civil society* have been found to be of special importance in this respect. Ever since Putnam's (1993) study of civic traditions in modern Italy a rapidly expanding political science research all over the world has focused on people's opportunities to engage in all sorts of organizations for collective action. Research on Russian civil society is nowadays also expanding.

On the surface, judging from membership numbers, civil society in the Soviet Union was well developed and strong, the prime example of such organizations being trade unions. But since all organized civil activity was controlled by the Communist Party the real influence that members of such organizations might have had on political decisions was very limited, in effect a choice between supporting existing proposals or staying quietly passive. Expectations have been high for a rapid revitalization of the Russian civil society during the transition period. A vital civil society is believed to help mobilize and focus citizens' interests and ultimately be conducive to a positive democratic development.

Recent studies indicate that, while the most optimistic expectations for a revitalization of Russia's civil society have not been met, the situation nonetheless gives some ground for optimism. Howard (2002) finds that post-communist civil society is characterized by comparatively low levels of organizational membership. He explains the low participation levels by three factors originating in these countries' communist past. Mistrust of the old communist organizations still makes "large majorities of citizens throughout Europe continue to have a common sense of mistrust of organizations today". The second reason that Howard finds is related to the persistence of friendship networks established under communism. Such networks still substitute for civil society organizations. A third reason is what Howard calls "post-communist disappointment",

that is, people's feeling that "they have been let down, even cheated, by the new system that quickly replaced the old one." Howard sees the weakness of civil society as a "distinctive feature of post-communist democracy" and he fears that the situation might persist for many decades to come. The main problem with the current situation is that (Howard, 2002:165) "not only are post-communist citizens deprived of the opportunities for developing greater "civic skills" through participation in voluntary organizations, but their voices and views are hardly represented in the political decision-making process". Speculating about what can happen over the next few decades Howard sees two main ways through which post-communist civil society might be strengthened: "generational change" and a "reappraisal of the role of the state and its relation to voluntary organizations".

March (2000) in his review of social capital and democracy in Russia comes to a somewhat more positive conclusion concerning the existence of a "social capital stock" in Russia and the relationship between social capital and democracy in the Russian regions. In Putnam's vein March develops a "civic community index" which he then correlates with an "index of democratization"[25] calculated for the Russian regions. The results of March's calculations indicate that (p. 196) "social capital exists in many regions of Russia" and that "higher levels of social capital associate with higher levels of democracy." March's conclusion is that "it appears that social capital is not only beneficial in making democratic governments more effective and efficient, which Putnam's study of Italy shows, but that social capital can actually facilitate the democratic development of post-Communist societies".

In a recently published study of political discourses across thirteen post-communist countries Dryzek and Holmes (2002:94) characterize Russia as "a stalled or halted transition" due to the fact that at the time of the study (1997–8) "its major political players were only weakly committed to pursuing their ends through constitutional means, as distinct from trying to manipulate constitutional structures to their own advantage." However, when analyzing interviews conducted in 1997 with individuals in six Russian regions Dryzek and Holmes are able to identify (through the use of Q-analysis) three political discourses, which they label "Chastened Democracy", "Reactionary Anti-Liberalism", and "Authoritarian Development". In their "minimalistic" analysis the authors find that all three discourses (which are taken to represent three fundamental and different "political attitudes" prevailing among Russia's citizens) make it possible to envisage a future that is more democratic than the present. In such a future the presidency would be strong without being authoritarian, rather adopting a "facilitating" role. It is argued that such a development is *in principle* feasible in Putin's Russia that the presidency does not *necessarily* have to end up in dictatorship. All three discourses also "recognize and lament alienation, a breakdown in trust, and the absence of civic engagement" (Dryzek and Holmes, 2002:112). This is taken as proof of the existence of some common political ground on which consensus for policies to remedy these negative features may be built. The authors' conclusion is (2002:112):

[25] The "index of democratization" that March is using was developed by Tatu Vanhanen in his 1997 book *Prospects of Democracy: A Study of 172 Countries*, London: Routledge.

Acknowledging that the situation in Russia has been chaotic and depressing is quite different from arguing that this means the future of democracy in that country is doomed. A dynamic, strong new presidency might just make a significant difference in a relatively short time, especially if Putin's commitment to the "dictatorship of law" really translates into the rule of law rather than rule by the coercive agencies of the state.

Finally, to conclude this summary of findings that indicate that democracy is amenable to improvements through the development of civil society, let us look at the results of a study by Mishler and Rose (2001), who have found that "institutional theories" do a better job than competing "cultural theories" in explaining the development of *trust* in post-communist societies. While cultural theories assume that trust is "an emergent property linked to basic forms of social relations", that is, as something exogenous to the political process, institutional theories, on the other hand, look upon trust as "rational responses by individuals to the performance of institutions". Testing two hypotheses about trust based on cultural theory and two based on institutional theory by using data generated in 1998 through the fifth and seventh "New Democracies Barometer"[26] the authors received results strongly supporting institutional explanations of trust. "Trust or distrust in political institutions is substantially endogenous and largely determined by the political and economic performance of new democracies" (Mishler and Rose, 2001:55). And indicating some important policy implications they conclude (p. 56):

Insofar as institutional performance holds the key to developing trust in political institutions, then trust can be built more surely and swiftly than the decades or generations suggested by cultural theories. Trust can be nurtured by improving the conduct and performance of political institutions. Governments can generate public trust the old-fashioned way: They can earn it by responding promptly and effectively to public priorities, rooting out corrupt practices, and protecting new freedoms. … Ultimately, the character and performance of trustworthy institutions can generate trust just as the performance of the old untrustworthy institutions generated skepticism and distrust.

In conclusion, here we take the findings of the research referred above to support our understanding of the following "causality chain":

(1) trust can be generated through institutional change;

(2) institutional change can be achieved through the development of civil society; and

(3) civil society can be advanced through purposeful interventions (including financial and other support) by (representatives of) the state and through "autonomous" initiatives from within civil organizations.

Taken together the reasoning in this section of the report provides a basis for the systemic interventions attempted by IIASA through its policy exercises with Russian regional forest stakeholders. Before going over to an account of the policy exercises in

[26] See the presentation given of the "New Democracies Barometer" on the Internet site of the University of Strathclyde's Centre for the Study of Public Policy at URL: http://www.cspp.strath.ac.uk.

Murmansk, Karelia, and Arkhangelsk we should, however, first review the approach and results of IIASA's study of the institutional problems besetting the forest sector in these three regions.

3 The IIASA Case Studies of the Forest Sector Institutions in Murmansk, Karelia and Arkhangelsk — Comparing the Situation

The fundamental question — the puzzling fact — that much research concerning the Russian transition period wants to answer is this: Why did production in the Russian economy drop so dramatically in the years following the disintegration of the Soviet Union? In Figure 2 this development is strikingly illustrated for the Russian forest sector.

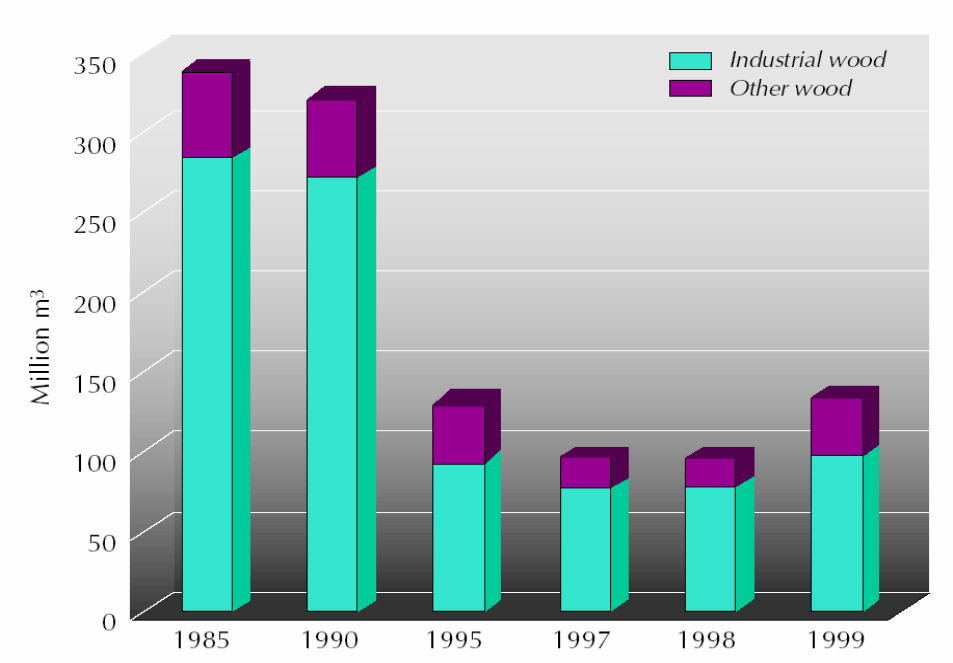

Figure 2: Production decline in the Russian forest sector during the transition period.

A basic hypothesis in the IIASA study of the forest sector in eight Russian regions was that the decline had to do with deficiencies in the institutional setup affecting actors' behavior in the forest markets. The approach used in the IIASA study to analyze this phenomenon was based on the so-called *Institutional Analysis and Development* (IAD) framework developed by Elinor Ostrom and associates at Indiana University, Bloomington, USA.

3.1 The Framework for Institutional Analysis Informing IIASA's Case Studies

The IIASA case study design was informed by ideas proven fruitful in previous research based on the IAD framework.[27] This framework suggests certain features that condition the behavior of actors in the system, i.e., factors that affect the adoption of certain institutions ("rules-in-use"). The focus of the IAD framework lies on what happens in the "action arena" (cf. Figure 3). In our case the action arena was the timber procurement in eight Russian regions and the study focused on actors' behavior on these action arenas. However, the IAD framework also insists on the importance of the embedding of this action arena, on features in the environment conditioning or constraining the behavior of the actors in the arena. Such features include the physical characteristics of the resource, the commodity or service in question, the attributes of the community and the established "rules-in-use" (i.e., institutions) governing the behavior of the actors. What emerges on the action arena is a specific pattern of *interaction* entailing certain *outcomes*. These outcomes must be evaluated according to some criteria. One can presumably look upon this framework as a stylized model of an actual interaction situation, in which case the evaluation is "automatically" made by the actors in the system themselves. But one can also look upon it as a description of a study design (and this was actually the way it was used in the IIASA study), in which case the evaluation is performed by some outside analyst studying the system in question.

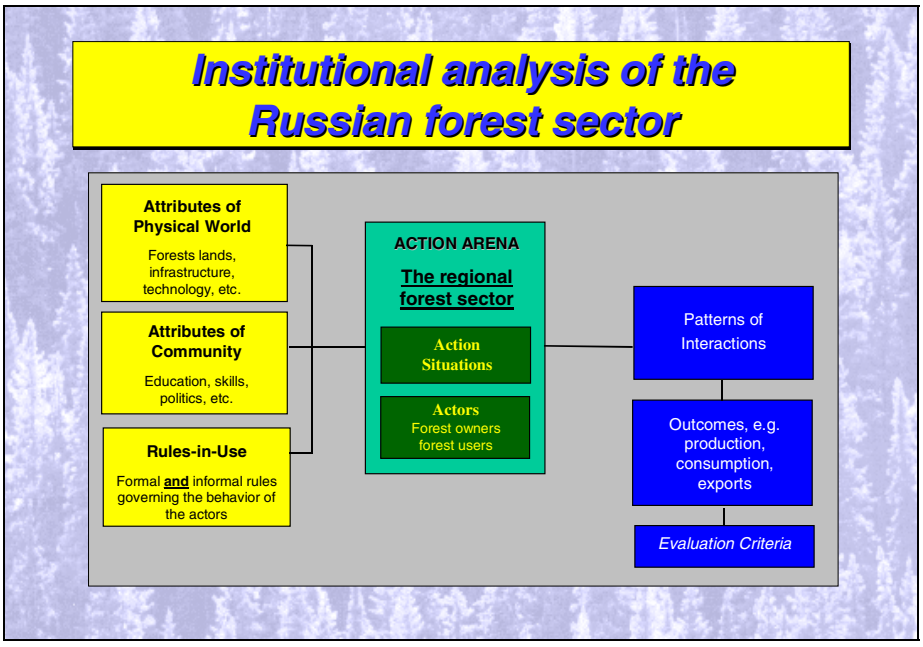

Figure 3: The Institutional Analysis and Development (IAD) framework used in the IIASA case studies of the institutional embedding of the Russian regional forest sector (after Ostrom *et al.*, 1994:37).

[27] The IAD framework has been used in numerous studies of resource management around the world. Good overviews of the approach are given, for instance, in Ostrom *et al.* (1994) and Ostrom (1995).

The very reason for engaging in the study of these phenomena has to do with the fact that the Russian forest sector is extremely inefficient. Thus, actors' behavior produces suboptimal economic outcomes. Changes of the rules governing actors' behavior should therefore be high on the agenda. And, indeed, it has already since long been high on forest sector stakeholders' agenda and it is just becoming a high priority item on the federal political agenda (see, e.g., Clark, 2002).

The forest sector institutions identified through the IIASA study were both formal and informal. Information about the latter category was compiled through a series of interviews with forest enterprise managers. The conclusions reached in the IIASA study largely concern what institutional changes would be required in the forest sector in order to improve its functioning in the emerging market economy. Recommendations were given of measures to change rules at three different levels: the constitutional level, the collective choice level and the operational choice level (Carlsson *et al*., 2001). In the current stage of the Russian transition, where the state is (still) fairly weak, where there is a huge and mostly very inefficient forest sector (which was dominating the economy in some of our case study regions), where forest stakeholders no longer trust that the "traditional" forest organizations (which, even if reformed, are remnants from the old Soviet command economy) should be capable of improving the situation, there seems to be a timely opportunity to engage a broad circle of regional forest stakeholders in a collaborative effort to develop new forest policies. Some kind of "participatory policy process" seems to be a suitable vehicle for such an effort (Stiglitz, 1998b).

In the next section we will have a closer look at the policy exercises conducted by IIASA in the regions of Murmansk, Karelia and Arkhangelsk. The remainder of this section gives a background to these exercises through an overview of the main results of the earlier IIASA case studies of the institutional problems afflicting the forest sector of the three regions.

3.2 Overview of the Institutional Problems in the Forest Sectors of Murmansk, Karelia and Arkhangelsk

In order to arrive at some kind of coherent understanding of the actual (observed) behavior of the actors in the regional forest sector, which the IIASA study tried to capture through in-depth interviews with a number of forest enterprise leaders in the case study regions, knowledge about the characteristics of the resource, the society and the rules-in-use is required.

Here we will try to summarize the most important findings reported in the previous IIASA case studies of the forest sector institutions of Murmansk, Karelia and Arkhangelsk. We will compare the situation obtained in the three regions regarding the resource (forests), the societal development and the existing institutions ("rules-in-use") governing people's behavior. The characterization of the features influencing actors' behavior in the action arena as either pertaining to the resource, to society or to existing rules-in-use is not entirely straightforward. To the features pertaining to the resource (timber) belong land-use patterns, resource reserves and quality, forest use, but also the socioeconomic significance of forest utilization patterns. Among the "societal features" we distinguish demographic development (including educational levels), workforce

characteristics (composition, employment, competence, wages), the economic structure and market adaptation, the infrastructure and the environmental situation. Under the "rules-in-use" category the focus is on formal and informal rules and their enforcement. This entails looking at the forest legislation in relation to the constitution, the organizational structure in the regional forest sector, the actual behavior of forest sector actors (based on survey data), and the modes through which policy changes might be designed and implemented.

Before diving deeper into this discussion let us first, however, provide some basic facts about the area that we are looking at.

3.2.1 Some Basic Facts about the Area

Together with the Komi Republic and the Vologda County (*Oblast*) the counties of Murmansk and Arkhangelsk and the Republic of Karelia form the Northern Economic Region of Russia. The total area of the Murmansk and Arkhangelsk Counties and the Republic of Karelia is 728 thousand sq. km, which is about 4.3 percent of the total Russian territory. The total population of the three regions amounts to more than 3.2 million people, corresponding to a mere 2.2 percent of Russia's total population. The area has a population density of only 4.4 inhabitants per sq. km. This means that we are looking at a huge and very sparsely populated territory. Just to indicate the order of magnitude we can note that the total area of our three regions is only slightly smaller than that of Belgium, The Netherlands, Germany and Poland taken together. (In contrast, the total population inhabiting those four countries amounts to slightly more than 146 million, which is roughly the same as the total Russian population size.)

The most prominent natural geographic characteristic of our three case study regions is their northern location. For instance, most of the Murmansk region is situated north of the Arctic Circle. Thus, most of its territory belongs to the tundra or pre-tundra zone. Karelia and Arkhangelsk are located further to the south; only very small portions of these regions are to be found north of the Arctic Circle. This extreme northern location affects all life in the region and it is of course of great significance for the possibilities to develop the forest sector.

In the Soviet era the regions of Murmansk, Karelia and Arkhangelsk experienced significant economic development (see, e.g., Andreev and Olsson, 2003). The Soviet planned economy strived for a high degree of economic self-sufficiency, which made it necessary to exploit remote natural resource deposits. Huge investments were allocated to the establishment of the infrastructure (cities, municipalities, transport routes, etc.) necessary for a heavy natural resource exploitation. To run these operations labor was recruited from other parts of the Union. Immigration was stimulated by the higher wages offered for work in "cold locations," but labor was also allocated "by force" through the establishment of many large prison camps in the area. Another factor that has contributed to the development of all of these regions is their military importance. Especially the Murmansk region with its ice-free harbors is vital for the Russian navy. Exact data of the magnitude of the military establishments in the three regions are difficult to obtain, but one can safely assume that the military investments have made a significant impact on the regional economy in the area.

Until the beginning of the 1990s, all this planned economic expansion resulted in a steady population growth in the Russian north. Since the early 1990s, however, all our three regions have displayed a moderate population decrease, a decrease which is most pronounced in the Murmansk region (where the population was reduced by more than 13 percent during the 1990s). Like Russia at large the three regions are highly urbanized. About one third of the total population of the three regions lives in the regional capitals (the cities of Murmansk, Petrozavodsk and Arkhangelsk), 72 percent of the total population in the area live in the ten largest towns in the respective regions. Murmansk has the highest urbanization degree (92%), while Arkhangelsk and Karelia has a somewhat smaller share of their populations in urban areas (74%).

Figure 4: Map of northern Europe showing the Barents Euro-Arctic Region.

3.2.2 Forest Resource Characteristics — Comparing the Three Regions

Some size relations

Since there are significant differences between the three regions in our study it might be useful to have a brief look at some indicators illustrating their relative size in terms of population, territory, forest lands and growing stock (see Table 2). (Relevant figures for northern Sweden — the counties of Norrbotten and Västerbotten — have also been added for comparison.)

It can be noted that Arkhangelsk accounts for a dominant share of all indicators displayed in the table. The region occupies 47 percent of the total territory; it holds 40 percent of the total population in the area and 58 percent of the total forest resources. The Republic of Karelia is homogenous in the sense that its share of the population, territory, forest land and growing stock is roughly equal to one fifth of the total. Murmansk is the least homogenous region in terms of these indicators, with a comparatively large population density and only a small share of forest lands and, especially, growing stock. Northern Sweden has a small population share — in fact its

population density is the lowest in the whole area. While its share of the total territory is more or less the same as that of Murmansk and Karelia, it has significantly lower shares of the total forest land and growing stock than Karelia.

Table 2: Population, territory, forest lands, and growing stock in Murmansk, Karelia, Arkhangelsk and Northern Sweden, 1998.

Indicator	Totals (= 100%)	Percent			
		Murmansk[a]	Karelia[a]	Arkhangelsk[a]	Northern Sweden[b]
Population (1,000 inh.)	3813.5	27	20	40	13
Total area (mln. ha)	106.9	14	16	55	15
Forest fund (mln. ha)	60.8	16	24	49	11
Forest land (mln. ha)	43.4	12	21	52	15
Growing stock (mln. m^3)	4187.3	5	22	58	15

[a] Source: Data for 1998 from Komistat, 2000.
[b] Source: Data for northern Sweden (the counties of Norrbotten and Västerbotten) in the year 2000 were obtained from Statistics Sweden as published on the Internet at URL: http://www.regionfakta.com (retrieved on 24 April 2003).

The significance of the forest sector for the regional economy

Already the size relations displayed in Table 2 indicate that the forest sector is of greatly varying significance in the four regions. In terms of employment the size of the industrial sector is roughly equal in the three Russian regions (28–30% of total employment in 1995, decreasing to about 25% in 1999), while it is slightly smaller in northern Sweden (around 24% 1995–1999). The forest industry is of paramount importance as an employer in Karelia, where close to 50 thousand people worked in the forest sector in 1995, corresponding to 48.5 percent of industrial employment and slightly over 13 percent of total employment in the republic. It was also very important in Arkhangelsk, where about 82 thousand people worked in the forest sector in 1995 (corresponding to almost 45 percent of the industrial and close to 13 percent of total employment in the region). In Murmansk, on the other hand, only about 2,800 people worked in the forest sector (roughly 2 percent of industrial and a mere 0.6 percent of total employment in the region).

Figure 5 illustrates the importance of the forest industry in terms of its contribution to total regional industrial production. It also shows the size relations between the different industrial sectors in the three regions.

The figure clearly displays the striking similarities in industrial structure that exist between Arkhangelsk and Karelia. Here the forest industry is dominating the industrial production. Arkhangelsk is distinguished from the other two regions through its fuel and machine and metalworking industry. Murmansk displays a radically different industrial structure compared to the other two regions. Here the industry is dominated by non-ferrous metallurgy (which alone accounts for 38.5% of total industrial production), while practically no such industry exists in Arkhangelsk and Karelia. Murmansk is also set apart from the other two regions by the fact that a fairly large share of its industrial production emanates from electricity production (13.2%), ferrous metallurgy (10%),

chemical and petrochemical production (almost 12%) and food production (close to 20%). The share of total production produced by the forest industry in Murmansk is insignificant, only 0.3 percent.

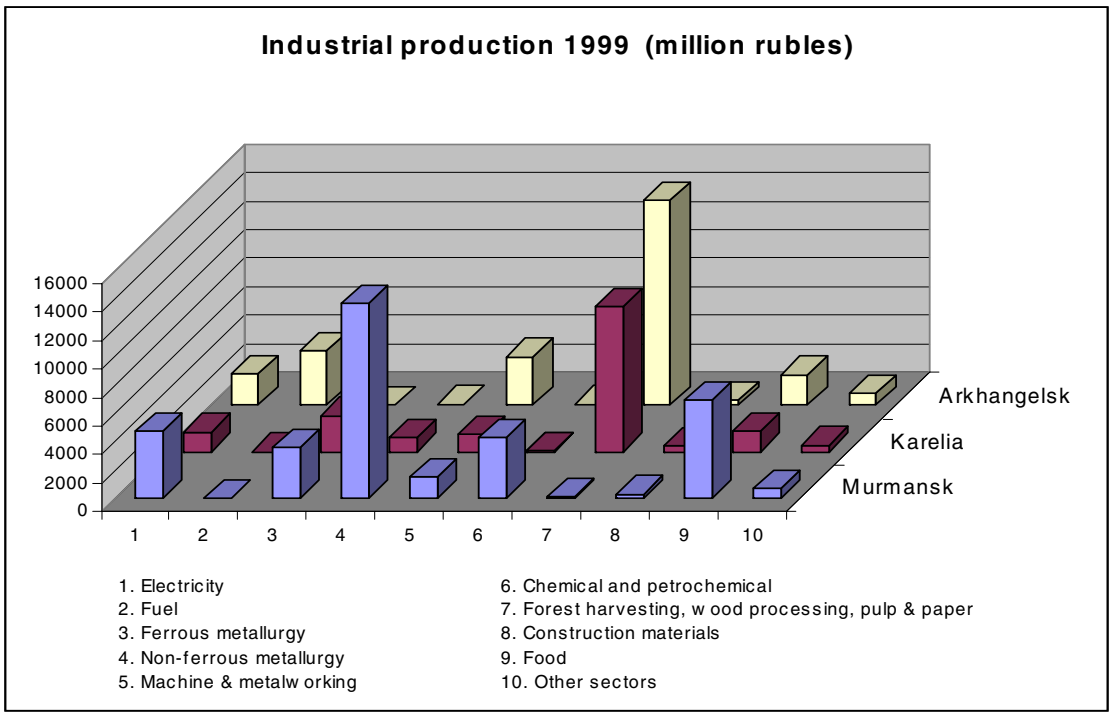

Figure 5: Volume and structure of industrial production in 1999. Source: Komistat, (2000:78, 80–81.)

Export volume is a good indicator of the importance of an economic sector for the whole economy. Export was of particular importance in the Soviet era as the major generator of foreign currency income to the state budget. But also after the disintegration of the Soviet Union and the onset of the transition to a market economy export volumes are still a good indicator of the situation in the economy. The development of exports indicates the general competitiveness of the economy. Products that are exported have successfully competed in the market and proved to have an attractive price-quality relation. This is an especially important signal in an economy in which a large share of production takes place inside the so-called virtual economy, where products are not directly exposed to market competition (cf. Sections 2.3 and 2.4).

Reliable data on export developments are not easy to come by, however. In Figure 6, the size relations in terms of export volumes between the three regions can be readily seen.[28] The picture only confirms the previous impression that the forest sector is of negligible importance for the economy of Murmansk Oblast, while it is of vital

[28] Total export values are given for the year 1999 (based on data from Komistat, 2000:125). The shares of pulp and paper and forest and woodworking in total exports were obtained from a database compiled at the Arctic Centre in Rovaniemi published on the internet at URL: http://arcticcentre.urova.fi/barentsinfo/intro/index.htm (data retrieved on May 12, 2003).

importance for the Republic of Karelia, and especially important for Arkhangelsk Oblast. It can be noted that Arkhangelsk alone accounts for about one third of the total Russian export of forest products (Bjorvatn and Castberg, 1994:133). Even if available figures are uncertain it seems that the share of the forest industry in total exports has increased in both Karelia and Arkhangelsk during the latter part of the 1990s. According to Strakhov *et al*. (1996) the share of the forest and forest industry in the total export of the Republic of Karelia was 46.5 percent in 1994 and it is said to be increasing. One official statistical source (Goskomstat Arkhangelsk, 1997:91) gives the corresponding share for the forest industry of Arkhangelsk to be as much as 85 percent in 1994 (88% in 1995). According to one of the sources of the data used in Figure 6 (Arctic Centre, 2003) the share of the forest sector in total commodity export in 1998 was 53.5 percent for Karelia and 81.7 percent for Arkhangelsk. These are extremely high shares. By comparison, in the year 2001, the exports (net export value[29]) of the forest-based industry in northern Sweden amounted to 28 percent of total regional industrial exports (cf. Infraplan AB, 2003:7).

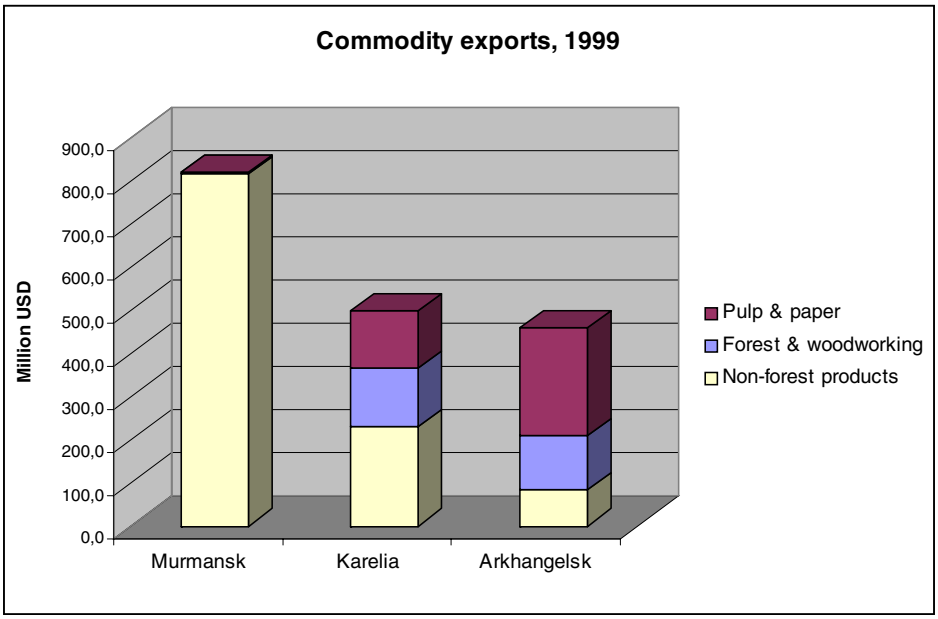

Figure 6: Commodity exports in 1999 (million USD). Source: See footnote 28.

Finally, it can be noted that, in 1998, as much as 44 percent of the exports of forest products from the Republic of Karelia was sold to Finland, another 11 percent to Turkey, 8 percent to Great Britain, and 5 percent to Iran. In the mix of forest products exported from Karelia the share of sawn wood drastically decreased in the 1990s, from more than one third to around 6 percent (Nemkovich *et al*., 2000:80). Instead paper increased its share from around 16 percent at the beginning to about 25 percent towards the end of the period (with peak levels of 40–44 percent in the middle of the period).

[29] Net export value is equal to gross export value minus the value of imported inputs. The data on which the percentage for the forest sector given here is based is an approximation where the distribution between various regions and branches of the economy has been made in accordance with the number of employees.

Unprocessed raw wood also radically increased its share of total forest commodity exports towards the end of the period (to around one fifth).

Two changes in the mix of exported forest commodities characterize developments in Arkhangelsk during the 1990s (Goskomstat Arkhangelsk, 1997:92). The first was a decrease in the share of sawn wood, from around 50 percent of the total in 1992–1993 to only about 10 percent in 1995, then again increasing to about 25 percent towards the end of the period. The second was a radical increase in the shares of pulp (from 13% in 1993 to almost 50% in 1995) and paper and cardboard (from about 10% in 1993 to close to 30% in 1995).

In summary, the picture of the regional industrial structure and the importance of the forest sector for the regional economy that is produced by the above indicators reflects a legacy from the command economy of the Soviet era, where the exploitation of natural resources were mainly governed by national interests often resulting in very skewed regional economic structures with an almost monocultural type of production. With the disintegration of the Soviet Union Arkhangelsk Oblast and the Republic of Karelia were left with economies that were highly dependent upon the forest sector, while the economy of Murmansk Oblast was somewhat more diversified but still largely dominated by ferrous and non-ferrous metallurgy. In Murmansk and Arkhangelsk being situated on the sea, sectors like fishing and (fish) food production were also developed. Furthermore, due to its geopolitical location (bordering "the West") and due to the specific maritime conditions (the Golf Stream producing all-year-round ice-free harbors) the northwest of Russia has always had a special military significance. The military presence in the area resulted in large investments in armaments and military establishments, which have greatly affected the economic conditions and the living standard of the population.

With the disintegration of the Soviet Union in 1991, most of the fundamental reasons for the Soviet-type planned economic development based on the exploitation of one or a few natural resources have vanished. Instead, the legacy from Soviet times in terms of industrial structure and dimension now constitutes a serious obstacle for a prosperous development in the emerging market economy. The challenge is to find ways to facilitate and speed up the political and economic changes that are needed if these regions should be able to move smoothly towards an efficient market economic system.

Characteristics of the forest resource

The kind of legacy left with the Russian regions after the disintegration of the Soviet Union is not, however, that easy to overcome. In effect, the regions are stuck with an economic structure that often does not at all suit the new emerging market economic system — much of the existing economic activities actually cannot survive the competition in the market. Fast and dramatic structural changes are required in order to improve the competitiveness of these economies, introducing new kinds of economic activities while simultaneously closing-down or down-sizing many existing production establishments. The problem is that achieving such changes on a sufficiently large scale is no easy task. Existing large production establishments (which were often constructed jointly with whole towns to provide housing for their workers) cannot be closed down

or restructured at an instant. Realistically, whatever policy is pursued, these regions will be stuck with their industrial structure for some time to come.

Since large parts of the sizeable populations in the three regions discussed here are likely to be profoundly affected by the future (necessary) structural changes in the economy it would seem natural (and arguably also efficient) to freely engage people in the development of public "transition policies" with the purpose of achieving legitimate changes and efficient governance of the transition process. Obviously, these policies will have to take their departure in the existing economic situation and the resource exploitation that has led to and still sustains the existing situation. Thus, since the forests and the exploitation of forest resources have been the basis for the development in both Arkhangelsk and Karelia, it seems natural to commence an investigation of the prerequisites for market economic structural changes in these regions by looking at the existing conditions in this sector. The argument also bears upon the situation in Murmansk, even if the forest sector does not occupy any prominent position in the regional economy. Still, the forest sector in Murmansk engages a sufficiently large number of people (e.g., all those living in the 10 forest settlements, so-called *leskhozy*, with their 28 forest villages, *lesnichestva*) to make an assessment of the problems afflicting the Murmansk forest sector well motivated.[30]

Russian forests are classified according to criteria that may not be entirely transparent to a layman. The State Forest Fund is a basic concept. It might be measured in either hectares of land or in cubic meters of standing forest. The State Forest Fund (FF) contains land covered by forests (so-called Forest Land, FL) as well as land not covered by forests (NFL[31]). FL, in turn, is divided into stocked areas, so-called Forested Areas (FA), and unstocked areas.[32] Furthermore, crosscutting FF, FL and FA, Russian forests are divided into three management "groups" according to their function: *Group I* consists of forests that are protected for various reasons (there are 25 protective categories). *Group II* consists of forests that are protected but where restricted industrial

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[30] Cf. Eikeland *et al*. (2004) for a more detailed discussion of the development of the *leskhozy* in Murmansk Oblast. There were actually two basic reasons for incorporating Murmansk Oblast in the IIASA study of the institutions governing the Russian regional forest sector. One reason was of a mostly *ad-hoc* character. We had selected Arkhangelsk and Karelia to be part of the study. Since Murmansk is also part of the "Barents collaboration" established in 1993 and since this collaboration allows people from the western parts of the Barents Region good access to various decision-makers it was both easy and cost-effictive to incorporate Murmansk in the study as well. By doing so we would also get a more complete picture of the situation in the forest sector in the Russian part of the Barents Region. The second reason for incorporating Murmansk has to do with the fact that it is *not* a typical "forest region". The forest sector means a lot in most of the different regions incorporated in the IIASA study. It therefore seemed interesting as a comparison to have a look at what the forest institutional problems looked like and how they were handled in a region that was not heavily dependent on the workings of the forest sector.

[31] NFL consists of (a) areas which are not suitable for forest production under current conditions; and (b) areas with other land-use functions, such as pastures, arable lands, peat production, farmsteads, etc. These two categories of land must be managed by a forest authority in order to be classified as NFL (Nilsson *et al.*, 1994).

[32] To indicate the rough proportions between these various forest land categories we can note that the the total area of Russia is roughly 1.7 billion ha. Almost 70 percent of this area (close to 1.2 billion ha) belongs to the FF. FL comprises about 75 percent of FF, and FA, in turn, slightly more than 87 percent of FL.

exploitation may be allowed (usually forests situated near densely populated areas). Only forests belonging to *Group III* are entirely available for industrial exploitation (cf. Nilsson and Shvidenko, 1997; Strakhov *et al*., 1996).

While, as already pointed out above, all forests in Russia are owned by the State, the actual management of the forests — the execution of ownership rights — may be handled by several different authorities representing the forest owner (the State). It is rather difficult to follow how the state ownership of the forests has been managed historically. A number of organizational reforms have been passed over the years, which tend to confuse the picture. While in Soviet times the management functions were largely handled through delegation from the political level (ultimately the Communist Party apparatus), the system started to change to what it is today through the reform measures decided under Gorbachev in 1988. These reforms started a period of organizational turmoil ending in 1992 with the establishment of the independent Russian Federal Forest Service (FFS).[33] Until its incorporation into the Ministry of Natural Resources of the Russian Federation (in late May 2000) the FFS was in charge of the management of the State Forest Fund. Thus, during the period 1988–2000 (which includes the years during which the IIASA study of forest sector institutions was performed) the management of the forest resources continued to be in the hands of an authority that had no (or only little) control over the (industrial) use of the resource. In fact, the history of Soviet/Russian forest management and forest use is largely about alterations between periods in which the control and use of forest management were in the same administrative hands and periods as when they were under the control of separate state organs.

Beside the Federal Forest Service, which manages the overwhelming majority of the State Forest Fund, smaller shares (less than 5%) of the Fund is managed by other State organs, such as various agricultural organizations, the State Committee for Environmental Protection, the State police, and the military.

Figure 7 shows the stocked forest land (FA) managed by FFS and its distribution between the three forest use groups for Murmansk, Karelia and Arkhangelsk. It can be noted that neither Murmansk nor Arkhangelsk has any forested areas belonging to Group II. A major share of FA in Murmansk is categorized as Group I forests. And, again, the figure clearly illustrates the overwhelmingly large size of the Arkhangelsk forests. Group I forests in Arkhangelsk are in fact somewhat larger than Group III forests in the Republic of Karelia. It should also be noted that the major share of the forests in the region is coniferous, although deciduous forests occupy rather significant shares of the forest land in both Murmansk and Arkhangelsk. For comparison it can be noted that the total FA of northern Sweden occupies close to 6.5 million ha to be compared with the totals of 5, 9, and 19.8 million ha for Murmansk, Karelia and Arkhangelsk, respectively.

Figure 8 illustrates the distribution of the growing stock for the five dominating tree species in Murmansk, Karelia and Arkhangelsk. To facilitate comparison the growing stock of northern Sweden is also given.

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[33] A brief overview of these events can be found in Sheingauz *et al*. (1995).

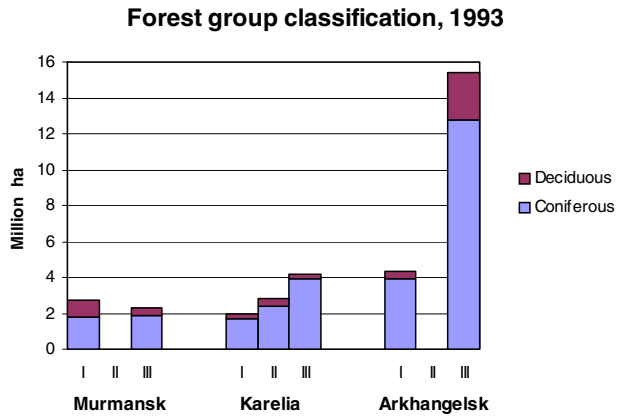

Figure 7: Stocked forest land (FA) managed by FFS by forest group in Murmansk, Karelia and Arkhangelsk. Source: Based on data from the Arctic Centre Database (2003.)

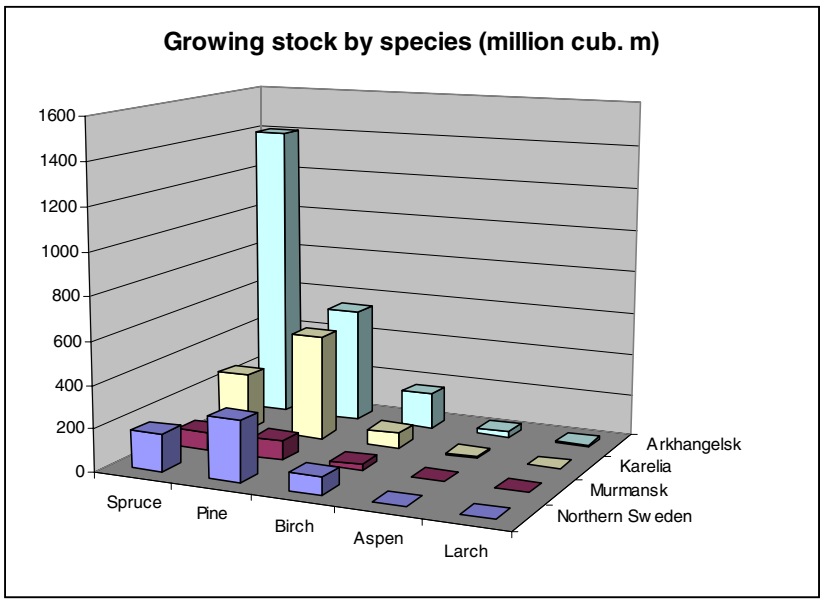

Figure 8: Growing stock by species in Murmansk, Karelia, Arkhangelsk and northern Sweden, end of the 1990s. Source: Based on data from the Arctic Centre Database (2003).

The size relations between the regions displayed in the figure are familiar by now. In terms of growing stock as well as in terms of forest lands Arkhangelsk is the dominating region. Its stock of spruce is roughly 2.5 times larger than the combined spruce volumes of Karelia, Murmansk and northern Sweden. It also has the largest stock of pine of all the regions included in the figure notwithstanding the fact that pine is the dominating tree species in each of the other regions. The figure also clearly shows that in this area of the world there are in fact only three tree species that matter — spruce, pine and birch, and even the birch stocks are relatively insignificant compared to the stocks of spruce and pine. The total growing stock in Murmansk, Karelia and Arkhangelsk was close to 3.2 billion cub. m. corresponding to almost 4 percent of the total growing stock in all of Russia and about 15 percent of that of the European part of the country.

(Arkhangelsk alone contributed close to 2.7 percent of the total Russian growing stock and just over 10 percent of the total for the European part of Russia.) The growing stock of northern Sweden is roughly equal to 20 percent of the total for Sweden.

So much for the physical characteristics of the forest resources of north-west Russia and the north of Sweden. Now let us turn instead to the economic use of these resources.

Characterizing forest utilization

Historically, the development of the forest sector has been similar in the regions of Murmansk, Karelia and Arkhangelsk. Especially in the 1960s and the 1970s, there was a drastic expansion of production capacities and production volumes reached their highest levels ever. Forest harvesting volumes in Russia is governed by norms stipulated for individual regions by the forest authorities and set with the purpose to avoid over-exploitation. In Soviet times, especially during the peak years from the 1960s and into the 1980s, harvesting — typically large-scale clear-cutting — often exceeded these so-called Annual Allowable Cut (AAC) levels, which anyway were often very high despite warnings from forest researchers (Carlsson *et al.*, 1999). This development has led observers of the transition period (see, e.g., World Bank, 1997) to speak of a "legacy of overuse" of Russian forest resources, a legacy that must be corrected in order to make the forest sector environmentally and economically sustainable in the emerging market system.

One consequence of the heavy exploitation of the forests is that the share of mature and over-mature stands in the total forest of Karelia has decreased since the 1950s. In 1956, mature and over-mature stands occupied 65 percent of the total forested areas. Ten years later this share was 56 percent, in the late 1980s it was down at 33 percent and it has remained at approximately this level since (Piipponen, 1999). In Arkhangelsk the share of mature and over-mature stands was close to 60 percent still in the mid 1990s despite a fast reduction since the 1950s (Carlsson *et al.*, 1999). In Murmansk the corresponding share has remained lower (around 40%) in the whole period since the 1960s (Strakhov *et al.*, 1996). Since these stands are densely stocked they remain attractive for continued heavy exploitation. Thus, the struggle over the exploitation of pristine forests can be expected to continue primarily increasing the pressure on those old forest areas which are most accessible for exploitation, i.e., areas along existing transport routes.

The deep economic crisis (output decline) following the disintegration of the Soviet Union "automatically" helped to bring down harvesting levels way below the AAC in most regions of Russia. While harvesting sometimes exceeded or remained closely below the AAC in the 1960s through the 1980s, a sharp reduction in the AAC utilization levels took place in the 1990s. While, for instance, in 1970, the AAC utilization was 109 percent in Murmansk, in 1990 it was 92 percent, in 1992: 61 percent, and in 1996 it was down to slightly over 26 percent (Ivanova and Nygaard, 1999). AAC utilization levels have changed in a similar way both in Arkhangelsk and in Karelia (Carlsson *et al.*, 1999; Piipponen, 1999).

In Murmansk Oblast and the Republic of Karelia harvested volumes were highest in the 1960s. About 15–20 million cub. m. of wood was then harvested annually in Karelia — in Murmansk the corresponding volumes were over 2 million cub. m. In the 1970s

annual harvesting volumes were slowly decreasing in both regions. In Arkhangelsk Oblast harvests peaked in the 1970s and into the 1980s with annual volumes up to about 25 million cub. m. As illustrated in Figure 9 harvest volumes were dramatically reduced in the 1990s in all three regions.

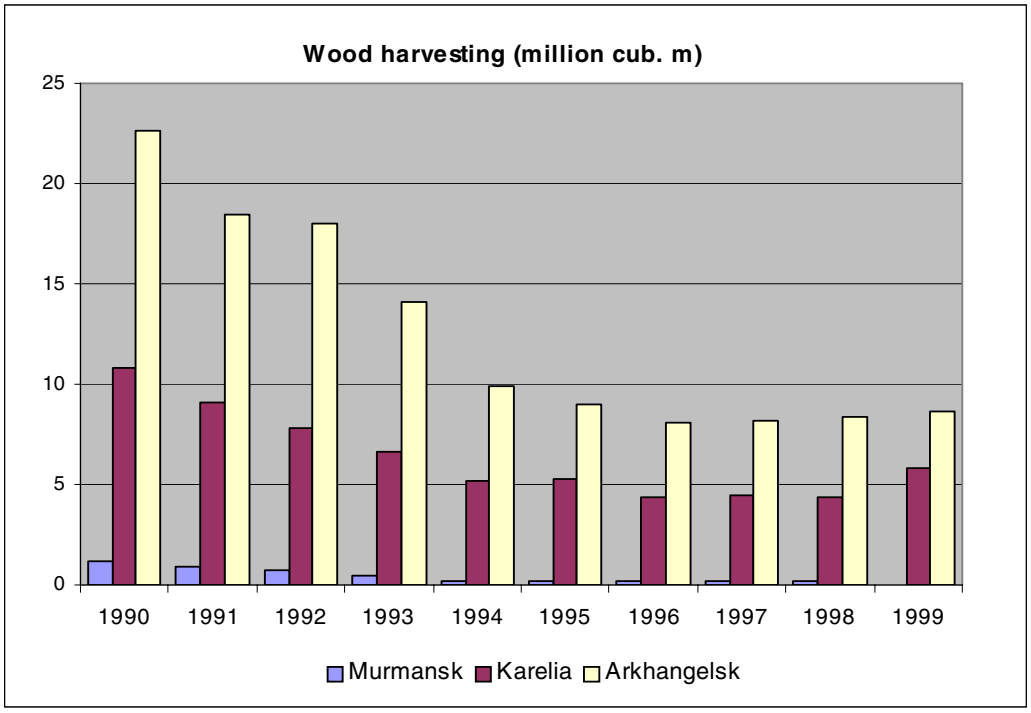

Figure 9: Wood harvests in Murmansk, Karelia and Arkhangelsk, 1990–1999. Sources: Carlsson *et al.* (1999); Piipponen (1999); Ivanova and Nygaard (1999); Layton and Pashkevitch (1999).

The total forest harvest in the three regions decreased from 34.6 million cub. m. in 1990 to a minimum around 12.7 million cub. m. in 1996, after which volumes again increased to around 14 million cub. m. towards the end of the 1990s (the exact numbers are a bit shaky though).

The development pattern is very similar for all three regions. The relative decline has been most pronounced in Murmansk, where output levels as of 1996 have remained at slightly over 11 percent of the 1990 level. It was least drastic in Karelia where the level in 1996 was around 40 percent of the 1990 level and then climbed back to over 50 percent at the end of the period. (The harvested volumes in the three regions together seem to have remained around 12–13 percent of the total harvests in Russia throughout the period.)

For comparison we can note that annual harvesting volumes in northern Sweden has remained fairly stable around 10–11 million cub. m. during most of the 1990s (Statistics Sweden). (This corresponds to around 15 percent of the total Swedish harvested volumes in this period.)

Table 3 shows the production in the 1990s of the most important forest industrial products in the three regions.

Table 3: Forest industrial production in Murmansk, Karelia and Arkhangelsk, 1990–1999. Source: Komistat (2000:84–87).

Murmansk	**1990**	**1995**	**1999**	**1995 (1990 = 100)**	**1999 (1990 = 100)**
Commercial wood (mln m^3)	1	0.2	0.1	20	10
Sawn wood (1,000 m^3)	354	47	31	13	9
Karelia					
Commercial wood (mln m^3)	10	4.6	5.1	46	51
Sawn wood (1,000 m^3)	2004	861	709	43	35
Plywood (1,000 m^3)	28.2	8.3	12.2	29	43
Pulp (1,000 t)	765.7	324.3	307.2	42	40
Paper (1,000 t)	1219.8	632.3	659	52	54
Cardboard (1,000 t)	53.1	8.8	9	17	17
Arkhangelsk					
Commercial wood (mln m^3)	21.6	8	8.5	37	39
Sawn wood (1,000 m^3)	5011	1737	1754	35	35
Plywood (1,000 m^3)	50.4	25.4	47.2	50	94
Chip board (1,000 m^3)	149.4	18.6	0	12	0
Pulp (1,000 t)	2154.3	1344.4	1504.7	62	70
Paper (1,000 t)	396.5	211.1	253.4	53	64
Cardboard (1,000 t)	628.1	399.7	575.1	64	92

One noticeable trend shown in the table is that the production decrease in Murmansk Oblast almost extinguished the regional forest industry. Production of both commercial and sawn wood — the two main forest industrial products produced in the region — rapidly vanished from their already very low levels at the beginning of the 1990s and there is no sign of recovery towards the end of the period. The production of these two commodities decreased severely in Karelia and Arkhangelsk as well. In Arkhangelsk, where production volumes are about twice as large as volumes in Karelia, the reduction was most dramatic, with output volumes already in 1995 down to slightly over one third of the 1990 levels. Towards the end of the period a slight increase in production can be noticed for commercial wood in Arkhangelsk as well as in Karelia (where output decrease was less drastic, falling to "only" around half of its 1990 volume).

The most dramatic output decrease (apart from chip board production in Arkhangelsk, which seems to have vanished altogether after 1995) took place in Karelia, where the production of plywood and cardboard was reduced in the first half of the period to slightly less than one third and one fifth, respectively, of their 1990 levels. However, plywood production then increased again and by 1999 it had reached 43 percent of its 1990 level. In contrast, in Arkhangelsk production of plywood and cardboard never sank below 50 and 64 percent of their respective levels in 1990, and by the end of the period production had returned to almost their initial levels. (It should also be noticed

that output volumes of plywood and cardboard was always very much larger in Arkhangelsk compared to Karelia — the output of plywood was almost twice as large in 1990 and close to four times as large in 1999, the output of cardboard as much as 12 times as large in 1990 and almost 64 times larger in 1999.)

While Arkhangelsk is by far the largest producer of chemical pulp in this area — production volumes were roughly 3–5 times higher than volumes in Karelia throughout the period — the situation is reversed when it comes to paper production, where Karelian paper plants together produce about three times more than the paper producers in Arkhangelsk. Output volumes of both pulp and paper display reductions similar to most other forest industrial products. By 1995, volumes in Karelia were reduced to between 40 and 50 percent of their 1990 level and there seems to have been no or only a moderate recovery in production volumes towards the end of the period. In Arkhangelsk, however, production decline was not as drastic. Here volumes had decreased by 1995 to roughly 50–60 percent of their levels in 1990, and in the second half of the decade output recovered significantly so that, by 1999, output had reached 64 percent of the 1990 level for paper and 70 percent for pulp.

It can also be noted that Murmansk, Karelia and Arkhangelsk together have accounted for a substantial share of the total forest industrial production in Russia during the 1990s. The shares seem to have remained rather stable throughout the period despite the declining output volumes. The total share of commercial wood production has remained around 14–17 percent (with Arkhangelsk alone accounting for 9–11 percent) of the total Russian production. The corresponding share for sawn wood has been roughly 10–13 percent (Arkhangelsk 6–9%), for plywood roughly 4–5 percent (Arkhangelsk 3–4%). For products like cardboard, paper and chemical pulp Karelia and Arkhangelsk together accounted for a large share of total Russian production — 28–36, 30–32, and 40–42 percent, respectively, of the total Russian production during the 1990s. (For comparison it could be mentioned that, according to a rough estimate, the five pulp producing plants in northern Sweden accounted for around 45 percent of the total Swedish pulp production in the late 1990s.)

3.2.3 Characteristics of Society Compared

Informed by the IAD framework the IIASA case study of regional forest sector institutions also focused on "societal features" affecting actors' behavior in the Russian timber procurement "arena." Since the behavior of many — if not most — actors (citizens) in society influences the outcome of interaction in *all* conceivable action arenas, we could in principle distinguish a very large number of "societal features" as contributing to what happens in the timber procurement arena. But, evidently, not every "societal feature" is of equal importance for the behavior that is analyzed here — some features must be considered more pertinent than others. Without being able to fall back on broad data mining techniques when selecting which features of society that deserve attention in this context, one is forced, in practice, to lean on established theory of the "forces" governing socioeconomic behavior.

Here we will briefly review some data describing the development in Murmansk, Karelia and Arkhangelsk with regard to (a) the regional demography and level of

education, (b) the workforce and its composition, competence, employment, wage level, etc., (c) the economic structure and enterprise restructuring, (d) the infrastructure serving the population and the actors in the forest sector, and (e) the environmental problems, especially problems relating to forestry and forest utilization.

Features of regional demography conditioning actors' behavior

As already noted above (cf. section 3.2.1) population numbers in all three regions have been steadily decreasing at a slow and even pace throughout the 1990s. The decrease has been most significant in Murmansk Oblast, where the total population in 2000 was 13.6 percent smaller than in 1990. (The population decline in Karelia and Arkhangelsk was smaller, only 4.2 and 7.5 percent, respectively.) All three regions are highly urbanized. About a fourth of the population in Karelia and Arkhangelsk live in rural areas, in Murmansk the share is slightly less than 10 percent. Significant shares of the total regional population live in the regional capital. The population of the city of Murmansk amounts to 37.7 percent of the total population in the region, the corresponding share for Petrozavodsk was almost as large (36.7%) while only slightly over a quarter of the regional population lives in Arkhangelsk. (There the total population is distributed over several smaller cities. All in all there are seven cities and districts in the region with a population of 40–80,000 people, and one large city (Severodvinsk) with a population of close to 235,000 people). Population density in the three regions is much lower than the Russian average (8.6 inh./sq. km) — for Arkhangelsk (including the Nenets Autonomous Okrug) it is 2.5, for Karelia 4.5, and for Murmansk 6.9 inhabitants per sq. km. (In northern Sweden, by comparison, population density is merely 3.1 inh. per sq. km.). Looking at the age distribution of the population in 1999 (cf. Table 4) we find that Murmansk had the youngest population. The share of the regional population under the age of 15 was almost equal in all three regions, but the share in working age was largest in Murmansk (65.2%). The share above working age was largest in Karelia (18.7%).[34] Using the same age classes as in the Russian calculation we find that the corresponding shares for northern Sweden are strikingly different. In 1999, the share of the population under the age of 15 was 19.5 percent, the share in working age was merely 54.7 percent, while the share over working age was as large as 25.7 percent.[35]

The natural population growth (births minus deaths) has been negative in Russia since after 1992. The decline is due to a drastic decrease in the birth rate with a simultaneous increase in the death rate. The former decreased by 45 percent in the period 1987–1994; in 1996 it was reported to be nine births per 1,000 inhabitants. The latter increased by as much as 50 percent in the same period and in 1996 the death rate was reported to be 14.4 deaths per 1,000 inhabitants. This development also meant that life expectancy declined. Life expectancy in Russia grew until around 1989. Between 1989 and 1994 there was a decrease in life expectancy from 64.1 to 57.7 years for males, and from 74.4 to 71.2 years for females. These are very low numbers compared to most other industrialized countries (Granåsen *et al.*, 1997).

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[34] See note to Table 4 for age groups definitions.

[35] Age classified population data from Statistics Sweden recalculated to fit the Russian age group definition (cf. note to Table 4). (Data retrieved on May 26, 2003 from http://www.scb.se.)

Table 4: Some demographic characteristics of Murmansk, Karelia and Arkhangelsk (as of 1.1.1999). Source: Based on data obtained from *The Barents Euro-Arctic Region* (2003).

	Murmansk Oblast	Republic of Karelia	Arkhangelsk Oblast	Total
Area (1,000 km^2)	144.9	172.4	587.4	904.7
Population (1,000)	1,000	772	1,478	3,250
Population Density (inh./km^2)	6.9	4.5	2.5	3.6
Structure by Age (%)[a]				
Under Working Age	21.7	22.2	22.8	22.3
Working Age	65.2	59.1	59.4	61.1
Above Working Age	13.1	18.7	17.8	16.6
Share of Population Living in Towns (%)	92	74	74	79.5

[a] Under working age <=15; working age males 16–59, females 16–54; above working age males >=60, females >=55.

As can be seen in Table 5 the development of these indicators has been similar in our three regions with levels mostly slightly below the averages for Russia. There was a dramatic decrease in life expectancy during the 1990s. Infant mortality rates (deaths within the first year of life per 1,000 births) also displayed a negative development in all three regions.

Table 5: Some demographic characteristics for Murmansk, Karelia and Arkhangelsk, 1990–1999. Sources: Komistat (2000:13–17); Goskomstat (1996a,b; 1995) (data retrieved from http://www.gks.ru).

	Murmansk Oblast			Republic of Karelia			Arkhangelsk Oblast			Russia		
	1990	1995	1999	1990	1995	1999	1990	1995	1999	1990	1995	2000[b]
Birth rate	11.5	8.1	7.6	13.2	8.5	7.9	13.5	8.7	8.1	13.4		8.7
Death rate	6.0	11.4	10.1	10.1	16.3	15.1	9.8	14.6	15.1	11.2	14.9	15.4
Natural pop. growth	5.5	-3.3	-2.5	3.1	-7.8	-7.2	3.7	-5.9	-7.0	2.2	-5.7	-6.7
Male life expectancy	65.3	57.0[a]	63.7	63.8	55.0[a]	59.7	64.0	55.9[a]	60.0	63.8	58.0	
Female life expect.	74.4	69.7[a]	74.0	74.2	69.0[a]	72.3	74.0	70.0[a]	72.7	74.3	72.0	
Infant mortality	16.1	15.9	11.3	14.0	17.4	17.5	14.4	16.2	14.8	17.4	18.1	15.3

[a] Data for 1994.
[b] Data for 2000 retrieved from Goskomstat's website at http://www.gks.ru.

Explanations: *Birth rate:* Number of new-born children per 1,000 inhabitants; *Death rate:* Number of deaths per 1,000 inhabitants; *Natural population growth:* Difference between birth rate and death rate; *Male/female life expectancy:* Expected length of life at birth (years); *Infant mortality:* Number of new-born children who die within their first year per 1,000 births.

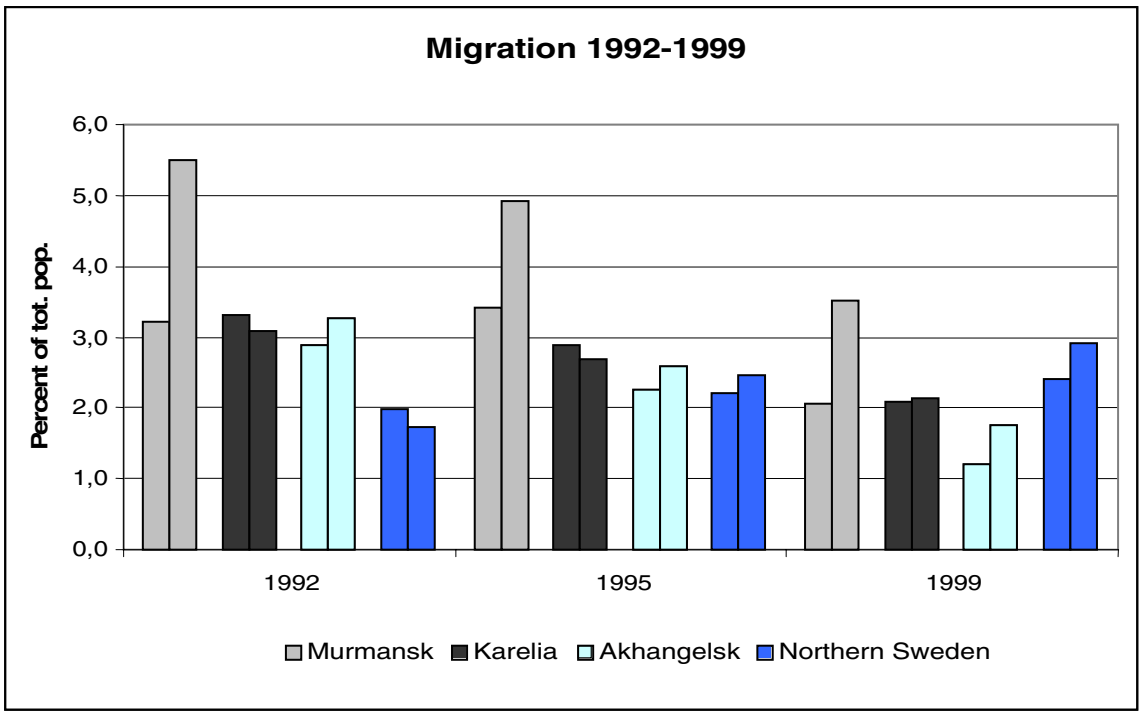
Comparing these figures with corresponding data for Sweden we find that birth rates in Sweden are also declining but from higher levels than in Russia (14.5, 11.7, 10.2 for the years 1990, 1995, 2000), death rates remain stable around 10–11 throughout the period, natural population growth in Sweden is changing from small positive to small negative numbers (3.4, 1.1, -0.3). The life expectancy and infant mortality levels, however, are dramatically different in Sweden compared with Russia. Life expectancy is significantly higher in Sweden. Especially male life expectancy displays a huge difference — the Swedish level was 17 percent higher compared to that of Russia in 1990 and the gap increased drastically to 1995 when a Swedish male (on average) could expect to live slightly over 18 years longer than a Russian male. (The numbers for females display a similar pattern but with smaller differences.) Infant mortality in Sweden decreased from its already comparatively low level of close to 6 deaths per 1,000 newly born in 1990 to 3.4 in 2000. The same indicators for northern Sweden display a similar pattern to that of Sweden at large, the main difference being that the population decrease has been somewhat more pronounced in northern Sweden compared to the Swedish average.[36]

The population development in the regions of Murmansk, Karelia and Arkhangelsk has also been affected by migration flows. Figure 10 shows immigration and emigration over the regional borders as percentages of total regional population for the years 1992, 1995, and 1999. (Migration to and from northern Sweden has been included for comparison.) Migration flows in all the three Russian regions have decreased in the period displayed in the figure. (For northern Sweden the situation is the opposite.) Murmansk has had the largest migration flows of all regions. Net migration is also highest in Murmansk. In 1992 migration caused a population decrease of 2.3 percent in the region, in the latter half of the period the share decreased to around 1.5 percent. It can also be noted that Karelia is the only region where net migration has been positive for most of the period (in 1999, however, in- and out-migration flows were roughly of equal size). In Arkhangelsk migration has decreased significantly, net migration is slightly negative and slowly increasing. By the beginning of the 1990s migration was of least significance in northern Sweden — net migration was also slightly positive, more people moved to the region than from it. However, migration increased and by the end of the period the immigration share was the largest of all regions displayed in the figure while the emigration share was surpassed only by that of Murmansk.

It can be noted that migration to and from the Russian "North" has always been sizeable, due to the tangible material benefits (a temporary) relocation to the North entailed for people willing to perform hard and often hazardous work in the natural resource extractive industry. After enjoying the benefits of working in these extreme environments for some time, on retirement (if not earlier) many "immigrants" would move to other parts of Russia. This explains the fact that the populations of the three regions is comparatively young, and that the share of pensioners is fairly low (this is especially true for Murmansk Oblast). However, the tendency of emigration flows to decrease is a bit surprising considering the expected economic consequences of the introduction of market relations among existing enterprises in the region. The introduction of market competition was expected to disclose the inefficiency of a large

[36] Numbers for northern Sweden are from Statistics Sweden (retrieved on May 23, 2003, from http://www.scb.se).

part of the enterprise sector. The consequence would be an economic restructuring (through enterprise close-downs or down-sizing). Such a quantitative shrinking of the economic activity would only illustrate the fact that these northern regions were in fact "overpopulated" (Heleniak, 1999). An hypothetical explanation of the fact that the expected increased migration never materialized is that a sufficiently large part of the enterprises in these regions were, in fact, pulled into the virtual economy (cf. Sections 2.3 and 2.4) and thereby "insulated" from the most immediate and dramatic effects of market competition. In combination with the fact that the turmoil in the Russian economy — where, furthermore, employment relocation services were only barely being introduced — made prospects for finding employment anywhere else in the country seem very uncertain, the labor force tended to stay put and try to "ride out the storm."



Note: *Left bar:* Immigration. *Right bar:* Emigration.

Figure 10: Regional immigration and emigration shares, 1992–1990. Sources: Komistat, (2000:18), and Statistics Sweden.

Human resources conditioning economic behavior

In order to pin down more aspects of the way actors' behavior in the timber procurement arena is conditioned by various features of society we may look at the demographic development from a production factor point of view. As already noted employment in the forest sector accounts for a significant share (around 13%) of total employment in Karelia and Arkhangelsk (and as much as 45–48 percent of total industrial employment), while forest related labor in Murmansk contributes a mere 0.6 percent to the total regional employment. The aggregate sector employment structure looks very similar in the three regions. Industry, which is by far the largest sector in all regions, accounted for 24–27 percent of total employment in 1999. Next in size was

Trade with 13–15 percent, followed by Education, Culture and Arts with 12–13 percent and Transport and Communications with 10–12 percent of total regional employment. Two small differences in employment structure should be noted. While Murmansk has only 2 percent of total employment in Agriculture and Forestry the corresponding shares for Karelia and Arkhangelsk is 6 and 7 percent. On the other hand, Murmansk has a slightly higher share of total employment in Public Administration (8%) compared to Karelia and Arkhangelsk (with 6% each). In all three regions there has been a relative decrease in industrial employment in the latter half of the 1990s. In Arkhangelsk and Karelia Transport and Communications also lowered its respective shares of total employment in this period. Trade increased its share of total employment from 10–12 percent in 1995 to 13–15 percent in 1999. Public Administration in all regions also increased its share of total employment by two percentage points in this period and by 1999 it had reached 6 percent in Karelia and Arkhangelsk and 8 percent in Murmansk.

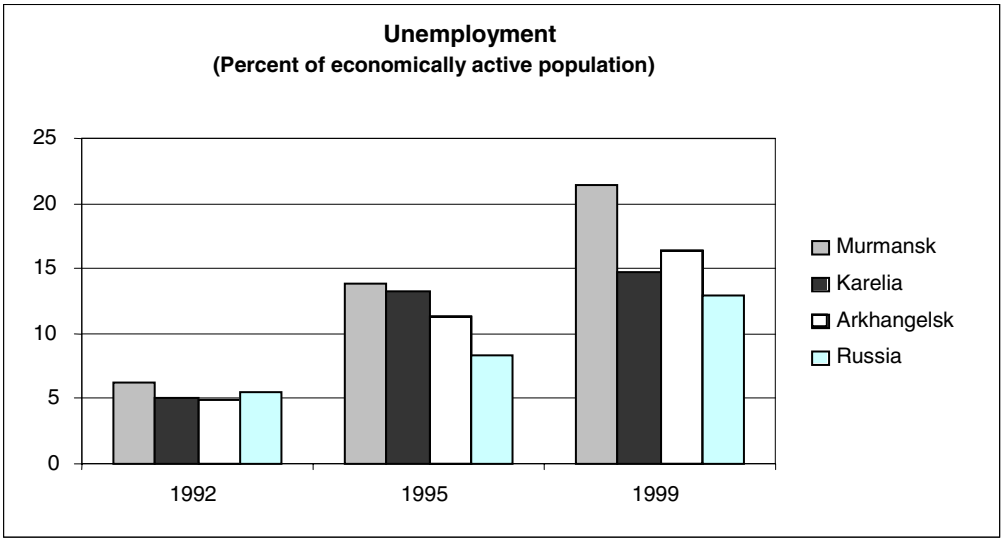
Industrial employment displays a greater variation between the three regions. A rough indication of the industrial employment structure can be induced from Figure 5, showing the distribution of production between various industrial branches.

Unemployment was an almost non-existent phenomenon in the Soviet era. However, during the transition period people have had to get used to the risk of losing their job. This prospect has been — and probably still is — extremely frightening, since preparedness for such crises (on the individual/psychological as well as the societal level) is not yet well developed. Although public employment agencies have been established today with the task of distributing unemployment relief and helping the unemployed to find new jobs, this institution is still new in Russia and people seem reluctant to make full use of its services. It is therefore likely that strong rigidities in people's behavior still inhibit the mobility on the labor market, a mobility that is crucial for the possibilities to restructure the economy and generate economic growth.

Data on unemployment can be suspected to be biased, but official unemployment figures are nowadays regularly published. Data of both registered and estimated total unemployment is provided in the official statistical publications. Figure 11 shows the development of total estimated unemployment in Murmansk, Karelia and Arkhangelsk for the years 1992, 1995, and 1999.

The rapid increase in unemployment from comparatively low levels at the beginning of the 1990s depicted in Figure 11 is due to many possible reasons. As already noted, transition brought unemployment on a scale never experienced in the Soviet Union. At first it is likely that people who lost their jobs were not even aware of the services offered by the employment agencies or they did not bother to register (which often was a cumbersome and costly procedure, especially for people living in remote areas) to obtain the meager benefits that were offered (Ivanova and Nygaard, 1999; Piipponen, 1999). The rapid increase in unemployment numbers that can be seen in the data for 1995 and 1999 must be regarded as a consequence partly of improved registrations and partly of the increasing competition facing enterprises in the emerging market economy — a process that is forcing them to lay off labor. The fact that unemployment numbers are not even higher, which might have been expected knowing the Soviet legacy of high labor intensity with accompanying low labor productivity, is probably due to the

workings of the virtual economy that often seems to lead enterprise managers to hoard labor.



Note: Data for Russia is from 1992, 1995, and 2001.

Figure 11: Estimated total unemployment in Murmansk, Karelia and Arkhangelsk, 1992, 1995 and 1999. Sources: Komistat (2000:23); Goskomstat (1996b:21); On-line Pravda, February 12, 2003.[37]

Still, unemployment numbers reported by the official statistical agencies can be expected to underestimate real unemployment levels (Carlsson *et al.*, 1999). But at the same time the numbers also hide the fact that many unemployed are anyway gainfully employed in the "shadow economy," since people are forced to perform some work in this large unofficial sector in order to survive (Ivanova and Nygaard, 1999).

Unemployment in Murmansk, Karelia and Arkhangelsk was similar to the average Russian level of around 5 percent of the economically active population at the beginning of the period. By the mid 1990s it had increased sharply to 11–14 percent, which is well above the Russian average of slightly over 8 percent. Towards the end of the period it had reached 15–16 percent in Karelia and Arkhangelsk while it was more than 20 percent in Murmansk (Goskomstat, 1996b:21). For comparison it can be noted that unemployment in northern Sweden also increased substantially during the 1990s, from levels slightly over 3 percent to levels around 8 percent by the mid 1990s. However, towards the end of the decade unemployment seems to have slightly decreased again in northern Sweden, to 6–7 percent of the working age population.[38]

Reliable data on incomes and wages are difficult to come by and data obtained from different sources (such as regional statistical offices) are sometimes impossible to compare. It seems clear that average workers' wages in northern regions like

[37] Retrieved on May 28, 2003 from http://english.pravda.ru/economics/2003/02/12/43298.html.

[38] Numbers for northern Sweden from Statistics Sweden (http://www.scb.se, data retrieved on May 27, 2003).

Murmansk, Karelia and Arkhangelsk traditionally have been higher than the Russian average. This was due to the fact that special subsidies were paid to attract labor to the often hard work available in regions with extreme natural conditions. With transition such public subsidies can be expected eventually to disappear altogether. Official data (Goskomstat, 1996b) indicate that workers' average monthly wages by the mid 1990s were still significantly higher than the average for all of Russia. Wages in Karelia and Arkhangelsk were around 25–30 percent higher than the Russian average, and wages in Murmansk were about 90 percent higher. (Per capita money incomes for Murmansk and Karelia display a similar pattern but with smaller differences. For Arkhangelsk, however, per capita incomes were slightly lower than the Russian average.) It can also be noted that nominal monthly average wages increased rapidly in all three regions, the wage level was around three times higher in 1999 compared to 1995. Wages remained highest in Murmansk, in Karelia the wage level was 70 percent of that for Murmansk throughout the period, in Arkhangelsk it was slightly higher in 1995 (72%) but decreased towards the end of the decade to 66 percent of the Murmansk level.

For both Karelia and Arkhangelsk, where, as we have seen, the forest sector is of great importance for the regional economy, the wages of forest sector workers were comparatively low, only around 80 percent of the average monthly wage in industry (Piipponen, 1999; Carlsson *et al.*, 1999). In the small forest sector in Murmansk, the wage level in the forest industry was only 50 percent of the average monthly wage in the region (in fact, workers in the Murmansk forest industry were paid the second lowest wages among all industrial branches). Nevertheless, due to the fact that the general wage level was so much higher in Murmansk, it seems that a worker in the Murmansk forest industry still earned slightly more than his colleague in Karelia in 1997 (Ivanova and Nygaard, 1999). It can also be noted that wages differ between the three main activities in the forest industrial sector (forest harvesting, woodworking, and pulp and paper). A worker in the pulp and paper industry earns much more than a worker in forest harvesting or woodworking. In Karelia, for example, the average wage in the pulp and paper industry was slightly higher than the average wage for the whole industrial sector in 1997, while wages in forest harvesting and woodworking were 23 and 40 percent below this average, respectively (Piipponen, 1999).

However, nominal wages alone cannot say very much about the living standard of the population. By relating the per-capita money incomes to the minimum subsistence level we obtain a measure indicating something of the real value (purchasing power) of the nominal wage. Data for the latter part of the 1990s show that incomes in relation to minimum subsistence were highest in Murmansk and lowest in Arkhangelsk, they were at a high in 1997 in all three regions only to fall back towards the end of the decade, when the income level in Murmansk was still more than twice as high as the minimum subsistence, while that of Arkhangelsk had fallen below its 1995 level and in 1999 was only about 20 percent higher than minimum subsistence.

This state of affairs is reflected in the fact that significant shares of the total population in the three regions have incomes below the minimum subsistence level. In Murmansk, the region with the highest wage level, 18 percent of the population had incomes below the minimum subsistence level in 1997. In 1999, this share had increased slightly to 20 percent. The corresponding shares for Karelia and Arkhangelsk were 20 and 25 percent,

respectively, in 1997, increasing to 26 and as much as 50 percent, respectively, two years later.[39]

An important "feature of society" conditioning all economic behavior in a region has to do with the education level of the workforce. The education level in a region reflects a potential resource for economic efficiency improvements and economic structural change. Higher general and professional education is of special importance in this respect.

An important measure of the education level in the regions of Murmansk, Karelia and Arkhangelsk is given by the number of specialists with higher education per 1,000 inhabitants. As can be seen in Figure 12 all our regions increased the relative numbers of specialists in their respective populations between the years 1989 and 2000. Arkhangelsk was most successful in this respect. While the region had by far the lowest relative number of specialists in 1989 (less than 80 percent of the Russian average), it had increased its share more than twofold by the year 2000 and reached the Russian average (94 specialists per 1,000 inh.). Murmansk and Karelia, on the other hand, have fallen further behind. While having been on the Russian average level in 1989, Murmansk had increased its share to a moderate 81 specialists per 1,000 inhabitants in 2000 (almost 14 percent lower than the Russian average), while Karelia had reached a mere 74 specialists per 1,000 inhabitants (which is more than 20 percent lower than the Russian average). The corresponding numbers for northern Sweden was 90 specialists per 1,000 inhabitants (by the beginning of 2003). The average for all of Sweden was 98.[40]

While Figure 12 shows the "stock" of specialists available at two points in time, Figure 13 displays an education "flow" indicator, viz. the relative number of newly graduated specialists from higher educational institutions. It should be noted that only comparatively few specialists have graduated each year from higher educational establishments in Murmansk. Obviously, this has to do with the fact that the capacity for higher education is low in Murmansk. However, the number of graduating specialists has also increased in Murmansk during the last few years. This tendency probably has to do with the fact that there has been a capacity increase in higher education in Murmansk during the last ten-year period with the establishment of several

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[39] The dramatic deterioration indicated by the figures for 1999 may be an effect of the profound financial crisis of August 1998. However, since this crisis should cause a similar deterioration in most Russian regions it is not clear why the change for Arkhangelsk is so much larger than that for Karelia and Murmansk. Thus, this may also be an effect of deficiencies in statistical reporting. Slobodanuk (2003), however, citing Russian official statistics, claims that the share of all Russians with incomes below the subsistence level was 21.5 percent at the beginning of 2003. At the beginning of 2002 this share is said to have been 31.5 percent.

[40] Calculation based on data for Västerbotten and Norrbotten in "Facts and Perspectives" published on the Internet at URL: http://www.regionfakta.com/ (data retrieved on May 30, 2003). The basis for the comparison with the Russian situation is, however, uncertain since it is not clear how the definitions of "specialists with higher education" compare between the two countries. For Sweden the population aged 20–64 with "tertiary education of more than 3 years" and "post-graduate education" were added to obtain the number of specialists with higher education. If the population with "tertiary education of less than 3 years" is also added to these totals the number of specialists per 1,000 inhabitants increases to 180 for northern Sweden and 184 for Sweden as a whole.

new higher educational institutions in the region. It probably also has to do with the fact that many higher educational services nowadays are offered at fees to be paid by the student. By enrolling in higher education in the region where they live students can better afford their studies by staying longer with their parents. Earlier, students had to leave Murmansk to get their education at universities in more central regions of Russia (Ivanova and Nygaard, 1999). Otherwise, it should be noted that Karelia has the comparably largest "output" of graduated specialists. But it is Arkhangelsk that displays the fastest relative growth in the number of new specialists among our three regions. This has probably contributed to the improvement of the "specialist stock" in Arkhangelsk that was displayed in Figure 12.

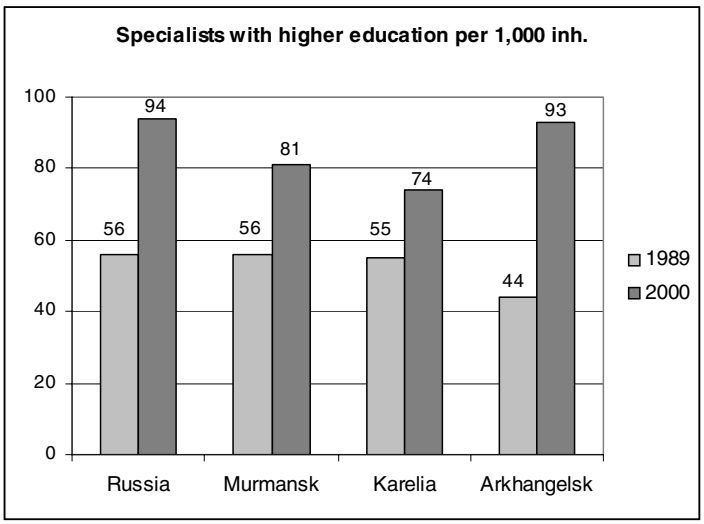


Figure 12: Level of education, 1989 and 2000. Sources: Calculations based on data from the IIASA Russian Forest Study Database, from Minobrazovaniia Rossii (2002), and from Goskomstat Rossii (2003).

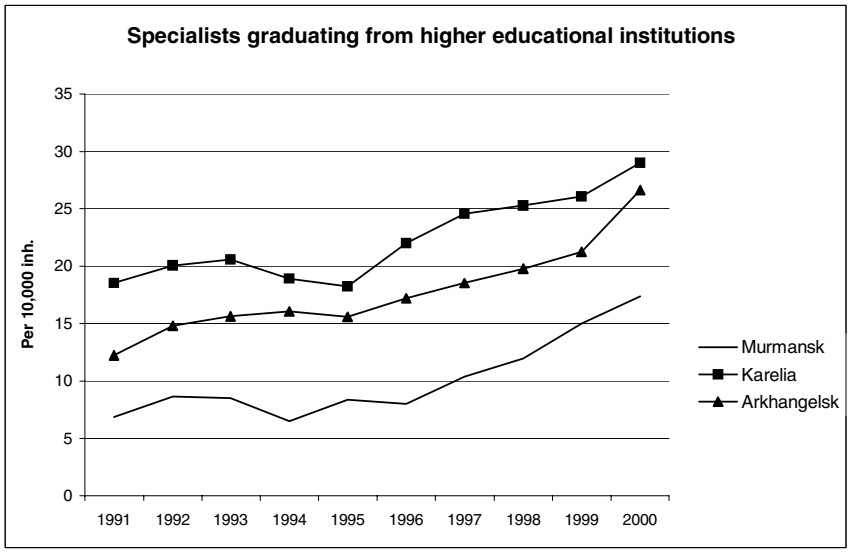


Figure 13: Yearly addition to workforce competence. Yearly number of specialists graduating from higher educational institutions, 1991–2000. Source: *Russia in Figures* (2003).

The share of the total working age population enrolled in higher education has also been increasing rapidly in all three regions. While Karelia had the highest share throughout the 1990s (220 students per 10,000 inhabitants in 1991; 363 in 2000), and Murmansk the lowest (86 in 1990; 276 in 2000), Arkhangelsk displayed the fastest increase in the share of students (from 166 per 10,000 inhabitants in 1990 to 358 in 2000). For comparison we can note that the share of students in higher education in northern Sweden was twice as large as that of Karelia in 2000.

The number of students in higher education studying forest related sciences and economics and management is of special importance in the present context. In the three year period between 1998 and 2000 (for which data is available[41]) Arkhangelsk had twice as large a share of students enrolled in forest science courses compared to Karelia. However, the share was comparatively low and slightly decreasing for both regions, from 6.6 to 6.2 percent in Arkhangelsk and from 3 to 2.8 percent in Karelia. (In Murmansk no higher education in forest sciences was offered.) The share of all students enrolled in higher education specializing in economics and management was, not unexpectedly, much higher: for Murmansk the share was decreasing slightly from 19 to 17 percent, for Karelia the share increased from a low 8 percent to 16 percent in the three year period and in Arkhangelsk the share grew from 12 to 18 percent, the highest share of all three regions in 2000.

Changing enterprise structure, ownership and employment

A set of "societal features" that has profoundly affected all activities in Russia during the last 10–15 years have to do with the changing structure of the enterprise sector, with changes of enterprise ownership and improvements in corporate governance, including enterprise close-downs, restructuring, and the emergence of new (small) enterprises. The first structural feature that should be noted, however, is the fact that the economies of Murmansk, Karelia, and Arkhangelsk all have become smaller in terms of employment during the transition period. The relative number of people of working age who are employed in the economy has decreased in all three regions. For Murmansk (which had the lowest level at the beginning of the period) the decrease was least dramatic with a share falling from 75 to 65 percent of the working age population between 1991 and 2000. For Karelia (which had the highest employment numbers throughout the period) the share decreased from 88 to 73 percent. The employment numbers decreased the most in Arkhangelsk, where the share of the working age population with employment decreased from 82 percent in 1991 to 64 percent in 2000. Between 1996 and 1997 alone it fell by almost 8 percentage points and for the rest of the period it remained below the level of Murmansk. This development can be blamed on shrinking population numbers (due, as we have seen, to a negative natural population increase and out-migration) and changes in the population age structure.

At the same time, per-capita regional GDP (Gross Domestic Product) has increased moderately at least up until 1997 (figures for 1998 seem to be biased probably due to

[41] These calculations were based on official data on higher education compiled in *Russia in Figures* and from an interactive database published on the Internet portal "Rossiskoe obrazovanie" (Russian education) at URL: http://www.edu.ru/db/portal/index_statistic.htm (data retrieved on May 25, 2003).

the "ruble crash"). However, available data are difficult to assess. Measuring regional GDP in current ruble prices does not tell us much about the real situation in the economy due to the high rate of inflation. If the GDP series is converted to US dollars using average exchange rates for the separate years, a more realistic picture of the development is obtained. Looking at the development as it is indicated by the per capita GDP at current USD prices reveals that GDP has increased in all three regions, it was highest in Murmansk throughout the period (well over the Russian average) and increased from around USD 2,500 in 1994 to close to 3,200 in 1997. In Karelia and Arkhangelsk per-capita GDP remained below the Russian average, but increased from USD 1,940 to 2,231 in Karelia and from 1,764 to 2,210 in Arkhangelsk. Taking account of the difference in purchasing power between the ruble and the dollar shows that the real per-capita GDP may be around 130 percent higher than the level indicated by the data just mentioned (Arctic Center Database, 2003). This would mean that "real" GDP in, for example, Murmansk would have been close to USD 7,300 per person in 1997. (For reference these figures might be compared to the per-capita GDP level of the neighboring Nordic countries, e.g., that of northern Sweden, which was about USD 25,000 in 1997, i.e., more than three times higher than the Murmansk level.)

A pertinent characteristic of the Soviet command economy was that it consisted of comparatively few, but often very large, enterprises, and that production of material goods had a much higher priority than production of services. This resulted in a special economic structure that has been causing problems for economic reformers during the whole transition period. The monopolistic legacy of the Soviet Union was automatically challenged by the increased competition that resulted when market economic principles were allowed to govern business organization and behavior in Russia. But this legacy, the dominant feature of which was a high degree of inertia, has not yet been overcome despite the process of intensive structural change in the Russian economy that was automatically triggered by the release of the "market forces." Various policy programs aiming at fostering the establishment of new enterprises in Russia has been a prominent part of the reform process during the 1990s. The effects of the changeover to the market system were also immediately to be seen. To what extent these effects have been policy-driven or to what extent they simply resulted from the workings of the market forces is not clear.

In Murmansk, Karelia and Arkhangelsk this process is illustrated by the fact that the number of enterprises has increased from very low levels of a few thousands at the beginning of the 1990s to 15–20 thousand enterprises in the year 2000. In relative terms this means increases from less than five enterprises per 1,000 inhabitants of working age to slightly over 20 in Arkhangelsk, 25 in Murmansk and 33 in Karelia. Still, these are comparatively low numbers. In old market systems like, for instance, that of northern Sweden, the "enterprise density" is much larger. During all of the 1990s there were about 50–52 enterprises per 1,000 inhabitants of working age.[42]

A major part of the Soviet enterprise sector was privatized in the period 1991 to 1995/96. While more than 400 enterprises were privatized in Murmansk in the four year

[42] Data for these calculations were obtained from Russia in Figures (2003) and Facts and Perspectives (2003).

period 1993–1996, not one was privatized in the following four years. However, privatization seems to have proceeded at a somewhat slower pace in Karelia and Arkhangelsk, where as many as 777 and 827 enterprises, respectively, were privatized between 1993 and 1996. But also here the number of privatized enterprises decreased radically in the next four-year period, when a total of 106 enterprises were privatized in Karelia and 206 in Arkhangelsk.

By the year 2000, the private sector, measured as the number of privatized enterprises, had reached a dominant position in all three regions (cf. Figure 14). Less than 20 percent of all enterprises were owned by the state (including municipalities). Arkhangelsk had the highest share of state owned enterprises (17%), Murmansk the smallest (12%). However, looking instead at how many people the various types of enterprises employed in the year 2000, we find that the state sector still dominated the picture. Between 46 (in Karelia) and 51 percent (in Arkhangelsk) of all employed in the economy still worked in a state owned company or organization.

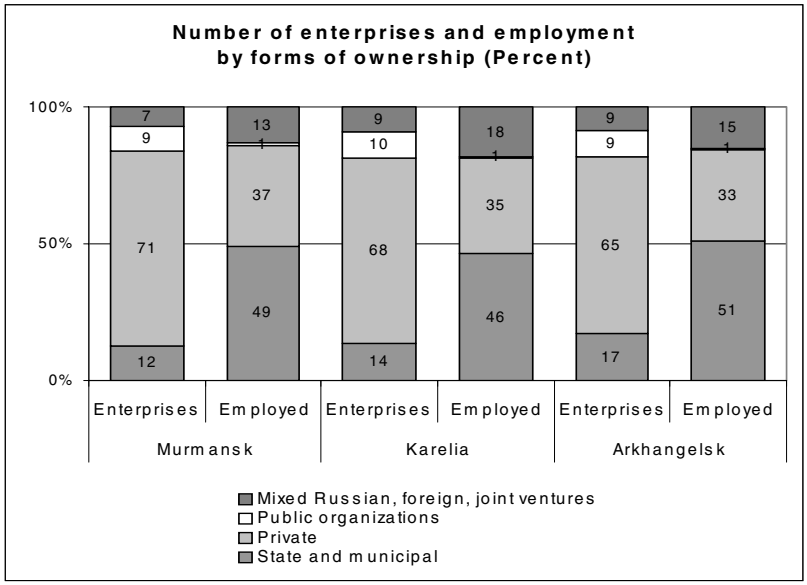


Figure 14: Number of enterprises and employment by forms of ownership in the year 2000. Percent. Source: Calculations based on data retrieved from *Russia in Figures* (2003).

While the proportion of state employed tended to decrease slowly, there were three other shifts in employment characterizing the development in the latter half of the decade that could be observed. The first was a rapid increase in the share of private sector employment. The largest change happened in Murmansk where privately owned enterprises increased their share of total employment from around 20 percent in 1995 to close to 40 percent in the year 2000. The same tendency could also be seen in Karelia and Arkhangelsk.

The second shift in the enterprise-employment configuration characterizing the latter half of the decade was the fact that enterprises with mixed state-private ownership lost much of their importance as employers. (This is in fact the reason for the increase in

private employment that we just noted.) While in 1995 the joint state-private enterprise sector employed close to one third of all occupied in the Murmansk economy this share had decreased close to one tenth by the end of the decade. In Karelia this share changed from 20 to 13 percent and in Arkhangelsk from 24 to 8 percent! This development indicates a decreasing need for state support of recently privatized enterprises in the latter half of the 1990s. The interpretation would be that many privatized enterprises actually became gradually more competitive in the emerging market environment, being able to increasingly rely on their own resources. The development could possibly also be seen as an indicator of a progressing decrease in the size of the virtual economy, with its characteristic reliance on "relational capital" (cf. Section 2.3).

The third characteristic development of enterprise sector employment was the rapid growth in the relative number of employees in foreign and joint venture enterprises that took place between 1995 and 2000. This development was clearly to be seen in Karelia and it was especially pertinent in Arkhangelsk, where the share of foreign and joint venture enterprise employment grew from 0.5 to more than 7 percent in the five-year period. (In Murmansk this share remained low throughout the period, around one percent.) It can also be noted that the foreign and joint venture enterprises seem to have made a somewhat different impact on our respective regions in the late 1990s. In terms of employment, data show that in 1998/99 Arkhangelsk had the smallest number of foreign and joint enterprise units of all our three regions, but on average (i.e., per unit) these enterprises, nevertheless, had the highest number of employees as well as the outstandingly highest production turnover compared to corresponding enterprises in Murmansk and Karelia (the numbers are 4–5 times higher than for Karelia).

The majority of the joint ventures in Murmansk, Karelia and Arkhangelsk have foreign partners from a limited number of countries. In Murmansk most foreign partners are from two countries, Great Britain and Finland. A few enterprises are also partly owned by Americans and Germans. As might be expected the major share (almost 50%) of the Karelian joint ventures have partners from Finland. Other important partner countries are Cyprus (13% in 2000), USA (9%) and Germany (8%). In Arkhangelsk, foreign capital is more evenly distributed between various partner countries. Here the most important joint venture partner country is Germany (involved in 20% of all joint ventures in 2000), followed by the USA (15%) and Cyprus (12%). There are also small Belorussian and British interests in the Arkhangelsk joint ventures sector.[43]

Finally, we should note the feature of the new market economy that probably is the most striking for the Russian citizens: the emergence of a large number of small enterprises. Available data suggest that small enterprises in Murmansk, Karelia and Arkhangelsk comprised around one fifth (in Murmansk) to one quarter (in Karelia and Arkhangelsk) of the total number of enterprises in the year 2000.[44] If these numbers are related to the total number of *private* enterprises we find that the share is one fourth to well over one third. What ever measure is used it is clear that the emergence of small enterprises has

[43] The prominence of Cyprus in this context has to do with the fact that many Russian companies are registered in Cyprus. This means that there might well be Russian investors behind the Cyprus nationality label.

[44] Data were retrieved from *Russia in Figures* (2003).

meant quite a change for a country where only ten years earlier there were practically no such enterprises. However, the number of small enterprises is no certain indicator of their importance for the economy at large. Data also clearly show that the comparatively large number of private small enterprises together only employ a fairly small number of people. In 2000, the small enterprises of Murmansk, Karelia and Arkhangelsk only employed 5–8 percent of all occupied in the respective regional economies. As can be seen in Figure 15 around half of all small enterprises (in Murmansk closer to two-thirds) are to be found in the trade and catering sector. About one fifth of the small enterprise sector consists of industrial enterprises. A somewhat smaller share (12% in Karelia, 20% in Arkhangelsk) of all small enterprises is engaged in construction activities.[45] On the other hand, if we look at the value of production these proportions are almost "reversed" so that the comparatively few industrial enterprises account for a significantly larger proportion of the total value produced by the small enterprise sector. For small trading enterprises the situation is the opposite with a large number of companies producing a relatively smaller value share of total output.

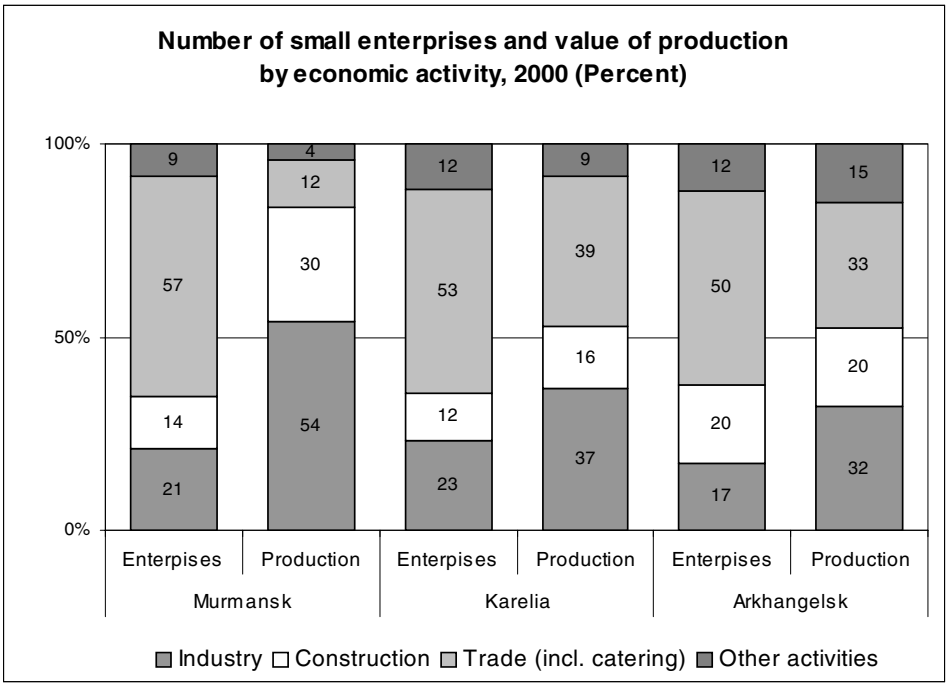


Figure 15: Number of small enterprises and value of production by type of economic activity in the year 2000. Percent. Source: Calculations based on data retrieved from *Russia in Figures* (2003.)

[45] In the previous IIASA case studies it was clearly shown that very few small enterprises were active in the forest sector. Furthermore, it was often claimed by small forest company managers that the establishment of small forest enterprises was actively opposed by the "forest establishment". The registration in 2003 of an Association of small and medium sized forest sector enterprises (Assotsiatsiia malogo i srednego biznesa lesopromyshlennogo kompleksa) in Arkhangelsk may perhaps be seen as a sign that this attitude from the "forest establishment" is being relaxed. (Information Agency "REGNUM", August 22, 2003, http:www.regnum.ru/ allnews/148151.html.)

Figure 15 also shows that small industrial and construction enterprises in Murmansk (35 percent of all small enterprises in the region) account for a comparatively larger share of total regional production than the corresponding enterprises in Karelia and Arkhangelsk (84 percent of the total value produced in the small enterprise sector compared to 53 percent in Karelia and 52 percent in Arkhangelsk). The difference in the so-called "other activities" that can be noticed in the figure between Arkhangelsk and the other two regions is due to the fact that the 131 small enterprises in the Arkhangelsk transport sector in 2000 produced a vastly larger production value (almost 3.5 times higher) than the corresponding 181 enterprises in Murmansk and Karelia together.

Finally, we should perhaps mention a last "feature of society" that affects the functioning of the emerging Russian market economy. Against the background provided above and considering the effect of the legacy of the old Soviet state-owned, large-scale, and inert production machinery, it should come as no surprise that many enterprises are in principle non-viable in the new market environment. A dominating characteristic of the Russian economy is that it still is very labor intensive with an accompanying low labor productivity. Many enterprises are in fact unprofitable and should be restructured or even closed down if behavior were governed by unrestrained "market forces". However, partly due to the workings of the "virtual economy", many enterprises have managed to stay in operation without engaging in restructuring, despite the fact that they cannot make a profit.

Data for the period 1995–1999 (Komistat, 2000:59) display a rather gloomy picture of enterprises' profitability in our three regions. The situation has been worst for enterprises in the agricultural sector. More than half of all agricultural enterprises in the three regions were unprofitable during the whole period. In 1996–1997 less than 40 percent worked with a profit. (The situation was the most extreme in 1996 when, respectively, 86 and 91 percent of all agricultural companies in Karelia and Arkhangelsk were unprofitable.) The construction sector had the smallest share of unprofitable enterprises in 1995–1999. In Murmansk, for instance, where developments in the construction sector were comparatively the most positive, 64–78 percent of all construction enterprises were profitable. Murmansk has also had the comparatively best development for the large industrial sector. Still between one third and nearly half of all industrial enterprises in Murmansk were unprofitable throughout the five-year period. In Karelia, and especially in Arkhangelsk, the situation was far worse with 64–67 percent of all industrial enterprises in Arkhangelsk being unprofitable in 1996–1998.

Infrastructure and environment

The construction and maintenance of communication and transport infrastructure traditionally belong to the obligations of the public sector. In Russia infrastructural investments were part and parcel of the decisions to "colonize" remote areas for the extraction of valuable natural resources. It is common knowledge that transport distance did not constitute the same kind of absolute restriction for the procurement of raw materials to processing industries in the Soviet Union as it often did in western market systems. Raw materials — timber is a good example — were hauled across huge distances from remote extraction sites to reach processing industries that were often located in the European parts of the Soviet Union. The whole command economy was, in fact, based on an established network for the delivery of goods between suppliers and

users all over the former Soviet territory. This vital distribution network was largely disrupted through the changes brought about by the transition.[46]

Transition, with the pressure that price liberalization and the accompanying market competition for products exerted on all economic agents in the new Russia, often produced strange effects when enterprises (including state-owned transport and network maintenance companies) were compelled to make ends meet. In the eyes of old customers, freight tariffs were often raised to astronomically high levels, thereby effectively forcing customers to find other transport modes or ship smaller volumes. As might be expected, one effect was that transport volumes decreased significantly. The problem with such a development is that it easily deteriorates into a vicious circle, where transport volumes decrease to the extent that it hampers enterprises' further development and decreases the incomes of the transport companies thereby leading to under-investments and insufficient grid maintenance.

A well-developed transportation system allowing smooth and efficient operation is of course essential for the development of the entire economy, not only for the forest sector. While the network densities for most transport modes have remained almost unchanged in Murmansk and Karelia during the 1990s (in Arkhangelsk both road and railway densities even increased), the amount of goods transported (and transport work) decreased significantly. This situation is depicted in Table 6 and Figure 16.

Table 6: Railway and road density, 1999 (km per 1,000 km^2, percent 1990 = 100). Sources: Russia in Figures (2003); SNRA Road Database (2003, http://www.vv.se/vdb/webb-sidor/Slitlager.htm).

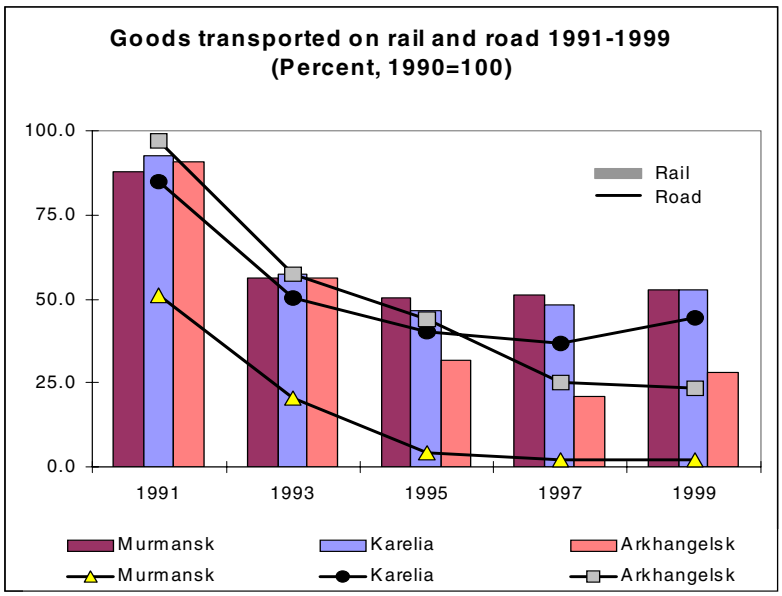
	Murmansk		**Karelia**		**Arkhangelsk**		**Russia**[b]	**Northern Sweden**	**Sweden**
	Km	Change (%)	Km	Change (%)	Km	Change (%)	Km	Km	Km
Railroad	6.1	95	12.1	98	4.0	133	9.2		26.5
Roads[a]	17.0	106	38.0	109	16.7	152	40.9	68.3	172.4

[a] Roads with hard cover in general use.
[b] Data for 1992.

Clearly, the sparse road and rail network constitutes a severe obstacle for the development of the forest sector. This problem is pertinent in all of Russia, but especially severe in the northern regions. Comparing the numbers indicating the density of hard cover roads in Murmansk, Karelia and Arkhangelsk (cf. Table 6) with the corresponding number for the extremely sparsely populated northern Sweden gives an indication of the dimension of this problem. The difference would be even more accentuated if we were to add the lengths of other types of roads, which are essential for the exploitation of the forest resources (branch roads — both permanent and for winter use only, and various types of haulage roads). Since a large share of the roads necessary for procuring timber in Russia does not allow year-round transportation at full lorry

[46] See, for example, Granberg (2000a,b) for a discussion of the importance of inter-republican supply linkages in the Soviet Union.

capacity and speed (due to their low quality with inferior surface, bad passages over streams, bad embankments, bad maintenance, etc.) wood deliveries to the forest industries cannot be steadily performed during all seasons of the year (Strakhov *et al.*, 1996; Nemkovich *et al.*, 2000).



Note: Columns = rail transport; Lines = road transport.

Figure 16: Goods transported on rail and road 1991–1999. Source: Based on data from *Russia in Figures* (2003.)

The very location of the sparse transport network also constitutes an obstacle for the further development of the forest sector in the area. Forests have been over-exploited in areas close to existing roads and railways. In the very huge areas without transport facilities high-quality raw material has remained unavailable for exploitation. Thus, actual forest harvesting has been restrained to areas with the most favorable existing transport facilities — which are also the forest lands that have been most extensively exploited already — and not to areas with the best harvesting potentials from a raw materials and forest maintenance point of view. This has resulted in an inefficient land use pattern. To increase future forest harvesting it will be necessary to make substantial road investments (Carlsson *et al.*, 1999). For instance, in Arkhangelsk, the road density (including winter roads) is merely 0.1 km/sq. km. The optimum density for forest exploitation has been estimated to 0.5 km/sq. km (Strakhov, *et al.*, 1996).

Ports and waterways are also of great importance in the transportation network of our three regions. Both Murmansk and Arkhangelsk have year-round ice-free ocean harbors that are used for shipping export goods, including timber and forest products. Rivers and canals are also of significant importance in the area. Petrozavodsk, for example, is an important center in the internal waterway transport network. As with road and railway transports the volume of goods shipped by water transport has drastically decreased with rising shipping tariffs. (For instance, goods transported on internal waterways in Arkhangelsk decreased by as much as 87 percent between 1990 and 1995 (Carlsson *et al.*, 1999:20).)

The ecological problems in Russia have received much attention both from environmental activists, domestic authorities and international organizations. The environmental situation in Russia is severe in many respects, but the current situation is largely a legacy from Soviet times.[47] As the Soviet society gradually deteriorated environmental issues were actually the first to engage broader layers of the population in public actions, and the environmental movement that emerged might be seen as a precursor to the politically oriented mobilization that eventually resulted in the breakdown of the Soviet system.

It is hardly surprising that the heavy natural resource exploitation allocated by the Soviet command economy to the northern regions of Russia with their extreme and highly sensitive ecology would cause a severe strain on the natural environment.[48] Keeping in mind, however, that, since these are sparsely populated and very large areas, the existing ecological distress, which today has to be taken into account in all socioeconomic policy decisions, is in fact highly localized. Population centers and large factory sites are often affected by pollution causing severe environmental damage and health problems. At the same time, huge and largely uninhabited areas are virtually unaffected by pollution. Pollution sources and deposition patterns are fairly well known, the questions that remain to be solved basically concern *what* can be done to improve the situation and — perhaps most importantly — *how* can policies aiming at such improvements be identified and implemented.

Beside the heavy air and water pollution associated with the mineral extraction and non-ferrous metal processing that has led to the virtual extinction of much of the flora and fauna around the towns of Nikel and Monchegorsk on the Kola Peninsula, there are also the high-risk problems related to the storage of spent nuclear fuel (again mostly concentrated to the Kola Peninsula and to the islands of Novaya Zemlya). These are probably the most studied and publicized environmental problems in the area today.[49]

Even if air pollution has ruined the soils and thereby converted large forest and agricultural lands to "ecological deserts" there are other types of environmental disturbances that cause the worst problems for the maintenance and development of the forest sector in our three regions (cf. Strakhov *et al.*, 1996). In general, forest fires are the most serious threat to the Russian forest environment. Every year huge areas of the Russian forests are devastated by fire. According to Strakhov *et al.* (1996:130) between 12,000 and 34,000 forest fires affecting more than one million ha of forest are registered in Russia every year. Forest fires in Russia are only reported for territories where fire protection has been in operation — previously around 60 percent of the Forest Fund. In recent years this share has decreased significantly (Shvidenko and Goldammer, 2002). It has been estimated that on average about 1.2 million ha of Forest Land were annually affected by forest fires in Russia during the 1990s. For example, in Murmansk Oblast

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[47] See, e.g., Mnatsakanian (1992) for an overview of the environmental legacy of the Soviet Union.

[48] The environmental problems in Russia's north-west are discussed in, e.g., Olsson and Sekarev (1994); and in Andreev and Olsson (1995, 2003).

[49] For instance, the grave problems related to the storage of nuclear waste materials were studied in a large project coordinated by the Centre for Regional Science, Umeå University. A number of reports were published by participants in the project. (The reports can be obtained through Cerum's web site at http://www.umu.se/ cerum).

alone the average annual number of forest fires in the period 1990–1996 was close to 200 (varying between 126 in 1996 and 433 in 1994). The average area that was annually affected by these fires was 830 ha — with a maximum (1992) of 2,497 ha caused by 222 fires and a minimum (1991) of 100 ha caused by 157 fires (Ivanova and Nygaard, 1999). The large majority of all fires are caused by human carelessness.

There are many and complex reasons for the prevalence and incidence of forest fires, but there seems to be agreement about the fact that the level of forest fire prevention and protection is low compared with countries in Europe and North America (Korovin and Isaev, 1998; Shvidenko and Goldammer, 2002; Grigoriev, 2003). The activities of fire prevention and protection organizations have decreased due to insufficient state funding. While, for instance, at the end of the 1980s, the Russian state airborne fire prevention organization used to have 7–800 aircraft in operation during the fire season, nowadays the number of aircraft and the patrol time has decreased by more than 50 percent (Shvidenko and Goldammer, 2002). But the lack of financial resources does not seem to be the only problem hampering an efficient forest fire protection. Lack of coordination between airborne and ground based fire protection organizations and between different regional levels as well as a lack of new initiatives in the work to improve the activities of these organizations has also been suggested (Korovin and Isaev, 1998; Shvidenko and Goldammer, 2002).

Another cause of the serious environmental problems currently disturbing the Russian forest sector development has to do with the mode of operation on the part of the forest enterprises themselves. Many of the problems encountered today go back to the practice of over-exploitation and the practice of extensive clear-cutting that characterized the Soviet era. The practice of over-exploitation and the effect it has had on land use patterns has already been mentioned above. This problem has (at least temporarily) been "solved" through the dramatic decrease in harvesting that has characterized the transition years. However, clear-cutting on large harvesting areas is still common — approximately 95 percent of all forest harvesting in Russia is still made using clear-cutting. Harvesting may be performed on large plots of up to 50 ha, which could be compared with the maximum size of operation in, for instance, Finland, which is 10 ha (Strakhov *et al*., 1996)[50]. One reason for the prevalence of clear-cutting is to be found in the available harvesting technology. Mechanization of harvesting operations has radically expanded since the beginning of the 1980s.[51] But, typically, existing harvesting machines cannot be used for selective felling and since they are heavy (crawler tractors are common) they cause serious damages on the forest land soils and existing shrubbery (Strakhov *et al*., 1996).

The forest industry also contributes significantly to the environmental disturbances in Russia's Northwest by emitting large volumes of pollutants to air and water. Due to the drastic production decrease the volumes of pollution emitted by the forest enterprises also decreased significantly. Between 1991 and 1994, emissions to the air by the

[50] During Soviet times, clear-cutting might be performed on areas of the size of up to 200 ha (Strakhov *et al.*, 1996:133).

[51] "In 1975, only a few percent of forest work had been mechanised. By 1990, 38% of the tree felling work, 42% of forest haulage, and 59% of delimbing and 43% of bucking had been mechanised" (Strakhov *et al*., 1996:134).

Russian wood-based industry was reduced by nearly 80 percent, and in 1994 it amounted to 2.7 percent of total atmospheric emissions in Russia. The corresponding share for polluted water emitted by Russian forest enterprises was 19.9 percent, and despite a reduction of 50 percent, this was the highest pollution share compared to all industrial branches. The three most common atmospheric pollutants emitted by Russian forest industrial plants (together accounting for close to 85 percent of total forest industrial emissions to the air) were solid particles, carbon dioxide, and sulphur dioxide. The largest individual source of forest industrial air pollution in 1993 was the Arkhangelsk Pulp and Paper Complex (in Novodvinsk) contributing 7.5 percent (47,800 tonnes) of the total (Strakhov *et al.*, 1996). This plant together with the Kotlas Pulp and Paper Complex (also in Arkhangelsk Oblast) also account for 23 percent of total wastewater emissions from Russian pulp and paper mills. All in all, pulp and paper production accounted for 20 percent (2 billion cub.m.) of the total waste water emitted by the Russian industry (Strakhov *et al*., 1996).

As already noted, the dismal environmental situation in Russia has triggered a reaction both among the general public and their political representatives. Today environmental protection is high on the formal political agenda all over Russia and it influences decisions in practically all spheres of society, which is not to say that all political decisions that are actually taken are environmentally sound. For the traditional actors in the Russian forest sector this development has meant an awakening to a number of problems caused by established practice both in forest management and forest use. Especially the development during the transition period, when both domestic and international environmental organizations have taken a very active interest in the environment, not least in Russia's northwest regions, has forced all actors in the Russian forest sector to reconsider their attitudes and behavior. The fact that the demand for wood products is extremely sensitive for consumers' preferences is something that can no longer be ignored by the actors in the Russian forest sector. During the last 5–10 years customers' preference for wood produced in an environmentally acceptable way has exerted a significant influence on, for instance, harvesting in Murmansk and Karelia.[52]

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[52] The fact that a large part of the discussion concerning environmental issues contained in the background analysis for the Karelian long-term development program (see Nemkovich *et al*., 2000:27–31) was focused on the behavior and demands of various "green" NGOs acting for the preservation of pristine forests close to the Finnish border is perhaps indicative of the degree of influence that environmenal issues have on economic development planning today. Another recent example is a petition to the governor made by the directors of the five largest forest industrial enterprises in Murmansk Oblast to establish new specially protected nature preserves in the region, the motive for the petition being that their most important European customers demand wood produced under sustainable forest management, guraranteeing the preservation of the most valuable pristine forests. In Murmansk the concept of "model forests" is also attracting an increasing interest in the debate on sustainable forest management. For instance, the Kovdozerskii leskhoz has recently started to prepare for becoming a model forest (cf. releases from the Information Agency REGNUM on August 22, 2002 and June 10, 2003 retrieved on August 27, 2003, from the Internet at http://www.regnum.ru/forprint/49203.html and http://www.regnum.ru/forprint/124552.html, respectively). Similar examples may be found also in Arkhangelsk. Here the Solombala LDK (sawmill) recently entered the "Association of ecologically responsible forest industrialists of Russia", which is an organization working to promote voluntary forest certification (FSC). Thereby for its customers, the company is displaying an active interest in the creation of an environmentally sustainable forest management in Arkhangelsk (cf. news release from the Information Agency REGNUM on August 12, 2003, retrieved on August 27, 2003, from the Internet at

As could be expected, the growing public awareness of the environmental problems disturbing the development of the Russian forest sector, has forced political actors and forest sector officials to take a number of steps to improve the situation and prevent further negative consequences of continued forest exploitation. One measure taken has been to reclassify forest land areas to Group I forests[53] thereby withdrawing lands from commercial forest exploitation. In northwest Russia about one third of the total forest lands nowadays belong to Group I (Strakhov *et al.*, 1996). In Murmansk Oblast, furthermore, researchers have suggested that all forest lands be reclassified to Group I, allowing only a very restricted forest use (cf. Mal'kova and Peshev, 1997:78).

Regeneration of the forests after final harvesting is another hotly debated issue in Russian forestry during transition. Areas under artificial and so-called assisted natural regeneration have decreased during the transition period. Regeneration is traditionally the responsibility of *leskhozy*, but with the deterioration of *leskhoz* funding forest regeneration work has gone down dramatically. The extensive use of clear-cutting in combination with natural regeneration tends to produce broadleaved low-value stands (Strakhov *et al*., 1996). Thus, new approaches are called for both with respect to harvesting and regeneration methods. This has also recently been noted in the ongoing development of a new Russian forest policy.[54]

This rather sketchy overview of the infrastructure and environment of North-West Russia and their relation to the development of the regional forest sector may serve to illustrate the gravity of the current situation as well as the fact that Russian forest stakeholders today have realized the necessity to take these issues into account when developing new market oriented policies with the purpose of improving the efficiency in the forest sector. This is based on a growing insight on the part of Russian forest stakeholders concerning the factors determining world market demand for wood.

Let us now turn to an overview of the results of IIASA's survey of the "rules-in-use" (or institutions) governing the behavior of forest enterprises in Murmansk, Karelia, and Arkhangelsk.

3.2.4 Comparing Existing "Rules-in-Use"

In the series of eight regional case studies performed in Russia by the IIASA team of researchers in the period 1997–2000 the impact of existing institutions on forest stakeholders' behavior in the forest procurement arena was captured through interviews with 24–36 representatives (mainly CEOs) of regional forest enterprises (including *leskhozy*, the state forest management units) in each one of the study regions.[55] All in all

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http://www.regnum.ru/forprint/ 144430.html.) (For other examples and overviews of the Russian forest preservation issues engaging various environmental organizations, see the Internet web portal http://www.forest.ru.)

[53] Cf. Section 3.2.2 for more on the division of Russian forests into different exploitation groups.

[54] The central importance assigned to forest regeneration in the new Russian forest sector development strategy for 2003–2010 is explained by Mikhail Giriaev, head of the institute "Rosgiproles," in an interview in *Lesnaia gazeta* in May 2003 (*Rossiiskaia lesnaia gazeta*, No. 10 (12), p. 2, May 2003).

[55] The organizational background to the project is briefly presented in Section 1.2 (especially footnotes 5 and 6) and Section 1.3.2.

221 interviews with forest enterprise managers in the eight regions were made by Russian collaborators in the project. In Murmansk 24 interviews were made, in Karelia 36, and in Arkhangelsk 31. For comparison a parallel study was made among 24 representatives of forest enterprises in northern Sweden.

The Russian study coordinators made appointments with enterprise representatives and conducted in-depth interviews based on a questionnaire form developed by the IIASA research team. The respondents' answers were recorded in writing and all questionnaire forms were then delivered to the IIASA team, where the answers were coded and stored in a computerized database. The results of the eight regional case study investigations were reported in a series of IIASA working papers (see Appendix A for a complete listing of publications from the project). The overall results of the series of case studies were published in Carlsson *et al*. (2001).

Institutions are "rules-in-use"

The questionnaire used in the survey of Russian forest enterprise representatives was designed with the purpose to capture (a) background facts of the enterprises included in the study, (b) the behavior of the enterprise management in its encounter with the new emerging market economic context, and (c) the attitude of the interviewed enterprise representatives towards the new developments in the transitional Russian economy. To (a) background facts of an enterprise concerns information about the type of production in which the enterprise is engaged, the age, ownership structure and size of the enterprise, the characteristics of the management, etc. The behavior of the enterprise management (b) was captured through questions concerning the enterprise's procurement and sales, its relation to branch organizations, various market support institutes (such as banks, state organs, legislation), etc. The attitudes of the interviewed company directors towards the effects of the Russian transition process (c) were captured through questions asking respondents to assess how well they felt they were able to cope with certain common problems facing managers in contemporary Russian business life.

Through the analysis of the responses given to the survey questions the IIASA team wanted to arrive at conclusions concerning the viability and efficiency of the institutional framework embedding contemporary Russian forest business activities. The purpose was to identify and assess some of the rules that actually govern the behavior of Russian forest enterprise managers. Such *rules-in-use* are actually what is meant by the concept of *institution*. (Note that to qualify as "institution" rules have to be in general use, i.e., actively governing the behavior of the actors of a system.) Various such rules-in-use are often related to one another. In fact, they typically appear in bundles or sets. Such rules are also normally varying in scope; some rules restrict the operation of others. The result is what has been called "institutional set-ups," consisting of a hierarchical set of rules-in-use. Ramazzotti (1998) even speaks of the existence of a "dominant institutional set-up" as the set of hierarchical rules that condition (restrict) the operation of most (all?) other existing sets of rules-in-use.

Rules-in-use (or institutions) are often — but they do not necessarily have to be — expressed in the form of a legislative act or otherwise binding recommendation. Thus, rules-in-use (institutions) can be established by collective decisions (so-called *formal* rules) but they can also be established through people's actions, through praxis

(*informal* rules). The decisive characteristic is that they enjoy some kind of legitimacy, i.e., that they are recognized and followed by a major portion of the population in a certain society.

It is important to note that by "institution" we do not in principle mean an "organization". "Institution" refers to the rule, not to the way in which a rule is enforced. At the same time, it should be clear that rule enforcement is often "institutionalized", that is, certain structures are established (sometimes in the form of organizations) to enforce certain rules. Consider, for example, the tax legislation that contains both rules-in-use (institutions) and rules that are not obeyed by the actors in the system. Rule enforcement is handled by the tax authorities (which is an "organization"). Thus, to refer to the tax authorities as an "institution" is misleading in our framework, even if the tax authorities (the organization) is related to the enforcement of taxation rules (the institutions). To summarize, to the extent we are able to map and understand how institutions related to the Russian forest sector work, we are also able to analyze problems and suggest solutions.

This is of course not to say that organizations do not matter. On the contrary, organizations often "epitomize" existing rules-in-use and are set up to monitor rule compliance, to advice or govern the behavior of the actors and impose penalties for violations of existing rules-in-use. Before looking at the summary of the results of IIASA's survey analysis we will have a look at the changes in the organizational structure of the Russian forest sector that took place during the turbulent 1990s.

Political changes during the transition period and their effects on the organizational structure in the Russian forest sector

As already noted the many and often dramatic changes in the structure of the organizations governing the Russian forest sector are not easily accounted for. In principle, there seems to have been a constant struggle between two tendencies — the tendency to unite the governance of forest management and forest utilization under the same organizational roof and the tendency to keep those two issues apart under separate organizational roofs.[56] Here we will have a brief look at the organizational framework of the forest sector in Murmansk, Karelia, and Arkhangelsk as it was in the period 1997–2000 when the IIASA case studies were made.[57]

The history of Soviet/Russian forest sector management can be seen as an illustration of the notion of institutional path-dependency (cf., for instance, North, 1990). Rules governing actors' behavior (institutions) and the structure and operation of various organizations established to enforce certain institutions tend to change at a

[56] The historical development of Russian forest management is discussed in Malmlöf (1998, 1999). See Lehmbruch (1998, 2001) for an analysis of the struggle for power and influence at the federal level between governmental organs and the forest sector bureaucracy during the 1990s.

[57] Overviews of the forest sector organizational structure in the Soviet Union and Russia as well as more detailed descriptions of this structure in the regions of Murmansk, Karelia, and Arkhangelsk are given in the IIASA studies by, respectively, Ivanova and Nygaard (1999:27–39); Piipponen (1999:14–20), and Carlsson *et al*. (1999:33–44). The remainder of this section is largely based on these sources.

comparatively slow pace (if at all) in response to changes in external conditions.[58] So, for instance, it is easy to see how forest sector rules (institutions) and management organizations in transitional Russia are still largely preserved from the late Soviet era with only minor changes.

The formal institutions governing the Russian forest sector are set down as laws and regulations in various legislative acts. A central act in this context is the new Forest Code of the Russian Federation that was (at long last) approved in 1997 and which is currently being amended in an extended legislation procedure. This code preserved many of the rules and regulations that were part of previous Soviet and Russian legislation on forest issues. Through a 1947 Council of Ministers' resolution a unified forest management system for the whole of the Soviet Union was created. In 1977, the law "Basics of Forest Legislation in the USSR and Union Republics" created a general legislative framework around forestry related issues. In 1988, the Central Committee of the CPSU (the Soviet communist party) and the USSR Council of Ministers adopted a new policy resulting in significant changes in Soviet forest management. This was the start of a turbulent period in Soviet forest sector management. Not only were there many forest management reforms introduced — in 1991 the entire Soviet Union disintegrated and the Russian Federation was established as an independent nation. Through the adoption in 1993 of a new law, "Basics of Forest Legislation in the Russian Federation," the most intensive period of forest management reform came to an end (Sheingauz *et al*., 1995).

The 1988 reform was intended to change the structure of forest administration, but instead it conserved the old centralized management structure. Through the reform forest management returned to a situation similar to the one existing in the chaotic late Khrushchev period (1959–1964). The central forest management authority (the old *Gosleskhoz* transformed through the reform to *Goskomles*) was supposed to supervise forest management, but ended up controlling also the forest industry units managing forest utilization (Sheingauz *et al*., 1995). After the establishment of the Russian Federation in 1991, a power struggle immediately emerged between the center (federal authorities in Moscow) and the regional and local levels. A number of legislative acts were adopted on the federal level while at the same time many normative acts were introduced by regional and local authorities. The latter acts varied greatly between regions and were often inconsistent with federal legislation concerning forest management and use and environmental legislation — sometimes they even contradicted the Russian constitution. The 1993 "Basics of Forest Legislation" law sorted out some of these contradictions.[59]

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[58] Arguably, these changes are interdependent, so that changes in the rules-in-use might also ultimately affect the environment in which actors in the system act.

[59] While the Russian legislation contains rulings concerning many different aspects of forest actors' behavior we focus here on the aspects of legislation pertaining to the organizational structure of forest management and forest use. It could be noted that members of the IIASA institutional framework project also conducted studies of other aspects of legislation of relevance for the Russian forest sector in transition. See Pappila (2000), Kotova (2001), and Nysten-Haarala (2001). A somewhat earlier overview of the Russian Forest Legislation produced within IIASA's Forestry Project is given in Sheingauz *et al*. (1995).

Through a management reform after the formal disintegration of the USSR (in December 1991) *Goskomles* and the RSFSR Ministry of Forestry were liquidated and replaced by a forestry department within the Russian Federal Ministry of Ecology and Natural Resources. One year later, through a presidential decree, this department was transformed into the independent Russian Federal Forest Service (FFS or *Rosleskhoz*) (Sheingauz *et al*., 1995).

As the official proprietor of the Russian forests FFS, like its predecessor organizations, managed a major part of the Russian Forest Fund and had the right to sub-allocate forest resources to harvesting enterprises. In the Soviet era this was a part of the command economy operating by administratively connecting a producer to a customer. Overall production plans were elaborated by the State Planning Committee (*Gosplan*) while the State Procurement Committee (*Gossnab*) handled the actual assigning of, for example, a certain amount of timber to a particular sawmill. After the disintegration of the Soviet Union a new allocation mechanism was introduced through the 1993 law "Basics of Forest Management of the Russian Federation." It allowed the distribution of forest resources to forest users (both juridical and physical persons) through short-term or long-term lease of forest lands. Leases could be allocated through closed bidding, open auctions or direct negotiations with the authorities (Sheingauz *et al*., 1995). The law also made stipulations about payments for various kinds of forest utilization. It remained largely quiet on issues of legislative disputes and rule violations. In a follow-up regulation the Russian Federal Government in July 1993 recommended direct negotiations and competitions for leases, rather than auctions (Sheingauz *et al*., 1995).

In Soviet times a parallel system of government existed, with basically three lines of political administration — the formal representational/legislative hierarchies (soviets), the executives (the bureaucracy, nominally subordinate to the soviets at each level), and the communist party. The ultimate power to settle disputes and decide on future policies rested with the communist party, the formal political hierarchies were of insignificant practical importance, while the bureaucracy could wield all the more executive power. Forest management was a bureaucratic task; it was a task for public authorities. The principle of "dual subordination" was in effect. Thus, regional forest management was subordinated both to the central ministry of forestry and to the republican council of ministers. In practice, furthermore, the whole structure was at all levels subordinated to the communist party's hierarchical organization (cf., for example, Kotz and Weir, 1997:23–33).

With the disintegration of the Soviet Union in 1991 this whole political-administrative structure was in principle abolished. The communist party was forced to yield its "leading role" in society.[60] But it was only in December 1993, after an intensive power struggle between President Yeltsin and the Parliament (the Congress of Peoples' Deputies) culminating in Yeltsin's dissolution of the Parliament and the attack by tanks on the White House on October 4, that new representative organs, named *Dumas,* were elected in most regions. For the coming couple of years the role and working procedures

[60] Already in June 1991, Boris Yeltsin, then president of the Russian Republic, had even prohibited party organizations in all workplaces on Russian soil (Stoner-Weiss, 1997). The process diminishing the power of the CPSU had in fact started already some years earlier (cf. footnote 12).

of the regional Dumas were being established and their actual influence on regional policies was comparatively small.

Thus, these were the years when the Russian presidency established its authority. Already in the summer of 1991 Boris Yeltsin, who was still the president of the Russian Republic, in an effort to strengthen central control had introduced the (ill-defined) position of "Presidential Representative" in all regions of the Russian Republic. He had also converted the former regional executive organs (the *oblispolkomy*) to regional administrations to be headed by a *gubernator*. The regional governors were at first appointed by the Russian president, the intention being that popularly elected candidates should successively replace them. (As it turned out, however, it was not until the autumn of 1996 that Yeltsin, now President of the Russian Federation, allowed gubernatorial elections across the whole country.) Through the initial appointments of governors, Yeltsin had hoped to attain some influence over regional governments. It seems, however, that in many regions "old style" communists were appointed to the office, many of whom supported their own region's efforts to gain increased independence vis-à-vis Moscow (Campbell, 1995; Stoner-Weiss, 1997).

Thus, in hindsight, one could perhaps interpret Yeltsin's reformation of regional administration as a process through which many of the communist party's officials were "transformed" to become the staff of the new regional administrations. Even the real estate belonging to the communist party (the main regional offices of the party were often centrally located impressive buildings) was "confiscated" and "transformed" to offices for these new regional administrations. One interesting feature of this transformation process, which led to a reformulation of the power relations between the center (Moscow) and the periphery (*oblasti*), goes back to the 1990 elections to the local soviets, where candidate nominations were not controlled by the CPSU. The elections were the result of Gorbachev's attempt to resurrect the political role of the *soviets*, to make them real legislatures. In the elections many party first secretaries were elected to the oblast soviets, but the electoral procedures now made it clear that "a measure of accountability" existed to the soviet, even above the Party. As Stoner-Wise (1997:72) has put it:[61]

> *The elections fundamentally changed the point of reference of these officials. Where previously Moscow and the Central Committee were the source of power, after the elections even the obkom was far more dependent for power on its domestic constituency than on an increasingly weakening Moscow.*

This whole development, which can seem to an outside observer, as very fast and resulting in fundamental changes in governance, might actually be quite consistent with the path-dependency hypothesis saying that old institutions are "sticky" and cannot be profoundly changed in a short time. If the interpretation is correct it should come as no surprise if old behavioral patterns among the actors in the Russian regional forest procurement arena were preserved well into the late 1990s. The fact is that, despite some dramatic changes in the formal organizational structure, the old lines of command between various "forest officials" were preserved. At first even the old party officials

[61] Kotz and Weir (1997) have noted that a large portion of the new pro-capitalist elite that emerged in the late 1980s and early 1990s were in fact recruited among the Soviet party-state elite.

tended to play the roles they had played earlier, even if they now had adopted a somewhat different perspective with regard to Moscow's influence. It also means that the administration of the Russian regional forest sector (at least initially) largely remained in the hands of the bureaucracy, thus continuing Soviet practices.

The organizational structure within which Russian forest management was operated during most of the 1990s is depicted in Figure 17.

The figure gives the general picture — one that reflects the structure of forest management in most Russian regions. It should be noted, however, that this structure might vary slightly between regions. In the Karelian Republic, for instance, some features of this structure differ from what is depicted in the figure. Between the federal level and the local operative level (the *leskhozy*) there is the Government of the Republic of Karelia and immediately below (in place of the Regional Forest Management) there is in Karelia the State Forest Committee (*Goskomles*). In Table 7, a comparison is given between the state forest management structure in the regions of Murmansk, Karelia and Arkhangelsk.

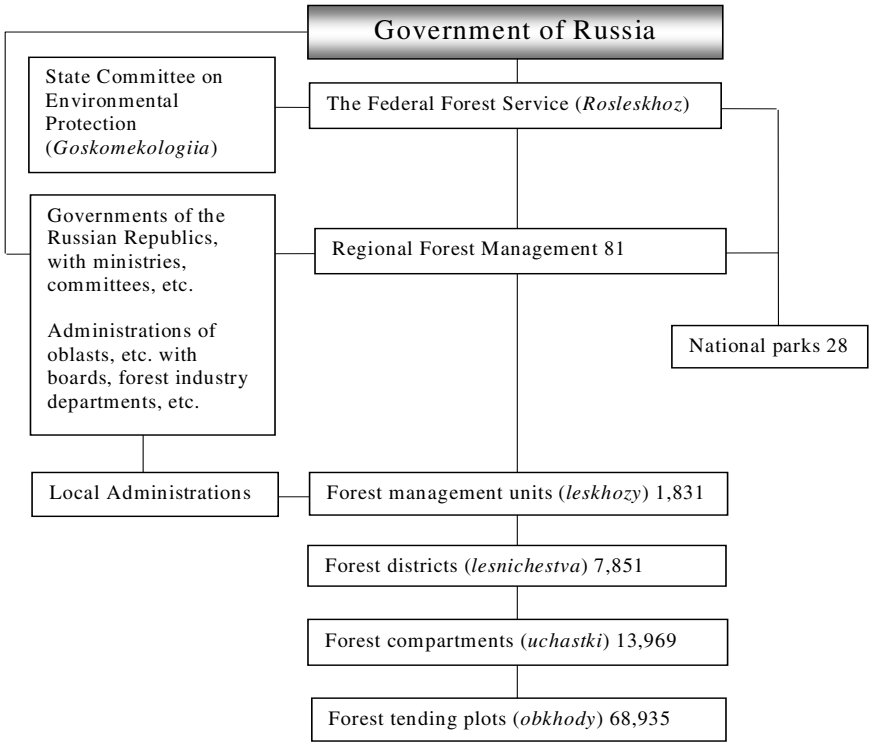

Figure 17: Forest Management Structure of the Russian Federation.[62] Source: Carlsson *et al.* (1999:35). The figure is based on Strakhov *et al.* (1996) and World Bank (1997).

[62] There are a number of Federal Forest Service organizations which are not included in Figure 17, such as ten Forest Inventory and Planning units (*lesoustroistvo*), eight forest research institutes and eighteen air forest protection units.

Table 7: Different forest management units and their average Forest Fund and Forest Land area in Murmansk, Karelia and Arkhangelsk (end of the 1990s). Sources: Ivanova and Nygaard (1999); Piipponen (1999); Carlsson *et al*. (1999); Strakhov *et al*. (1996); Nemkovich *et al*. (2000).

	Murmansk	**Karelia**	**Arkhangelsk**
Regional forest management	Murmansk Regional Forest Management	State Forest Committee of the RK	Arkhangelsk Reg. Forest Management
Total Forest Fund (FF) area	9.8 mln ha	14.8 mln ha	27.4 mln ha
Total Forest Land (FL) area	5.2 mln ha	9.7 mln ha	19.9 mln ha
Total growing stock	200.6 mln cub.m	848.6 mln cub.m	2,150.6 mln cub.m
Average growing stock per ha FL	38.6 cub.m	87.5cub.m	108.1cub.m
Number of Forest Management Units (*leskhozy*)	10	38	28
Average FF (1,000 ha)[a]	980	389	979
Average FL (1,000 ha)	520	255	711
Average growing stock (mln cub.m)	20.1	22.3	76.8
Number of Forest Districts (*lesnichestva*)	28	224	212
Average FF (1,000 ha)	350	66	129
Average FL (1,000 ha)	186	43	94
Average growing stock (mln cub.m)	7.2	3.8	10.1
Number of Forest Management Compartments (*uchastki*)	87	334	413
Average FF (1,000 ha)	113	44	66
Average FL (1,000 ha)	60	29	48
Average growing stock (mln cub.m)	2.3	2.5	5.2
Number of Forest Tending Plots (*obkhody*)	305	1,463	1,348
Average FF (1,000 ha)	32	10	20
Average FL (1,000 ha)	17	7	15
Average growing stock (mln cub.m)	0.7	0.6	1.6

[a] There are huge variations in the area of different territorial management categories within an individual region. Looking, for instance, at the Forest Fund (FF) area of different *leskhozy* in Murmansk and Arkhangelsk we find that the smallest *leskhoz* in Murmansk has an FF area of 46 ha, the largest 2,085 ha. In Arkhangelsk the corresponding figures were 27 and 3,733 ha.

There are some differences in the forest management structure of the three regions that deserve to be noticed. While the share of the Forest Fund occupied by Forest Land is about 66 percent in Karelia and almost 73 percent in Arkhangelsk, it is merely 53 percent in Murmansk. Looking at growing stock we find that Arkhangelsk has by far the largest growing stock volume per hectare of Forest Land, and that the corresponding figure for Murmansk is merely one third of the Arkhangelsk level. Figures such as these are of course affected by the natural conditions in the respective regions as well as by previous forest harvesting and management practices. Foresters in Murmansk have to operate over much larger areas in their different forest management units than their counterparts in Arkhangelsk and (especially) in Karelia to manage similar growing stock volumes.

The *leskhoz* is an entity with independent accounting and separate funding. During Soviet times *leskhozy*, and state harvesting enterprises (*lespromkhozy*), sawmills and other forest industries formed an integrated system. It is this system that has been deteriorating during most of the 1990s.

The description above has largely concerned Russian forest management. Until the beginning of the 1990s the forest industry was governed by a similar hierarchical structure (cf. Figure 18, exemplifying the situation by showing the pre-transition organization of forest harvesting).

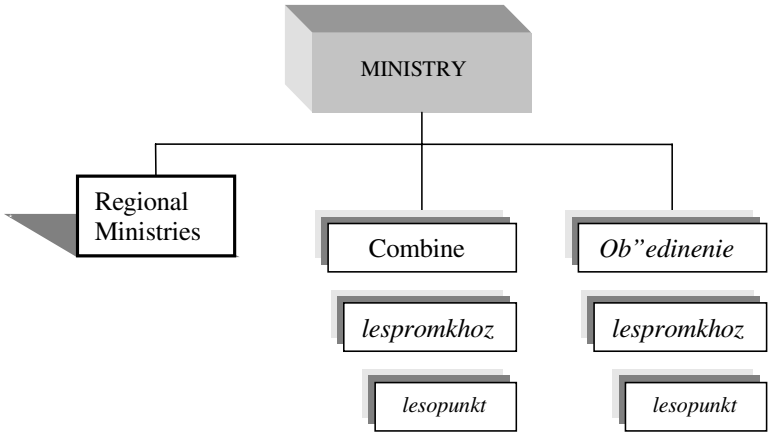

Figure 18: Organizational structure of forest harvesting before Perestroika. Source: Carlsson *et al*. (1999:36). The figure is based on Blandon (1983:58).

In the figure "Ministry" may, in fact, represent any one of a large number of so-called branch ministries, which were the "central command" of individual sectors of production in the Soviet economy. Whitefield (1993:29) has pointed out that "industrial ministries occupied a peculiar and powerful position in the Soviet economy:"

> *The most notable and consequential feature of this position was that the ministries straddled both state power (vlast') and economic functions. On the one hand, ministries were nominated by the political leadership as the instrument of the state in the economy, while, on the other, they physically controlled resources in the way that their exercise of power was more akin to that of an economic organization. On the basis of their control over resources and on account of their presence in the heart of the state, which prohibited the emergence of a clear demarcation between politics and the economy, industrial ministries were able to act in their own interests, undermine the control, and even dominate the agendas, of other institutions, and function both directly and indirectly as the most powerful, hegemonic political forces in the Soviet system.*

In a fairly long period preceding the Perestroika years the economic and political power wielded by the economic ministries was a source of conflict with the communist party and its claim for dominating political power. This conflict was, according to Whitefield (1993), what ultimately brought about the disintegration of the Soviet Union in 1991. After 1988, the struggle to reform the industrial ministries intensified. In the end both the ministries themselves and their critics agreed in viewing the transfer of ministries to

economic actors as their favored solution. The plethora of organizational forms available for use by the ministries in this changeover to more market-like organizations (concerns, consortia, joint-stock companies, associations, unions, commercial banks, exchanges) offered a possibility for the ministries to "have the best of all worlds" (Whitefield, 1993:228). This was the time when, for instance, in August 1989, *Gazprom* was established as an independent state concern. It should be noted that (Whitefield, 1993:230):

> *Ministries were being transformed into concerns without the existence of proper legal regulations. Leonid Abalkin's State Commission on Economic Reform in October 1989 had passed recommendations on the formation of concerns and associations, but these were considered to contain serious flaws. For one thing, they were only recommendations: and they relied on a traditional approach by sharply defining the internal structure of the new concerns, while ignoring the more important fact — that they must not be ministerial structures. Despite the paper change, for example, concerns retained the right to issue subdepartmental acts of an administrative-directive character. Gazprom, for example, like the old ministry has responsibility for gas supply, and used state orders to achieve it. Many enterprises had even less juridical independence than previously; they could not leave the concern, had to fulfill their given plan, and were subjected to central redistribution of profits.*

In the process central command was even strengthened in the hierarchy of enterprises belonging to such concerns. After the August 1991 coup and the demise of the Soviet Union the task for the new president and the reformers surrounding him was to find a new functioning structure in government regulation of industrial management. We will conclude this section by a brief look at the organizational structure that emerged in the Russian Federation during the early 1990s for managing (or "coordinating") activities in the Russian forest industry.

In her recent dissertation on the fragmentation of sectoral governance in Russian industry, Lehmbruch (2001:22) gives the following shorthand description of the results of the reforms in the Russian forest industry at the beginning of the 1990s:

> *At first glance, market transition in the timber industry did live up to its potential. Within a few years of the breakup of the Soviet Union, decentralization was everywhere. Regional conglomerates had been broken up into their constituent enterprises and privatized separately, to the extent that a Moscow paper in 1994 called the forest complex "the most privatized sector of Russian industry." Branch management was all but abolished. Along with textiles and light industry, the sector was one of the few exceptions to a half-reformed national economy in which ministerial bureaucracies had been significantly reduced in size and influence, yet still, in the form of "state committees" and a few ministries, preserved basic organizational continuity. Former administrators had moved over to the private sector and created a rich infrastructure of spin-off organizations. Thus, one Brezhnev-era minister, Mikhail Busygin, headed the foreign trade organization "Vneshles," while Busygin's successor as minister, Vladimir Mel'nikov, was president of the joint-stock company "Soiuz lesopromyshlennikov." Around these, and often connected through cross-holdings or overlapping membership, a variety of other organizations emerged.*

A commodity exchange, an insurance company, and several banks — two alone in Moscow — were set up to cater specifically to the timber industry. Organization-building wasn't restricted to the commercial sector: two separate timber industry organizations were also set up. The "Union of Timber Exporters" (Soiuz Lesoeksporterov) was created in July 1992; a "Union of Timber Industrialists" (Soiuz Lesopromyshlennikov) followed months later. Just as other 1992 start-ups, these two bodies were created by old ministry insiders; however, their mission statements, their names and even their formal status were visibly oriented towards Western organizational models.

The organizational structure that emerged in the Russian forest industry during the beginning of the 1990s (briefly outlined in the citation from Lehmbruch above) was clearly reflected in the eight regions that were studied in the IIASA project. It was found that many of the individuals who, in the late Soviet era, had occupied prominent positions in the forest industrial sector still did so at the end of the 1990s, but now as representatives of recently established "private" forest organizations.

Forest management was preserved in a basically similar organizational form all over Russia (cf. Figure 17) with a single central authority, the Federal Forest Service (FFS) in Moscow, regional forest management offices in regional capitals supervising a number of forest management units (*leskhozy*) in their respective regions. The Russian forest industry also preserved many organizational features from the Soviet era, but here the regional organization displayed more variation and the subordination to central authorities in Moscow was seemingly less pronounced. So, for instance, in Arkhangelsk the "Union of forest industrialists" was found to be a formally important and centrally placed organization. In reality, however, the Union was rather small and insignificant, with a limited membership consisting of directors of forest industrial enterprises meeting to exchange information rather than playing a more operative role in the forest sector. Instead the newly established Arkhangelsk Forest Bank (*Lesobank*) had come to occupy the central position, the director of the bank, a former official in the state forest sector (the huge state concern *Arkhlesprom*), now being transformed into a powerful actor in the new private sector. The public interest in the Arkhangelsk forest sector was exercised through a Forest Department within the Regional Administration.

In Karelia the major forest industrial organization in operation at the end of the 1990s was based on *Karellesprom*, a large state concern formed in 1986, a characteristic feature of which was the merger of *leskhozy* (the local forest management units) with *lespromkhozy* (local harvesting enterprises) into *kompleksnye lespromkhozy*. At the end of the 1980s Karellesprom entirely dominated the Karelian forest sector employing more than 90 thousand people and managing 97 percent of the forest area (Piipponen, 1999). In the 1990s, the *kompleksnye lespromkhozy* and other forest processing enterprises were privatized, often becoming joint-stock companies. In this process the forest management regained its independence from the forest industry and became, once again, a state authority. *Karellesprom* was reorganized and became a joint-stock *holding company* with only about 60 people directly employed. The state is a major shareholder in the company and in 1998 *Karellesprom* owned shares in 28 forest industrial enterprises in Karelia with a total employment of more than 29,000 people (Piipponen, 1999).

> *The activities of the company have changed from formerly being the central organizer of the whole regional forest sector to a form of consultancy and trading company. It can handle the sales transactions of the companies which are dealing with Karellesprom. It offers judicial and business advice services and auditing for the companies of the sector. It can also transmit credits and buy equipment in the role of a wholesale buyer. … About 50–60 percent of the exports goes through Karellesprom and the rest is exported by several production enterprises and agents* (Piipponen, 1999:18).

The public interest in the regional forest industry was taken care of through the Karelian Ministry of Natural Resources and the State Committee for the Forest Industrial Complex.[63]

In Murmansk, where the forest sector never played any really significant role in the regional economy, there are no specialized forest industrial organizations similar to those found in regions such as Arkhangelsk and Karelia. A group of specialists in the Committee of Industrial Development in the Regional Administration used to cater for the forest industry. Until 1998, there was still one person in the Department of Industrial Development (succeeding the earlier Committee) in the Regional Administration who kept track of forest issues. Ivanova and Nygaard (1999:36) conclude that "the forest sector does not have any priority with the Administration and there are in fact no people who can promote the interests of the forest sector. This development can be explained by the lack of pressure groups".

The important feature to note concerning the Russian regional forest industrial organizations is that all or most of them have emerged from the structure that existed during Soviet times. The new (or "reformed" and sometimes renamed) organizations were formally privatized — even if the state maintained a significant influence over their activities — and they were populated by much the same officials who were previously in charge of the corresponding Soviet forest organizations. Another prominent feature that, at least initially soon after the start of the privatization period, characterized these organizations was that the same people were often members of several different organizations, the same people occupied key positions in many different organizations thereby becoming liable to double (or multiple) loyalty conflicts.

The organizational changes that took place in the 1990s (and are still taking place) were triggered by changes in the Russian socioeconomic system. But, simultaneously, the new or reformed organizations that appeared were instrumental in modifying existing, or even installing new, institutions (rules-in-use) in the Russian regional forest sector. The previous study performed by IIASA sought to identify key institutions in the Russian regional forest sector and assess their efficacy in the emerging market economic context. Through surveys among decision-makers (directors, civil servants) in forest enterprises and forest organizations compliance to various institutions was evaluated.

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[63] Today (at the beginning of 2004) these organizations have been restructured and (partly) renamed: Ministry of the Forest Complex, Natural Resources and Ecology of the Republic of Karelia, and State Committee of the Republic of Karelia for the Forest and Mining Complex.

Rules, behaviors and attitudes — results of a survey among actors in the Russian regional forest sector

The findings in the previous case studies of the institutional embedding of the forest sector in eight Russian regions (cf. summary in Carlsson *et al*., 2001) indicated that the behavior of a majority of the Russian forest enterprises is guided by the dominant institutional set-up that has been labeled the *virtual economy*.[64] The concept designates a set of informal rules according to which a Russian company that cannot operate profitably in the new market environment might nevertheless (at least temporarily) avoid bankruptcy, maintain its workforce and keep up its production by shying market competition. Transactions among companies in the virtual economy are not based on cash but on more or less elaborate forms of *barter*. The use of barter trade makes it possible to keep up the pretence of a sizeable economy, in which products are exchanged at inflated nominal "values" that have little to do with the prices that would have emerged if the products had been traded in a normal market where they had been exposed to competition.

The virtual economy dictates a specific behavior on the part of the actors of the system, a behavior that in many respects drastically deviates from what is typical in a well-functioning market system. In comparison with the situation in a market system, managers of companies operating in the virtual economy will take very strange (but, in the virtual economy context, rational) decisions concerning, for instance,

- company personnel: not laying off labor despite decreased demand for the company's products;
- investments: favoring investments in so-called "relational capital" at the expense of investments in modern production technology and management competence;
- product development: not seeking to develop new products despite decreasing demand for existing products and/or signs of growing demand for products that the company would be able to produce;
- marketing and sales: not exploring the potential benefits of marketing nor striving to find new (cash paying) customers;
- business contracts with suppliers and customers: trusting only personal relations, always expecting, and trying to safeguard against, breach of agreements;
- relations with public authorities: seeking to negotiate favors and alternative ways of fulfilling company obligations towards the state, like paying taxes in kind rather than in cash, thereby making public affairs less transparent;
- etc.

Examples of this type of behavior were clearly to be seen in the material gathered through the survey among regional forest sector decision makers performed within the previous IIASA study.

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[64] The characteristics of the virtual economy were briefly summarized in Section 2.3. See also footnote 16 for numerous references to work in which the concept is discussed.

However, some "transition oriented" firms were also found in our survey. While such companies might also be in a difficult position in terms of market efficiency they nevertheless strive to improve their operations to become viable in the emerging Russian market environment. While firms operating in the virtual economy tend to explore their "relational capital" in order to compensate for their inefficiency and avoid bankruptcy, transition oriented firms tend to invest in productive capital or management skills in order to reduce their "distance to the market", to improve their market efficiency. The former behavior can be seen as a legacy of the Soviet command economy modified to counter the consequences of the restrictions enforced by the transition to a market system. The latter behavior rather seeks to embrace and make the best of these consequences. In a longer-term perspective, assuming that the transition to a market economic system continues in Russia, only the latter behavior is viable.

Labeling a forest enterprise as either a "virtual economy firm" or a "transition firm" should be seen as a kind of "shorthand" indicating that the enterprise *tends* to behave in a certain way with respect to its future existence. Using the simplest assessment criteria (cf. Carlsson *et al*., 2001) it was possible to group the enterprises in our previous survey study according to the answers given by the respondents on questions relating to the current level of (market) efficiency of the enterprises and their investment strategy. This way the enterprises in the study could be grouped according to their degree of (in-)efficiency — their "distance to the market" — and their tendency to make use of possibilities offered by the virtual economy that in certain respects might compensate for market inefficiency. Typically, such possibilities are connected to the enterprise's ability to explore so-called "relational capital," i.e., its ability to make use of personal relations with people in public office who can (lawfully or unlawfully) distribute benefits or favors to individual enterprises.

Using the same classification criteria as in the previous survey study the forest enterprises in our three regions, our selected enterprises have been grouped in a two-dimensional dichotomy to produce four groups based on their different behavior with respect to their "distance to the market" and use of "relational capital". The resulting "map" showing the shares of enterprises belonging to the four different groups is displayed in Figure 19 for Murmansk, Karelia, and Arkhangelsk as well as for the total of all 221 enterprises in the eight Russian regions, and for the 24 enterprises in northern Sweden that were part of our previous survey. (This "map" should only be seen as a kind of illustration since the number of enterprises in the individual regions, which were part of our survey, was limited and since the selection of enterprises to be part of the survey did not guarantee unbiased samples.)

As can be seen in Figure 19, the great majority of Swedish forest enterprises in the survey are to be found in the diagram in the lower left corner of the figure, displaying a typical market behavior. They are fairly efficient and they do not invest much in "relational capital". While more than 60 percent of the Murmansk forest firms seem fairly efficient, the remaining close to 40 percent of the firms seem to be less efficient without trying to compensate for their inefficiency by investing in relational capital. Forty-five percent of the forest firms in Arkhangelsk also seem to be in a precarious situation being inefficient without trying to compensate by investing in relational capital. Firms found in the lower right diagram in Figure 19 might in fact prove unviable in the present Russian business environment. In contrast, it might be argued

that the firms found in the upper left diagram of Figure 19 are the ones that are most adapted to the present business environment, enjoying, as it were, the best of two worlds, being fairly efficient in a market sense and simultaneously making use of the benefits offered in transitional Russia from investments in relational capital. The most typical "virtual economy firms" are found in the upper right diagram in the figure. It should be noted that neither any Murmansk firms nor any firms from northern Sweden can be found in this group. According to this classification more than 40 percent of the Karelian forest enterprises that were part of our survey are operating in the virtual economy. Firms in this position survive by exploring the benefits currently offered by the transition environment. The question is for how long their situation will remain viable, since if they keep relying on their "relational capital" and do not make serious efforts to reduce their "distance to the market" they are likely to fall behind their market oriented competitors when (assuming the transition towards a market system will continue in Russia) the virtual economy will eventually begin to disintegrate.

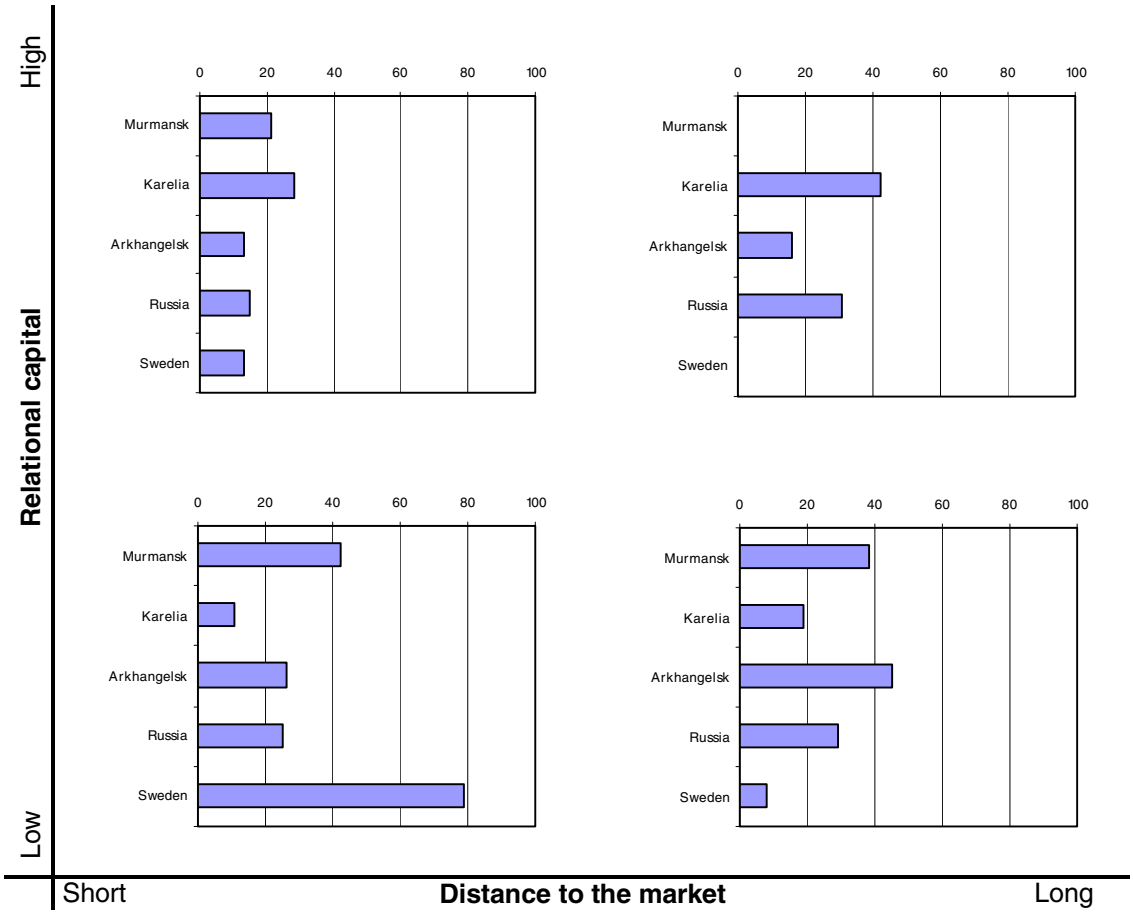

Figure 19: Grouping of the forest enterprises in Murmansk, Karelia, Arkhangelsk, Russia, and northern Sweden according to their position in the "transition-virtual economy space". Source: Based on data from the IIASA Institutional Study Database.

In the analysis of the complete survey material it was found (cf. Carlsson *et al*., 2001) that, for instance, large publicly owned forest enterprises display a more typical virtual economy behavior than smaller ones and newly established companies. Thus, the distribution of forest enterprises in Murmansk, Karelia and Arkhangelsk that is displayed in Figure 19 is likely to be affected by a biased prevalence of publicly owned or privatized formerly public enterprises. (In Karelia and Arkhangelsk as many as, respectively, 78 and 93 percent of the enterprises in our survey belonged to these two categories. The corresponding number for all eight regions in the survey was 66 percent.) These facts should just caution us not to draw too far-reaching conclusions concerning regional differences on the basis of the survey data from individual regions.

Some further illustrations of differences in behavior patterns between forest enterprises in the three regions, Russia at large (i.e., all eight regions) and northern Sweden might be mentioned. Looking at compliance with formal business rules, like, for instance, buying and selling agreements, reveals great differences between the Swedish and the Russian companies. While the overwhelming majority of Swedish companies (around 90 percent) do not experience any problems related to buying and selling agreements, only about a fourth of the Russian enterprises are equally lucky. Many Russian forest companies in our survey have big problems with buying and, especially, selling agreements. It could be noted, however, that these problems are less pronounced among the forest companies in Murmansk, Karelia and Arkhangelsk than they are for all of the Russian enterprises in our survey.

While no Swedish firms use barter in their transactions with other firms, more than 40 percent of the Russian forest firms make use of barter at least to some extent (and this figure probably underestimates the extent to which barter is used). Compared to the total Russian barter share it is interesting to note that only 14 percent of the Murmansk forest firms use barter, while as much as 71 percent of the Karelian firms do so. While almost all forest firms in northern Sweden accept payment after delivery, very few of the Russian firms do so. Most Russian firms want payment on or before delivery. Compared to the total for Russia the share of enterprises accepting payment after delivery is higher in Arkhangelsk (13 percent compared to 4 percent of all the Russian enterprises in our survey). These figures might be seen as an illustration of the weak trust that economic actors in the Russian society have for institutions governing trade, for the enforcement of business contracts, the work of arbitration courts, etc.

While 85 percent of the northern Swedish forest enterprises make investments in their companies only slightly more than a third of all the Russian enterprises in our survey do so. For the regions of Murmansk, Karelia and Arkhangelsk the corresponding figures are, respectively, 42, 44, and 23 percent. The share for Arkhangelsk is very small, which might be seen as a reflection of the fact that a large part of the Arkhangelsk forest companies are still operating in the virtual economy.

Finally, just a note on the impression produced by the answers to a question regarding what problems forest enterprise managers consider most important to solve in order to improve the functioning of the forest sector. The answers, which can be said to reflect the attitudes of the interviewed managers towards the ongoing transition process, are depicted in Figure 20. Note that the problems named in the figure are all matters typically dealt with by the political sphere; to be remedied they all require changes in

formal rules. Comparing the answers given by Russian business managers with those given by the managers of forest firms in northern Sweden (which we take to illustrate managers' attitudes in a market economy) we find some interesting differences. For instance, no Swedish manager saw problems with investment/ technology or (lack of) state coordination as something that had to be solved in order to improve the functioning of the sector. However, these problems were seen as the most important to solve by slightly more than a third of all the Russian managers interviewed in our survey. Looking at our three regions we find that as much as half of the forest enterprise managers in Arkhangelsk thought that the investment/technology and the state coordination problem were the ones in most need of attention. By contrast, as many as half of the Swedish enterprise managers were most concerned with problems related to business legislation and ethics/politics. These issues seemed to trouble significantly fewer managers in Russia. While close to one fifth of the managers in Murmansk and Karelia saw problems with ethics/politics as the most important, it is striking that no forest enterprise manager in Arkhangelsk considered this the most serious problem to be dealt with in order to improve the functioning of the regional forest sector.

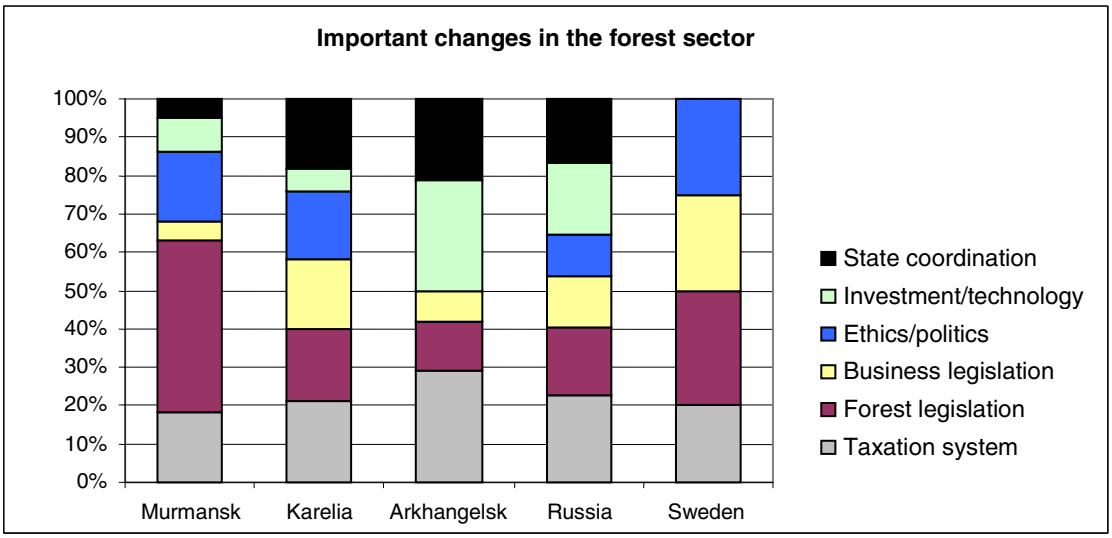

Figure 20: What individual forest enterprise managers found to be the single most important change to be made in order to improve the functioning of the regional forest sector. Source: based on data from the IIASA Institutional Study Database.

The fact that 45 percent of the interviewed forest enterprise managers in Murmansk find problems related to the forest legislation most urgently in need of solutions probably has something to do with the fact that a quarter of all Murmansk enterprises in our survey were forest management organizations (so-called *leskhozy*), for which forest legislation can be expected to be especially important. But problems related to the forest legislation is also considered important by 30 percent of the Swedish forest enterprise managers, something that might be explained by the fact that the Swedish environmental legislation is very strict and environmental clauses in the forest legislation is strongly enforced, and this is regarded by managers as a restriction on enterprise profitability.

To provide some kind of summary of the picture that emerged through the discussion presented above an attempt has been made to collect the most important statistical information characterizing the regions of Murmansk, Karelia, and Arkhagnelsk in a single table (Table 8). Data pertaining to Russia at large as well as data for Northern Sweden have also been included in the table wherever it was possible to find appropriate information in official statistical publications.[65] This summary concludes the account given in the present section of the forest sector institutional framework in the three regions, an account inspired by the Institutional Analysis and Development (IAD) framework outlined in Section 3.1.

Table 8: Overview comparison of conditions obtaining in the three regions studied. (Data for Russia and Northern Sweden have been added if available and found relevant.)

I	**Geographical characteristics:**	**Russia**	**Murmansk**	**Karelia**	**Arkhangelsk**	**Northern Sweden**
1	Total area (mln. ha)	17075.2	14.5	17.2	58.7	16.5
2	Population size 1998 (1,000)	146328	1035	775	1491	512
3	Population density 1998 (inh./sq. km)	8.6	7.0	4.5	2.5	3.1
4	Share of population living in urban areas 1999 (%)	73	92	74	74	79
II	**Characteristics of the resource:**	**Russia**	**Murmansk**	**Karelia**	**Arkhangelsk**	**Northern Sweden**
5	Forest land (mln. ha)	719	5.0	9.3	22.4	6.7
6	Growing stock (mln. cub. m)	74322	198	919	2144	615
7	Share of spruce/pine in growing stock (%)	13/20	42/44	32/58	65/25	31/50
8	Forest industrial production 2000 (% of total ind. prod.)	n.a.	0.3	54.9	52.7	n.a.
9	Forest industrial employment 1995 (% of total ind. empl.)	6.3 (2003)	2	48.5	44.6	n.a.
10	Export of forest products 1998 (% of total comm. exports)	8 (2002)	0.3	53.5	81.7	28
11	Harvested volume 1990/1998 (mln cub. m)	311.3/107.4	1.2 0.14	10.8/4.4	22.6/8.4	n.a.
12	Production of some forest industrial goods (1990/1999):					
	Sawn wood (1,000 cub. m)	75069/19164	354/31	2004/709	5011/1754	n.a.
	Pulp (1,000 t)	7525/4225	0/0	766/307	2154/1507	n.a.
	Paper (1,000 t)	5240/2968	0/0	1220/659	397/253	n.a.
III	**Characteristics of society:**	**Russia**	**Murmansk**	**Karelia**	**Arkhangelsk**	**Northern Sweden**
13	Share of population in working age 1999 (%)	56.8	65.2	59.1	59.4	54.7
14	Share of population above working age 1999 (%)	20.2	13.1	18.7	17.8	25.7
15	Male life expectancy (1995/1999)	58.0/n.a.	57.0/63.7	55.0/59.7	55.9/60.0	73.5/76.3
16	Infant mortality, deaths per 1,000 births (1995/1999)	18.1/16.5	15.9/11.3	17.4/17.5	16.2/14.8	3.9/3.6
17	Regional immigration 1999 (% of total pop.)	-	20.7	16.1	17.7	n.a.
18	Regional emigration 1999 (% of total pop.)	-	35.1	16.4	26.1	n.a.
19	Unemployment 1992/1999 (% of econ. active pop.)	n.a./13.0	6.2/21.4	5/14.7	4.9/16.4	≈ 5/≈ 4
20	Share of total population with incomes below minimum subsistence level 1997/1999 (%)	n.a./29.9	17/20	20/26	25/50	22[a]
21	Specialists with higher education 1989/2000 (per 1,000 inh.)	n.a./n.a.	56/81	55/74	44/93	n.a.
22	Specialists graduating from higher education 1991/2000 (per 10,000 inh.)	27.1/39.7	7/17.4	19 / 29	12/27	n.a.
23	Per capita Gross Domestic Product in 1997 (USD/% of 1994 level)	3,087/98	3,200/128	2,231/115	2,210/125	n.a.
24	No. of state/private enterprises 2000 (% of total no.)	5/75	12/71	14/68	17/65	n.a.
25	Employment in state/private enterprises 2000 (% of total employment)	21/46	49/37	46/35	51/33	n.a.
26	No. of small enterprises 2000 (% of total no. of enterprises)	26	17.6	25.6	23.9	n.a.
27	No. of employed in small enterprises 2000 (% of total no. of employed)	13	5.8	8.2	5.4	n.a.
28	Road/railroad density 1999 (km per 1,000 sq. km)	40.9/9.2	17.0/6.1	38.0/12.1	16.7/4.0	68.3/-

[65] The work with this table has clearly illustrated the fact that official statistical data describing the situation in Russia is still surprisingly hard to come by. However, as we have noted with satisfaction, data published by a wide variety of Russian authorities and organizations are nowadays available on the Internet. At the same time, one could not cease to marvel at the limited data availability offered by the official Russian statistical authority (Goskomstat).

Table 8: continued.

IV	Institutions or rules-in-use:	Russia	Murmansk	Karelia	Arkhangelsk	Northern Sweden
29	Share of forest enterprises in our survey displaying the most market viable behavior (short distance to the market combined with low investments in relational capital)	25	42	11	26	79
30	Share of forest enterprises in our survey displaying a behavior that makes them unviable in the longer term (long distance to the market combined with low investments in relational capital)	29	38	19	45	8
31	Share of forest enterprises in our survey operating in the virtual economy (long distance to the market combined with large investments in relational capital)	31	0	42	16	0
32	Share of forest enterprises in our survey that are fairly efficient (short distance to the market) and simultaneously making use of benefits offered by the virutal economy (investing in relational capital)	15	21	28	13	13
33	Share of forest enterprises reporting big problems related to selling agreements (%)	59	50	49	38	0
34	Share of forest enterprises reporting big problems related to buying agreements (%)	44	35	14	19	0
35	Share of forest enterprises to some extent engaging in barter trade (%)	44	14	71	36	0
36	Share of forest enterprises accepting payment *after* delivery (%)	4	0	0	13	96
37	Share of forest enterprises having bank relations (%)	17	4	15	23	82
38	Share of forest enterprises exporting more than 40% of their production (%)	24	29	43	43	21
39	Share of forest enterprises investing in their business (%)	36	42	44	23	85
40	Single most important change required to improve the functioning of the regional forest sector:					
	Improve the taxation system	23	18	21	29	20
	Improve forest legislation	18	45	19	13	30
	Improve business legislation	13	5	18	8	25
	Develop business ethics and business policy	11	18	18	0	25
	Facilitate investments/improving technology	19	9	6	29	0
	Increase state coordination	17	5	18	21	0

n.a. = Data not available.

[a] In 1998, between 22 and 23% of the working age population in northern Sweden had a low income (< 135.000 SEK, corresponding to the income of the 20 percent share of the male population with the lowest incomes).

Sources: Numbers for this table were collected from the text of Section 3. Thus, sources can be found in the above text. Data for Russia and Northern Sweden have been added for comparison whenever it seemed appropriate and data were available. Data given under "IV Institutions or rules-in-use" were calculated from information obtained through the survey among Russian forest enterprise representatives that was part of IIASA's Institutional framework study. Some data presented on lines 5–7 and 11 were retrieved (on May 4, 2004) from the website *Forest.ru* supported by the Russian "Forest Club", an umbrella organization of various Russian NGOs at: http://www.forest.ru/rus/basics/statistic.html. Some data on lines 12 and 24–26 were obtained from *Russia in Numbers* at: http://www.sci.aha.ru/cgi-bin/regbase.pl. Data for Russia on lines 13–14 were obtained from *The Demographic Yearbook of Russia; Statistical Handbook*. Moscow: Goskomstat Rossii, 1995. Data for Northern Sweden presented on lines 19 and 20 were obtained from the website of The National Board of Health and Welfare, Stockholm at: http://www.sos.se/epc/FS/index.htm. Data for Russia on line 27 were obtained from *Maloe predprinimatel'stvo v Rossii; Offitsial'noe izdanie*, Moscow: Goskomstat Rossii, 2000.

4 The Policy Exercises in Murmansk, Karelia and Arkhangelsk — Comparing Procedure and Results

There are a number of problems that have to be overcome in order to allow participatory approaches to improve the situation in the Russian forest sector. The most obvious problem — and perhaps the most fundamental obstacle for the successful implementation of participatory policy formulation methods — is the historical legacy from Soviet times that is still today manifesting itself in a specific mind-set or mentality making people refrain from political activity and leave public policy decisions in the hands of (often incompetent and dubiously legitimate) public and private "decision-makers" (cf. Howard, 2002).

Finding a specific form for stakeholder participation in forest policy formulation suitable for the situation in the Russian regional forest sector is another difficult problem to solve. In Russia, with its limited prior experience of democratic processes and the relatively little impact of transition so far, there is not much to build this kind of participatory policy approach upon. Under the existing circumstances the only possible way of achieving a practical result seems to be to ask the existing power structures (the political "establishment" and official forest agencies) for sanction and support in testing methods for stakeholder participation in the formulation of modern regional forest policies. Their rationale for providing such sanction and support would be their need (without knowing how) to make changes happen that would improve the situation in the forest sector.

IIASA has a fairly long experience in developing and using participatory approaches in policy making. The "policy exercise" concept was, in fact, developed in a large IIASA project called "The Sustainable Development of the Biosphere" during the beginning of the 1980s. Brewer (1986) proposed the use of a kind of "free-form, manual games" that he labeled "policy exercises" to engage broad layers of the population in the development of policies to cope with the emerging serious global environmental problems.[66] In the second half of the 1980s, Ferenc Toth and his co-workers further developed Brewer's policy exercise concept at IIASA (Toth, 1988a, b).

Based on earlier work at IIASA, the Forestry Project further elaborated the concept of policy exercises and tested the approach in a run of five exercises for different categories of participants (Duinker *et al*., 1993). Here, a number of useful insights in the workings of policy exercises were gained.

Since this time, a number of projects at IIASA have worked on the further elaboration of the policy exercise or employed the approach (or similar designs) to disseminate the results of their research and to engage stakeholders in continued research or policy-oriented activities (see, e.g., Najam, 1995; Parson, 1996; Franz, 1997; Gluck *et al*., 2000).

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[66] In a comment to Brewer's article, Nick Sonntag noted that the policy exercise concept proposed by Brewer had its closely related precursor in the so-called Adaptive Environmental Assessment and Management (AEAM) methodology developed ten years earlier by a team lead by C.S. Holling (cf. Holling, 1978).

4.1 Current Conceptualization of a IIASA Policy Exercise

Before looking at the implementation and outcome of the policy exercises that IIASA's Forestry Project organized in Murmansk, Karelia and Arkhangelsk in 2000–2001, we should summarize the current understanding in the project of what characterizes a policy exercise for Russian forest stakeholders. This conceptualization is a result of previous experiences at IIASA and reflections upon recent experiences with participatory policy formulation approaches elsewhere.

The policy exercise can be seen as a tool for disseminating the results of the research conducted at the institute to problem stakeholders, i.e., people and organizations who are affected by the results of the research and for whom it should be of most concern. Such exercises might also be used to open a *discussion* and a *continuous dialogue* with these stakeholders about the results of the research and its policy implications. Thus, the policy exercise can be seen as a tool that might be used in a participatory policy formulation process.

To the group of forest sector stakeholders belong executives in the forest sector, politicians, businessmen, and representatives of environmental and other public organizations with an interest in the regional forest sector, etc.

The general objectives of a IIASA policy exercise for forest sector stakeholders are:

1. To foster exchange of knowledge and information and mutual learning through effective face-to-face communication (confrontation);
2. To synthesize policy-relevant and useful information through the integration of disparate sets of formal and informal knowledge; and
3. To identify policies for alternative and plausible futures.

A policy exercise might be a relatively long event, lasting for months, even years. IIASA's engagement in such a process should be limited to a (small) number of well-defined interventions in the form of policy exercise *workshops*. In these workshops the results of the research performed by the institute is reported to the workshop participants, who are then challenged to identify the general issues and specific problems that they find particularly important to solve in order to improve the functioning of the forest sector in their region. It is important for the outcome of the workshop that an atmosphere is created in which different stakeholders could freely present their views on the problems and suggest solutions.

The results of IIASA's initiative to organize a policy exercise with stakeholders in the Russian forest sector are of course contingent upon the sanction and support that the initiative receives both from the regional authorities and from the forest stakeholders themselves (the legitimacy of the initiative). Ideally, the initial policy exercise workshop would result in a continued orderly discussion among the regional stakeholders after the first IIASA-led workshop is over. Such a discussion might, for instance, be conducted in permanent working groups formed with the purpose of developing a modern regional forest policy. The IIASA team would then only monitor the work and, when necessary, interact with the working groups until their work were self-sustaining.

4.2 The Policy Exercise Workshops in Murmansk, Karelia and Arkhangelsk — From Preparation to Implementation

4.2.1 IIASA's Provisions and Requirements

Based on the experiences gained through a policy exercise workshop in Tomsk in June 2000 (cf. Olsson, 2001) the IIASA team decided to opt for similar interventions in the regions of Murmansk, Karelia and Arkhangelsk with the purpose of disseminating the results of the previous case studies and initiate a discussion of the institutional problems hampering a further development of the regional forest sector. The idea was discussed with the authors of the case study reports previously published by IIASA and it was agreed that it would be suitable to contact the regional forest sector officials to find out if it would be possible to obtain official sanction for a policy exercise from the regional government. The result of these preliminary explorations indicated that the forest officials and the representatives of the regional governments in Karelia and Arkhangelsk clearly were very interested in IIASA's proposal to organize a policy exercise for forest stakeholders in the respective regions. In Murmansk, however, it was not possible to obtain any formal commitment from the Regional Administration for such an endeavor. The idea was supported by the person in charge of forestry and forest industry matters in the Regional Administration. The regional forest management also expressed an interest in the idea. However, the representatives of the Regional Administration and the forest management preferred the actual organizational duties to be handled by IIASA with the help of the Institute of Economic Problems (IEP) of the Kola Science Centre in Apatity and the Norwegian Institute of Urban and Regional Research (NIBR) in Alta.[67]

To be able to handle all practical details related to the organization of the planned events IIASA decided to ask the authors of the reports from the case studies previously performed in Murmansk, Karelia, and Arkhangelsk to serve as regional coordinators for the policy exercises in the respective regions. The case study report on Murmansk was jointly authored by a Russian and a Norwegian researcher (Lyudmila Ivanova and Vigdis Nygaard). The report on Karelia was authored by a Finnish researcher (Minna Piipponen) who recruited a Russian colleague from the Karelian capital Petrozavodsk (Nadezhda B. Polevshchikova) as co-organizer. One of the three authors of the Arkhangelsk case study report was a Russian researcher (Mikhail Yu. Varakin) from the Arkhangelsk State Technical University, who undertook the organization of the Arkhangelsk exercise with strong support of one of the vice-rectors of his university (Galina V. Komarova). In the late summer of 2000 the coordinators of the Murmansk and Karelian policy exercises spent a few days at IIASA in Laxenburg to prepare the budgets, programs, list of invitees, etc., for the upcoming events.

In order to negotiate the final conditions for the organization of the policy exercise and stir up an active interest from the top executive level the leader of IIASA's Forestry Project (Sten Nilsson) paid a brief visit to the regional government and the forest sector organizations in the Republic of Karelia about a month before the exercise was held.

[67] The authors of the previous IIASA case study report on Murmansk were affiliated with IEP and NIBR.

The IIASA team issued general instructions about the desired format of the policy exercise workshops and stated some principal objectives regarding the program and participants. It was recommended that some 40–70 people be invited in order to get a total of 25–50 workshop participants. Invitations to the event were to be sent to top managers of regional forest industrial enterprises, leading personnel in the regional forest management (including chief foresters of the *leskhozy* in the region), officials in the Regional Administration responsible for forestry and the forest industry as well as representatives of regional environmental non-governmental organizations (NGOs). The local organizers and supporting organizations were also asked to propose additional regional stakeholders to be invited as participants.

Invitation letters were sent out after prior agreement with the IIASA group. IIASA also sent invitations to a number of officials working with forestry and forest industry issues at the federal level (in Moscow).

The workshop was expected to last for two full days. To facilitate participants' travel it was decided that the program should commence only after lunch on the first day, use a full second day for group deliberations, and end with lunch on the third day.

The practical requirements for the meeting that IIASA set up were simple and straightforward — a large meeting room for the initial and final plenary sessions, four smaller meeting rooms for group sessions, computer and copying facilities should be readily available. Two well-qualified interpreters (for "sequential" interpretation) were required for the plenary sessions. Discussions in the group sessions were to be held in Russian without interpretation so as not to inhibit an efficient exchange of opinions. (The idea was that some members of the IIASA group with native or acquired ability in Russian were to sit in during the group sessions as observers.)

IIASA strived to externally recruit a person to serve as "facilitator" of the workshops. Using an external facilitator seemed appropriate considering the fact that the whole event was initiated from an "outside" organization (IIASA), and that the policy exercise concept was new and largely unknown to the regional forest stakeholders in the three regions. Even if a suitable local candidate had been available for serving as workshop facilitator, earlier experiences in participatory action (cf., for example, Wright, 1999) suggest that it would still have made good sense to use an "external consultant" since it would probably not be possible to find a "local" facilitator who would be allowed to take a leading position in the exercise in the first place and, since the negative consequences of failure could be considered severe, it would also be difficult to find someone willing to take on the task.

The offer to serve as workshop facilitator went to a former IIASA research scholar (Peter Duinker, Head of the School for Resources and Environmental Studies at Dalhousie University, Canada) with extensive experience in conducting policy exercises, both during his period at IIASA (cf., Duinker *et al*., 1993) and in his work in Canada. As it turned out Peter Duinker was only able to participate in the policy exercise workshop that IIASA organized in Murmansk.[68] In the workshops in Karelia

[68] Peter Duinker also served as a facilitator in IIASA's policy exercise workshop in Tomsk in June 2000.

and Arkhangelsk Sten Nilsson, leader of IIASA's Forestry Project, served as the facilitator.

4.2.2 The Workshop — Design and Implementation

In principle, as outlined in the previous paragraphs, IIASA strived for a similar design of all the three policy exercise workshops in Murmansk, Karelia, and Arkhangelsk. By setting aside plenty of time in the workshop program for informal group deliberations among participants representing different interests in the regional forest sector, it was hoped that existing problems hampering a further development of the sector would receive an unprejudiced and inventive analysis in which new suggestions for problem resolutions would emerge. The IIASA team would begin the workshops with plenary presentations of the main findings in its previous series of case studies of the institutional problems in eight Russian regions. The more specific findings pertaining to the regions of Murmansk, Karelia and Arkhangelsk would also be presented at the outset of the workshops to serve as "food for discussion" in the subsequent group sessions. The outcome of the workshop would hopefully be a consensus on the prioritization of the existing problems and some thoughts on how solutions to the identified problems might be elaborated. Ideally, the workshop would end with participants specifying how the work started during the workshop might continue and making a commitment to continue this work with the purpose of elaborating detailed proposals for improvements of the regional forest policy.

Clearly, such an ambitious program would require a lot from the workshop participants. A crucial task in the preparation for the workshops was, therefore, to attract a suitable selection of participants from among the various forest stakeholders in the three regions. Since the transition process was gradually changing the context in which forest related business activities in Russia were performed, IIASA found it important to get a good representation of the forest industrial sector to participate in the workshops. Thus, finding representatives of forest enterprises in the respective regions should be emphasized in the recruitment of participants to the workshops. Other stakeholder groups that ought to be represented among the participants included forest officials in the Regional Administrations and the regional forest management, environmental NGOs and other civic initiative groups with an interest in forest utilization.

In general, IIASA's requirements and intentions for the design and implementation of the policy exercise workshops were satisfactorily met in all three regions. Some differences in the implementation of the workshops could, however, be noted.

Murmansk

The policy exercise workshop in Murmansk took place on October 23–25, 2000. In terms of format and program the Murmansk policy exercise workshop arguably was the one that best corresponded with IIASA's prior intentions. The workshop program covered two full days of work dispersed over a period of three days. The contents of the program fully matched the ideal suggested by IIASA, with plenary sessions during the first half day, group deliberations in two parallel sessions during the second day, and a plenary debriefing and general discussion session during the third half day. The total number of participants was limited, only amounting to 24 including the IIASA team.

Since the majority of this small group of participants were from outside the city of Murmansk and most of them therefore accommodated in the same hotel it was possible to keep the group together, something that seems to have stimulated informal discussions. Participants also expressed their gratitude for this opportunity to meet with other forest stakeholder groups. No such opportunity had previously been offered them. The workshop premises were adequate — all sessions took place in the hotel conference area. The plenary hall was small but sufficient for the relatively small group of participants. It also allowed participants to be seated facing one another around tables arranged in a large rectangle thus facilitating discussions. Smaller rooms for group discussions were available. Since the workshop had been carefully prepared beforehand by the local organizers, the little that was needed in terms of office facilities during the actual meeting was available in the hotel conference area. Adequate sequential translation was also available. See Appendix B1 and B2 for the workshop program and list of participants.

However, in terms of impact on the regional forest policy the Murmansk workshop could probably not be considered very significant. Primarily this has to do with the fact that the forest sector in Murmansk Oblast is very small and of minor significance for the regional economy (cf. Section 3.2.2). This state of affairs was manifested in the composition of the group of participants. Of the total 24 people present at the workshop five represented the organizers (four of whom were non-Russians), two represented the Murmansk Regional Administration, two were researchers (one of these specializing in forest sector economics), six represented forest management (one was the head of the Murmansk regional forest management, five were *leskhoz* chief foresters), five represented the regional forest enterprise sector, one was a foreign (Finnish) forest enterprise director, two were representatives of the Murmansk regional nature protection committee, and one participant represented a regional environmental NGO. It could be noted that almost half of the participants were women, six of them working as chief foresters of various *leskhozy*.

On the second and third day of the workshop deliberations the number of participants present had dropped to a total of 15.

Karelia

The policy exercise workshop in the Republic of Karelia took place in Petrozavodsk, the capital of the Republic. Partly as a result of Sten Nilsson's visit, the organization of the Petrozavodsk workshop received broad support from the following organizations apart from IIASA: the Government of the Republic of Karelia, the Holding Company *Karellesprom*, the Karelia Science Centre of the Russian Academy of Sciences, the Petrozavodsk State University, the Karelian State Pedagogical University, and the University of Joensuu, Finland. The IIASA team arrived at Petrozavodsk in the evening of November 28 and the next day a planning meeting was organized with members of the local organizing committee and the five persons who had been suggested by the local organizers to serve as chairmen of the working groups. Here ideas came up on how to divide the participants between 4–5 working groups. A number of issues that might be expected to appear in the discussions of the meeting were also listed. It was felt that the various groups might be charged to approach specific topics, such as, for instance, legal issues (relations between the Republic and the Federation), forest

management issues, issues of restructuring of the forest industry, and personnel issues (education and training).

The workshop took place in the conference area of the Banking School of the Russian Federal Bank in Petrozavodsk, some 15 minutes' distance from the centrally located hotel where most participants from outside Petrozavodsk were accommodated. Plenary discussions were held in a medium-sized lecture hall, which barely roomed all participants who were present during the first day. (Later, when the number of participants slightly decreased, space allowed everyone to sit at the lined-up tables.) Four well-equipped small lecture rooms were available for the group sessions. Efficient simultaneous translation was available for all plenary sessions.

The exercise was designed so that participants were not required to be absent from their jobs for more than two full days. The workshop program began in the morning of November 30, 2000, and it ended in the afternoon the next day (December 1). All in all there were 70 people participating in the exercise, including 10 foreign participants (seven of them belonging to the IIASA team, three other foreign experts). Five participants represented organizations at the Russian federal level, the remaining 51 participants represented regional Karelian forest sector organizations (19 researchers, 18 administrators and 7 businessmen) and environmental groups (2) or civic organizations, including the media (5). See Appendix C2 for the list of participants.

Several prominent ministers of the Karelian republican government (Mr. Maslyakov, at the time First Deputy Prime Minister in charge of natural resources, Mr. Shlyamin, Minister of Foreign Relations, and Mr. Shurupov, Minister of the Economy) were present during the plenary session on the first day to greet everyone welcome and introduce the speakers. Most of the day was devoted to plenary presentations by members of the IIASA group and a number of Russian speakers representing forest and environmental organizations on both the federal and the regional level. See Appendix C1 for the workshop program.

Towards the end of the first day and for most of the second day the workshop participants were engaged in group deliberations. Three local researchers and a businessman from the town Kem in northern Karelia chaired the four groups. Each one of the groups had between 6 and 11 Russian participants. (Thus, there was a drastic drop in participation during the working group sessions.) Members of the IIASA team were sitting in as observers in the groups. The discussion in the four groups differed a lot in style and temperament. In general, however, the discussions were lively and highly productive touching on substantial issues, where all participants were given an opportunity to state their meaning. The group chairmen, sometimes assisted by a member of their group, took notes and prepared for the presentation of the results of the group discussions to be made in the subsequent final plenary session.

At the final plenary session, which took place in the afternoon of the second day (between 14.00–16.30) all group chairmen gave short summaries of the discussions in their respective groups. All together there were about 40–45 people present at this final session of the exercise. Two of the government ministers (Mr. Maslyakov and Mr. Shlyamin), who had been chairing the first plenary session, again appeared and actively

took part in the discussions following the group leaders' presentations and in the closing of the exercise.

On the day following the exercise (December 2) the IIASA team had a follow-up meeting with the chairmen of the working groups. The intention was to see if they believed that the exercise had been able to trigger a sufficient interest to generate a continued activity among the stakeholders of the Karelian forest sector with the purpose of developing a new regional forest policy. A lunch for the IIASA group and a few guests attended by Mr. Maslyakov and an aide formally marked the end of the policy exercise.

Arkhangelsk

The policy exercise workshop in Arkhangelsk took place on March 29–30, 2001. The main responsibility for the organization of the event was taken by IIASA in close collaboration with the Arkhangelsk State Technical University (AGTU). An organizing committee was named consisting of twelve people representing (apart from IIASA and AGTU) the Russian Federation Ministry of Industry, Science and Technology, the Arkhangelsk Regional Administration, the *Lesobank* (Forest Bank) and the Arkhangelsk Union of Forest Industrialists and the board of directors of the company *OAO Lesozavod No. 3*.

The workshop was convened on the premises of AGTU located on the embankment of the river Dvina running through the city of Arkhangelsk. A newly refurbished auditorium was used for the plenary sessions and smaller conference and lecture rooms were used for the two group sessions. Simultaneous translations were available for the plenary sessions.

The final preparations for the workshop program were made during a meeting between the IIASA team and members of the organizing committee on the day before the start of the workshop. Discussions centered on possible themes to be discussed in three working group sessions. The final details concerning the workshop program were settled (see Appendix D1).

All in all 60 people participated in the Arkhangelsk policy exercise workshop. Apart from the IIASA team consisting of five people, there were six representatives of Moscow based organizations (two environmental NGOs, two forest research, one foresters' society, one development foundation supported by the World Bank), nine representing the Arkhangelsk Regional Administration (four of whom were primarily working with forest management issues), seven representatives of the forest enterprise sector, 23 representatives of various types of research (four research administrators in AGTU, 12 working in forest research organizations, primarily forest related departments in AGTU), and 10 other participants (representatives of the Arkhangelsk Customs, the Arkhangelsk Chamber of Commerce, the forest sector in Karelia, a Swedish and a Finnish company, a local newspaper, and AGTU post-graduate students). See Appendix D2 for the list of participants

It could be noted that the Arkhangelsk Regional Administration was represented at the workshop by the acting chairman of the international relations department (for an opening speech) and by a young deputy director of the Department of Economics and

Development, who gave a short speech on the current state of the Arkhangelsk economy. More prominent officials of the Regional Administration were said to be prevented from participating in the workshop due to other obligations. The regional forest management organization (which at this time had already been merged into the Regional Administration) was represented by its chief forester (in the old organization), currently the head of the Department of State Control in the Committee for Natural Resources.

The workshop started in the morning of March 29 with words of welcome by representatives of the AGTU and the Regional Administration. After the initial presentations of the results of the previous case studies performed by the IIASA team, there were nine other (brief) presentations by Arkhangelsk and Moscow based researchers and forest enterprise representatives. This meant that the discussion groups could not be established and start their work until fairly late in the afternoon. Two groups were formed and the group sessions continued for the better part of the second day. The workshop ended with a plenary session during which representatives of the two groups presented the results of their discussions. This was followed by a general discussion.

During a brief meeting with the IIASA team and the organizing committee it was decided that an outline would be made of what was actually discussed and suggested during the workshop. It was agreed that a small working group would be formed to draft a document containing the understanding that was reached of the current situation and the problems hampering a further development of the Arkhangelsk forest sector. Ideas discussed during the workshop that should be of use in a future development of a regional forest policy should also be included in this document. A rough timetable for the preparation of this document was also agreed upon.

Comparing the Workshop Design and Implementation in the Three Regions

The comparison of the workshop design and its implementation in the three regions is summarized in Tables 9 and 10.

Table 9: The workshop preparations and final format.

	Murmansk	**Karelia**	**Arkhangelsk**
Region object of previous IIASA study	Yes	Yes	Yes
IIASA had previous contacts with Regional Administration and/or forest officials to mobilize support for the exercise	No	Yes	Yes
Previous contacts included preparatory visit to the region by IIASA team leader	No	Yes	No
Regional coordinator(s) spent time at IIASA preparing for the exercise	Yes	Yes	No
Number of short plenary presentations by foreign participants (including IIASA presentations)	1	3	1
Number of short plenary presentations by Russian participants from the region	1	2	7
Number of short plenary presentations by Russian participants from outside the region	0	4	3
Number of working groups	2	4	2

Table 10: Characterizing workshop participants.

Participants	Murmansk		Karelia		Arkhangelsk	
	No.	%	No.	%	No.	%
Total number of participants (excluding the IIASA team)	19	100	64	100	55	100
Approximate number of participants engaged in working group sessions	15	79	40	63	25	45
Number of participants representing:						
Regional administration (excluding forest management)	4	21	11	17	7	13
Forest management (including leskhozy)	6	32	3	5	4	7
Forest industry (including branch organizations)	5	26	12	19	8	15
Forest research	1	5	8	13	14	25
Other research	1	5	12	19	11	20
NGOs (including media)	1	5	7	11	1	2
Share of participants from other Russian regions:		0		11		15
Forest (natural resource) administration	0		3		3	
Forest (natural resource) research	0		2		3	
Representing NGOs	0		2		2	
Share of participants from outside Russia (excluding the IIASA team):		5		6		4
Foreign business	1		0		2	
Foreign administration	0		1		0	
Foreign research	0		3		0	

4.3 Workshop Deliberations

A brief look will be taken (in Section 4.3.1) at the recommendations for policy changes that were the outcome of the previous IIASA case studies of the institutional problems of the Russian forest sector. These recommendations were presented to the workshop participants in the initial plenary sessions to set the stage for the subsequent working group discussions. The substance of the discussions during the group deliberations is reviewed in Sections 4.3.2 and 4.3.3.

4.3.1 Recommendations Made in IIASA's Previous Research

In the initial plenary sessions, which started each of the policy exercise workshops in Murmansk, Karelia and Arkhangelsk, the IIASA team gave an account of the previous case studies of the institutional problems hampering developments in the Russian regional forest sector.[69] Here only a brief account will be given of the recommendations that were based on the previous IIASA analyses. (The overall results of the case study project were reported in Carlsson *et al*., 2001.) The presentations made by IIASA in the plenary sessions at the workshops were intended as "food for discussion" in the subsequent group sessions.

Each of the reports from the previous IIASA case studies of the forest sector institutions in eight Russian regions were rounded off with a number of conclusions about the current situation and recommendations on how to achieve changes that would make the

[69] A brief account of the design of this series of IIASA case studies was given in Sections 3.1 and 3.2. The reports published by the project are listed in Appendix A.

forest sector function in a more market efficient way. Not unexpectedly, it was found that a large number of functional deficiencies among the forest enterprises were dependent on problems at various levels in society. Some problems typically belong to the *constitutional level* (e.g., ambiguities concerning property rights, contradictions between the constitution and the forest code, etc.), some problems must be handled on the *collective choice level* (e.g., taxation reforms, improved bankruptcy legislation, policy programs should be elaborated, entrepreneurship should be encouraged, education and training of personnel should be organized, etc.), while others could be attacked and solved by the actors in the forest sector themselves (these are problems at the *operational choice level*, such as improved product development, enterprise management should focus on economics rather than engineering, the education of the workforce should be improved, good market behavior rewarded, etc.).

A number of recommendations could be seen as generally valid for all regions taking part in the case study project. Table 11 gives an overview of these general recommendations.

Table 11: Overview of measures recommended in IIASA's previous case studies of the institutional problems hampering the Russian regional forest sector.

At the Constitutional Level
• All ambiguities concerning property rights should be sorted out. • Collisions between the constitution and subsequent laws must be eliminated. • Different types of ownership should be allowed. • A number of political problems e.g., the role of the parliament versus the president, as well as many macro-economic questions, must be solved in order to establish a solid foundation for a vital forest sector.
At the Collective Choice Level
• Federal and regional policy programs, which are in line with market economic principles should be worked out. No political, administrative coordination of business activities. • A thorough taxation reform should be enacted. The whole system of taxes and fees, not only the number of taxation rules, should be simplified. • Politicians and bureaucrats should withdraw from direct involvement in individual enterprises. • Banks and other credit institutes should encourage entrepreneurship, exports, and the establishment of joint ventures with foreign companies. • Forest enterprises should create their own independent branch organizations. • The infusion of cash to the forest sector from "prosperous" state monopolies should be stopped. • The bankruptcy system and the arbitration courts must be made more efficient. • Education and training for people to learn new tasks and technologies must be developed; democratic citizenship should be encouraged. • All democratic means should be utilized to create law and order.
At the Operational/Enterprise Level
• Learn from others; there are a number of good examples. • Increased efforts at product development. • Focus more on the economics and less on the engineering. • Educate and develop the workforce, e.g., in English, modern business accounting, quality management, etc. • Reward good behavior, work ethics should be held in high esteem, business leaders should act as moral vanguards. • For larger industries, vertical integration *might* prove profitable. • The coordination and integration process must be the result of the companies' *own* decisions. It cannot be implemented if the old political structure intervenes in the forest sector.

Some more specific recommendations were also offered in the reports on individual regions taking part in IIASA's previous study. The main thrust of the recommendations pertaining to Murmansk, Karelia, and Arkhangelsk is outlined under separate headings below.

Murmansk

In their case study report on the institutional problems in the Murmansk forest sector Ivanova and Nygaard (1999) paint a rather bleak picture of the situation and future development possibilities for the regional forest sector. The sector was squeezed harder than in other regions by the changes brought about by the transition. The effects on society and for the population were nevertheless limited due to the insignificant size and importance of the sector in the regional economy. There used to be a regional demand for wood products from regional enterprises in, for instance, the mining and finishing industry. But since production volumes decreased dramatically in the 1990s, wood demand from these enterprises has also decreased and almost disappeared. Thus, a fundamental problem concerns the possibilities for wood demand to recover — a problem that is intimately connected to a recovery of the whole regional economy. The question is how to turn economic stagnation into economic growth.

When the economy recovers regional forest enterprises will again meet a certain demand for their products. Until the economy recovers forest sector enterprises will have serious problems, however. Ivanova and Nygaard (1999) found that forest sector enterprises in Murmansk could be divided into two groups depending on how they reacted on the difficulties facing them. One group of enterprises, mainly larger state owned companies, tended to do as little as possible to adapt to the prevailing situation, their strategy was to try to survive and maintain their workforce until better times arrived or until the state intervened to save them from bankruptcy. The other group, mainly consisting of smaller enterprises, many of them new privately owned, used a completely different coping strategy. They tried to adapt to the new situation, reduced their workforce if necessary, strived to improve their productivity, to find new markets for their products, develop new products for markets in which they had not previously been engaged, tried to attract foreign partners for funding investments, etc. Clearly, such a strategy of "restructure and develop" will make the latter group of enterprises stand a much better chance of survival in the emerging Russian market economy than the former group's "wait and see" attitude.

The authors of the IIASA case study recommended some specific measures that the forest sector enterprises in Murmansk should take to stimulate a positive development. They found that the regional forest sector enterprises should (a) intensify their efforts to find new markets for their products; (b) strive to make all their sales and purchase payments in cash; (c) organize good training of enterprise managers focusing on business economics rather than engineering; (d) establish a political lobby to make the Regional Administration take more interest in the needs of the forest sector (this should be done through the creation of branch associations or the like); (e) try to influence the regional taxation system to make it transparent and legitimate; and (f) work to improve the existing forest legislation.

Karelia

In the report from IIASA's study of the institutional problems hampering the development of the Karelian forest sector the author, Piipponen (1999), largely refrains from making explicit policy recommendations. Instead she seeks to identify the most serious problems disturbing the functioning of the regional forest enterprises as they were perceived and stated in the survey analysis made among 36 Karelian forest enterprise managers.

As was the case with the forest enterprises in Murmansk, the survey among Karelian forest enterprise leaders also indicated the existence of two coping strategies. Piipponen (1999) calls them the strategy of survival and the strategy of restructuring or reform. However, the evidence found in the survey analysis for different enterprises belonging to one or the other category was not unambiguous. It rather seems to be the case that companies tend to behave like a "reformer" in certain respects while keeping to "survivor" strategies in other situations. In practice this could mean, for example, that a company might continue to engage in barter transactions with suppliers or customers,[70] while at the same time seeking to improve its performance by making investments to raise productivity. Foreign competition had also started to complicate life for many Karelian wood-processing enterprises, which could not obtain enough timber due to increased export sales at prices they were not able to pay. This development caused some enterprise managers to call for export regulations or price controls aimed at securing a sufficient amount of wood at affordable prices for the domestic wood processors. At the same time, these possibilities to export stimulated the development of regional forest harvesting companies.

Based on Piipponen's (1999) analysis of the survey data and her conclusions about what constituted, according to company managers, the most pertinent problems for the Karelian forest sector enterprises, the following urgent measures to be taken by the Karelian government and the forest sector organizations in the region could be imputed:

(a) Efforts should be made to find solutions to the problem of investment funding involving the banking system.

(b) Measures should be taken to decrease the disorder in society and in the economy that was brought about by the transition process. Rules instituted to govern economic agents should be developed in a way that ensures legitimacy; they should be transparent and carefully enforced.

(c) Existing taxation rules should be revised to become conducive to lawful behavior on the part of the (forest) enterprises.

(d) Efforts should be made to improve the Forest Code, to eliminate ambiguities concerning property rights. Rules pertaining to forest use (harvesting rules, leasing rules, etc.) should be revised to better suit the demands of the forest users.

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[70] It was found that barter trade was practiced by 70 percent of the enterprises taking part in the survey. (However, barter was not the only means of trade used in these companies. Cash transactions were also common.)

(e) Efforts should be made to improve the coordination of the regional forest sector. In the current situation this might mean the establishment of vertically integrated structures, perhaps in the form of holding companies, which could help to secure raw materials for the wood processing industry while simultaneously facilitating its restructuring and modernization to make its output competitive in the new market environment.

(f) Measures should be taken to expand and improve the transportation infrastructure to allow forest harvesting on lands with mature forests, which are nowadays mostly found in unavailable locations.

Arkhangelsk

In their report on the forest institutional problems of Arkhangelsk Oblast, Carlsson *et al.* (1999) concluded that the regional forest sector displayed many features typical of the so-called *virtual economy* (cf. Section 2.2). In effect, this means that only a rudimentary restructuring had taken place in Arkhangelsk by the latter half of the 1990s. Since one should assume that actors in the forest sector are rational human beings, the problem consists in explaining why they choose to remain in the virtual economy. The answer is, of course, that the virtual economy currently offers the most favorable circumstances in the eyes of a large share of the forest enterprise managers. If market competition were allowed to make its full impact it would probably show the large extent to which existing production processes and capital equipment are insufficient to allow an efficient production. In this situation to opt for rapid enterprise restructuring on a large scale would simply be unfeasible. The result would be devastating in terms of company closures withdrawing the economic foundation for life in the many municipalities that are entirely dependent upon the continued operation of a single large forest enterprise. Still, in the longer term, enterprise restructuring is necessary, since the market oriented transformation of the economy most likely will continue.

Against this background Carlsson *et al.* (1999:79–80) made the following recommendations for measures to be taken by various actors in the Arkhangelsk forest sector:

- Regional authorities and others should withdraw from most of their engagements in single firms. When such engagements are needed the reasons should be openly declared and justified.
- The overall task of political authorities in Arkhangelsk should be to minimize or eliminate political risks in order to achieve economic growth. For example, all types of *ad hoc* regulations, such as retroactive rule-making, should be immediately stopped. Politicians and related officials should promote institutional stability and, thus, transparency of rules, which will subsequently increase predictability.
- In order to stimulate, or increase the likelihood of, the evolvement of "real" branch organizations officials should withdraw from the type of corporative organizations that has been created.
- The authorities should pay great attention to the task of making regulations simpler and contradictions between various rules should, if possible, be eliminated.

- Together with other actors regional authorities should develop programs in order to stop the deterioration of education and to increase management competence in the forest sector.
- Activities of independent actors should be encouraged and supported, thereby counteracting a further bureaucratization of the forest sector. For example, programs deliberately aimed at stimulating the establishment and development of small and medium sized enterprises should be constructed, provision of economic guarantees should be considered as well as economic support of entrepreneurship.
- All private actors in the forest sector as well as the regional authorities must find ways of releasing industries from their social commitments. For example, privatization of apartments should be increased and supported.
- All concerned parties should try to find economic support for deliberate programs aimed at renovating apartment houses, repairing public buildings, roads, and other infrastructure facilities. As a side effect this might increase the regional demand of forest products.
- More emphasis should be paid to develop the export sector, for example, by widening the current range of products. Political authorities as well as the authority of the police should be used to secure that exporting firms have the possibility to reinvest the income of their export thereby making their production more efficient. Export firms have no incentive to generate money that in the end will end up in a draconian tax system or in the hands of organized crime.

Let us now turn to an examination of the format and procedures of the working group deliberations in the Murmansk, Karelian and Arkhangelsk policy exercise workshops.

4.3.2 Group Sessions — Format and Procedures

In each of the policy exercise workshops in Murmansk, Karelia, and Arkhangelsk, the initial plenary sessions were followed by group discussion sessions. The group sessions were introduced by the workshop facilitator. The basic idea behind this mode of operation was briefly stated and a template outlining the tasks to be performed by the working groups were distributed to all participants (see Table 12). An extensive list of problems or issues touched upon in the previous plenary sessions was presented — these lists were compiled by members of the IIASA team — and participants were asked to add issues or topics that they found missing in the list. The procedure was similar in all three policy exercise workshops.

The IIASA team and the local organizers also prepared a proposal for a possible division of the participants into various working groups. The decision on the number of working groups was entirely dependent upon the available number of people ready to participate in the group sessions. The procedure resulted in, respectively, two groups in the Murmansk and Arkhangelsk workshops and four groups in the Karelian workshop.

Table 12: The IIASA template to guide policy exercise group work.

Instructions for the Working Groups
1. Select a facilitator from among the participants in the working group. The facilitator's job is to make sure that (a) the discussions stay on topic and on time, and (b) that everyone at the table gets an equal chance to speak. The facilitator frequently asks questions to move the discussion in the right direction. It is best if someone with good experience doing this will volunteer.
2. Select a recorder/spokesperson from among the participants, too. The spokesperson's job is to take notes of the main points in the discussions, and present these in the plenary session after lunch. Here, too, it is best if a group participant with good recording and presentation skills will volunteer.
3. Discuss and provide ideas about the following questions. Be as specific as possible in the answers. For a specific problem area or theme:
(a) THE REAL PROBLEM Make a short statement about what the problem really is. Are there different ways of stating the problem? Develop a group agreement on the best statement.
(b) PRIORITY How critical is it for an effective and efficient transition of the regional forest sector to fix this problem quickly? Is this high, low or medium priority?
(c) LINKAGES Can action be taken on this problem independent of progress in resolving any other problems? If not, which other problems must be solved first before progress can be made on the problem you are discussing?
(d) KEY PLAYERS Who needs to take primary responsibility and a leadership role to resolve the problem? Who else's participation is critical in resolving this problem?
(e) REQUIRED ACTIONS What specific actions are required to begin solving the problem? What needs to be done first, and how soon? What resources are required to implement each of the identified actions?
(f) OBSTACLES What obstacles are there to implementing the identified actions? How can these obstacles be removed?

Murmansk

The discussion during the plenary session resulted in a long list of issues (all in all 38 questions) that participants advanced as candidates for further discussion in the working group session. A loose clustering of the issues on this extensive list produced broad themes for discussion in two working groups, one focusing on "Financial, technical and ecological problems," and the other on "Legal, personnel and social problems." All participants present were then asked to sign up for one or the other of the established working groups. There were 7–8 participants in each of the two groups.

Two young men chaired the groups, one working as a researcher at the Russian Academy Kola Science Centre simultaneously representing an environmental NGO, and the other was the owner and director of a small forest trading company. Both chairmen very competently guided the discussion in their respective groups. The groups also elected a group member to take notes and prepare for the later plenary presentation of the group's discussion.

Immediately after the workshop the Russian participants gathered to decide about ways to proceed the work initiated during the workshop. As a first step the group asked the local workshop organizer (Lyudmila Ivanova, KSC) to make a draft summary of the results of the deliberations (see further comments on this document in Section 4.3.4). The draft was then to be disseminated to all participants and a follow-up meeting would be called within a few weeks.

Karelia

Four working groups were formed by assigning participants to each group in a random manner. The local organizer had found four very competent persons willing to act as group chairmen. Three of the group chairmen were affiliated with research, either in research institutes or at a university. One was the director of a forest enterprise in the northern part of Karelia.

The groups were not assigned specific topics for discussion. Instead the IIASA team had collected (and structured) the issues that had been touched upon during the previous plenary session and issues that had been discussed at earlier IIASA policy exercises conducted in Russia. These issues were compiled into a long list from which participants in each of the groups were asked to select the questions they found most important. (This list of issues can be found in Appendix E.)

The style of work in the different groups varied substantially due to the different style of chairmanship and the temperament of the group members. In some groups there was a seemingly unstructured and very lively discussion, while in others group members quietly waited their turn and then stood up to give more or less formal statements. (In one group there were even written statements presented.[71])

The group members adhered well to the procedure suggested by the organizers and selected certain problems for deeper analysis and paid less attention to things they did not find immediately important.

The results of the group discussions were presented in the final plenary session. Members of the organizing committee drafted a document summarizing the most important problems and suggestions for solutions after the workshop. (More about this document in Section 4.3.4).

[71] In Group 3, Dr. Ilya R. Shegel'man, President of the Karelian Engineering Academy, introduced two documents on "Problems of improving the legislation" and "The Investment and Personnel Policy".

Arkhangelsk

Since a relatively large share of the participants attending the initial plenary session did not stay on to take part in the group discussions, only two working groups were found to be feasible with 11–12 participants in each. The same list of issues that was used in the Karelian policy exercise workshop was used here as well. Group participants were asked to select what they found to be the most interesting issues to discuss from among the many issues listed in the IIASA document (cf. Appendix E).

As a lot of time was spent on the initial plenary presentations —all in all there were nine of them apart from the presentation by the IIASA team — the group sessions could only start in the late afternoon. They were continued on the second day after a brief plenary session in the early morning. After lunch the two working groups were merged into one group before the final plenary session that started at about 4 o'clock in the afternoon. The working groups were chaired by one prominent representative of the Arkhangelsk Forest Management and a researcher from an Arkhangelsk based forest consultancy firm. Deliberations in the two groups were lively and productive in the sense that many issues were brought up for discussion. The group chairmen took care of the presentation of the results of the group discussions in the final plenary session. The discussion in one group centered on natural resources and resource accessibility, land use and forest management, and social issues including the labor market. The other group focused more on issues related to the sustainable restructuring of the Arkhangelsk forest sector, on forest utilization, infrastructure, technological modernization, and product innovation.

During the final plenary session an editorial group was selected from among the Russian workshop participants and charged with the task of drafting a final document (more about this document in Section 4.3.4).

4.3.3 Summary Account of Discussions in the Working Groups and the Final Plenary Sessions

This section provides an overview of the substance of the discussions in the working group sessions of the respective policy exercise workshops. The summary is based on the presentations made by group representatives during the final plenary session. Without keeping track of which arguments were discussed in the respective working groups the account primarily seeks to identify the problems participants found most severe, which priorities they found necessary, etc. It also seeks to capture the suggestions that were advanced for reaching solutions to the identified problems, how participants thought work should proceed to achieve improvements in the forest policies of the respective regions.

Murmansk

Deliberations in the working group sessions of the Murmansk policy exercise workshop focused on two broad themes, "Financial, technical and ecological problems" and "Legal, personnel and social problems." The discussions in the introductory plenary session raised a large number of issues related to the current functioning of the Murmansk forest sector. The entire list of issues was given to both working groups and

group participants were free to pick out the issues they felt most in need of further deliberation. A lively and productive discussion ensued in both working groups.

In the subsequent plenary debriefing session the outcome of the group discussions was summarized by the two group chairmen. The discussion reflected the fact that the forest sector actually is insignificant for the regional economy and it was understood that solutions to all problems that forest stakeholders encounter today would not be easily found. It was felt that a very important prerequisite for bringing about a positive development was to make various forest stakeholder groups come together and start learning more from one another about all aspects of the problems that have to be solved. This would also help to solve the problems with lack of information about the forest resources and their actual and potential use. The workshop discussions ended with participants agreeing that some kind of branch organization ought to be established. But before recapitulating the discussion about this suggestion some of the problems that participants found most in need of a solution should be mentioned.

Participants — many of whom worked in forest management units, *leskhozy* — noted that forest management (still) was supposed to be a public authority entrusted with the task of managing the state owned forest lands of the country. However, due to insufficient funding via the state budget, today *leskhozy* were increasingly forced to engage in market transactions to generate money for their continued operation. This, in fact, threatened to transform the *leskhozy* to a kind of state enterprise, for which the forest management duties might become of secondary importance. It was felt that the juridical status of leskhozy should be clarified. If forest management were to remain a public authority with only control and protection functions it should be fully funded via the state budget.

Several problems pertaining to forest legislation were discussed. Firstly, it was agreed that consistent regional rules should be elaborated for the sale of standing timber. This demand for improved regulations was caused by the problematic relations between *leskhozy* and forest harvesting enterprises. Harvesters found that forest managers did not understand the conditions and requirements of the new market environment. The problems concerned the allocation of harvesting plots, rules allocating the responsibility for reforestation, etc.

Secondly, since the “Law on Northern territories” had still not been abolished, it should also be enforced. The extra wage bonuses guaranteed by the law for work in the Russian North should be paid from the Federal budget and not have to burden individual enterprises as is the case today. (Many seemed to believe, however, that this law would soon be abolished.)

Thirdly, it was argued that the regional law on economic development zones offering exemption from some regional taxes should be extended to districts where the forest industry was being developed. Investors in the forest sector should be granted tax exemptions for the companies’ first years of operation. A related suggestion was that forest enterprises should be granted privileged loans for capital investments by the Regional Administration.

Fourthly, the issue of forest certification was also debated in the working group sessions. Certification definitely will be required if Russian timber should be possible to export. Since Russian foresters do not (yet) seem to understand that it would be best to have their timber (voluntarily) certified by the Forest Stewardship Council (FSC) it seems necessary that the State introduces and pays for obligatory certification.

An issue that caused a lot of discussion both in the working group session and in the subsequent plenary session concerned the lack of well-trained personnel suitable for work in the regional forest industry. The problem seems to be acute for some harvesting companies (impossible to find operators for modern forest machines) and in the sawmill industry. Information that emerged during the workshop discussion indicated that a certain support for training of specialists for the forest industry might be obtained from the Committee on Labor and Employment of the Regional Administration, provided enterprises specified their needs in an application.

It turned out that both working groups had been discussing the establishment of some form of forest stakeholder association, an organization drawing members from all types of forest sector activities in the region. The discussion about this organization, its goal, membership, mode of operation, etc., continued in the final plenary session. The representatives of the Regional Administration declared that they would also like to see some kind of forest stakeholder organization, which would give the officials in charge of economic development in the Regional Administration a partner for discussion about the state and the needs of the regional forest sector. One possible functional environment for such an organization was outlined in a figure presented in the final plenary session (cf. Figure 21).

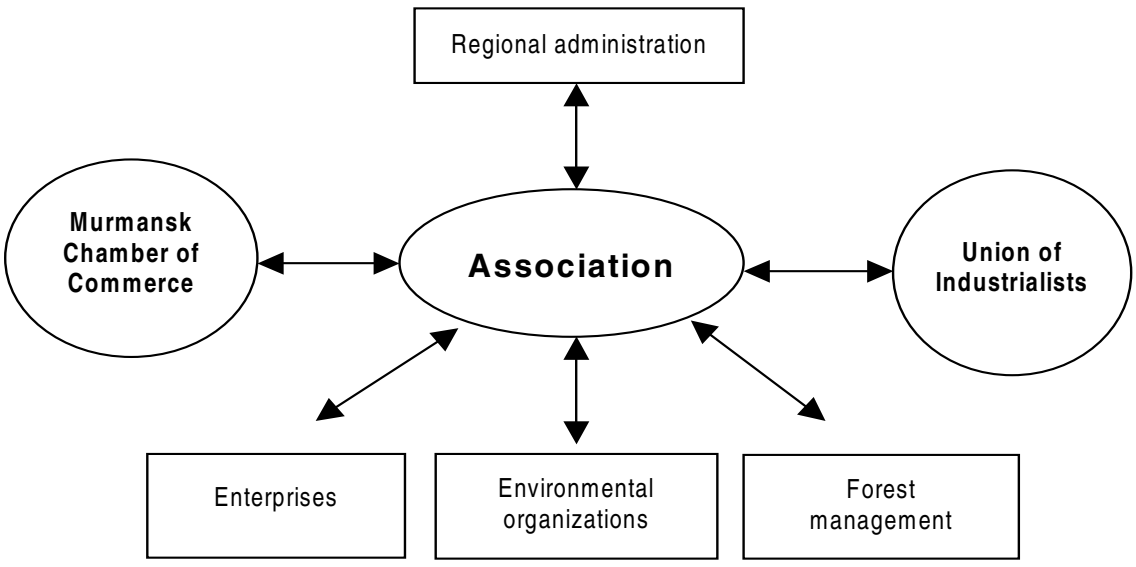

Figure 21: Possible organizational environment for a Murmansk association of forest stakeholders.

The issue was also raised whether the tasks of such a stakeholder organization might not be possible to incorporate into an already existing business organization (such as those mentioned in the circles to the left and right in the above figure). It was agreed that a number of issues must be carefully considered before a move towards the establishment of a forest stakeholder organization can be made. Thus, one has to consider who should be members of the organization, what should be the mission of the organization, who should take the initiative to establish the organization, should it be a new independent organization or should it rather be a part of an already existing organization, etc.

Several participants found that a first important task for the proposed organization to work with might be the establishment of a regional information center for the forest sector. The goal of such an effort would be to create and maintain an open database with information about the Murmansk forest sector.

Karelia

The overarching question posed for discussion in the working group sessions was *how to improve the competitiveness of the Karelian forest sector*. Due to the many unsolved problems in the sector there is today an almost absurd situation with an insufficient wood supply in a region where there are huge timber reserves.

A general answer to the question how this situation might be changed was also unanimously agreed upon. The lack of efficient structures for collaboration between public authorities, enterprises and households (civic society) is seen as being at the core of all problems. That is, solutions to the problems can in principle be (and often enough have been) envisaged, but the real difficulty is how to agree on the choice of particular solutions and how to implement the solutions, once selected. This problem is given different labels. Sometimes it is called a lack of coordination in the sector, at other times calls for stakeholder collaboration, the formation of efficiently working branch organizations (a "union") can be heard. Related to such calls for cooperation is also the idea to identify a group of efficiently working forest enterprises and stimulate collaboration between these enterprises. This would boost efficiency in the sector and the group would function as a showcase from which other, less efficient companies might learn how to improve their performance.

Thus, participants emphasized the need for a new consistent forest policy for the Republic of Karelia. Various activities in the forest sector must be coordinated and this coordination could not, as it used to be during Soviet times, come "from above". That is, there is no public organization that could provide such an all-encompassing coordination today. On the contrary, coordination has to be developed "from below" in a bottom-up approach where various forest stakeholders voluntarily agree to form certain structures (from informal working groups to formal branch organizations) to help identify and further develop their interests.

In this process of dividing the duties and obligations relating to forest sector development between the public authorities and private sector organizations the scope and specific forms of State interventions in the regional forest sector should be clearly defined. The State must refrain from interfering in all aspects of economic and social life. The State should mainly act through the provision of a consistent and transparent

legislation. It should also strive to enforce this legislation and fight crime and corruption. There is also a role for the State to sanction initiatives and behavior among actors in the forest sector that require public sanction in order to work well. Conversely, it is also the role of the State to counter such initiatives and behavior among actors that violate existing legislation and that might set back the development in the sector or in society.

If necessary the State should also make sure that such public goods that are necessary for the safety and well-being of the population are actually provided. Of special relevance for the forest sector is the maintenance and development of the transport infrastructure (roads, railroads, water transports) and at least some of the variety of characteristics required for a good investment climate might be possible for the public authorities to affect. Many of the uncertainties due to the unstable political situation in Karelia cause foreign investors to refrain from investing, the risk of losing money is simply too high. In principle, the State (the government and public authorities both at the republican and the federal levels) can do much to reduce these uncertainties. Through legislation and special regulations (concerning taxation, banking, etc.) it might also affect the propensity of domestic investors to invest their money in forest sector enterprises.

It was also noted that there is an urgent need for modernization of the old and sometimes obsolete capital of the Karelian forest enterprises. This issue is not only related to the investment climate, the taxation rules and banking. It is also affected by the legislation related to forest management and forest use. While there seems to be clear evidence that enterprises would prefer to change practices, for instance to use more selective harvesting rather than clearcutting, the existing system regulating forest operations stands in the way of such changes. There are also other rules concerning forest use that today are an obstacle for development of the sector. Thus, there is a clearly identified need for special regional harvesting rules.

Investments must also be used to change the profile of the forest industry, from the current focus on primary processing (harvesting and sales of round timber) to an increased orientation towards further processing (value added) of the wood. Being a traditional “wood country” Karelia has a natural advantage in this respect. For instance, here it should be possible to develop wooden house construction, furniture production, and the like on the basis of traditional knowledge. Such changes are dependent on entrepreneurial skills and knowledge of existing market opportunities. In present-day Karelia such competence is in short supply.

The issues of employment in the forest sector, of personnel and its qualifications, was also discussed in the group sessions. There is a need to upgrade training facilities for most categories of workers in the forest sector. Enterprises have trouble recruiting qualified personnel for operating modern harvesting or forest processing machinery. This may also be due to the fact that the wage level in the forest sector is uncompetitive so that qualified labor goes elsewhere to find employment. But one important reason seems to be that the opportunities for getting a good training in Karelia are currently very limited. (This is of course not equally true for all types of labor.)

One issue concerning the resource base was intensively discussed. This was the issue of a *cadaster*. Since forest lands are (still) state owned in Russia as they were earlier during the Soviet period, no market set prices exist for land as a commodity. But the *use* of forest lands has been privatized, enterprises have the right to acquire timber and use it for their own benefit. They can acquire this timber in a variety of ways, but today forest lease is getting widely used. A *cadaster*, entailing a forest inventory as well as an estimate of the economic value of the resource tied to a specific location, is therefore considered important as a basis for establishing the price of the timber (stumpage fees). It has become obvious for actors on the forest market in Russia that the values assigned the natural resources do not emanate from the interplay of supply and demand in a commercial market and this causes disputes concerning the "true value" of the resource. The calculation of this "true value" is not entirely simple, since it has to take all sorts of alternative uses of the resource into account. (This type of "calculation" is actually what the market is good at doing.) In fact, the stumpage fee is a tax and, as such, it can be manipulated to achieve specific goals, like raising public income, improving forest maintenance, to preserve the forests (decrease — or entirely prohibit — the use of the forest resource on a certain area), etc. But, still, in the absence of a market solution to the pricing problem, authorities have to come up with some sort of price calculation and this is why it is relevant to advocate a comprehensive *cadaster*.

It was also pointed out that forest industrialists should take a more active interest in resource maintenance by taking part in and contributing to the *cadaster*. Such participation and the participation of the regional forest management would help solve the problem of the inadequacy and inaccessibility of information about the Karelian forest resources. Compiling information about the resource situation is of no benefit to anyone if it is not made freely accessible by all actors in the market. The information deficit (and the uncertainty relating to existing information) is just another factor hampering economic development. It is an especially negative factor influencing the interest of foreign investors and customers.

The property rights issue also kept coming up in the group discussions. This is not only, or even mainly, a question of who owns the forest lands. There does not seem to be any serious movement in Russia today to change the ownership of forest lands. Forest lands are state owned. But the interesting aspects of property rights in forestry are rather the *rights of access* to the forest resource, that is, it concerns the question of who is entitled to use the forest and how it may be used. The discussion clearly indicated that while much has happened in Russia concerning various subjects' rights of forest use, a lot still remains unclear and "floating." Examples of areas where these rights have changed but where further changes can be expected are forest lease and concession. Disputes are common concerning the distribution of, and payment for, forest lease rights, etc.

Another area where rights and obligations are "floating" concerns the handling of social problems in connection with major changes in enterprises. Such problems are of special importance in locations where a single forest enterprise constitutes the backbone of the entire local economy. Evidently, modernizing such companies, drastic reductions of personnel or even closedowns, requires a rule system that distributes the obligations of different actors in the game. Inevitably the State might have to assume a great deal of responsibility in such situations.

Environmental issues were also touched upon in the group discussions. The issue of certification was brought up already in the first plenary session and the existing rules were largely clarified. As might be expected, it is the environmental organizations that advocate the introduction of obligatory certification of all forests. This is not such an attractive goal for people working in forestry or the forest industry. However, the environmentalists are probably right in claiming that Karelia (and Russia) should put high priority on the certification issue (not necessarily obligatory certification though), since forest demand in the world market has become very sensitive to the origin of wood. This means that if nothing is done about the issue of certification in Karelia there may be sudden effects in the demand for Karelian wood. Companies in other countries have experienced the harsh consequences that might be the effect of being vague on the issue of certification. The common approach abroad is to agree on and use voluntary certification.

But the environmental issues in forestry are more than just certification. In Karelia there are vast so-called old growth forests, which have been submitted to a harvest moratorium forced upon the industry by the environmental organizations with the support of forest companies in nearby Finland and Sweden. This issue was another "hot potato" in the group discussions. Positions seem to be largely locked with environmentalists advocating a prolonged moratorium and foresters and forest industrialists maintaining that no harm would come to the environment from alleviating the moratorium. Another venue of discussion concerned the allocation of land for various forms of preservation. Here, it was noted that one should not only look upon economically productive forest lands. Rather, what Karelia might offer are vast bogs and wetlands that might be set aside in biodiversity conserving nature preserves.

Environmentalists also wanted to emphasize the so-called non-forest uses of forest lands. It was claimed that much could still be done in order to stimulate this use, and it was, furthermore, claimed that the use of forest lands for collection of mushrooms, berries, firewood, etc., might be much further developed from an economic point of view.

Finally, again in a more general vein, participants in the group discussions displayed their awareness of the fact that all the present features of the Karelian (and Russian) economy are indeed interrelated and form a specific type of economic system, what was called in the IIASA study the *virtual economy*. As suspected, the realities behind the notion of the virtual economy are all too familiar for Russian citizens and they have a more or less well-developed knowledge of the workings of this system. Since it is a system perpetuating many of the "non-market" traits of the old Soviet economy it is not altogether obvious to everyone which features of the system are good and which are bad. However, there were participants in the exercise making clear reference to the system of the virtual economy and branding it as the root of many of the evils currently besetting Karelia. How to make society start moving out of this system is a difficult question to which participants at the meeting ventured no really good answers. It should be understood, however, that as soon as many of the problems discussed during the exercise are indeed solved, some features of the virtual economy would have evaporated as well.

In the final plenary session, during the discussion following the presentations by the group chairmen, the workshop facilitator (Sten Nilsson) invited all participants to state what they found to be the most important issues to raise in the final document that should come out of the exercise. Several participants took the floor and addressed questions that they thought had been the most important and interesting during the earlier discussions. They also sometimes added issues that they did not think had been given sufficient attention during the meeting.

The low productivity of many Karelian forest enterprises was mentioned as a serious problem that would have to be attacked one way or another. Modern Scandinavian technology for selective cutting would be ideal, but difficult to obtain and use due to the lack of investment funds and due to specifics in the Russian forest legislation. This was seen as an illustration of the intricacies one has to disentangle if one is to come up with a solution that would improve the efficiency of forest use in Russia. How should one go about it then? Obviously, some kind of development program must be elaborated. Maybe it would be good to develop a scenario for the next 3–5 years, one under very favorable and one under very unfavorable conditions, illustrating a kind of maximally positive as well as a maximally negative future possible development of the Karelian forest sector. But who should develop this program? And who should implement policies built on this kind of scenario work? These issues will be even more pertinent with the increasing competition in the forest markets.

Sten Nilsson emphasized the importance of finding out what people living in Karelia can actually do themselves to improve the situation in the forest sector.

Mr. Shlyamin (the Karelian Minister of foreign affairs) noted that if there is a wish to make the forest complex more healthy then clearly people engaged in forestry issues will have to do something themselves. And this is essential and necessary, even if the forests are a federally owned resource. The forests are of such importance for the Republic of Karelia that solutions cannot be left waiting for the federal government to act.

Mr. Maslyakov (the Karelian Minister of natural resources) gave a final statement before the plenary session and the entire exercise ended. He pointed out that the exercise had provided an opportunity for discussion among different members of the Karelian “forest family.” In this period when market relations are being formed nothing happens smoothly. Even if forest resources exist these resources might not be possible to use because of some other resource deficit, typically the lack of financial resources. Karelia is in a specific situation in the Russian forest sector. It is the “window towards Europe”. Here, there are a lot of forests that might simply be sold abroad. But there are also wood processing industries like saw mills and pulp and paper mills. A large hurdle for positive development is the lack of control, the bad management of enterprises. Of course there are some good companies, but there are many that do not work well. It has been enlightening to listen to the presentations during this policy exercise and especially interesting and thought provoking were the statements made about the necessity of a clear division of duties between the public and the private sector. Clearly the importance of initiatives at the “collective choice level” cannot be underestimated. In the declarations that hopefully will come out of this exercise it is important to clearly state

the division of responsibility for the implementation of various proposals between the federal, regional and the local levels, between public and private sector actors.

Arkhangelsk

On the most general level it was agreed that the problem currently facing the Arkhangelsk forest sector had to do with the low efficiency in the use of the region's forest resources. Thus, the overarching task for the region's forest stakeholders was to find ways of improving the socioeconomic efficiency of forest utilization. In the general discussion about how to solve this problem, participants first referred to the most pertinent causes of the current situation. In this connection three factors were mentioned. Mistakes were made in the forest policy of the 20th century (implicitly pointing to the inadequacies of Soviet time management of the forest resources and the forest industrial complex). The imperfections in the federal and regional legislation were also mentioned, as well as the underdeveloped infrastructure.

More specifically, concerning the legislation it was argued that the problem basically has to do with the fact that there are no laws regulating the relations between public authorities at various levels and the (private) entrepreneurs working in the forest sector. This problem threatens to push the Arkhangelsk forest sector into a depression. Under these circumstances it seems useful to develop a common understanding about the situation in the forest sector and its future development options through a public discussion in the media.

The summaries of the working group discussions that were presented during the final plenary session were largely outlining various stages of a policy initiative that would eventually make the appropriate authorities take actions with the purpose of solving the identified problems of the forest sector. It was agreed that this policy initiative comprised two main phases, the first of which was to convince the legislative and executive powers (the Regional Assembly[72] and the Regional Administration) that the further development of the Arkhangelsk forest sector is in jeopardy and that actions must be taken in order to improve the situation. The second phase would consist of convincing the Regional Administration that Arkhangelsk Oblast needs a strategic program for the forest sector. (In the previous discussion it was repeatedly argued that the present regional administration did not care for the forest sector, that other sectors in the economy were given higher priority.)

Participants envisaged a number of measures that they believed had to be taken in order to push the policy process in the desired direction. It was felt that the main role in solving these problems should be played by the regional legislative and the executive powers engaging also civic organizations. The first step in the process would be to properly develop the idea (*kontseptsia*) for the formulation of a forest policy for the Arkhangelsk Oblast in the 21st century. The decision to elaborate such a document should be taken by the Regional Administration. The drafting of the document should be handled by a group of scientists and forest specialists after hearing all of the suggestions for measures that ought to be proposed in this conceptual document. On the

[72] In many regions the regional parliament is called the regional Duma. In Arkhangelsk it is called the Regional Assembly.

basis of the guidelines specified in this document a regional forest policy could then be elaborated that would include well-prepared suggestions for a regional forest legislation, a regional development program, including construction plans for improving the transport infrastructure and plans for developing research and technology in the regional forest sector. The specific goals for the forest sector that should (ideally) be reached with the help of the resulting forest policy include:

- An increased productivity and improvement of the structure of the forest resource;
- An increased profitability in forest utilization;
- Improved location of industrial plants and a development of the transport network;
- Development of a multi-purpose forest utilization; and
- Ensuring environmental safety.

To get this policy process started, in the first instance to make the political and administrative organs realize the importance of developing a regional forest policy, it was suggested that the outcome of the IIASA policy exercise workshop should be communicated to the administration and to the Regional Assembly. It was also suggested that a discussion about these problems be initiated with deputies of the Regional Assembly and that forest specialists, researchers, and entrepreneurs should be asked to make their views known and take part in discussions on specific plans of action. It was considered imperative to begin these activities immediately, resource requirements are minimal (funding of seminars). The only obstacle is a lack of a coherent public opinion on the problem and the "technocratic" thinking dominating enterprise top-management.

The specific administrative organ that could best initiate a process to solve this problem may be the coordinating-analytical council in the office of the Head of administration. The leading organizations in developing such a policy program should be the Department of the forest industrial complex in the Regional Administration in collaboration with the Department of natural resources, the Arkhangelsk State Technical University, the Institute of environmental problems of the North and various research institutes (such as TsNIIMOD, SevNIILKh). A decision of the Regional Administration is required to develop the program. Funding is also required (an estimate of 6–700 thousand rubles was mentioned). A group of 8–10 representatives of research institutes and universities should be formed under the auspices of the Regional Administration to start working on the problems.

The ideas expressed in the working group sessions were further discussed in a short final plenary session before the formal closing of the policy exercise workshop. Several questions were raised. For instance, it was emphasized that a regional forest policy must include a strong implementation mechanism. It was decided that a small group should be formed to draft a document — a Declaration — in which the main lines of the discussion during the policy exercise workshop should be stated. Some discussion followed on who should be members of this group. The IIASA team was invited to make comments on the draft of the Declaration.

4.4 Tangible Outcomes of Workshop Deliberations

Three kinds of tangible outcomes of the policy exercise workshops conducted in Murmansk, Karelia and Arkhangelsk could be distinguished. Each of the workshops produced a *final document* in which the main conclusions of the discussions were stated. The events were also reported in local and regional news media. But the question that must ultimately be posed is whether or not the workshops produced any noticeable impact on regional forest policy making. In this section the tangible outcomes of the workshops in the respective regions are reviewed.

4.4.1 Final Documents

The workshop deliberations in the three regions were eventually summarized in a *final document*. Decisions on who should draft these documents were taken during or immediately following the final plenary sessions of the respective workshops. Workshop participants elected representatives to form a small editorial group to produce the first drafts of these documents. The IIASA team was not involved in the authoring of the first drafts. The drafts were, however, sent to IIASA for review. In some cases this was an iterative process with the drafts being sent back and forth several times. After each iteration the text had to be approved anew by each member of the editorial group. This was of course a time consuming activity and agreement on the wording of the final documents was reached only several months after the date of the workshops.

The character and style of the resulting final documents varied between the regions as did their intended purpose and use. These variations are outlined below.

Murmansk

Participants in the Murmansk workshop gathered to an informal meeting right after the closing of the workshop to decide how the workshop discussions could be followed up. The IIASA team did not initiate or take part in this meeting. The Russian co-coordinator of the workshop (Lyudmila Ivanova) was elected the organizer of a follow-up meeting to be held about a month later. Dr. Ivanova was also asked to draft a summary of the workshop discussion. This summary was subsequently approved by the two working group chairmen and was later sent to the Murmansk Regional Administration as information about the event. (The document is reproduced in Appendix B3.)

The character of the final document resembles that of a press release. It gives a short and straightforward account of the workshop deliberations and it ends by stating that one of the fundamental problems of the Murmansk forest sector was found to be the "lack of coordination at the regional level". The remedy suggested entails the "creation of a co-coordinating organ". It must be presumed that this "organ" would be some kind of department or section in the Regional Administration. (Unlike the situation in Karelia and Arkhangelsk, there is no formal unit within the Murmansk Regional Administration with the task to coordinate activities in the regional forest sector.) But the wording of the continued text, where it is stated that workshop participants agreed to "create a regional organization (an association) of forest users in Murmansk Oblast," also allows the interpretation that this kind of voluntary stakeholder organization might be of help in achieving the coordination that is found lacking today. The document ends by

asserting that workshop participants will "continue their work to create a regional association" and that it was agreed that in this process it would be necessary to have regular meetings to further discuss the issues raised during the workshop.

Karelia

On the day following the Karelian policy exercise workshop the IIASA group had a follow-up meeting with members of the organizing committee and the working group leaders. During the meeting it was discussed how the results of the deliberations during the exercise might be continued and be brought to bear on the development of the regional forest policy.

There was a general consensus that it would be expedient to produce two documents reflecting the outcome of the policy exercise. A first declaration should be fairly short and recapitulate the general conclusions of the meeting, stating the main outcome of the discussions and suggesting how the forest sector problems identified should be approached in work to come. This first document should be finished and made public within a couple of weeks in order to be used as an input for the working group that the government had set up in order to generate ideas for the development of the Karelian forest sector.

A second document should then be elaborated within the next 3–4 months. This document should state more in detail what problems were identified in the policy exercise workshop and what specific measures were discussed and found necessary in order to come to grips with these problems.

It was eventually decided to delegate the work of drafting these documents to two different working groups, the first document should be drafted by a group led by a sawmill director (who had also served as the chairman of one of the working groups) and the second document should be elaborated by a group chaired by the head of an institute belonging to the Karelian Science Centre (who had served as the chairman of another working group). The draft of the first document should be ready within a couple of weeks, while a first draft of the second document should be produced and distributed to all present at the follow-up meeting in about two months' time. Based on comments received a final version of the document should then be prepared and made public. Ideally, this document should become the basis for continued work among stakeholder groups in Karelia to further develop measures to improve the workings of the forest sector.

As it turned out, a draft of the first document (the Declaration) was ready in two weeks and used to introduce the ideas from the policy exercise to the members of the new governmental working group on forest policy. The final version of the Declaration, signed by all participants of the organizing committee, was received by the IIASA team by the beginning of March 2001, i.e., roughly three months after the workshop. (A copy of the declaration is attached in Appendix C3.)

The Declaration does not specify any particular problems hampering the development of the regional forest sector, nor does it indicate any specific measures that should be taken to improve the situation. Rather it outlines some general problems of concern for

the actors in the sector and it calls for joint action by all forest stakeholders in the republic to enable and stimulate a restructuring of the sector to make it better suited to achieve social welfare for the regional population, an efficient production and competitive products, and preservation of the forests for future generations. It is emphasized that the efforts of all stakeholders are required in order to "effectively achieve the goal of reforming the forest sector of Karelia". Bearing in mind that most of the signatories of this document were top-level politicians, officials of forest management, forest enterprise leaders or forest researchers the wording of the document (inviting broad stakeholder participation) might indicate that the "establishment" now has realized that solving the problems of the forest sector will require the support and engagement not only from people belonging to the traditional "forest family", but from a wider range of stakeholders, including environmental NGOs and interested citizens.

However, it should be noted that work on the second document that was announced in the Declaration was slow to materialize. Some of the signatories of the Declaration (mainly those who served as working group chairmen during the workshop) did in fact put together a first draft of the second document with the title "Recommendations of the international seminar *Institutional Problems of the Forest Sector of the Republic of Karelia*". After several iterations, through which the IIASA team was given an opportunity to make comments and suggestions, a version of this document was finally elaborated. But by the end of March 2002 (15 months after the workshop) the workshop main organizer, who did most of the work of compiling this document, had not been able to obtain signatures from all members of the organizing committee. The status of this document is therefore not quite clear. The four people serving as working group chairmen during the workshop did, however, agree on the contents of the document. Since stakeholder participation in the process of forest policy formulation was called for during the workshop, this document might perhaps be seen as an example of such an initiative. (The document is reproduced in Appendix C4.) Still, however, the document can only be seen as a first outline of a goal formulation in such a policy process. A number of more or less specific goals that Karelian forest stakeholders should strive for are listed, but nothing is said about how these goals should be prioritized, about what measures would be required in order to reach the goals or about the implementation mechanism (who should take action, who should fund the activities, etc.).

Arkhangelsk

Towards the end of the final plenary session in the Arkhangelsk policy exercise workshop participants proposed an editorial group for the drafting of a final document, a Declaration. The group consisted of nine people representing the departments of the forest industry and forest management in the Regional Administration, the forest industry and various institutes conducting forestry related research. (It might be noted that no representatives of any environmental or other stakeholder groups were elected to the editorial group.) A first draft of the Declaration already reached the IIASA team about one month after the workshop. A second version (very similar to the first) appeared a few weeks later. This time the IIASA team made several comments and suggestions for minor changes in the text. In late December 2001 (almost nine months after the workshop) the workshop coordinator, who had had the difficult task of communicating the various versions of the Declaration to the editorial group, informed the IIASA team that all members of the group were now satisfied with the opinions

stated in the Declaration. The document would then be forwarded to the Regional Assembly for its consideration. It was also said that the document had been taken into account in the elaboration of a regional law on forest utilization (No. 145-20 OZ) adopted by the Regional Assembly on 13 November 2002.

The Arkhangelsk Declaration is the most elaborated of our final documents. It sets out with a historical overview emphasizing the importance of the forest sector for the entire regional development. This also provides an opportunity to declare that many of the problems currently facing the forest sector are in fact consequences of mismanagement during the Soviet era. The most pertinent problems are then listed. The Declaration ends with an outline of the procedure to elaborate a regional forest policy for the Arkhangelsk Oblast in the 21st century. To initiate such a process the first stage would be to explicitly formulate the task in a kind of conceptual document (*kontseptsia*). The Declaration ends with a fairly detailed listing of directives for the work with the formulation of this document. Twelve provisions are stated that ought to be included in this *kontseptsia* as directives for (i.e., problems that should be dealt with in) the subsequent elaboration of a regional forest policy. (The Declaration is reproduced in Appendix D3.)

4.4.2 Media Coverage

In order to attract local media to cover the event the organizers sent out information about the policy exercise workshops to various newspapers and the regional TV stations well before the dates of the meetings. This information produced varied responses in the three regions. What can be reported here is entirely based on the information provided by the regional coordinators of the policy exercise workshops in the respective regions. (All newspaper articles and TV features relating to the three workshops that were reported to IIASA are listed in Appendix F.)

In Murmansk there were notes in two local newspapers during the workshop days, and one longer article appearing some days after the end of the meeting. The regional television taped parts of the plenary sessions and a short sequence was broadcast in the evening of the first day of the workshop.

In the Republic of Karelia there was a somewhat more intensive media coverage of the workshop discussions. The workshop deliberations were reviewed in three local newspapers. The results of the IIASA study of the Karelian forest sector were outlined at some length and it was noted that a large number of the regional forest officials actively took part in the discussions. The workshop also provided the "topic of the week" of a regular half-hour TV program on social and environmental issues relating to the development of the Republic of Karelia.

In Arkhangelsk the media did not take much note of the workshop, despite the information distributed to newspapers and television beforehand. All that appeared about the event was a note in the newsletter of the Arkhangelsk State Technical University and a brief announcement in a regional TV news broadcast.

4.4.3 Impacts on Policy Formation

As indicated in Section 4.1, the workshops organized by IIASA in Murmansk, Karelia, and Arkhangelsk were, in principle, intended as a *first event* in the longer process of a policy exercise (which might last for several months up to one or a few years), during which groups of regional forest stakeholders regularly were to convene and discuss the problems hampering developments in the regional forest sector and, ultimately, to elaborate well-founded regional forest policies. Clearly, a single meeting cannot achieve much more than a start of a real policy formulation process. In embarking upon the series of policy exercises the IIASA team had nourished a hope that this initiative would trigger a continued orderly activity in the respective regions engaging a good representation of the regional forest stakeholders in a participatory policy formulation process. However, such a continued policy formulation activity seems not to have been triggered in any one of the three regions. (More is said about possible reasons for this fact in Section 5.)

However, even if these workshops were one-time events they did nevertheless produce some interesting impacts of relevance for the regional policy formulation process. The information about such impacts that was reported to the IIASA team is summarized below.

Murmansk

The final document of the Murmansk workshop (cf. Appendix B3) was eventually brought to the attention of the governor, but it seems not to have provoked any reaction from the head of the Murmansk administration. According to recent information from the local workshop coordinator not much substantial happened after the workshop. There were some early attempts to push the process further. A businessman, who had also served as the chairman of one of the working groups, brought some secretarial help to the local organizer, who was selected to draft the final document, the intention being to form a small "initiative group" to work for establishing a "forest section" in the Murmansk Chamber of Commerce. It is not clear if these efforts have produced any results.

In the opinion of the local workshop coordinator the major impact of the policy exercise workshop was that it brought people together, people from different sections of the forest sector who had not previously had any opportunity to meet and discuss common problems. In the situation that the Murmansk forest sector is currently experiencing, where everybody is occupied with solving everyday problems, no one has time to think about the "larger picture". The workshop offered a possibility for various regional forest stakeholders to establish new contacts, which might eventually produce some results of relevance for the goals stated in the final document of the workshop.

Karelia

The policy exercise workshop in Petrozavodsk took place at a time when awareness seemed to be growing in Karelia of the necessity to unite forces in society to analyze and solve the forest sector problems. Shortly before our workshop the Karelian government had formed a working group on the initiative of forest stakeholders with an

interest in restructuring the forest enterprise sector. Many of the participants of this working group also took part in the IIASA workshop. The workshop is said to have exerted a certain influence on the work of this group. (The final document — the Declaration — from the workshop was submitted to the government working group.)

At the beginning of February 2001, a new independent Center for Social Analysis and Reconstruction was established in Petrozavodsk with financial support from the Moscow Science Fund (which is funded by US AID). One of the goals of this center is to support institutional restructuring in society. The majority of the researchers engaged in the center also participated in the IIASA workshop.

Through the opportunity that the IIASA workshop provided for regional forest researchers and forest officials to meet with foreign experts and discuss pertinent problems in the Karelian forest sector a significant contribution was made towards the development of a sustainable forest policy for the republic. The local workshop organizer also reported that a group of Karelian forest sector stakeholders might be established (several possible organizational "homes" for such a group were mentioned) to further elaborate the suggestions made during the workshop. A requirement for the implementation of this scheme would, however, be that financial support could be obtained for the work, either via the Karelian governmental or forest authorities, IIASA or a Nordic country.

Arkhangelsk

The Declaration from the Arkhangelsk policy exercise workshop was brought to the attention of the forest officials in the Regional Administration. When all the signatures finally had been gathered the document was submitted to the Regional Assembly for its consideration. This was supposed to have happened in January 2002. No information about the fate of the Declaration has reached the IIASA team. Ideas expressed in the Declaration and discussed during the workshop were brought to bear in the drafting of a regional law on forest utilization adopted by the Regional Assembly on 13 November 2002.

5 Conclusions

This report has discussed various aspects on the series of policy exercise workshops that IIASA conducted in the Russian regions of Murmansk, Karelia and Arkhangelsk in the period October 2000–March 2001. The background of the endeavor was outlined and some reflections were made on the theoretical underpinning of the study of the Russian transition and participatory policy processes. A review was made of the previous IIASA case studies of the institutional problems hampering the forest sector development in the three regions. A detailed analysis was then presented of the policy exercise workshops, their preparation and implementation, the plenary presentations, the working group deliberations and the final outcome of the meetings. It is now time for a final assessment of the value of these events. What was the expected outcome of the workshops, to what extent did expectations correspond with actual outcomes, what are the crucial prerequisites for a successful policy exercise with Russian forest stakeholders? These and similar issues are discussed in the three final sections of the report.

5.1 Assessing IIASA's Approach to Systemic Intervention in the Russian Forest Policy Process

The policy exercise workshops that were organized by IIASA in the regions of Murmansk, Karelia, and Arkhangelsk can be seen as examples of *systemic interventions* (cf., for instance, Flood and Jackson, 1991; Midgley, 2000). Systemic intervention refers to the interaction of an individual or a group of policy analysts with the actors of a specific system with the purpose of achieving improvements on an identified problem situation. In our context the *policy exercise* is seen as a tool that might be used in a systemic intervention. Implicit in these distinctions is the notion that a systemic intervention is a *process* that continues until the actors in the system have managed to improve upon the perceived problem situation. In this process it is crucial to engage those actors in the system (stakeholders) who are negatively affected by the existing problem situation and who are capable of elaborating and implementing improvements on that situation.

In this perspective the workshops that IIASA organized in the three Russian regions should be seen as an *initiating event of a process* — a systemic intervention in the form of a policy exercise — that would be continued by the actors in the system themselves until adequate solutions had been found and an implementation mechanism had been worked out.

When assessing the efficacy of the IIASA policy exercise workshops it is essential to be clear about the premises under which the activity was undertaken. In this particular context this meant that it was important for the intervening policy analysts (the IIASA team) to have a realistic understanding of the environment (the workings of the Russian socioeconomic system) in which the identified problem situation is embedded. The greater the accuracy of this understanding, the more realistic expectations might be formed of what would be *possible* to achieve.

Thus, the dilemma in an assessment of the efficacy of IIASA's policy exercise workshops lies in the fact that different actors (members of the group of policy analysts and members of the group of stakeholders) probably had different understandings of the limitations imposed by the existing situation on the possibilities to achieve the goals for the intervention. This is also the reason for basing a systemic intervention on a careful analysis of the system in which the problem situations are embedded. In this case the interventions were preceded by case studies of the institutional problems hampering the development of the forest sector in the respective regions. It was hoped that the results of the case studies would provide a common understanding of the current problem situation on the basis of which a discussion about possible improvements could start.

The presentations of the case study results that were made during the initial plenary sessions in the respective policy exercise workshops never caused any serious objections from the regional forest stakeholders participating in the meetings. This can be seen as a sign that the continued discussions during the workshops were indeed based on a common understanding of the existing problem situation.

There also seems to be a slight ambiguity in the expectations of the IIASA team regarding the possible consequences of organizing this series of policy exercise

workshops. It was clearly seen as a high-risk endeavor, the main problem concerned the realism of assuming that the regional forest stakeholders themselves would indeed continue the policy process that started through these initial workshops. Since IIASA was not in a position (due to lack of funds) to offer continued support for a long-term policy exercise process, the institute took on the task of organizing the first workshop deliberately hoping that the regional stakeholders themselves would be able to mobilize the support necessary for continuation. As has been reported above such an *organized continuation* of these first policy exercise workshops did not take place in any of our three regions. This failure was, however, not entirely unexpected. On the contrary, it would rather have been surprising if continuation had in fact materialized.

The expectations of what the IIASA policy exercise workshops might achieve were probably rather moderate among the forest sector stakeholders in the three regions. The IIASA team was not the first group of external experts to appear loaded with good advice on how to improve the dismally functioning Russian economy. But even if no one expected to learn anything previously unknown about the forest sector in their respective regions, workshop participants acknowledged having been attracted to the event by the opportunity it might offer for an independent analysis of the existing problems ("a view from the outside") and for the opportunity it offered for a dialogue with other regional stakeholder groups.

Thus, with regard to the moderate prior expectations for the workshops to succeed in generating continued activity in the form of long-term policy exercises, neither the IIASA team nor the regional forest stakeholders were really disappointed with the outcome.

But even if IIASA could not hope to achieve a fully-fledged policy exercise in Murmansk, Karelia and Arkhangelsk, it must have hoped to achieve something else by engaging in this series of workshops. The motives for IIASA to engage in this activity were partly scientific and partly policy oriented. Transitional Russia offers an arena for assessing various hypotheses concerning the way in which a market economy can emerge or be constructed. Modern forest policy analysts advocate participatory policy formulation procedures to generate efficient and implementable forest policies (cf. Section 1.1). Thus, the IIASA team saw the conducting of policy exercise workshops as interesting "policy experiments" through which it might be possible to assess to what extent participatory policy formulation methods work in the Russian setting (Russia being a "new democracy" with an underdeveloped civil society), while simultaneously stimulating the democratic development by engaging broad stakeholder groups in policy deliberations thereby also fostering the development of civil society.

Through the policy exercise workshops the IIASA team also hoped that hitherto largely neglected institutional issues would receive increased attention by the Russian regional policy makers and forest sector stakeholders. The previous IIASA case studies had clearly shown that actors in the Russian forest sector put an unduly large emphasis on the "technical" side of forest management and wood processing at the expense of socioeconomic qualities and requirements. This probably has to do with the fact that discussions and decisions about the "rules of the game" during Soviet times used to belong to the political sphere. In fact, such decisions were entirely in the hands of members of the communist party and citizens' participation in the decision process was

very limited. Assuming, as is done in the IIASA case studies, that a significant path-dependence characterizes the development of the currently emerging market based forest sector operations, it could also be expected that Russian forest sector stakeholders, who are not members of the regional "forest establishment", still do not take a very active part in public decisions concerning the development of the regional forest sector. Contributing to the change of the existing "rules of the game" that prevent a broad stakeholder participation in the decisions about the Russian regional forest sector development, while in the process creating a foundation for the elaboration of better policy decisions, should also be seen as a motive for IIASA's engagement in the policy exercise workshops in the regions of Murmansk, Karelia and Arkhangelsk.

It seems that all three workshops illustrated that allowing broad stakeholder participation in the development of regional forest policies is nothing that comes naturally to the regional "forest establishment". Still the behavior of the actors in the Russian forest sector is governed by provisions made and decisions taken by the state. Sector governance is largely centralized, with strong decision power concentrated in the hands of state forest sector officials. At the same time, there are indications that the traditional "forest family" is increasingly becoming aware of its inability to find good solutions to the problems hampering developments in the sector. In this situation, IIASA's initiative to organize policy exercise workshops was welcomed by both the forest sector establishment and by other stakeholder groups. It can be assumed, therefore, that the participatory policy formulation model demonstrated through the policy exercise workshops left some positive impressions with regional forest officials and forest stakeholders alike.

The crucial factor determining the fate of this kind of participatory policy formulation procedure is the legitimacy that can be established for the procedure among everyone with a stake in the process.

5.2 Legitimacy Is Crucial for the Success of the Intervention

An important aspect of the preparation of an efficient systemic intervention — for making the intervention stand a chance of success — is to make sure to the extent possible that the effort is seen as trustworthy and just in the eyes of those who are affected by it. If the intervention can find such legitimacy all stakeholders will support it and, hopefully, be willing to engage in the process. The idea being that a legitimate intervention in which broad stakeholder groups are engaged will stand a better chance of producing sustainable results in the sense that the identification of issues for discussion as well as the suggestions for problem solutions will not be biased in favor of any particular stakeholder group but can be trusted to serve a positive development for society at large.

Since the initiative to study forest sector institutions in Russia was taken by researchers at IIASA without explicit invitations from the regions that were made the objects of study, there were of course no formal demands from the forest sector representatives or the public authorities in these regions for IIASA to undertake any further dissemination or policy formulation activities. However, when IIASA suggested to the forest officials and representatives of the regional administrations in the case study regions to visit the

regional capitals and organize workshops with the purpose of disseminating the results of the previous studies and initiate a discussion among the regional forest stakeholders about improvements in the regional forest policies — all arrangements financed by IIASA — the endeavor rapidly found official sanction from the Russian side.

In order to secure the support that seemed possible to obtain from the regional authorities and the forest sector organizations in Murmansk, Karelia and Arkhangelsk, IIASA hastened to take two initiatives: (a) local coordinators were identified and asked to immediately start working with the practical arrangements related to the policy exercises, and (b) it was decided that the leader of IIASA's Forestry Project should visit the three regions to explore the possibilities to make formal agreements with the regional authorities and the forest sector organizations about official sanction of the planned exercises.

As it turned out, the leader of IIASA's Forestry Project (Sten Nilsson) was only able to make a brief visit to Petrozavodsk in seeking official support for the planned policy exercise in the Republic of Karelia. The visit resulted in official sanction from the Karelian government. Formal contacts between Sten Nilsson and the Arkhangelsk Regional Administration paved the way for official support for the Arkhangelsk policy exercise workshop. The exercise in Murmansk, however, was organized without any formal support or sanction from the regional authorities. (A kind of "informal support" for the event was expressed through the participation in the workshop of representatives of the Murmansk Regional Administration.)

While in countries with more firmly established democratic traditions the adoption of policies is the privilege of the legislative power (parliaments on the national, regional or the local level), in Russia such precedence has not (yet) been firmly established. Here, policy formulation is still largely in the hands of the executive and the bureaucracy, in our case the Regional Administrations and the organizations governing the forest sector. In all fairness, however, it should be noted that also in countries like Sweden policy reforms may be suggested by forest sector organizations and the elaboration of policy programs is often delegated by the governments or parliaments to branch organizations and stakeholder groups. But still, at the time of IIASA's preparations for the policy exercises in Murmansk, Karelia and Arkhangelsk, it was not considered necessary or expedient to consult and engage the political sphere in this policy initiative.[73] This fact might be said to illustrate another institutional path-dependence maintaining the established order of policy change on its more traditional track.

To secure the legitimacy of a participatory policy formulation procedure with the purpose of improving the Russian regional forest policy the procedure has to appeal both to the regional "forest establishment" and to a wider group of regional forest stakeholders. Obtaining support from one of these groups may, however, compromise the procedure in the eyes of the other group. The fact that IIASA managed to find

[73] It might be added, however, that only half a year later when IIASA wanted to organize a policy exercise in Moscow for forest stakeholders on the Russian federal level the strongest support for the initiative came from the political sphere (the Economic Committee of the Russian State Duma). For various reasons — mainly related to the ongoing reform of the Russian forest sector — an IIASA led policy exercise in Moscow never materialized.

support for the policy exercise workshops from both these stakeholder categories might be interpreted as a sign of the fact that traditional ways of handling the problems of the forest sector no longer worked and that this fact was obvious for the regional forest officials as well as for other regional forest stakeholders.

5.3 Participatory Policy Formulation in the Russian Forest Sector — Feasibility and Requirements

The changes that have taken place in the Russian society after the disintegration of the Soviet Union are profound. Since the whole earlier sociopolitical system has been overthrown we can characterize the Soviet transformation into a market-type system as a revolutionary change. In fact, what we have witnessed during the last decade has been called a "revolution from above" (cf. Kotz and Weir, 1997), in which certain circles in the Soviet elite have pushed for reforms that eventually caused a systemic change and resulted in a huge redistribution of resources and wealth in society, a redistribution, furthermore, that have concentrated wealth and economic power in the hands of a small elite minority (the so-called "oligarchs").

A profound systemic change, like the one we have witnessed in Russia, requires a major transformation of the institutional framework in society. In fact, such a systemic change *consists* of a series of fundamental institutional changes. The literature on the transformation of the former "socialist countries" largely deals with institutional change.

At the start of the "transition period" by the end of the 1980s, many actors and observers believed that the transformation from the old command economy to the new (capitalist) market economic system would be a fast process once the fundamental institutions were in place. Basically, it was expected that once the price system had been liberalized and hard budget constraints introduced for all enterprises in the economy the rest would quickly follow. As it turned out, these expectations were ill founded. The post-socialist transformation has clearly demonstrated that such fundamental changes in a society's institutional set-up cannot, in fact, be swift and free of conflict. The transition experience shows that institutional change is path-dependent. Existing institutions entrenched in an existing organizational structure cannot easily be removed or modified. At the same time, designing and introducing new institutions is also not easily accomplished.

If we assume, as we have done in this report and in the earlier research conducted at IIASA — and, as many outside observers and, for that matter, many (probably most) citizens in the European transition countries seem to do — that the goal of the transition is to convert the former socialist countries into western-type market democracies, it is quite obvious that a lot remains to be done before the institutional framework of the transition countries has become fully conducive to an efficient functioning of a modern social and economic life. Thus, while many institutional changes have taken place, many more remain. This conclusion is valid for the Russian socioeconomic system at large and, as hopefully has been shown earlier in this report, it is a highly valid conclusion for the Russian regional forest sector.

As our study of the institutional problems hampering the performance of the forest sector in eight Russian regions has shown, further institutional changes are needed in order to improve the functioning of the sector, to make it more competitive in the new market economic context. The question is *which* institutional changes are needed and *how* such changes can be initiated. And, on a more fundamental level, is it at all possible to accomplish purposeful institutional change, can institutional change be designed?

As we have tried to argue above (cf. Section 2.3) we believe that institutions *can* change, that they actually *do* change and that "directed" changes can, under specific conditions, indeed be designed, decided, and implemented by intentional collective action. While the process through which *formal* institutions change is rather more manageable than that through which *informal* institutions change, both types of institutions are in principle amenable to intentional change by human action and interaction.

As the IIASA case study of the forest sector problems illustrated (cf. Section 3.2) it was certainly possible for an outside observer to identify a number of deficiencies in the institutional framework of the Russian regional forest sector. Several suggestions for improving the institutional framework embedding the Russian regional forest sector were also presented in the case studies. However, it was concluded that a fundamental problem with the various suggestions for institutional change that were proposed had to do with the high degree of interdependence between various measures. Consequently, many of the measures that were suggested for improving the dismal situation in the Russian regional forest sector actually *presupposed the existence of an already well functioning institutional framework*. This is a crucial problem with institutional change.

So, in a situation where the need for institutional change has been established and where a set of necessary or relevant institutional changes have in fact been suggested, what can be done to implement these suggestions? To answer this question we can no longer ignore the position of the observer/analyst. It is important to realize the significance of the fact that the IIASA study of the regional forest sector institutions in Russia was made by an observer/analyst who is not himself a part of the system that was studied. It would seem that the only thing such an external "actor" can do is to finish his analysis and inform the ones most concerned with the investigated problems about the results. If, on the other hand, the study had been conducted by someone inside the studied system, or by someone outside the system serving as consultant to someone inside, then the results of the study might have triggered another kind of response. While IIASA's case studies of Russian regional forest sector institutions were *initiated from "the outside"* (by IIASA as an external observer/analyst), they were always *conducted in collaboration* with representatives of the regional forest sector stakeholders and often with the formal consent and sanction by the regional forest sector authorities. This was taken by the IIASA research team to mean that IIASA, at the end of a regional case study, was in fact in a legitimate position to take a more advanced step towards the realization of the proposals elaborated in the studies. The question that remained, though, was: which specific "advanced steps" could IIASA actually take to implement the suggestions elaborated in its previous research?

For reasons briefly elaborated in Sections 4 and 4.1, the manner in which IIASA tried to promote the implementation of the suggestions for institutional change, elaborated in its studies of current forest sector problems in eight Russian regions, was to initiate and arrange policy exercises with the forest stakeholders in the regions where case studies had been conducted.

This actually brings us to the issues raised in the introduction to this report about the prerequisites of participatory policy processes. We will therefore finish with some conclusions and comments on these issues.

- ***What are the general prerequisites for participatory policy processes and for initiating such processes?***

In general the prerequisite for a workable participatory policy process is of course that a specific problem (or a set of problems) exists in a community that have not been (and are likely never to be) satisfactorily attended to by the structures in society that normally would manage this type of problem. These may be entirely new problems in an existing context, problems that are not noticed or acknowledged by the "normal structures" or for which these structures cannot find any solutions. It may also be more long-standing problems that have never been definitely solved or for which the "normal structures" have not been able to find sufficiently good solutions.

In order to initiate a participatory policy process with the purpose of finding solutions (and perhaps even implement these solutions) a number of general prerequisites must be at hand. First of all, to make it possible to get such a process going, there must be a sufficiently large number of actors who have become aware of the problem and who think the problem possible to solve and who believe that no one else is going to solve it. How strong (in terms of numbers and composition) this group of actors has to be must be determined with a view to the complexity and the "quantitative aspects" of the problem at hand. Secondly, the political environment in which this initiative is going to be taken must allow this kind of participatory action. Thirdly, to really succeed in initiating such a participatory policy process (and, even more, to make this process successful) it is important to get capable actors to participate. Modern societies, where levels of civic organization are high, are likely to be favored in this respect. Thus, the more advanced civil society, the better the chances are of finding successful participatory policy processes.

- ***What are the specific prerequisites for the successful establishment of a participatory policy process in the Russian forest sector? Are such prerequisites in place in Russia today?***

In this general perspective we have to acknowledge that the specific prerequisites existing for a successful participatory policy process in the Russian forest sector present a mixed picture. In some respects favorable conditions for such a process exist. In other respects conditions are less favorable. For instance, most forest stakeholders know that severe problems beset the Russian forest sector in its new social and economic context. Many also know much about these problems and have ideas about how the problems might be solved and they realize that the present power structures (both in society at

large and in the forest sector) might never be able to cope with the problems that are facing the sector or might not even bother to try to find any solutions. They also suspect that if the authorities indeed would try to solve (some of) the forest sector problems they might well come up with suggestions for solutions that would not work at all or that would not be the best under the circumstances. Thus, there are regional forest stakeholders in Russia who are capable in the sense that they know much about the regional (and often also the federal) forest sector and its problems and who may have ideas about how these problems could be solved.

However, it is not quite clear to what extent the current Russian sociopolitical system can accommodate participatory policy processes. In general, the Russian political system is still rather primitive, with an underdeveloped formal political system — a multiparty system exists, but its capacity for channeling citizens' political opinions still seems rather bleak. While there are many political parties in Russia, most are very small in terms of membership and efficient ways of working have not yet been established. In this situation much power has been gathered in the hands of the executive, the presidency, and, on the regional level, in the hands of regional heads of administration, the governors. Even if there has been a strengthening of the presidency under Putin and even if governors have huge powers in many regions, the general impression is that the state is still weak in Russia. This does not, however, mean that the state would welcome popular interventions in public affairs, especially interventions that are not even channeled through the existing official political structures. On the contrary, such "unauthorized" popular movements are easily seen as a threat to central authority and something that should rather be quenched than stimulated. So, initiating participatory policy processes would at least require some careful preparations in order to be allowed and seen by the "authorities" as something that might help rather than harm development.

Even if participatory policy processes are in principle possible in Russia, and sometimes even welcomed and encouraged by public authorities, there still remains a problem with the people's attitude toward this kind of political action. This has very much to do with the weak traditions of civil society in Russia. People are simply not used to taking action outside their work or their work-related organization, such as the trade unions. For several reasons Russians are hesitant when it comes to taking action as a private citizen in civic organizations. This is especially so when the action is related to something for which an established political, bureaucratic or (nowadays) private enterprise organization (as indeed is the case in the forest sector) already exists.

What then, in a final count, could we say about the possibilities for participatory policy processes in the Russian (regional) forest sector? First, *if* such a process really got established (with the sanction of the authorities) and engaged many stakeholders, their knowledge and initiative might lead to useful applications that would improve the situation in the forest sector. This fact is probably also realized by the "authorities". The difficult question, then, concerns the possibilities to get such a process going in the existing political environment and with stakeholders having such a limited "civic experience". The conclusion drawn by IIASA was that trying to initiate a participatory policy process among the regional Russian forest stakeholders was valuable both for the substantive contributions it might make to the solution of actual problems hampering the development of the forest sector, but also for the "educational" merits of the project,

through which some of the "democratic deficit" in Russia might be made slightly smaller.

- ***To what extent can the necessary prerequisites for a successful participatory policy process in Russia be created, imposed or "fostered" from "the outside"?***

The experience gained by IIASA from the policy exercises in Murmansk, Karelia and Arkhangelsk, which have been reviewed and discussed in this report, should be taken to indicate that participatory policy processes are indeed possible to initiate and stimulate from "the outside". And, taking the current level of the Russian democratic maturity into account, it seems all the more relevant actually to take such initiatives as a way of fostering the development of Russian civil society.

However, to succeed (in the sense that the process works as intended and that it becomes a continuous activity) such an initiative should be backed up with substantial (financial) resources. It would also be good if further external support could be generated to be released in case some of the solutions to the problems discussed in the policy exercise actually would be elaborated to the point when it might be implemented. The issue of resources (financial support) also bears upon the legitimacy of the initiative. Obviously, if an initiative to a participatory policy process does not succeed — or it cannot be made plausible that it will eventually succeed — in securing sufficient financial support to make it realistically possible to sustain it, such a process will have severe difficulties of finding support among stakeholders. Such a process would simply not be considered legitimate in the eyes of its (potential) participants. This problem may be even more acute when a participatory policy process is initiated from "the outside". It seems highly unlikely that such initiatives would be able to generate local Russian resources sufficient to sustain an active and long-term process. Therefore, today, external initiatives to organize participatory policy processes should be backed up with external funding.

In light of the above, our policy exercises in Murmansk, Karelia and Arkhangelsk might be said to have been a moderate success. It did in fact generate some useful activity, but an activity that was mainly related to the policy exercise workshop itself. Since the process was not backed by sufficient external funding we can only notice that it turned out to be a one-time event. As far as we are aware it did not lead to any organized longer-term activity among the regional forest stakeholders. It did, however, have a certain impact on already on-going work with reforming regional forest sector management (Karelia) and the development of a regional forest legislation (Arkhangelsk).

- ***What lessons can be learned from IIASA's efforts to initiate policy exercises and the preceding case studies of forest sector institutions in the regions of Murmansk, Karelia, and Arkhangelsk for initiating a successful policy process in the Russian forest sector (and elsewhere)?***

As already indicated above, the crucial problem with employing participatory models of forest sector development in Russia is intimately linked to the fact that civil society (including the political party system) is still very weak in the country. In a society with more experience of civic organization the IIASA policy exercise initiative might indeed have produced more long-lasting effects, even without the backing of external funding. In the present context, however, one must conclude that an important lesson to be learned is precisely this: if it is possible to initiate a policy exercise under the present Russian circumstances, the initiator must be prepared (i.e., have sufficient resources at his disposal) to follow the activity through to the point when it becomes self-sustainable. This way it will have a chance to "mature" and start producing the intended outcomes.

But there are also some strategic issues that might be even more important for an external policy interventionist to consider when deciding how to go about the task of initiating a participatory process with the aim of improving the Russian regional forest policy.

Based on the study presented here and in previous reports from the IIASA institutional framework project, we can conclude that the most important lesson to be learned for improving the possibilities of an external interventionist of having at least a *chance* of success with initiating a participatory policy formulation process in the Russian forest sector has to do with the crucial importance of *legitimacy and trust* as well as the importance of *finding the right stakeholders* to work with. These two issues are, furthermore, intimately linked. The choice of stakeholders to take part in the participatory process can be decisive for the degree of legitimacy the process will have in the eyes of the citizens and the trust with which they can look upon the whole endeavor. In the present context we can distinguish at least three options for an external policy interventionist when choosing a "dancing partner" for initiating a fruitful policy process in the Russian forest sector.

1. If time is a priority and if one could be certain of a wholehearted and honest commitment from the regional top political leadership (the top state executive — the regional administration — including the regional "forest establishment") to support a genuine participatory policy formulation process engaging a broad circle of regional forest stakeholders (i.e., allowing also others than only members of the traditional "forest family" a fair influence) a process design like the one envisaged by IIASA in the policy interventions performed in Murmansk, Karelia, and Arkhangelsk would probably produce the fastest "pay-off" in terms of a vitalized and implementable regional forest policy. However, the question is if this set-up would produce the *best* possible forest policy, the policy best adapted or suited to the new emerging market conditions. The problem with this approach is that it is difficult — if not impossible — for an external interventionist to know if the members of the traditional "forest family" really are acting with the primary aim of furthering an efficient functioning of the forest sector, rather than acting with the

ultimate goal of improving their own pay-offs in terms of personal wealth and continued power.

2. In a radically different approach the external interventionist might base the initiation and organization of a participatory policy formulation process on forest stakeholders *outside* the established regional top bureaucracy and the traditional "forest family," engaging instead various civil society organizations. This approach would offer an opportunity to get those individuals and organizations engaged, who are firmly in favor of Russia's transition to a market type economy. Ideally, it would engage those individuals in a region who understand something, or who have ideas, about what measures are required to stimulate the regional forest sector to produce the best results from a market efficiency point of view. With such participants engaged in the policy formulation process, the policy goals and measures proposed might be more far-reaching and radical than if the views of the old forest establishment were allowed to dominate, in which case policy proposals would probably be hampered by "traditional thinking" and a concern for the unfavorable effects that the policy might have for members of the "forest family". A positive "external effect" of using this approach would be the stimulus it might give for people's engagement in the emerging, but still rather weak, Russian civil society. (Developing civil society in Russia is, in fact, crucial for the continued democratization of the entire Russian society.) The great problem with this approach lies in the resistance that can be expected both from the regional state executive (the bureaucracy) and the "forest family". In particular, an external interventionist (like IIASA) choosing this mode of operation would have to expect such opposition and would be wise to also secure the support of the legislative power (the regional parliaments and various political parties).

3. A third avenue may also be available for an external interventionist (like IIASA) wanting to engage in participatory policy formulation processes in the Russian regional forest sector. This approach would entail seeking the support of the top federal political power, the Russian presidency and/or some of the reform-oriented ministries. Obtaining such support would (possibly) endow the interventionist with a measure of authority that might be used to curtail hostile resistance to the process put up by the regional bureaucracy and the forest establishment. It might also help the interventionist gaining support from various regional civil society organizations. The primary problem with the approach concerns the possibility of actually obtaining the necessary support from the Russian federal administration. However, prospects for finding this support might not be entirely discouraging. It seems clear that the Putin administration, already since its inception, has sought to distance itself from the traditional Russian forest industrial and forest management circles. Already the abolition of the Federal Forest Service (FFS) and the inclusion of its duties into the Ministry of Natural Resources in May 2000 can be seen as a step in this direction. The currently intensive debate (in the early spring of 2004) about the first drafts of a new Federal Forest Code, where the elaboration of the proposals have been assigned to German Gref's Ministry of Economic Development and Trade, also points in the same direction. This whole mode of operation on the part of the federal administration might be interpreted as a sign that the government does not expect any really creative and efficient market oriented forest policy proposals from

the old existing, too heavy and rigid, Russian forest sector management organization.

In Russia, where the central political power is still comparatively weak and where the political system and civil society are underdeveloped — a situation only offering a very frail foundation for the kind of interaction that actually constitutes participatory policy formulation processes — it must be expected that, whatever approach an external interventionist adopts, the initiated policy formulation process will be "invaded" by various groups in society fighting for influence and (most likely) personal material benefits. Such detrimental behavior is likely to improve only with continued development of Russian civil society and further reformation of the country's market governing institutions.

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Appendix A: List of Publications from the IIASA Project "Institutions and the Emergence of Markets — Transition in the Russian Forest Sector"

All IIASA Interim Reports (IR) can be downloaded from the Institute's website at URL: http://www.iiasa.ac.at/docs/IIASA_Publications.html.

IIASA Interim Reports — Case Studies in Eight Russian Regions:

Initial Studies:

Carlsson, Lars (1997). Prerequisites for the Evolution of Markets. An Institutional Analysis of the Russian Forest Sector. In: Sten Nilsson (ed.) Dialogue on Sustainable Development of the Russian Forest Sector, Vol. 1. Interim Report IR-97-009. Laxenburg, Austria: International Institute for Applied Systems Analysis, April, pp. 143–145.

Carlsson, Lars and Mats-Olov Olsson, eds. (1998). Initial Analyses of the Institutional Framework of the Russian Forest Sector. Interim Report IR-98-027. Laxenburg, Austria: International Institute for Applied Systems Analysis, June.

Lehmbruch, Barbara (1998). Ministerial Spin-Offs and Economic Transformation in the Russian Timber Industry, 1992–1996. In: IIASA Interim Report IR-98-027.

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Tomsk Oblast:

Carlsson, Lars and Mats-Olov Olsson (1998). Institutions and the Emergence of Markets, Transition in the Tomsk Forest Sector. Interim Report IR-98-084. Laxenburg, Austria: International Institute for Applied Systems Analysis, October (also available in Russian).

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Arkhangelsk Oblast:

Carlsson, Lars, Nils-Gustav Lundgren, Mats-Olov Olsson and Mikhail Yu. Varakin. (1999). Institutions and the Emergence of Markets, Transition in the Arkhangelsk Forest Sector. Interim Report IR-99-021. Laxenburg, Austria: International Institute for Applied Systems Analysis (also available in Russian).

Khabarovsk Krai:

Efremov, Dmitry F., Lars Carlsson, Mats-Olov Olsson and Alexander S. Sheingauz (1999). Institutional Change in the Forest Sector of Khabarovsk Krai. Interim Report IR-99-068. Laxenburg, Austria: International Institute for Applied Systems Analysis.

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Kleinhof, Andris E., Lars Carlsson and Mats-Olov Olsson (1999). The Forest Sector in Moscow Oblast. Interim Report IR-99-069. Laxenburg, Austria: International Institute for Applied Systems Analysis (also available in Russian).

The Karelian Republic:

Piipponen, Minna (1999). Transition in the Forest Sector of the Republic of Karelia. Interim Report IR-99-070. Laxenburg, Austria: International Institute for Applied Systems Analysis (also available in Russian).

Murmansk Oblast:

Ivanova, Lyudmila and Vigdis Nygaard (1999). Institutions and the Emergence of Markets Transition in the Murmansk Forest Sector. Interim Report IR-99-071. Laxenburg, Austria: International Institute for Applied Systems Analysis, December (also available in Russian).

Jacobsen, Birgit (1999). Auctions Without Competition — The Case of Timber Sales in the Murmansk Region. Interim Report IR-99-072. Laxenburg, Austria: International Institute for Applied Systems Analysis.

Irkutsk Oblast:

Blam, Yuri, Lars Carlsson and Mats-Olov Olsson (1999). Institutions and the Emergence of Markets — Transition in the Irkutsk Forest Sector. Interim Report IR-00-017. Laxenburg, Austria: International Institute for Applied Systems Analysis.

Krasnoyarsk Krai:

Sokolova, Nastassia (2000). Institutions and the Emergence of Markets — Transition in the Krasnoyarsk Forest Sector. Interim Report IR-00-028. Laxenburg, Austria: International Institute for Applied Systems Analysis (also available in Russian).

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IIASA Interim Reports on Other Institutional Issues:

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Pappila, Minna (1999). The Russian Forest Sector and Legislation in Transition. Interim Report IR-99-058. Laxenburg, Austria: International Institute for Applied Systems Analysis.

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Appendix B1: Murmansk: Workshop Program of IIASA Policy Exercise, 23–25 October 2000

International Policy Exercise "Institutional Changes in the Murmansk Forest Sector" Murmansk, Russia, 23–25 October 2000	
Monday, 23 October	
13:00–13:30	Hotel "Polyarnye Zory", Murmansk — Registration
13:30–15:00	Welcoming speech 1. **Vladimir Selin**, IEP 2. **Mats-Olov Olsson**, IIASA forest project, speaks about IIASA and its research on forestry (30 min.) 3. **Peter Duinker**, main facilitator of the meeting, explains the goals and means of the exercise (20 min.)
15:00–15:30	**Alexander Alimov**, Murmansk Regional Administration, speaks about the socioeconomic situation in the region
15:30–16:00	*Coffee, tea*
16:00–17:00	The IIASA study on the institutional embedding of the Russian forest sector is presented by **Lars Carlsson and Mats-Olov Olsson**, IIASA research team
17:00–18:00	The IIASA study on the institutional embedding of the Murmansk forest sector is presented by the researchers **Lyudmila Ivanova**, IEP and **Vigdis Nygaard**, NIBR
20:00	*Dinner at hotel restaurant*
Tuesday 24, October	
09:00–11:00	Plenary session lead by **Peter Duinker** 1. Short summary of first day. 2. Discussion. The purpose is to identify what the Russian participants see as the main problems besetting the forest sector in Murmansk 3. **Peter Duinker** presents a synthesis of the problem set and establishes working groups in witch the Russian participants will discuss the problems.
11:00–11:30	*Coffee, tea*
11:30–13:00	Group work/discussions among the Russian participants
13:00–14:30	*Lunch*
14:30–16:00	Group work/discussions among the Russian participants continues
16:00–16:30	*Coffee, tea*
16:30–18:00	Group work/discussions among the Russian participants continues
20:00	*Dinner at Restaurant «Inari»*
Wednesday 25, October	
09:00–11:00	Plenary. Representatives of the groups inform about the outcome of the discussions in their respective groups ("debriefing"). Discussion.
11:00–11:30	*Coffee, tea*
11:30–12:30	**Closing of the policy exercise**. Forming of working groups for continued work on solving identified issues
12:30–13:00	The IIASA team meets with representatives of the various working groups (one at a time) to discuss the plans for their work, working out final document
13:00–14:30	*Lunch*
15:00	Excursion to Kolskiy leskhoz
Thursday, 26 October	
09:00–11:30	The IIASA team meets with the Regional Administration to sum up the experiences of the policy exercise.

Appendix B2: Murmansk: Workshop Participants of IIASA Policy Exercise, 23–25 October 2000

International Policy Exercise "Institutional Changes in the Murmansk Forest Sector" Murmansk, Russia, 23–25 October 2000			
Participant name	**Company/Organization**	**Position**	**Location**
Lars Carlsson	Lulea University of Technology	Associate Professor	Sweden
Peter Duinker	School for Resource and Environmental Studies	Director, Professor	Canada
Vigdis Nygaard	Norwegian Institute for Urban and Regional Research	Researcher	Norway
Mats-Olov Olsson	International Institute for Applied Systems Analysis	Researcher	Austria
Alexander Alimov	Murmansk Regional Administration	Head of Department	Murmansk
Nadezhda Zimina	Murmansk Regional Administration		Murmansk
Nikolay Pekush	Murmansk Forest Management	Head	Murmansk
Yevgeny Olesik	Committee of Nature Protection	Deputy Chairman	Murmansk
Valeriy Sokolov	Committee of Nature Protection	Head of Department	Murmansk
Vladimir Selin	Institute for Economic Problems	Director	Apatity
Lyudmila Ivanova	Institute for Economic Problems	Researcher	Apatity
Tamara Malkova	Institute for Economic Problems	Researcher	Apatity
Dennis Smirnov	Kola Nature Protection Centre/INEP	Researcher	Apatity
Svetlana Chukareva	Kolskiy leskhoz	Chef Forester	Kola
Yekaterina Krasilnikova	Murmanskiy leskhoz	Chief Forester	Murmansk
Valentina Nekhaeva	Lovozerskiy leskhoz	Chief Forester	Revda
Alexander Pavlov	Kovdozerskiy leskhoz	Director	Zasheek
Tamara Serebrovskaya	Monchegorskiy leskhoz	Chief Forester	Monchegorsk
Igor Biryukov	Private company		Murmansk
Alexander Dvoryankin	SC «Priroda»	Director	Verkhnetulomskiy
Igor Ivaniv	Municipal enterprise «Belomorles»	Chief Engineer	Umba
Kari Tahtinen	SC «Eurotiivi»	Director	Kola
Alexander Tesalovskiy	Kovdorskiy lespromkhoz	Director	Kovdor
Margarita Tilikova	Kovda-timber	Head of Department	Zelenoborskiy

Interpreters: Zinaida Nechmir and Nadezhda Nikolaeva

Secretary: Anna Garbuz

Appendix B3: Murmansk: Final Document

SUMMARY FROM THE SEMINAR
"INSTITUTIONAL CHANGES IN THE MURMANSK FOREST SECTOR"

On 23–25 October 2000, the Institute of Economic Problems of the Kola Science Centre, RAS, in co-operation with the International Institute for Applied Systems Analysis (IIASA) and the Norwegian Institute for Urban and Regional Research (NIBR) conducted a seminar for representatives of enterprises and organisations related to the forest sector of Murmansk Oblast and stakeholders in sustainable regional forest use.

Representatives of the Murmansk Oblast Administration, the forest and forest processing industry — heads of enterprises and owners of private business companies, forest management, non-governmental environmental organisations and scientists from the Kola Science Centre, RAS, took part in the seminar from the Russian side.

In the plenary session, to which the first day of the seminar was devoted, participants were given a lecture by a representative of the Murmansk Oblast Administration (A.N. Alimov) on ways to achieve economic development in the Murmansk region. Then participants were given information (by Mats-Olov Olsson) about the International Institute for Applied Systems Analysis (IIASA). Representatives of the research project on sustainable forest use in the North conducted at IIASA (Lars Carlsson and Mats-Olov Olsson) made a presentation of their research. A study of the forest sector in Murmansk Oblast has also been conducted within the framework of this comprehensive project. The researchers responsible for this study, representatives of IEP and NIBR (Lyudmila Ivanova and Vigdis Nygaard) reported on the results of their work.

Peter Duinker, Director of the School for Resource and Environmental Studies, Dalhousie University, Halifax (Canada), who chaired the general discussion, suggested that participants should identify what they believed were the main problems for the Murmansk forest sector. In order to have a structured discussion of the identified problems and a search for possible ways to solve them all problems were grouped in the following way: financial, personnel, juridical, social, technical, and environmental. The further discussion was conducted in two working groups. The first group discussed financial, technical and environmental problems. The discussion in the second group concentrated on juridical, personnel, and social problems. Participants were divided between the two groups in accordance with their interests.

The first group made the following suggestions resulting from the discussions.

Concerning financial and technical problems:

1. The status of *leskhozy* should be carefully determined. If this is a state service it should not be allowed to conduct business activities with the purpose to obtain profit. To be able to fulfil its planned work the entire funding (100%) should be provided via the federal budget.

2. The regional law on zones of economic development should have a wider applicability entailing taxation privileges in those districts of Murmansk Oblast where the forest industry is well developed.
3. The Law on Northern Territories should be followed, as it applies to payments of northern wage bonuses from the federal budget.
4. Possibilities should be investigated to allow taxation privileges for investors during the period when an enterprise is being established.
5. Credit privileges for forest enterprises should be given by the Regional Administration from non-budget sources for investments in production capital.

Concerning environmental problems:

1. A transfer to compulsory forest product certification by independent state organisations should be introduced. Here it should be noted that, according to the forest management and forest industry representatives, this process entails certain difficulties, for which many enterprises are not ready.

The second group had the following suggestions:

2. An appeal should be sent to the employment agency of the Murmansk Oblast Administration containing a listing of special professional qualifications that are in demand on the labour market.
3. An appeal should be sent to the Centre of Scientific-Technical Information asking for help to develop a program for the compilation and distribution of information on the situation in the forest sector (summoned through SMI, and subsequently through Internet). This would mean the creation of a database for the forest sector.

Common for both groups was the proposal to develop and introduce changes in the rules for harvesting standing forest, taking regional characteristics into account, engaging in this process the Oblast administration and scientific organisations.

The participants of the seminar reached the conclusion that one of the fundamental problems of the forest industry is the lack of co-ordination at the regional level. The creation of a co-ordinating organ might facilitate the solution of many problems that are shared by enterprises.

The main result of the seminar was that an agreement was reached by the participants to create a regional organisation (an association) of forest users in Murmansk Oblast, in which forest industrialists, representatives of forest management and environmental organisations would take part. Such an association should be a voluntary union of enterprises and organisations. Within the framework of this organisation a closer collaboration between members is assumed to be established, here common problems should be discussed and solved, members' interests should be defended, and it should lead to interactions with the Regional Administration and other organs.

Seminar participants agreed to continue their work to create a regional association and they agreed that it would be necessary to have regular meetings to discuss the issues that were raised. The next meeting is planned for the end of November 2000.

Appendix C1: Karelia: Workshop Program of IIASA Policy Exercise, 30 November–1 December 2000

"Institutional Problems of the Forest Sector in the Republic of Karelia"
International Policy Exercise, Petrozavodsk
November 30–December 1, 2000

Tuesday, Wednesday, Thursday, November 28-30, 2000

Arrival and accommodation of foreign and non-resident participants of the exercise at Hotel "Severnaya" (Petrozavodsk, Lenin Prospect 21)

Wednesday, November 29, 2000

13:00–15:00 Representatives of the International Institute for Applied Systems Analysis (IIASA) meet with the chairmen of the working groups

Thursday, November 30, 2000

8:30–9:00 *Breakfast*

9:00 Bus from Hotel "Severnaya" to the Banking School

9:00–9:30 Registration for the exercise

9:30–15:30 Plenary session, *Chairman: V.N. Maslyakov*

9:30–9:45 Opening words. *V.N. Maslyakov*, First Deputy Prime Minister of the Republic of Karelia

9:45–10:00 Research on Forestry at the International Institute for Applied Systems Analysis (IIASA). Professor *Sten Nilsson*, Counselor to the Director of IIASA, Leader of the Forestry Project, Laxenburg, Austria

10:00–10:30 The IIASA Study on the Institutional Embedding of the Russian Forest Sector. *Lars Carlsson* and *Mats-Olov Olsson*, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria

10:30–11:00 Main results of the Study "Transition in the Forest Sector of the Republic of Karelia". Researcher *Minna Piipponen*, Karelian Institute, University of Joensuu, Finland

11:00–11:15 *Coffee Break*

11:15–11:45 Current Institutional Development in the Forestry Complex at the Federal Level. *N.A. Burdin*, JSC "NIPIEIlesprom", Moscow

11:45–12:00 Comments on the presentations. *A.M. Tsypuk*, Petrozavodsk State University, *V.G. Matrosov*, OAO "Kemskii LDZ"

12:00–12:20 Perspectives of the Forestry Complex in the Republic of Karelia. *A.I. Drobakha*, Vice-president of the State Committee for the Forest Industrial Complex of the Republic of Karelia

12:20–12:35 The Latest Changes of the Forest Policy of Arkhangelsk, Leningrad Oblast and the Republic of Komi and Its Potential Influence on the Forest Sector of Karelia. *A. Ptichnikov*, Moscow Representative of the WWF

12:35–12:55 Perspectives of the Structural Development of Forest Management in Russia and forest certification in Russia *A.V. Panfilov*, Ministry of Natural Resources of the Russian Federation, Moscow

12:55–13:15 On the state of the forest fund, forest use and forest management in the Republic of Karelia. *J.V. Skadorva*, Committee of Natural Resources of the Republic of Karelia

13:15–14:15 *Lunch*

14:15–14:40 Perspectives of the Swedish Forest Sector Development. *K.-G. Edstedt*, Vaesterbotten County Administrative Board, Trade and Industry Division

14:40–15:00	The World Bank and the Development of the Regional Forest Sector. World Bank Representative *S.E. Pitovranov*, Fund for Restructuring of Enterprises (FRP), Moscow
15:00–15:15	*Coffee Break*
15:15–15:35	The Northern Region and the Barents Region Forest Sector Initiative. *Olli Saastamoinen*, University of Joensuu, Finland.
15:35–15:50	Comments on the Presentations
15:50–16:30	Goals and Means of the Policy Exercise. *Sten Nilsson*, The purpose is to identify what the Russian participants see as the main problems of the forest sector in Karelia
16:30–16:45	Establishing working groups
16:45–18:00	Group work
18:00	*Dinner*
20:00	Bus from the Banking School to Hotel "Severnaya"
Friday, December 1, 2000	
8:00–8:30	*Breakfast*
8:30	Bus from Hotel "Severnaya" to the Banking School
9:15–9:30	Briefing
9:30–10:45	Group work continues
10:45–11:00	*Coffee Break*
11:00–13:10	Group work continues.
13:10–14:00	*Lunch*
14:00–15:00	Plenary
15:00–15:30	*Coffee Break*
15:30–16:00	Continued Plenary
16:00–16:30	Preparation of Declaration
16:30	Bus to restaurant for dinner
19:00	Departure from Petrozavodsk by train № 17 (Petrozavodsk–Moscow)

Appendix C2: Karelia: Workshop Participants of IIASA Policy Exercise, 30 November–1 December 2000

RUSSIAN REPRESENTATIVES

FEDERAL LEVEL

BURDIN, N.A., General director, OAO "NIPIEIlesprom", Moscow

PANFILOV, A.V., Deputy Head, Department of science and information systems, Ministry of Natural Resources of the Russian Federation, Moscow

PISARENKO, A.I., President, The Russian Society of Foresters, Moscow

REPRESENTATIVES OF THE KARELIAN REPUBLIC

ANAN'EV, V.A., "Vodlozero" National Park

BARBALYUK, B.A., Director, OAO "Muezerskii LPKh"

DENISOVA, M.I., GTRK "Karelian Radio"

DROBAKHA, A.I., Vice-president, State Committee for the Forest Industrial Complex of the Republic of Karelia

DRUZHININ, P.V., Head of department, Institute of Economics, Karelian Science Centre, Russian Academy of Sciences

FEDCHIK, I.N., Director, OAO "Pyaozerskii LPKh"

FROLOV, V.I., Researcher, "KARELNIILP", Design of new technology

GERASIMOV, Yu.Yu., Head of the StoraEnso representation in Petrozavodsk, proffessor at the forest engineering faculty of the Petrozavodsk State University

GRIGOR'EV, V.V., Head of the Suojarvi municipal administration

GROMTSEV, A.N., Head of laboratory, Forest Institute, Karelian Science Centre, Russian Academy of Sciences

GROMTSEV, M.A., Senior scientific associate, Institute of Economics, Karelian Science Centre, Russian Academy of Sciences

GROSHEVA, O.V., Senior specialist, State Committee of the Forest Industrial Complex

GUDYM, V.M., "Vodlozero" National Park

GUROVA, S.A., Research scholar, Institute of Economics, Karelian Science Centre, Russian Academy of Sciences

IESHKO, E.P., Vice-President of the Presidium, Karelian Science Centre, Russian Academy of Sciences

KHOTEEV, S.V., Senior management specialist of regional business, Branch office of ZAO "Menatep St. Peterburg" Bank

KIR'YANOV, N.N., Vice-president of the Union of Forest Industrialists and Forest Exporters

KIRYASOV, V.N., Special correspondent of the "Lesnaya Gazeta" ("The Forest Gazette") in Petrozavodsk

KOZYREVA, G.V., Researcher, Economics Department, Karelian State Pedagogical University

KRUTOV, V.I., Director, Forest Institute, Karelian Science Centre, Russian Academy of Sciences

MAKAROV, A.A., Newspaper "Nablyudatel'" ("The Spectator")

MALIKOV, V.I., Head of the Pudozha municipal administration

MARKOVSKII, A., Ph.D. student, President of the student environmental organization

MASLYAKOV, V.N., First Deputy Prime Minister, Minister of Natural Resources, Government of the Republic of Karelia

MATROSOV, V.G., Director of OAO "Kem LDZ"

MIKHALEVA, G.M., Ministry of Foreign Affairs of the Republic of Karelia

MOROZOVA, T.V., Head of department, Institute of Economics, Karelian Science Centre, Russian Academy of Sciences

NEMKOVICH, E.G., Deputy director, Institute of Economics, Karelian Science Centre, Russian Academy of Sciences

PANKRATOV, A.A., President, Chamber of Commerce of the Republic of Karelia

PLADOV, V.A., General Director, Holding company "Karellesprom"

POLEVSHCHIKOVA, N.B., Head of the Laboratory for regional socio-economic geography, Karelian State Pedagogical University

ROZHANSKII, I.B., Administration of the President, Government of the Republic of Karelia

RYBAKOV, D.S., Co-president of MSOES, Coordinator of ROO "Zelenykh" ("The Greens")

SABUROV, N.I., "Lesnaya gazeta" ("The Forest Gazette")

SACHUK, T.V., Head of the Economics Department, Karelian State Pedagogical University

SAKOVETS, V.I., Forest Institute, Karelian Science Centre, Russian Academy of Sciences

SANKIN, I.N., Assistant to the President, Government of the Republic of Karelia

SHEGEL'MAN, I.R., Petrozavodsk State University, President of the Karelian Engineering Academy

SHEVCHUK, I.I., Representative of the Government of the Republic of Karelia

SHISHKIN, A.I., Director, Institute of Economics, Karelian Science Centre, Russian Academy of Sciences

SHLYAMIN, V.A., Minister of Foreign Affairs of the Republic of Karelia

SHURUPOV, I.M., Minister of Economics of the Republic of Karelia

SKADORVA, I.V., Head, the Regional Forest Management of the Russian Federation, Petrozavodsk

SUKHAREV, M.V., Research associate, Institute of Economics, Karelian Science Centre, Russian Academy of Sciences

TIGUSHKIN, Yu.A., Coordinator of the Regional Program for Forest Certification "Karelia"

TITOV, A.F., President of the Presidium, Karelian Science Centre, Russian Academy of Sciences.

TSYPUK, A.M., Professor, Forest Engineering Faculty, Petrozavodsk State University

VASHCHUK, OAO "Pudozhpromles"

VEIKKOLAINEN, I.I., Newspaper "Karjala sannomat"

VISTBAKA, A.V., Consultant, Ministry of Foreign Affairs

VOLKOV, A.D., Deputy director of science, Forest Institute, Karelian Science Centre, Russian Academy of Sciences

YAKOVLEV, P.V., Director, OAO "Il'inskii lesozavod" ("Il'in Forest Factory")

ZHUKOV, N.N., President, State Committee for the Forest Industrial Complex of the Republic of Karelia

FOREIGN EXPERTS AND SCIENTISTS

Group from the Forest Project at the International Insitute for Applied Systems Analysis (IIASA)

CARLSSON, L., Researcher, Austria/Sweden

FESTIN, C., Administrative assistant, Austria/USA

NILSSON, S., Councellor to the Director of IIASA, Leader of the Forest Project, Austria

OLSSON, M.-O., Researcher, Austria/Sweden

SHVIDENKO, A., Researcher, Austria/Russia

Others

KOL'TSOV, S.B., Representation of WWF in St. Petersburg

PTICHNIKOV, A.V., Moscow representation of the WWF

PITOVRANOV, S.E., Head of Forest Sector Program, Noncommercial Foundation for Enterprise Restructuring and Financial Institutions Development (FER), Moscow

VARAKIN, M.Yu., Docent, Institute of Economics, Finance and Business Management, Arkhangelsk State Technical University

Sweden

EDSTEDT, K.-G., Trade and industry division, Västerbotten County Administrative Board, Sweden

USA

VASENDA, S., Researcher, Center for the Study of Institutions, Population, and Environmental Change, Indiana University, Bloomington

Finland

PIIPPONEN, M., Researcher, University of Joensuu

SAASTAMOINEN, O., Professor, University of Joensuu

HYTTYNEN, M., Finnish Forest Research Institute (METLA), Helsinki

Appendix C3: Karelia: Final Document, Declaration

30.11.–1.12.2000

SEMINAR
"INSTITUTIONAL PROBLEMS OF THE FOREST SECTOR IN THE REPUBLIC OF KARELIA"

Organized by the International Institute for Applied Systems Analysis (IIASA) with the support of the Government of the Republic of Karelia

Petrozavodsk

DECLARATION

The successful development of the Republic of Karelia is determined by the results of the activities in the forest sector enterprises. The change in a number of external conditions during 1998–2000 has allowed enterprises to improve their efficiency. But the absence of a stable legislative base, uncoordinated activities and a constant rise in internal production costs have held back the increased efficiency in the use of the republic's forest resources. It should be acknowledged that on the whole the forest complex of Karelia has not been able to reach decisions on a number of strategic issues that would facilitate a long term stable development of enterprises and allow a more efficient use of Karelia's rich forest resources in the short as well as in the long term.

Participants of the seminar expressed their readiness to become the initiators in a process of collaboration between all institutions in the Karelian society to create and implement an integrated policy for the development of the forest sector.

Taking into account:

- the importance and availability of the forest resources of Karelia;
- the necessity of stable legislative foundations for enterprises' activity;
- the strongly increased competition and our limitations in competing for customers on the sales markets;
- the importance and necessity of collaboration between production enterprises and research;
- the necessity of taking into account the opinion of all stakeholders interested in the successful development of the forest sector;
- the importance to solve the task of developing the forest sector in the shortest possible time,

we believe that the forest resources could and should become the basis for the creation of favorable socio-economic conditions in the Republic of Karelia.

It is necessary to consolidate the efforts of all forest sector stakeholders to achieve a restructuring of the Karelian forest sector. The main goals of such a restructuring should be to achieve:

- social welfare for the people;
- a high efficiency in the production of the enterprises and competitive products;
- preservation of the forests as a resource for future generations.

A strategy for the sustainable development of the forest sector of the Republic of Karelia should be elaborated. This strategy should be based on the complex development of forest management, forest industry and other related sectors taking the interests of the national economy and society into account. It can be envisaged that in working towards this goal a number of new horizontal and vertical structures in the forest sector will emerge within the

framework of the existing legislation of the Russian Federation and the Republic of Karelia. These structures will be able to channel various institutions' interests and engagement in the development of a modern regional forest policy for the Republic of Karelia. Naturally, this policy should also be developed in collaboration with other subjects of the Russian Federation, who are concerned about the successful development of the country's forest sector. Today, enterprise leaders understand and accept the idea of converting the activity of their enterprises to meet existing international standards.

Collaboration between all social institutions is absolutely essential to effectively achieve the goal of reforming the forest sector of Karelia. A result of such joint efforts will also be the possibility to provide competent solutions of the economic, environmental and social problems related to the sustainable management of the forests in the Republic of Karelia to the benefit of society.

This declaration was formulated by the undersigned on the basis of the discussions held at the seminar. As the next step in the process of establishing the forms of activity of all social institutions a second document will be elaborated which also will be based on the discussions during the seminar. In this document a clear formulation will be given of the problems besetting the Karelian forest sector and various possible solutions to these problems will be proposed.

The seminar was initiated by the International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria, and was sponsored by the Government of the Republic of Karelia as well as by Västerbotten County Administrative Board and the Kempe Foundations, Sweden.

On behalf of the seminar participants:

Signatures

Members of the organizing committee and chairmen of the discussion groups:

VISTBAKA, A.V., Consultant, Ministry of Foreign Affairs, Republic of Karelia

ZHUKOV, N.N., President, State Committee of the Forest Industrial Complex of the Republic of Karelia

IESHKO, E.P., Vice-President of the Presidium, Karelian Science Centre, Russian Academy of Sciences

MATROSOV, V.G., Director of OAO "Kem LDZ"

MASLYAKOV, V.N., First Deputy Prime Minister, Minister of Natural Resources, Government of the Republic of Karelia

SKADORVA, I.V., acting head of the Committee on natural resources in the Republic of Karelia

PLADOV, V.A., General Director, Holding company "Karellesprom"

POLEVSHCHIKOVA, N.B., Head of the Laboratory for regional socio-economic geography, Karelian State Pedagogical University

SACHUK, T.V., Head of the Economics Department, Karelian State Pedagogical University

SHISHKIN, A.I., Director, Institute of Economics, Karelian Science Centre, Russian Academy of Sciences

SHLYAMIN, V.A., Minister of Foreign Affairs of the Republic of Karelia

SHURUPOV, I.M., Minister of Economics of the Republic of Karelia

Appendix C4: Karelia: Final Document, Recommendations

RECOMMENDATIONS OF THE INTERNATIONAL SEMINAR "INSTITUTIONAL PROBLEMS OF THE FOREST SECTOR IN THE REPUBLIC OF KARELIA"

30 November–1 December 2000

PETROZAVODSK

The process to establish a forest policy depends on many factors, i.a., on the existence of institutional relations (formal and informal rules and norms), regulating the behavior of the actors in the forest sector.

The seminar, jointly organized by the Government of the Republic of Karelia and the International Institute for Applied Systems Analysis (IIASA), facilitated a discussion of the most important strategic tasks facing the forest sector of the economy.

The participants of the seminar, representatives of the federal and Karelian governments, science, economic actors, public organizations, and foreign experts, noted the necessity to consolidate the efforts of society, business and government in order to achieve a transformation in various spheres related to the forest sector.

The basis for the discussion during the seminar were:

- The published results of research on institutional problems in Russian regions and Karelia performed by IIASA: "Institutions and the emergence of markets — transition in the Russian forest sector," reflecting general and specific institutional problems of the forest sector;
- Papers dealing with the most recent changes in the forest sector at the Russian and the regional levels, presented by specialists from forest management, forest industry and public organizations.

In the course of the discussion topical questions were raised and the following recommendations were elaborated taking into account the current situation:

I. Forest resources and the environment:

To accommodate ecological and biodiversity issues in the forest complex in accordance with international requirements.

To conduct an inventory (cadastre) of forest resources taking wood and other forest functions and values into account.

To introduce a procedure for obligatory and voluntary certification of forest products for exports.

II. The future orientation of the sector:

To increase the harvesting and processing of wood through increased construction works, production of furniture.

To raise the level of qualification of the workers in the forest sector. To develop a program for training of personnel.

To facilitate for citizens to improve the condition in the forest sector themselves through public institutions and organizations.

To develop a strategy for long-term development of the Karelian forest sector.

III. Legislation:

To clarify property rights of the forest resources at federal and local levels.

To introduce detailed rules with regard to ownership of forest resources during the period of transformation to market conditions.

To improve legislation concerning forest utilization, especially with regard to taxes and tariffs.

To use legislative measures to remove corruption in the forest sector.

To elaborate and adopt local rules for forest use.

To clarify the structure of the forest sector at federal and local levels.

IV. The management of forest enterprises:

To separate the functions of business from the functions of politics.

To promote various forms of integration between enterprises in the forest sector.

V. The modernization of forest enterprises:

To create a mechanism for investment and innovation, for example, through a public investment policy.

To renew the capital equipment of the forest enterprises.

To stimulate the development of forest business through various measures like, for example, new forms of public communication about the situation in the forest sector.

VI. Government support:

To develop forms and methods for state collaboration and support of forest sector enterprises.

To increase the investment attractiveness of Karelia through the creation of more efficient infrastructure (roads, railroads, water transport, bank services) and political stability.

To find a mechanism for cooperation between the forest sector enterprises, the municipal administrations where they are located and the state structures.

VII. Civic institutions:

To create public organizations in Karelia and allow them to deal with the issues of institutional reforms in order to facilitate interaction in the forest sector between representatives of business, government and society.

These recommendations have been elaborated by the representatives of the working groups based on the discussions in the summary plenary session of the seminar on November 30 December 1, 2000.

Appendix D1: Arkhangelsk: Workshop Program of IIASA Policy Exercise, 29–30 March 2001

INSTITUTIONAL PROBLEMS OF THE FOREST SECTOR IN ARKHANGELSK OBLAST
International Policy Exercise, Arkhangelsk, March 29–30, 2001

Monday, Tuesday, March 26–27, 2001

Arrival of foreign and out-of-town seminar participants. Accommodation in hotel "Pur-Navolok" (Nab. Severnoi Dviny 88, Arkhangelsk)

Wednesday, March 28, 2001

10:00–12:00	Meetings with representatives of the International Institute for Applied Systems Analysis and the chairmen of the discussion groups

Thursday, March 29, 2001

08:30–09:00	***Breakfast***
09:00	Bus from hotel "Pur-Navolok"
09:00–09:30	Registration of participants
09:30–15:30	Plenary session chaired by O.M. Sokolov
09:30–09:40	Opening of the seminar. Words of welcome by the rector of the AGTU, Acad. O.M. Sokolov, and by the Acting Chairman of the Committee for International Relations of the Arkhangelsk Regional Administration, Mr. V.F. Eremeev
09:40–10:00	The development strategy of Arkhangelsk region — A.V. Poludnitsin, Deputy General Director of the Department of Economics and Development of the Arkhangelsk Region, Arkhangelsk Regional Administration
10:00–10:30	International Institute for Applied Systems Analysis (IIASA) and the forest project — Sten Nilsson, Counselor to the director, leader of the Forest Project, IIASA.
10:30–11:15	Research on the institutional embedding of the Russian forest sector — Lars Carlsson and Mats-Olov Olsson, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria
11:15–11:30	***Coffee***
11:30–11:50	The organization of forest management — D.V. Trubin, Committee on natural resources of Arkhangelsk Oblast
11:50–12:10	Structural changes in the production of sawn wood in the Arkhangelsk region since 1998 until the present — A.M. Kopeikin, JSC "Nauchdrevprom–TsNIIMOD"
12:10–12:30	Assessment of the situation and the prospects of forest exports in Arkhangelsk Oblast – E.G. Tsarev, General director, AO "Severolesoeksport"
12:30–14:00	***Lunch***
14:00–14:20	The experience of creating vertically integrated structures on the basis of a pulp and paper combine — A.V. Plastinin, president of the board of directors, JSC "Solombala Pulp and Paper Mill", head of the management department, ASTU
14:20–14:40	Assessment and ways of implementation of the IIASA forest project — A.A. Kalinin, Chairman of the Council of the Union of Forest Industrialists of the Arkhangelsk region, Director of Commercial Bank "Lesobank"
14:40–15:00	Economic assessment of forest resources and forst land of the North and North-West of Russia in the market conditions — Nikolay P. Chuprov, Head of laboratory of the Director on Scientific Work of Northern Scientific-research Institute of Forestry

15:00-15:10	Current activity of the world Bank connected with the development of the forest sector in Russia — S.E. Pitovranov, Non-commercial fund for reconstruction of enterprises and development of financial institutions
15:10-15:20	The Russian programme of WWF and development problems of the forest sector in the North-West of Russia — V.V. Dmitriev, coordinator, Russian representative of WWF, Moscow
15:20-15:30	Legal and economic foundation for the implementation of property rights of forest resources — A.E. Kleinhof, Prof. Moscow University of Forestry
15:30–15:50	***Coffee***
15:50–16:10	Organization of group work
16:10–17:50	Group work
18:00	***Dinner***
20:00	Bus to hotel “Pur-Navolok”
Friday, March 20, 2001	
08:00–08:30	***Breakfast***
08:30	Bus from hotel “Pur-Navolok”
09:15–11:00	Group work continued
11:00–11:20	***Coffee***
11:20–12:30	Group work continued
12:30–14:00	***Lunch***
14:00–15:40	Joint work of Group 1 and 2
15:40–16:00	***Coffee***
16:00–17:00	Plenary session. Presentation of results of the discussion in the groups and general discussion. Concluding results of the work.
18:00	***Dinner at restaurant***

Appendix D2: Arkhangelsk: Workshop Participants of IIASA Policy Exercise, 29–30 March 2001

INSTITUTIONAL PROBLEMS OF THE FOREST SECTOR IN ARKHANGELSK OBLAST
International Policy Exercise, Arkhangelsk, March 29–30, 2001

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Appendix D3: Arkhangelsk: Final Document

DECLARATION
from the International Seminar
"Institutional Problems of the Arkhangelsk Forest Sector"

On 29–30 March 2001 an international seminar "Institutional Problems of the Arkhangelsk Forest Sector" was conducted at the Arkhangelsk State Technical University. The seminar was organized by the International Institute for Applied Systems Analysis (IIASA) together with the Arkhangelsk State Technical University and the administration of Arkhangelsk Oblast. The funding was provided by the Kempe Foundation (Sweden), the World Bank and the World Wildlife Foundation (WB/WWF Alliance). The main objective of the seminar was to discuss and develop possible directions for improving the institutional policy of the Arkhangelsk forest sector and to present the results to enterprise managers, the regional and federal organs of power. People with a direct interest in the reformation of the forest sector took part in the meeting: enterprise managers, representatives of the Regional Administration, Russian and foreign financial organizations, professionals, nongovernmental institutions, scientists.

The forest sector of Arkhangelsk Oblast is the main sector in the region's economy and it has deep historical roots and professional traditions. The best years in the development of the region are connected with the achievements of the forest industry. When, at the beginning of the century, Arkhangelsk industrialists developed the sawmill industry, built the best forest factories in Europe, and reached out on the world markets with high quality products, the city of Arkhangelsk became one of the most modern and beautiful cities in Russia. Here, electricity, tram lines, a telephone net, running water, and beautiful architectural constructions appeared well ahead of other provincial cities. The rural population was given the opportunity to engage in business undertakings or receive additional earnings.

The establishment of the modern, well-equipped cities Novodvinsk and Koriazhma is related to the development of large pulp and paper combines.

But in the great history of the forest sector there were also hard times, and this was immediately reflected in the well-being of the population in the region.

Such a period has currently started, when the problems of the forest sector that have accumulated over the last decade were added to the difficulties of the transition period.

The main problem is that the economic and social efficiency in the use and processing of forest resources into products has turned out to be significantly below the world level. It is necessary to take immediate actions to reduce this lag.

In a historical perspective the main causes of the inefficient forest sector is an ecologically and economically unwise forest policy, more specifically:

1. Insufficient funding of reforestation and the rational use of forest resources, the technological and technical refurbishing of forest management and forest processing.
2. An extremely awkward distribution of the exploitable forest fund, resulting from poor logistic plans for the exploitation of forest lands and the idea of a "extensive" forest use.
3. The extreme concentration of forest processing facilities oriented to the production and export of intermediary products. The lack of further wood processing.
4. The artificial isolation from the world progress in science and technology.
5. The orientation of the region's fuel-energy demand towards imported energy carriers and the underestimation of the energy potential of wood.
6. The lack of a general policy of sustainable development of the forest industrial sector in the region, taking the economic structure and the trend towards tighter international environmental restrictions into account.

The above mentioned factors have the following consequences:

1. Low rates of technical and technological modernization of enterprises in all branches of the forest sector due to limited investments.
2. A decrease in the competitiveness of products of forest processing due to the uncontrolled tariff increases on electricity and freight by all modes of transport.
3. the insufficient funding and lag in scientific and technical support of monitoring of the forest resources and forest inventory.
4. The deficient legislative foundation for implementing harmonic forest relations, in particular:
   - the complicated procedures for assigning forest resources to be used by forest sector enterprises;
   - the conflicting interests of forest sector stakeholders;
   - the mistakes in reforming forest management, leading to a weakening of the federal forest service.
5. Underestimation of the role of small and middle-sized forest businesses in the solution of economic and social problems in rural settlements during the transition period. Weak incentives for legal honest business conduct due to the extremely rigid fiscal functions of the taxation authorities and the state in general, as well as the development of a falsely attractive shadow market for forest products.
6. The loss of some good traditions and habits of the local population, the decline of the environmental awareness, the deteriorating status of forest professions.
7. The complicated environmental situation, being one of the factors behind the reduced investment attractiveness of the region.

On the whole, all of these causes (and their consequences) have a long term creeping character. They appeared because of the lack of a stable forest strategy in the last century that should have been oriented towards specific socio-economic perspectives and free from short-sighted selfish interests of individual groups. Coping with these consequences will require time. This is all the more so when the object to be changed is the slow-growing forest and the expensive, widely diversified production infrastructure.

Directions of efforts to solve the main problem:

1. To elaborate an **Outline of a forest policy for the 21st century in Arkhangelsk Oblast**.

   According to this outline the forest should be regarded as the basis of the region's economy in the long-term perspective. The principles of sustainable forest development should be determined (continuity, inexhaustibility, and complex use at efficient reproduction, conservation and maintenance of the biological diversity and ecosphere function of the forests).

   It will be expedient to assign the task of developing the outline to the Department of Economics and Development and the Department of the Forest Sector in the Arkhangelsk Regional Administration. The working group of the seminar is ready to take part in the development of the document.
2. To take the following basic factors into account in the outline:
   - an increased profitability in forest use through the full production cycle due to a sound management and marketing, a proper selection of sustainable strategic investors and forest users, and technical modernization. The increased profitability should serve the interests of all participants of the forest arena: forest users and processors; the regional budget; the municipal formations, representing the interests of the local population; the forest management organs.
   - an increase in the investment attractiveness of the regional forest sector and measures to decrease investment risks;
   - a strategic zoning of the territory in accordance with the quality of the forest resources, their predestination and final state (model forests). The orientation towards multiple forest use, including commercial tourism and the preservation of the natural inheritance;

- improving forest cultivation through an increase of efficiency in forest exploitation, an intensification of intermediate use in zones bordering on stable forest processing settlements. Increasing the future wood harvesting in such zones to reach 3–5 m^3 per ha and year.
- to increase the level of reforestation in the activity zones of large enterprise complexes, i.a., on the basis of using front-line forest cultural technology and plantation type forest cultivation.
- a gradual "dismantling" of the Arkhangelsk forest industrial junction to municipalities in the region with good future prospects, the establishment of a strategic plan for the distribution of production forces and transport routes, the selection of optimal production structures according to final products, taking forecasts of the business fluctuations in the world forest market into account;
- a long term forecast of the political, economic, and demographic development of the country at large and the region in particular, the development of mutual relations between the regional government circles and regional and national corporations;
- establishing an order of priority for the scientific-technical and informational guidance for management decisions, a maximal transparency of the forest sector information field;
- the region's responsibility for the preservation and increase of forest resources in the period between planting and harvesting;
- preservation of the traditional rural population, fostering of good traditions and habits among the local inhabitants, development of their traditional way of life;
- joint action of the regional organs of power with federal organs and their territorial organs, municipal structures and industrial companies for the implementation of the forest policy;
- a forecast of the results of an implementation of the forest policy in terms of increased well-being.

3. Provided the outline is approved, to develop a comprehensive program for the solution of the identified problems, the composition of participants and the time assigned for performing the task.
4. To publish the program through the mass media with the purpose to make it known to potential investors, entrepreneurs and the citizens of the regions.
5. To continue legislation work in agreement with the Outline to create a regional legislative platform for the regulation of forest relations.
6. To use the Outline for the development of regional programs for specific sections of the forest sector.

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Appendix E: List of Issues for Discussion in the Working Groups

1. Legal issues

- Collisions between the constitution and subsequent laws must be eliminated.
- What kind of enterprises are the most viable and what kind of enterprises are the most unviable in the regional forest sector business? On which basis can you make this division? How should these different types of enterprises be handled by the authorities?
- The property rights and usufructs concerning the resource base are still not clear: collisions between the constitution and subsequent laws in forest use, the financial foundation of the forest management and monitoring of forest use, forest lease, forest payments, cumbersome bureaucracy in the daily activities of forest management, differences in the composition of the forest fund of different areas.
- All ambiguities concerning property rights should be sorted out.
- Different types of ownership should be allowed**.**
- A thorough taxation reform should be enacted. The whole system of taxes and fees, not only the number of taxation rules, should be simplified
- All democratic means should be utilized to create law and order.
- Defense of the rights of shareholders?
- Law on land?
- Implications of international agreements?
- How to handle certification issues?

2. Restructuring of the forest sector

- What kind of investments are most urgently needed? Who should the investors be? How can appropriate investors be drawn to the sector? What are the main ingredients of a favorable Karelian investment climate?
- What are the consequences of timber export for the different stakeholders of the sector?
- Without proper circulation of money and a monetary based economy there is no development. What are the means to develop a cash economy?
- Joint enterprise structures, merging of firms and branches of the forest industrial sector, and a better coordinated management of the sector are needed. What kind of joint structures? Based on whose decisions?
- Federal and regional policy programs, which are in line with market economic principles should be worked out. No political, administrative coordination of business activities.
- Banks and other credit institutes should encourage entrepreneurship, exports, and the establishment of joint ventures with foreign companies.
- Increased efforts at product development.
- The most unviable firms should be shut down! — Who are they and how can unintended effects be eliminated or mitigated?
- Without a cash economy, no development! — What are the hurdles for establishing a monetized forest sector?
- It is not self-evident that Karelia is actually suited for the current type of forest production! — Who are the competitors, why should customers choose the Republic of Karelia?
- For larger industries, vertical integration *might* prove profitable.

- How to support small business?
- How to establish a nucleus of good-working enterprises?
- Renewal of technology (e.g., for intermediate cutting).

3. Personnel, education, training

- Focus more on economics and less on engineering.
- Education and training for people to learn new tasks and technologies must be developed; democratic citizenship should be encouraged.
- Educate and develop the workforce, e.g., in English, modern business accounting (cost awareness), quality management, etc.

4. Role of public authorities

- What is the appropriate interrelation between enterprises and local communities? How deeply could — and should — enterprises be involved in the local decision making processes?
- A number of political problems, e.g., the role of the parliament versus the president, as well as many macro-economic questions, must be solved in order to establish a solid foundation for a vital forest sector.
- Politicians and bureaucrats should withdraw from direct involvement in individual enterprises.
- The bankruptcy system and the arbitration courts must be made more efficient.
- The coordination and integration process must be the result of the companies' *own* decisions. It cannot be implemented if the old political structure intervenes in the forest sector.
- Politicians and administrators should know their role and not make things worse! — What are the consequences of such a statement in the Republic of Karelia?

5. Business/Management culture

- Reward good behavior, work ethics should be held in high esteem, business leaders should act as moral vanguards.
- Establishing trust is the key to the solution! — What steps must and can be taken in the Republic of Karelia in this direction?
- How to establish a nucleus of good-working enterprises?

6. Information distribution

- There is always something that can be learned from other enterprises and from other stakeholders. What are the suitable channels for this learning process between different stakeholders of the sector?
  - *Between the industrial enterprises.*
  - *Between the industrial enterprises and forest management.*
  - *Between enterprises and representatives of the administration at different levels.*
  - *Between enterprises and the educational establishments.*
  - *Between enterprises and associations of civic society.*
  - *Between domestic and foreign enterprises.*
  - *Between domestic and foreign administrations relevant to the sector.*
- Forest enterprises should create their own independent branch organizations.
- Learn from others; there are a number of good examples.

Appendix F: List of Newspaper Articles and TV Features Relating to the Policy Exercise Workshops in the Three Regions

Murmansk

1. Natalia Grechina: "The forest sector: a view towards the future", *Murmanskii Vestnik*, 25 October 2000.
2. Adel' Alekseeva: Seminar "I look at you, as in a mirror", *Poliarnaia Pravda*, 26 October 2000.
3. Natalia Grechina: "The forest sector has nowhere to fall — it has to grow", *Murmanskii vestnik*, 1 November 2000.

Karelia

1. Sergei Nikonov: "Illusions of the virtual market", *Molodezhnaya Gazeta*, No. 51 (9935), 14–20 December 2000.
2. Viktor Kiriasov: "Do it yourself if you want something done — Notes from an international seminar on 'institutional problems of the forest sector in Karelia'", *Severnyi Kur'er*, No. 232 (23798), 5 December 2000.
3. Veniamin Sokolov: "Access to the European table — Karelia has a chance to participate in the process of economic globalization", *Guberniya*, No. 49 (234), 7–13 December 2000.
4. "Problems of the forest complex of the Republic of Karelia", a Karelian regional TV broadcast.

Arkhangelsk

A brief note in the Arkhangelsk State Technical University newsletter and a short announcement in a regional TV news broadcast.