

Challenges and Opportunities for the Development of a
Sustainable Forest Sector in the Russian Far East

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Abstract
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Twenty-three percent of global forests are contained within the Russian Federation's nine time zones, which is more than the combined forest area of Canada and Brazil. Despite the fact that Russia contains the largest area of natural forests in the world, its current share in the trade of world forest products is below 4 percent. Russia's forest sector is known for high transportation costs, aging infrastructure, and high instances of bribery and corruption, issues that have had widespread impacts. In 2006, Russia's easternmost region, the Far East, had the ability to process only two percent of its regional timber harvest. While the Far East's processing capacity was particularly low, the situation for most other regions of Russia was little better. With such a low capacity to process timber, Russia increasingly became an exporter of roundwood logs; between 2003 and 2005, Russia exported more roundwood than any other country. Beginning in 2007, the Russian government implemented a series of policies, including export tariffs on roundwood, in order to develop a more competitive timber-processing sector and increase the production and exports of value-added forest products. Yet, in 2009, 96% of the forest product exports from the Far East were in the form of unprocessed roundwood logs. Thus, the efficacy of these national forest policies in the Far East has been unclear in the short-term. Additionally, Russia's World Trade Organization (WTO) accession in August 2012 is expected to alter many aspects of Russia's forest sector development and exports. Through semi-structured interviews with people involved in the forest sector, this research investigates the most recent challenges facing the development of a sustainable forest sector in the Russian Far East.

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“Forests occupy over half of the land of the country, but the share of the forest sector in the 2010 gross domestic product (GDP) was only 1.3 percent; in industrial production, 3.7 percent; in employment, 1 percent; and in export revenue, 2.4 percent” (UN FAO, 2012, p. viii).¹ These figures suggest that Russia’s domestic forest sector has struggled to develop since the break-up of the Soviet Union in 1991. While Tykkylainen and Lehtonen (2008) note that current harvest and production levels in Russia still lag behind harvest and production levels observed in the mid-1980s, it is important to recognize that Soviet forest sector production was heavily reliant upon the presumption that their forest resources were inexhaustible and thus forestry practices and levels of production and export were neither economically nor ecologically sustainable (Barr and Braden, 1988).

Simeone (2013a, 2013b), UN FAO (2012), and Teplyakov (2011) have evaluated the effectiveness of Russia’s most recent forest sector policies at the national level and provide important discussions of Russia’s forest sector development since 2007. Yet, national-scale forest conditions and forest sector activity “described at the Russian level of detail masks the wide diversity across the country” (Backman, 1998, p. 30). Thus, for this reason it is important that micro-level, bottom-up, regional or provincial analyses be conducted in addition to top-down national research. Only through both levels of analysis will an understanding of the intended and unintended effects of domestic forest sector policies be possible. The objective of this thesis is to provide a case-study analysis of some of the most recent and salient issues affecting forest sector development in two forest-rich provinces, Primorskiy Krai and Khabarovskiy Krai, in the southern part of Russia’s easternmost region, the Far East. This

¹ For comparison, the share of the forest sector in Canada’s 2010 GDP was 1.9 percent and close to 10% of export revenue (Canada’s Forest Sector, 2013).

research is meant to complement the national-level policy research that was recently completed (see Simeone, 2013a). Bottom-up, grassroots-level research allows for a better understanding of individuals' and firms' motivations. Understanding the incentives people face is a necessary first step to designing effective public policies. This research contributes toward finding out how effective Russian federal forest sector policies are at achieving their intended objectives as well as illuminates some of the continued issues that the forest industry faces in these two provinces.

Recently, many countries around the world have started to pay more attention to their economic and political dealings with countries in the Pacific Rim, and particularly with the countries of Northeast Asia. The newly realized potential for prosperity from the Arctic and boreal regions, with regard to resource use, has made the Russian Far East economically and politically significant. There are important institutional, geo-political and ecological aspects of Primorskiy Krai and Khabarovskiy Krai that make an empirical case study of forest sector development issues in this region of Russia particularly valuable. There may be no other two provinces in Russia where political will, economic value, the shadow economy, and international interests for timber, all intersect and are so keenly observed.

The remainder of this study is divided into four chapters. The second chapter gives necessary background to the geographic area of study for this research by providing an overview of literature on forest sector development in Russia. The Russian Federation still retains much of its Soviet legacy and the geographical, economic, ecological and political conditions of today are very much shaped by its history. The importance of the easternmost region of Russia, the Far East, is described in relation to its Soviet legacy, as well as to its current geopolitical, economic,

and ecological significance. Once the broader context is provided, then the geography and ecology of the specific area of this research is described. Without such a treatment, and without a cultural understanding of how the Far East differs from other regions in Russia, research on this topic would fail to live up to any measure of success, whether furthering academic discourse or contributing to public policy recommendations. The third chapter goes into the methodology of this research and study design. The fourth chapter presents the study results. The fifth and final chapter provides an overarching discussion of issues in the Russian Far East highlighted by the most salient themes of the interviewees, and concludes with some policy recommendations.

2) Background and Literature Review

According to data from 2010, the Russian Federation contains approximately 809 million hectares, or 1,999 billion acres, of forestland (UN FAO, 2010a). Just shy of one third of Russia's forestland is 'primary forest' (approximately 256 million hectares), while most of the remaining two thirds of the forestland is classified as 'naturally regenerated' (approximately 535 million hectares).² Only two percent of Russia's forests have been planted (approximately 17 million hectares) (UN FAO, 2010a). With regard to age classification, 17.1% of the forest stock is considered early seral, or young growth, 28.5% is considered mid-seral, or middle-aged, 10.7% is considered mid-late seral, and 43.8% is considered late-seral, or mature to over-mature (UN FAO, 2012). Overall, the forests of Russia support annual growth estimated at around one billion cubic meters (Backman, 1998).

The predominant forest type in Russia is the boreal forest. Importantly, more than 60% of the world's northern, or boreal, forests are located in Russia, and approximately 80% of these forests are coniferous (Lesniewska et al., 2008). Ninety-eight percent of land covered by forest vegetation in Russia is of the following species: larch (35.8%), pine (15.6%), birch (15%), and lesser amounts of spruce, fir, cedar, and aspen (UN FAO, 2012). Sub-boreal forests account for the remaining 2% of total forest area in Russia and are predominantly comprised of the following species: oak, beech, elm, basswood/linden, and maple, and to a lesser extent, ash, chestnut, walnut, and hornbeam (UN FAO, 2012).

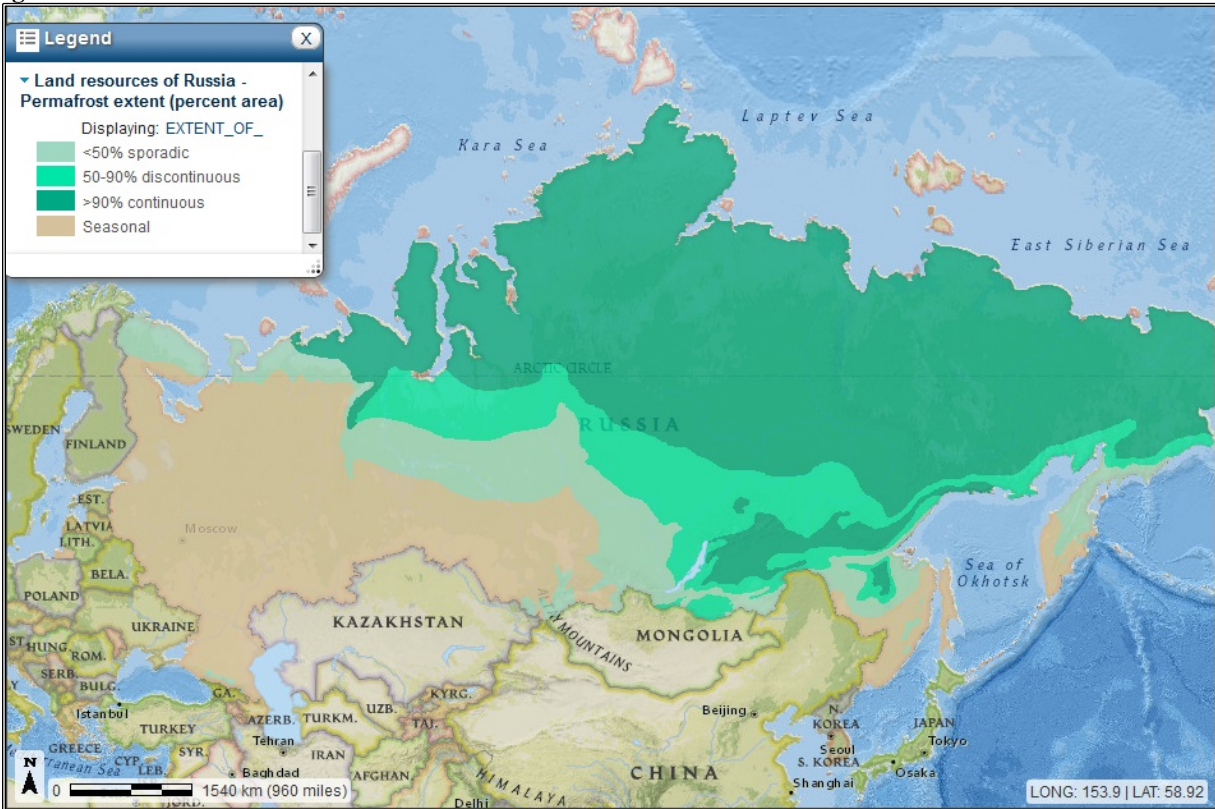
² According to the UN FAO's assessment (2010b), the term 'primary forest' is defined as 'naturally regenerated forest of native species where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.' The classification 'naturally regenerated' refers to 'forest predominantly composed of trees established through natural regeneration where there are clearly visible indications of human activities.' 'Planted forest' refers to 'Forest predominantly composed of trees established through planting and/or deliberate seeding'.

Northern, or boreal, forest ecosystems typically lack high biodiversity, but are still ecologically important. Boreal forests are the world's largest terrestrial carbon sink and have the ability to sequester large amounts of carbon. Therefore, they are of particular importance in the struggle to mitigate global climate change. According to the World Resources Institute (2005), current aboveground forest biomass in Russia contains approximately 35.1 billion tons of carbon equivalents and has a tremendous capacity to maintain high sequestration levels in the future. An equally important consideration with respect to the carbon budget in boreal ecosystems is the expected release of carbon and methane trapped belowground in the permafrost, or perennially frozen ground, as it begins to thaw as a result of climate change. Permafrost exists in a quarter of the northern hemisphere's exposed land (that is, the land that is not covered in glaciers) and its presence depends on such factors as air temperature, snow depth, vegetation, soil, and orientation to the sun (UNEP, 2012).

“More than half of the forests of the Russian Federation grow on permafrost soils (Siberia and the Far East) in severe climatic conditions, which determine low productivity and the fragmentary nature of growing stock” (UN FAO, 2012, p. 5, Figure 2.1). Yet, to the west, in the European part of Russia, permafrost occurs only in the tundra and the forest-tundra zone on the Kola Peninsula (which borders Finland). The southern boundary of permafrost is as far north as the Kola Peninsula in the western part of European Russia, while in eastern European Russia and Western Siberia the permafrost extends only half-way down the length of the country. However,

in Eastern Siberia and the Russian Far East, “permafrost is spread almost everywhere, except for south Kamchatka, Sakhalin Island, and Primorijie” (Kotlyakov and Khromova , 2012, para. 1).³

Figure 2.1: Distribution of Permafrost in the Russian Federation



Source: Stolbovoi V. and I. McCallum, 2002

The major regions mostly void of permafrost—European Russia and part of Western Siberia as well as the southern part of the Kamchatka peninsula, Sakhalin Island, and Primorskiy Krai, which make up the southeastern coastal parts of Russia’s eastern-most province, the Far East—are geographically distant from each other (Figure 2.2). On non-permafrost soils, the diversity of tree species is affected by elevation, latitude and soil productivity rates. In European Russia, the forest structure is dominated by second-growth mixed coniferous species, which includes spruce and fir, and some pine, as well as birch and aspen (Nilsson et al., 1992). In the northern part of

³ The region known as Primorjie (several different versions of the transliteration are common but all originate from the Russian: Приморье) is an unofficial term that refers to Primorskiy Krai, Russia’s southeastern most district in its Far Eastern Federal Region which shares a border with Khabarovskiy Krai to the north, China to the west, North Korea to the southwest, and the Sea of Japan to the east.

the Far East, forests are predominantly larch⁴, with areas of spruce and fir. As has been mentioned, it is only the very southeastern provinces that are void of permafrost, where the forest structure is dominated by broadleaf hardwoods and conifers—particularly ash, oak, linden, spruce, fir, and pine—all of which are specific varieties of species that do not thrive elsewhere in Russia (Newell, 2004).

Figure 2.2: The Four Main Economic-Geographic Regions of Russia



Source: Newell, 2004

The Russian Far East (hereafter referred to as the RFE) is Russia’s easternmost economic region and spans 2.4 million square miles, which encompasses a little more than one-third of Russia’s total territory. This area is approximately two-thirds the size of the United States (Figure 2.3; Lee, 2013). Lee (2013) notes that the geopolitical significance of the RFE rests on its natural

⁴ In fact, within the Far East, “the larch forest of the Republic of Sakha...is the world’s largest single-species-dominant plant community” (Newell, 2004, p. 31).

resource wealth and on its strategic location in the North Pacific, where “the interests of several major powers intersect” (p. 1). In order to contextualize the empirical research conducted in this study, the rest of this chapter is split into three broad sections that detail the necessary background and literature related to the forest sector in the RFE: factors of production, federal and regional governance, and RFE forestry issues.

Figure 2.3: The Russian Far East Economic Region and all of its constituent provinces



Source: Mankoff and Barabanov, 2013

Factors of Production

The distribution of factors of production (raw materials, labor, and capital/infrastructure) throughout the territory of the Russian Federation is not consistent. For instance, the RFE's factor endowments are particularly telling; while the region possesses vast riches of natural resources, including forests, oil, coal, natural gas, gold, diamonds, other valuable minerals, and freshwater and fish stocks, the region's population is only 6.3 million (which is just 4.4 percent of Russia's total population). The RFE's regional products contribute to just 5.6 percent of Russia's total GDP (Lee, 2013). Furthermore, Russia's population is heavily urbanized. Approximately three-quarters of the Russian population are urbanites and, troubling for Russia's regional demography, four-fifths of Russia's biggest cities are in European Russia. (Table 2.1; Shaw, 1999). The Soviet government relocated people, settlements and industrial complexes

Table 2.1: Levels of urbanization across Russian economic regions, 1996 (percentages)

Russia	73.0
North	75.7
Northwest	86.2
Central	82.9
Volga-Vyatka	70.1
Central Black Earth	61.6
Volga	73.0
North Caucasus	55.0
Ural	74.5
West Siberia	71.0
East Siberia	71.4
Far East	75.8

Source: Shaw, 1999, p. 164

supporting natural resource exploitation and industrialization of Russia's natural resources based on political, rather than economic, criteria (Thornton, 2011). Shaw (1999) notes, "the major aim of Soviet migration policy was to induce people to locate in areas of labour shortage, especially in resource frontier regions of the north and east" (p. 158). Despite receiving significant compensation from the government to

live in remote areas, from an economic standpoint, "the lack of realistic measures of opportunity costs meant that, on the eve of the break-up of the former Soviet Union, everyone was in the wrong place and doing the wrong thing" (Thornton, 2011, p. 3).

As the Soviet Union collapsed, so, too, did the government's support to these remote regions (Thornton and Ziegler, 2002). The RFE is far removed from Russia's capital, Moscow, and in order to understand contemporary development issues facing the RFE it is important to understand how dramatically the Soviet Union's dissolution in 1991 affected this remote region. After the collapse of the Soviet Union in 1991, the RFE was severely neglected and financially abandoned by the central government, to the point where "the region lost about 20% of its population, and up to 90% of its heavy industry, plus a lot of its Pacific-based naval and air force capability" (Lee, 2013, p. 2). Thus, based on the limited criterion of economic efficiency, the outflow of population was a natural consequence of the lack of emergence of market alternatives.

Furthermore, in the first few years following the collapse of the Soviet Union, the forest products sector in Russia's Far East displayed negative value-added at world prices — that is, "assessed at world prices, the value of domestic output would not cover the cost of purchased raw materials alone, even if existing labor and capital prices were zero" (Thornton, 2011, p. 14). In order for the forest sector, as well as the fishery and agricultural sectors, to be competitive at world market prices, these sectors needed to increase and modernize their technical ability as well as significantly increase their efficiency (Thornton, 1996). Thus, in response to the lack of support from the central government after 1991, residents of the RFE began to "assert a measure of independence from the center and to make their own deals on trade and migration issues, which was really a survival strategy for the RFE's provinces in this difficult time" (Lee, 2013, p. 2). As a result, high levels of corruption, unofficial markets, and weak rule of law led to increased crime, capital flight and high levels of poverty in the RFE (Lee, 2013; Thorsteinson, 2012; Thornton, 2011). In an area as remote and resource-rich as the RFE, these illicit activities

became highly connected with the traditional mainstays of the RFE economy: the exploitation of its natural resources, including forestry (Lukin, 2007).

Importantly, the diversity of ecological conditions across Russia's regions is indicative of the diversity in economic conditions that exist. For instance, as a result of the expansiveness of permafrost soils and the low productivity rates of forests that grow on permafrost, only 45% of the total forest area of Russia is considered available for exploitation and the "predominant part thereof — in the European North, in the Urals and along the Trans-Siberian Railway — is exhausted as a result of intensive exploitation" (UN FAO, 2012, p. 5). Backman (1998) indicates that historically there has been a large disparity between levels of forest sector production between Russia's regions and that these differences can be attributable to the absence of adequate transportation networks over Russia's vast, forested territories, as well as to the differences in the quality of harvesting and production technology used. Given that Russia's forested territory is vast, the transportation of timber from forest to processing facility is logistically difficult. Most of Russia's major rivers flow north into the Arctic Sea, and thus timber in Russia is typically transported via road or rail. However, the quality of roads throughout Russia is poor, and this fact plus the lack of an extensive railroad network, severely limit the geographic extent of cost-effective timber harvesting operations.

The issue of high transportation costs in Russia spans most resource extraction industries; however, since logs are particularly heavy, the competitiveness of Russia's forest sector is impacted significantly, as it depends upon an efficient, extensive rail network for freight.

Currently, as a result of the high costs of transporting timber across Russia's expansive territory,

Russia's timber supply is geographically segmented and is predominantly split into eastern and western markets. In this regard, forest use in Russia can be understood as a trade-off between transportation costs and land rent, first noted with regard to agricultural land use by Johann-Heinrich von Thünen in 1826 (and known as von Thünen's model of land use). In Russia, a gradient of transportation costs exists given the lack of an extensive road and rail network, and thus there is heavy exploitation of forest resources within close proximity to established freight transportation routes (Backman, 1998).

Given the high cost of transporting wood, one important indicator of forest sector development in Russia is the ability for timber processing facilities to be located within reasonable proximity to the forests from which logs are harvested. Data from 2005 for Russia's regional wood processing capacity (the capacity each region has to process the amount of timber that is harvested within its jurisdiction) indicates that "in only two regions, the Northwest and Siberia, did [regional] processing capacity exceed 25% of the timber harvest. In the remaining five regions, which possess about half of the country's available harvest, the processing capacity averaged just 6.6% of the actual harvest and just over 3% of the economically available timber harvest" (Eastin and Turner, 2009, p. 1; Table 2.2). WWF (2004) noted the following breakdown of average production costs for logging operations in Khabarovskiy Krai and Primorskiy Krai in 2001: 41% share for fuel & energy, purchase of materials, outside service, etc; 17.4% labor costs; 15.5% tax payments; 14.6% commercial costs; 8.8% depreciation; 2.7% stumpage fees and rent. Importantly, WWF (2004) observed, "there is a direct correlation between the depth of involvement in wood processing and increased costs for fuel and energy" (p. 33).

Table 2.2: Comparison of the actual harvest, available harvest and processing capacity in Russian regions

	Actual Harvest (million cubic meters)	Economically Available Harvest* (million cubic meters)	Ratio of Actual to Available Harvest (%)	Processing Capacity (%)**
Northwest Region	44	59	74.6%	38%
Center Region	10	19	52.6%	13%
South Region	3	5	60%	2%
Volga Region	20	36	57.2%	11%
Ural Region	10	37	27%	5%
Siberia Region	32	64	50%	25%
Far East Region	14	33	42.4%	2%
Total	130.3	248.5	52.4% (AVG)	14% (AVG)

Source: CIBC, 2007

*Quantity that is economically feasible to harvest in each region. Eastin and Turner (2009) note "the disparity between the actual harvest and the economically available harvest varies across regions in Russia and is correlated with the available processing capacity and the existing transportation infrastructure in each region" (p. 1).

**Percentage of regional harvest that can be processed within the regional wood processing sector.

Russia's current share of the global trade in forest products, on a value basis, is below four percent (UN FAO, 2012). As has been mentioned, despite Russia's natural advantage of having more forests than any other country, it has not been successful at capitalizing on the potential value of its forest resources due to insufficient investments in technology, limited transportation networks with extremely high costs, and ecological constraints (permafrost and productivity rates) associated with working in temperate and boreal ecosystems (Nilsson and Shvidenko, 1997). Thus, the low levels of regional capacity to process timber that are found in every region throughout the country, and the lack of domestic forest sector development following the Soviet Union's collapse, led to large increases in the export of Russian roundwood, or unprocessed logs. In fact, between 2003 and 2005, Russia exported more roundwood than any other country (Global Trade Atlas, 2012).

Federal and Regional Governance

The high prominence of Russian logs in international markets was far from optimal from Russia's perspective of developing its own forest sector. If Russia could shift its forest sector away from exporting roundwood logs to more value-added wood products, it could increase employment in the timber-processing sector. Additionally, increasing the development of

modern forest processing industries within many of Russia's regions could also encourage more sustainable use of Russia's forest resources, as it could reduce the processing and transportation costs of low-valued wood species and pieces, such as branches and woodchips, thereby making them more cost-effective to use and process into products like paper, pulp, and wood-based panels. Following the break-up of the Soviet Union domestic demand for value-added forest products in Russia was predominantly been fulfilled by imports (Global Trade Atlas, 2012). Recently, domestic consumption of value-added forest products has been growing substantially and Russia continues to rely on imports (UN ECE, 2012). The development of regional value-added processing facilities could lessen Russia's reliance on imported value-added forest products and also allow its forest sector to contribute more to the country's GDP, but "such investment has not been forthcoming, primarily due to illegal logging, capital flight, and corruption" (Newell, 2004, p. 68).

Given the diversity of ecologic and economic conditions in Russia, it is important to remember that Russia is a single country⁵ and that it institutes national policies that are designed to affect its entire domestic forest sector. The Russian government, like all governments, uses both domestic and trade policies to achieve economic and non-economic goals. While Russia has ample forest resources, the ability to export profitably depends on domestic costs and on the prevailing exchange rate and thus Russia may not have a comparative or competitive advantage, necessarily, in value-added processing of certain forest products. Eastin and Turner (2009) warn that the institution of forest sector development policies by countries that appear to lack a clear basis for developing an export-oriented competitiveness in wood processing tends to result in an

⁵ Some forestry publications split Russia into two separate entities for the purposes of analysis – European Russia and Asian Russia. This is done to the extent that when European Countries are being evaluated, European Russia is considered, but not Asian Russia. While there may be some merit to this division (for example, the level of market segmentation that exists) it does not characterize the dynamics of the country adequately.

inefficient wood processing sector that is unable to compete internationally without the continued provision of subsidies over the long-term (Eastin and Turner, 2009). However, importantly, the Russian government has stated that it has a variety of economic and non-economic goals for the development of its domestic forest sector in forest-rich regions of Russia, like the Far East. Current President and former Prime Minister Vladimir Putin stated, “We strongly believe that our niche on the global market is in products with high-value added, including construction materials, paper and the like. New jobs should be created here in Russia, not elsewhere” (Russian Federation, 2010, para. 9).

Beginning in 2007, the Federal government initiated several forest sector policies with the hope of ameliorating the widespread corruption and illegal logging that had become characteristic of Russia’s roundwood exports (Russian Federation, 2010). These new policies were designed to encourage the development of domestic processing of value-added forest products. The first of the three major policy changes in 2007 was the revision of Russia’s national forest policy, the Forest Code. It is important to note that Russian forest policy has undergone significant changes in the last quarter century. In 1993, the first overarching post-Soviet forest policy was established, called the Forest Code of 1993. Two subsequent reformulations of forest policy have taken place, in 1997 and most recently, in 2006-2007. Each edition of the Forest Code has tried to bring Russian policy closer to other countries’ models of allowing individuals, companies and governments to have as complete as possible exercise of property rights in forest lands (see Table 2.3 for a description of the development of jurisdictional changes in the system of land management for Russia’s forest fund). Despite this, the legacy of Soviet bureaucratic structures and processes remain (Tysiachniouk, 2012).

Table 2.3: Jurisdictional Changes in the System of Land Management for Russia’s Forest Fund

Levels and Functions of Management		Foundational Forest Legislation, 1993	Forest Code, 1997	Federal Law No. 122 of 8/22/2004	Federal Law No. 199 from 12/31/2005, Forest Code, 2006
Russian Federation	Constitutive / Right establishing	+	+	+	+
	Property management	0	0	+	0
	Supervisory / Oversight	+	+	+	+
Subjects of the Russian Federation	Constitutive / Right establishing	0	+	0	+*
	Property management	0	+	0	+
	Supervisory / Oversight	0	0	0	0
Administrative Regions	Constitutive / Right establishing	0	0	0	0
	Property management	+	0 or +	0	0
	Supervisory / Oversight	0	0	0	0

(+) - function exists, (0) - no function exists, (*) - limited opportunities

Source: World Bank, 2011

The 2006 Forest Code continued the legacy of federal ownership of 92% of Russia’s forests (the entire Federal Forest Fund), but re-oriented many other structural aspects away from federal jurisdiction. (See Appendix A for a flow chart of forest land jurisdiction under the Forest Code of 2006, with details specific to the Russian Far East). Forest leases are currently offered through auctions to private companies, with lease rights now being the main means for timber harvesting. The minimum lease length is one year for uses such as mining or pipelines, but for forest management, the lease tenure can be from 10 to 49 years, with sub-leasing allowed. The move to decentralize forest governance was initiated by stripping the Federal Forest Agency (ROSLESHOZ) of much of their responsibilities and placing the Agency under the Ministry of Agriculture. The Federal Forest Agency was charged with fulfilling the duties of inventory, evaluation and monitoring of Russia’s forests (Lesniewska et al., 2008). This included overseeing pilot and full-scale projects, such as “monitoring using remote sensing, creating a central database for all forest users and logging permits, and devising a system of roadside checkpoints with electronic scanning” (Lesniewska et al., 2008, p. 11). In an effort to provide regions with more responsibility, the 2006 Forest Code stipulated that each province (or oblast, krai, respublik, or autonomous okrug) would need to create a provincial Forest Service with the

responsibility of ratifying, implementing, and clarifying the laws expressed in the Federal Forest Code.

The provincial forest services are split into three separate departments: forest management, inspection and monitoring, and commercial institutions. First, the department of forest management is charged with administration and forest management. Previously, “there were 3,500 forest district units (known as *leskhoz*s) that specialized in management logging and processing which have now been abolished. The new 2006 Forest Code replaced it with the ‘*lesnichestvo*,’ a forest district with no right to undertake commercial harvesting or processing operations, responsible only for administration and forest management” (Lesniewska et al., 2008, p. 12). Second, the department of inspection and monitoring is tasked with forest patrols and monitoring the general condition of the districts’ forests. These tasks were previously done by each district’s *leskhoz*; however, now that these tasks are administered at the provincial level, by far fewer appointed workers, there has been an overall reduction in forest oversight. The third and last of the departments are the commercial institutions which are only loosely under provincial oversight. That is, each province has set up a commercial enterprise that maintains its autonomy as an independent company, but employs many of those who used to work for the *leskhoz*s.

In addition to the new Forest Code, the government initiated two other policy initiatives: export taxes on roundwood and subsidy support for priority investment projects. By increasing the export tariff on roundwood logs (which would increase the price of Russian logs abroad), Russia intended to decrease exports of unprocessed wood and thereby direct log sales into the domestic

market. On February 5, 2007 the Russian government announced an *ad valorem*, or percentage-based, export tariff on roundwood that would increase incrementally each year. By instituting an export tax on unprocessed wood, the Russian government intended to decrease exports of raw wood in order to increase its price abroad and lower its relative price domestically, thereby directing log sales into the domestic market to encourage domestic roundwood use and production. As of January 1, 2007, the Russian Federation's tax on roundwood was 6.5%. However, by July 1, 2007, the tax increased to 20% and by April 1, 2008, the tax again increased to 25% (CIBC, 2007). While the government's goal ultimately was to raise the tax rate up to 80% by January 2009, Russian authorities announced in November 2008 that they would delay the increase to an 80% log export tax indefinitely. Citing the rapidly deteriorating global financial crisis, the government maintained that the tax rate would remain at 25% for both softwood and hardwood logs. Importantly, high export tariffs might have the effect of increasing the incentives to divert logs into the informal (illegal) export market as a means of tariff evasion.

This trade policy was meant to work in tandem with a form of subsidies for investments in wood processing infrastructure known as priority investment projects (Russian Federation, 2010). In 2008, Russia's Ministry of Industry and Trade (*Minpromtorg*) adopted a "Strategy for the Development of the Forest Complex to 2020," which formally enumerated policies designed to develop the domestic forest processing industry (MINPROMTORG, 2008). With the passing of Federal Resolution No. 419 on June 30, 2007, priority investment projects were established to encourage the development and modernization of wood-processing infrastructure throughout all of Russia. Status would be given to projects that had an initial investment of no less than 300 million rubles (MINPROMTORG, 2008). Additional perks were given to projects that were

selected for priority investment project status, like allowing projects to bypass public auctions as a way of attaining forest land (Bloom, 2010; UN FAO, 2012). Two additional resolutions have been passed—No. 53 February 2, 2010 and No. 450 on June 8, 2011—which stipulate additional selection criteria as well as detailed exceptions given to priority investment projects (MINPROMTORG, 2012). Post-hoc additions include: (1) requirements for more thorough detail in project applications concerning project planning, financing, and specific forest resource management and harvesting, and (2) a requirement that the Federal Forest Agency (*ROSLESHOZ*) must give their full agreement prior to the approval of each investment project (*ROSLESHOZ*, 2011).

In August 2012, Russia officially joined the World Trade Organization (WTO), which may significantly alter the short-term competitiveness of Russian forest products. In general, the “cumulative changes will move the [Russian] economy toward an open trade and investment model of economic development and away from an import-substitution industrialization economic model” (Tarr and Volchkova, 2010, p. 202). Rutherford and Tarr (2010) find that Russia will gain from WTO membership in three major ways: liberalizing barriers to foreign direct investment in services (like telecommunication, banking, insurance, and transportation); improved gains from trade due to tariff reduction which, in turn, improves domestic resource allocation; and the potential for improved access for select Russian products in markets of other WTO member states due to dispute settlement mechanisms inherent in WTO membership (like rights over anti-dumping and countervailing duty investigations). Russia’s accession to the WTO will affect the competitiveness of Russian timber in foreign markets, as well as change the

incentive structure of the domestic timber industry and thereby alter the domestic market (Sheingauz and Antonova, 2008).

Moreover, in the mid-2000s, after years of neglect, the Russian government re-oriented several policies towards the development of its most remote territory, the RFE. Simultaneously, in addition to seeking to re-establish an administrative system of governance, rule of law, and political control, the Russian government strove further to develop the area economically.⁶ Most recently, on May 21, 2012 the Russian government created a new State Ministry for the Development of the Far East (*Minvostokrazvitiya*). In addition to overseeing the government-sponsored investments that had already been created to develop the city of Vladivostok in preparation for hosting the 2012 Asia Pacific Economic Cooperation (APEC) Summit, this new ministry will oversee all \$31 billion federal investments recently pledged for the RFE (Lee, 2013). In order to develop the RFE economically, the Russian government has seen potential for mutual gain by establishing closer economic ties with its North East neighbors, and principally with China (Lee, 2013). In September 2009, presidents Dmitriy Medvedev of Russia and Hu Jintao of China signed an economic development cooperation program between the RFE and Siberian regions of Russia and the Northeast regions of the People's Republic of China (PRC). Lee (2013) notes that “considering that the PRC is short of just about every resource needed to sustain the country's pace of development – oil, natural gas, coal, most metals, timber, water, and so on; so China needs to forage in international markets to obtain these raw materials and to sell Chinese-manufactured goods to pay for them” (p. 4).

⁶ Lee (2013) notes that the real drive behind the economic development of the RFE, though, is not economic criteria, but political reasoning. He cites the following four primary reasons for the Russian government's eastern development initiatives: “1) to reaffirm and strengthen Russia's sovereign control over its eastern territories; 2) To send a clear message to outside foreign actors that Moscow is a serious player in the Asia-Pacific; 3) To make the RFE, especially its southern parts, into a modern and efficient hub to expand Russia's exchanges with the Asia-Pacific; 4) To stop population outflows and prevent demographic insolvency –the true Achilles' heel of Moscow's ambitious designs for its Far East” (p. 3).

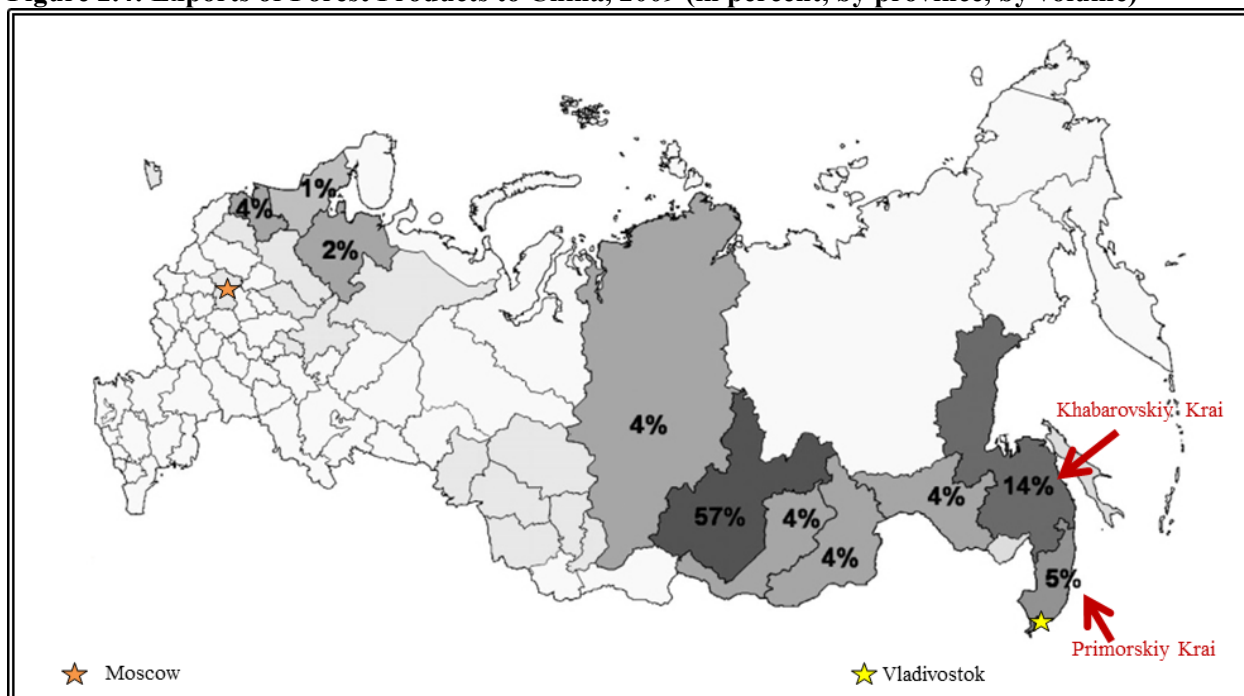
With regard to Russian-Chinese trade of forest products, it is important to note the significance of Russian exports to China (see Simeone, 2013a and Simeone, 2013b for a thorough discussion of the Russian-Chinese timber trade). China has become the largest importer of wood products in the world, and Russia's largest exports (in both quantity and value) of forest products (mainly in the form of unprocessed logs) are sent to China (Simeone, 2013a and 2013b). For example, in 2011, 73% of Russia's roundwood log exports were destined for China (Global Trade Atlas, 2012). With regard to this research, China's demand for timber on neighboring border provinces in Russia is of particular significance. While it is true that most of Russia's forest products' exports to China come from the Asian part of Russia, they do not primarily come from the RFE (Figure 2.4). WWF (2011a) notes:

There is a common misconception that Russian timber products export to China is mainly from the Far East. [...] We consider it to be true that nature of the Russian Far East mostly suffers from the consequences of trade. It is not correct to analyze the trade impact on forests of constituent territories on the basis of their share in the total timber export to China. Mixed coniferous broadleaved forest logging in the Far East causes stronger damage to biodiversity than logging of pine forests in the Irkutsk Oblast [the province with 57% of the share]. The share of stolen timber in the Far East is higher due to procurement of finewood (illegal procurement there amounts to 50%)” (p. 157-8).

While Figure 2.4 indicates the total percent of all forest product exports in 2009 to China by volume, it is worth recognizing that exports of wood pulp and paper from Irkutsk Oblast (the province with 57% share of exports, as labeled in Figure 2.4)—a region well known for its pulp and paper processing infrastructure—tend to understate the importance of roundwood exports from Khabarovskiy Krai and Primorskiy Krai (WWF, 2011b). Indeed, with regard to Russian roundwood exports, by province, to China, Khabarovskiy Krai takes the lead with a share of 33%. Irkutsk Oblast follows with a share of 22%, followed by Primorskiy Krai with a share of 11% and Krasnoyarsk Krai with a share of 10%. Importantly, 96% of all forest product exports

from the RFE in 2009 were unprocessed roundwood logs. In 2006, together Primorskiy Krai and Khabarovskiy Krai accounted for over 70% of the timber harvesting in all of the RFE (Forest Trends, 2006).

Figure 2.4: Exports of Forest Products to China, 2009 (in percent, by province, by volume)



Source: WWF, 2011a, colored annotations by author

A widely covered aspect of the Russia’s forest sector is the pervasiveness of illegal logging and corruption connected with log exports, especially exports of Russian logs to China—see publications from WWF (2013, 2011a, 2011b, 2004), Forest Trends (2009, 2007a, 2007b, 2006, 2005a, 2005b, 2004), Greenpeace (2006, 2002), and Environmental Investigation Agency (2012, 2007), as well as academic literature, like Robbins and Perez-Garcia (2012), and Krkoska and Korniyenko (2008). Many of these reports stress the ecological value of RFE forests. With regard to the commercial utilization of the forests of Primorskiy Krai and Khabarovskiy Krai, it is important to note that there are many inaccuracies with the official timber inventory data.

While many inaccuracies may have been attributable to outdated Soviet data (Newell, 2004), over the course of the last 20 years, inaccuracies may now be a result of the high amounts of unsanctioned or illegal logging that takes place and thus, without a real-time method of monitoring and inventorying the forests, the actual amount of standing timber stock can change while the ‘official’ data becomes out-of-date (WWF, 2013a).

RFE Forestry

As mentioned above, many of the RFE’s southern provinces are void of permafrost, or only have discontinuous permafrost, and thus are host to some of the most biodiverse forest ecosystems in all of Russia. It is for this reason that WWF (2011a) has chosen the Russian provinces that border China to be eco-regions that are “environmentally valuable for the whole world...[that is,] eco-regions that are characterized by a particular species of plants and animals, environmental communities, ecosystem dynamics and environmental conditions” (p. 160) (See Appendix B, Figure B.1). In particular, WWF (2011b) has identified the coniferous broad-leaved forests in the Southern part of the RFE (Figure 2.5)—and specifically, Primorskiy Krai and Khabarovskiy Krai—as the most important area since there are endemic plant and tree species as well as endangered Amur tigers and Far Eastern leopards. However, the Soviet Union, and to a certain extent the Russian Federation, never made environmental quality and protection a basic priority of government policy and, as such, it is important to note that the government “has paid even less attention to ecological concerns in the Russian Far East than in the rest of the country, especially since it is viewed by many in Russia as a kind of natural resource-rich appendage and not as a genuine part of the country” (Lukin, 2007, p. 24).

Figure 2.5: The coniferous-broadleaved forests (dark green) of the Southern RFE



Source: Newell, 2004

This has led to a significant decline of some of the most valuable hardwood and softwood species found in the southern RFE despite these forests being under the scrutiny of international NGOs for years. In addition to Primorskiy Krai and Khabarovskiy Krai, there are a total of two other border provinces in the RFE that share a border with China—Amurskaya Oblast (the region west of Khabarovskiy Krai labeled 4% in Figure 2.4) and the Jewish Autonomous Republic (JAO) which is the unlabeled small province nestled to the south in between Amurskaya Oblast and Khabarovskiy Krai. These two regions used to have more expansive forests and hence productive exports, but Newell (2004) notes that production in these regions

has dropped substantially over the course of the last 30 years and is due to “heavy over-logging of accessible timber stands during the 1970s and 1980s” (p. 69). Hence, with regard to current production and exploitation of forests along the Russian-Chinese border, Forest Trends (2006) notes, “the richest and most heavily exploited forests in the Russian Far East are in Primorskiy Krai and Khabarovskiy Krai” (p. 3).

A brief look at the ecology of the forests of Primorskiy Krai and Khabarovskiy Krai will provide a necessary background prior to reviewing the research methods and discussing the results of this study. The eastern side of the RFE is part of the Pacific Rim, also known as the Ring of Fire for its large number of earthquakes and volcanoes. The topography of the RFE along the Pacific Ocean is quite varied, but can be generally considered a mountainous area with several different mountain ranges with average mountainous elevations between 3 to 6 thousand feet (Sheingauz, 2003).⁷ While the Krai administrative regions separate the very southern part of the RFE (Primorskiy Krai, 64 thousand square miles) from its neighboring Krai to the north (Khabarovskiy Krai, 304.5 thousand square miles), the ecological differences between the two regions are primarily a function of latitude, elevation, and any historical legacies related to differences in resource exploitation (Newell, 2004).

The Sikhote-Alin mountain range extends as a low-ridged divide⁸ running northwest to southeast parallel to the coastline of the Sea of Japan through most of Primorskiy Krai and through the southern part of Khabarovskiy Krai. A subsection of the Sikhote-Alin in Primorskiy Krai that

⁷ The highest elevation in the RFE is Klyuchevskoi Volcano on the Kamchatka Peninsula which is over 15 thousand feet tall (Newell, 2004).

⁸ The highest peak in the Sikhote-Alin Mountains is Mount Oblachnaya (6,085 feet), but the average height the range is around 3,000 feet. In many respects, topographically speaking, the Sikhote-Alin range has strong similarities to the northern part of the Appalachian Mountains in in New Hampshire and Maine, USA.

directly borders Khabarovskiy Krai has been named a UNESCO World Heritage Site since 2001, cited for being

one of the world's most distinctive natural regions. The combination of glacial history, climate and relief has allowed the development of the richest and most unusual temperate forests in the world. Compared to other temperate ecosystems, the level of endemic plants and invertebrates present in the region is extraordinarily high which has resulted in unusual assemblages of plants and animals. For example, subtropical species such as tiger and Himalayan bear share the same habitat with species typical of northern taiga such as brown bear and reindeer. The site is also important for the survival of endangered species such as the scaly-sided (Chinese) merganser, Blakiston's fish-owl and the Amur tiger. [...]The Sikhote-Alin protected areas are considered to contain the greatest plant and animal diversity on the north-western coastline of the Pacific. [...]The unique combination of its severe climatic characteristics, physical isolation, and traditional resource use by the Udege and other indigenous peoples, has meant that 80-90% of the region's vegetation still remains as dense temperate forest and taiga (UNESCO, 2013).

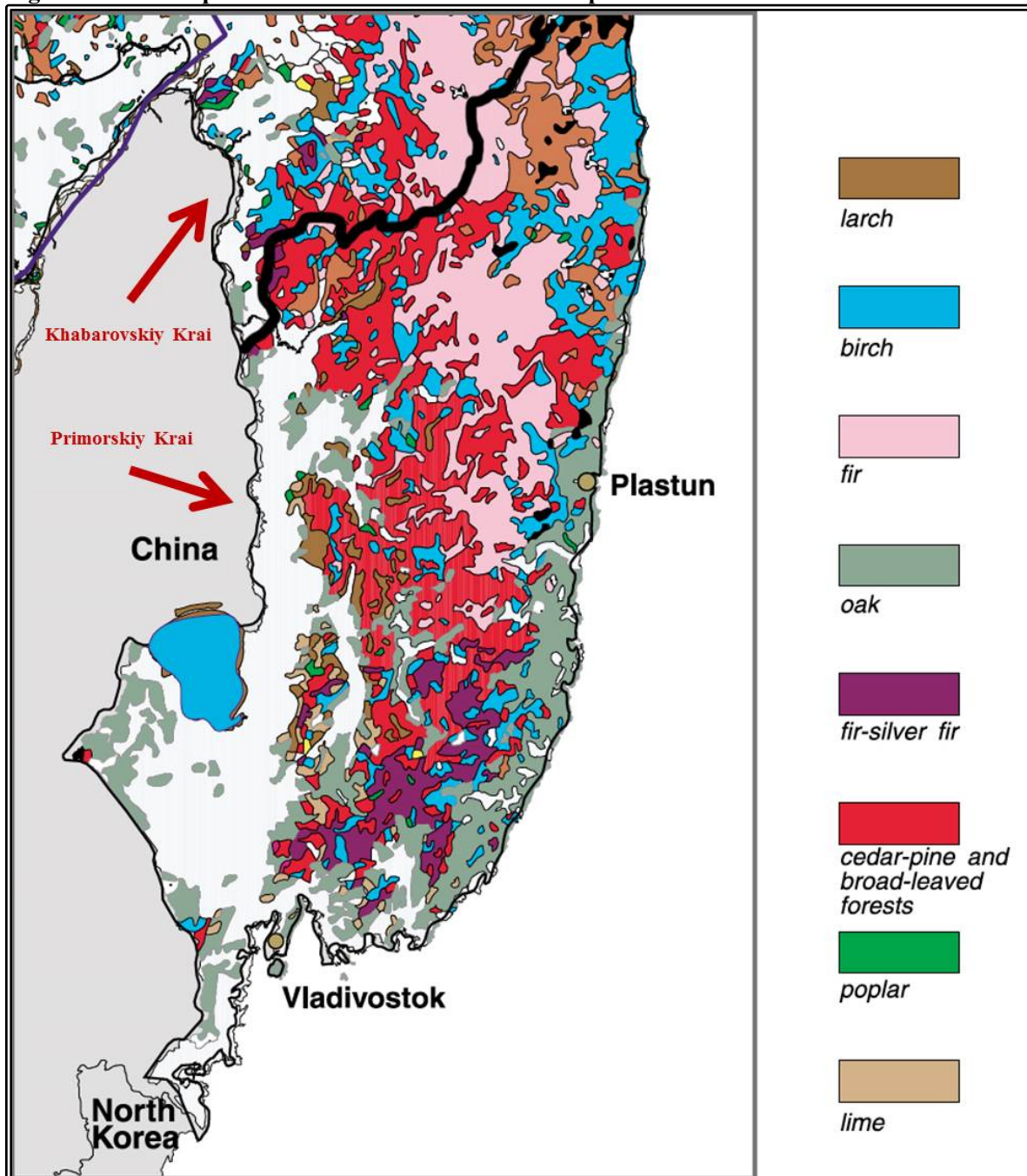
The extensive rivers on the western side of the Sikhote-Alin range flow west into the Ussuri river, which is a major tributary of the Amur River, a well-known river in the RFE that runs south to north and forms the border between Russia and China (Newell, 2004). In contrast, the short, fast-flowing rivers that flow from the eastern side of the mountains flow east into the Sea of Japan. Most of the rivers that flow east off the Sikhote-Alin mountains are not longer than 30 to 60 miles and are salmon-and other migratory fish-bearing. In Primorskiy Krai, there is approximately 80% forest cover (Newell, 2004). Not only is this region home to the aforementioned species cited by UNESCO, but also to the two most well-known 'charismatic megafauna' of the region: the endangered Amur tiger (*Panthera tigris altaica*) and the critically threatened Far Eastern Leopard (*Panthera pardus orientalis*). The Amur Tiger (sometimes called the Siberian Tiger in English incorrectly, since no tigers live in Siberia) is the largest living felid and lives throughout the forests of Primorskiy Krai and the Sikhote-Alin mountains with a total population no greater than 400 individuals (See Appendix B, Figure B.2).

In the very southwestern portion of the Krai (near where Primorskiy Krai borders China and North Korea), as of 2004, there were approximately 30 to 36 remaining Far Eastern Leopards, the most northerly subgroup of leopards (Newell, 2004) (See Appendix B, Figure B.3).⁹ As indicated in Figure 2.6, in Primorskiy Krai and southern Khabarovskiy Krai, there “is a mixture of zones with different dominant species, such as Korean pine (called cedar in Russia –*Pinus koraiensis*), Mongolian oak (*Quercus mongolica*), linden or lime-tree (*Tilia spp.*), Manchurian ash (*Fraxinus mandshurica*), elm (*Ulmus spp.*), and maple (*Acer spp.*)” (Forest Trends, 2004, p. 5). Korean Pine, has served as an important pine nut source for many of the native indigenous people of the RFE, and thus the harvesting of this tree for commercial purposes was banned between 1990-2007 and in 2010 the ban was re-instated (WWF, 2008, 2010) (See Appendix B, Figure B.4).

Most of these mixed conifer and broadleaved forests are second growth, but there are still areas of virgin mixed Korean pine–deciduous forests (Forest Trends, 2004). In the southwest of Primorskiy Krai, the rare Manchurian fir (*Abies holophylla*) grows and in the north of the Krai and at higher elevations Ayan spruce (*Picea ajanensis*), East Siberian fir (*Abies nefrolepis*), and Dahurian larch (*Larix gmelini*) are abundant (Newell, 2004). North of Primorskiy Krai is Khabarovskiy Krai, which stretches over 1,000 miles north to south (its northern zone areas come within 300 miles of the Arctic circle and its southern area is approximately the same latitude as Seattle at 47°), and thus while the forest ecosystems in the southern part of the Krai closely resemble those of Primorskiy Krai, farther north in the upper mid-part of Khabarovskiy

⁹ “Only about 60 [Far Eastern leopards, also known as Amur Leopards] remain in the wild –between thirty to thirty six in southern Primorskiy Krai, fifteen in Jilian Province, China, and perhaps five or ten in North Korea” (Newell, 2004, p. 112)

Figure 2.6: Tree Species Distribution in the Southern part of the Russian Far East



Source: WWF, 2002

Krai, larch, spruce, fir and European red pine dominate the forest. In the northern part of the Krai, mountains and valleys alike are covered with tundra and lichen-covered rock (Newell, 2004). Sheingauz (2003) notes, “the ecological capacity of the RFE, especially of its northern and mountainous areas, is relatively small” (p. 16). Despite the ecological limitations of RFE

forests, WWF (2004) notes that after 1991, during the transition period, the number of companies involved in the forest sector increased dramatically. “The number of enterprises in the regional forest sector grew faster than the regional economy’s average. [...] Many small enterprises were (and still are) established for short-term harvesting” (WWF, 2004, p. 26). These small enterprises (companies) do not have the capability to invest in modern, expensive equipment and technology, nor do they have the means to invest in local infrastructure development, including building quality forest roads (Nystén-Haarala and Kotilainen, 2009; WWF, 2004). Additionally, small firms may have a hard time trying to achieve voluntary forest certification given their financial constraints (Tysiachniouk, 2012).

While all official statistics in Russia suggest that during the first ten years following the break-up of the Soviet Union, in the 1990s, there were more than 500 individual forest users operating in the forest industry in Khabarovskiy Krai, official department statistics vary widely as to how many firms existed into the 21st century. WWF (2004) notes that the official number of forest users in 2003 ranges from 156 to 558 logging enterprises and that the difference could be due to the enumeration of small firms that do not fall under the jurisdiction of the Ministry of Natural Resources, as well as the inclusion of non-independent logging firms, or ‘subsidiary manufacturers.’ One of the results that experts predicted might happen as a result of the 2007 federal policy initiatives was that small timber harvesting companies would “most likely be forced to stop independent logging businesses and to proceed with rendering of procuring series to larger corporations or will be compelled to switch to other businesses” (Teplyakov, 2011, p. 106). While Nystén-Haarala and Kotilainen (2009) note that the federal government has been encouraging development of bigger companies by its forest policies, Tysiachniouk (2012) notes

that the primary barriers to sustainable forest management in Russia are the continuous restructuring of the forest management system (inclusive of the 2006 Forest Code) and the lack of implementation and enforcement of state forest policy. Importantly, “the enforcement of forest management [in Russia] is weak, compared with Finland, Sweden, and Canada (Tysiachniouk, 2012, p. 109).

Gap in previous literature

Several academic studies (Simeone, 2012; Solberg et al., 2010; Tarr, 2010; Makela, 2009; Tykkylainen and Lehtonen, 2008; Khramov et al., 2008; Turner et al., 2008) have focused on trade-related aspects of Russia’s 2007 forest sector initiatives (principally, Russia’s decision to increase export taxes on roundwood), and how these policies affected the Russian and global wood product sectors. Many of these recent studies have emerged from research institutes in Europe (for instance, European Forest Institute [EFI], Finnish Forest Research Institute, and International Institute of Applied Systems Analysis [IIASA]) and thus the scope of research from these institutions is typically limited to European Russia and Russia’s trade with Europe. There has been very little English-language academic research¹⁰ about the forest industry of Siberia and the RFE and Russia’s timber trade with China. Current English-language academic research on forestry in Russia tends to focus on regional northwest conflicts over natural resources, including forestry (see Nystén-Haarala, 2009), environmental activism (see Henry, 2010) or the emergence of voluntary forest certification (see Tysiachniouk, 2012). In the first decade following the

¹⁰ Naturally, there is much research conducted in Siberia and the Far East on Russia’s domestic forest industry and trade issues. The late Dr. Alexander Sheingauz (1933-2007) of the Economic Research Institute of the Russian Academy of Sciences, Far Eastern Branch was responsible for authoring, or co-authoring, over 200 academic monographs in both English and in Russian on the economics of the RFE timber industry and conservation. His last article, titled “Implications of Russia’s Accession to the WTO for the Growth of the Far Eastern Federal District Timber Complex” (Sheingauz and Antonova, 2008) was published post-mortem and was co-authored with his former student, Natalia Antonova. Additionally, in 2008, Antonova and others co-authored and published a post-mortem 185-page monograph in Russian titled “The Forest Sector of the Russian Far East.” While Antonova and other of his former students continue his legacy, since Sheingauz’s passing there has been an observable drop in academic research on this topic.

break-up of the Soviet Union, researchers at the Center for International Trade in Forest Products (CINTRAFOR) as well as the Departments of Economics and Geography at the University of Washington, in Seattle, formally studied the forest industry in the RFE.¹¹

Compared to the low levels of academic literature on recent forest sector issues in the RFE, research conducted by environmental non-governmental organizations (ENGOS) since 2007 has been prolific (See WWF, 2013a, 2011a, 2011b; Forest Trends, 2009, 2007a, 2007b; and Environmental Investigation Agency, 2012). Many ENGOS have researched and written about the ecological importance of the RFE, the high levels of illegal logging, and the emergence of illicit timber trade between Russia and China since the mid-to-late 1990s. Several of these reports are published by ENGOS with co-authorship by academics. One of the limitations of these collaborations, in this regard, is that the research team implicitly has become one of the stakeholders that are within the purview of the subject of their analysis. That is, ENGOS engaging in empirical research most likely already have policy recommendations in mind.

¹¹ It is near impossible to research natural resource issues, including forestry, in Russia and the Russian Far East without citing the scholarship that has come from this University. I feel very fortunate to have joined the ranks of these scholars in their drive to better understand resource use in a part of Russia that is of particular geopolitical significance, given the recent re-orientation of many countries' towards Asia and issues in the Pacific Rim and Arctic. Current research is carried out by Economics Professor Judith Thornton, Geography Professor Craig ZumBrunnen, and various professors and graduate students at the Center for International Trade in Forest Products (CINTRAFOR) in the School of Environmental and Forest Sciences. The research and writings of former University of Washington scholars, Josh Newell (2008 PhD in Geography), and former CINTRAFOR Professors Charles Backman and Tom Waggener support the University of Washington's position as an important Russian forest sector research center.

3) Methods

The goal of this thesis was to develop a ground-level understanding of current issues affecting forest sector development in the RFE and understand the extent to which recent federal government policies designed to develop and modernize its domestic forestry sector are seen as effective. Yin (2009) defines case study research as “an empirical inquiry about a contemporary phenomenon (e.g., a “case”), set within its real-world context—especially when the boundaries between phenomenon and context are not clearly evident” (p. 18). The specific ‘case’ of this research is the southeastern provinces of the Russian Far East, specifically Primorskiy Krai and Khabarovskiy Krai.

Based on the work of Simeone (2013a, 2013b, 2012), the overall assumption of this research is that the Russian government’s attempts in 2007- 2008 at policies that would provide incentives for forest sector investments and modernization did not fully address some of the underlying issues with rule of law, property rights enforcement, and evasion that still exist in many areas of Russia. Thus, while the recent federal government’s policies may have helped the RFE forest sector develop in some aspects, these policies may still allow for de facto arrangements between stakeholders which continue to entangle forest sector development with controversy and struggle.

To achieve the goal of this study, I examined and categorized current stakeholders’ perceptions of the current issues and challenges surrounding forest sector development in the RFE. The survey instrument (in the form of interview questions) was designed to be open-ended, yet semi-structured to allow for ample time for views and opinions from each participant (Creswell,

2003). The study design and sample survey questions were reviewed and approved for their compliance with the University of Washington's Institutional Review Board of the Human Subjects Division (IRB approval number 43282). The interview question framework was modeled after two well-known sources: The World Bank's Doing Business Survey methodology (World Bank, 2012) and the European Bank for Reconstruction and Development's (EBRD) Business Environment and Enterprise Performance Survey (EBRD, 2012). Content of the interview questions was developed and based on theory regarding the economic and environmental implications of broader forest sector research in Russia as well as the author's knowledge of current forest sector issues in the southern RFE.

Key interviewees were selected based on their involvement (either direct or indirect) with the timber industry in the RFE. All potential interviewees were contacted by email and phone and sent a copy of the research introduction (see Appendix C). All interviews were conducted one-on-one, in-person, by the author. Given the length of the survey instrument (see Appendix D) and the varying professions and specializations of the interviewees, only a select handful of questions (across survey instrument modules) were selected prior to each interview based on their appropriateness to each interviewee's area of expertise. While several questions posed to all interviewees overlapped, there were also questions that only were asked of a couple of interviewees. The interview was structured in such a way to dissuade polar responses (that is, yes-no responses) but instead to encourage interviewees to feel comfortable elucidating on points each interviewee felt were important. Due to time constraints, periodically the interviewee was asked to make his/her point more concisely in order to move on to additional topics. All interviews were conducted in Russian, except for one* (which is noted with an asterisk in the

table of interviewees), and the average interview length was 33 minutes. All interviews were recorded using a handheld digital voice recorder (Olympus VN-702PC). Interview conduct was structured on principles identified in EBRD’s Management, Organisation and Innovation Survey (MOIS) pamphlet titled “Understanding the Questionnaire” (EBRD, 2008). Based upon interviewee availability, interviews were conducted with the following eleven individuals:

<u>Region of Work</u>	<u>Generic Title</u>	<u>Generic Description of Place of Work</u>
RFE	Employee	Environmental NGO (ENGO)
RFE	*Employee	Construction worker in RFE and former logger
RFE	Senior Staff	Regional RFE Forestry Research Institute
RFE	Specialist	Regional RFE Agency Forestry Department
RFE	Senior Administrator	Provincial Government Committee on Forest Industry
RFE	Senior Executive	An RFE Timber Company that produces value-added products
RFE	Administrator	Nature Reserve located in the RFE
Moscow	Advisor (A)	Federal Duma's Committee of Natural Resources
Moscow	Senior Employee	A division under the Federal Forestry Agency
Moscow	Advisor (B)	Federal Duma's Committee of Natural Resources
Moscow	Senior Administrator	A Forestry Institute

Each interview recording was transcribed from Russian audio to Russian text. All transcripts were read multiple times while simultaneously listening to the audio recordings to ensure accuracy and to identify the beginnings of potential overlapping themes. The transcripts were then imported into the computer program ‘NVivo’ (Doncaster, Victoria: QSR International, version 9) for data analysis. Both inductive (primary) and deductive (secondary) methods of coding were used to ensure comprehensive analysis for a grounded theory approach to the data (Saldaña, 2009). Inductive coding and analysis refers to “approaches that primarily use detailed readings of raw data to derive concepts, themes, or a model through interpretations made from the raw data” (Thomas, 2006, p. 238). Deductive coding and analysis, on the other hand, refers to “data analyses that set out to test whether data are consistent with prior assumptions, theories, or hypotheses identified or constructed by an investigator” (Thomas, 2006, p.238). Exploratory method First Cycle coding was used to group data into categories of similar broad concepts. The

process of First Cycle coding continued until each interview had been initially coded and then re-coded through Structural Coding (Saldaña, 2009). After First Cycle coding was completed, Second Cycle coding was used to develop categorical, thematic, and conceptual codes from the First Cycle codes. Concepts that were mentioned only once by interviewees were not considered ‘themes.’ Focused Second Cycle coding was then used to “develop the most salient categories in the data corpus” (Saldaña, 2009, p. 155). It was in this stage of coding that some deductive coding techniques were used in order to link larger important concepts together. The inductive method of Axial Coding was then used to “strategically reassemble data that were ‘split’ or ‘fractured’ during the Initial Coding process” (Saldaña, 2009, p. 159). During this stage of iterative coding the final themes emerged and could be adequately and succinctly described and connected to other themes and sub-themes. What follows is a presentation of the most salient themes from the interviews, drawing upon the breadth of views expressed by each interviewee. Quotations are used to exemplify the issues that are brought up by interviewees. All translations that appear in this thesis are the author’s. The results are presented (in Chapter 4) and then followed by a discussion of the most salient themes as well as an overall conclusion (in Chapter 5).

4) Results

Interviewees expressed their views on a variety of topics on current forest sector issues. For data analysis, topics were split into three overarching categories: factors of production (section 4.1), federal and regional governance (section 4.2), and RFE forestry (section 4.3). Each category contains several themes centered on the topic of each main category; all themes contain multiple sub-themes (See Appendix E for a full outline of the categories, themes and sub-themes).

4.1 Factors of Production

Interviewees discussed several aspects of labor, land, and capital/infrastructure (and their associated costs) that are needed to operate in the forestry sector in Russia. These variables, known as factors of production in economics, are the inputs to any production process and all three are required simultaneously in some combination in order to produce any given commodity. Interviewees' comments on Labor and labor productivity (Theme 4.1a), land-forests (Theme 4.1b), capital-infrastructure (Theme 4.1c), and costs associated with production factors (Theme 4.1d) are presented below.

Theme 4.1a: Labor and labor productivity

All of the interviewees who spoke about labor acknowledged several issues related to the implications with local workers in the RFE. A Senior Staff member from an RFE Forestry Research Institute noted the distinct lack of labor in the Far East:

Здесь нету... трудовых ресурсов. There is no workforce here.

Several interviewees brought up the presence of foreign workers in the RFE forest sector and noted that they feel that many Russians in the Far East do not want to work under tough working conditions and be sent to remote areas of the province. Thus, many companies feel the need to attract foreign workers. A Senior Administrator of an RFE Provincial Government Committee on Forest Industry noted:

Не всех всегда устраивает, поэтому компании вынуждены привлекать иностранную рабочую силу.

Not everyone is always satisfied, so companies need to attract foreign labor.

The dynamic that this creates for businesses engaged in value-added processing can be difficult, however. A Senior Executive for an RFE Timber Company that operates processing facilities observed that Russian labor productivity is low, yet not necessarily cheap. The willingness of foreign workers to work for cheaper wages makes their labor more competitive:

Мы испытываем очень большое давление со стороны Китая, потому что много очень китайских рабочих...и этот поток дешевой рабочей силы, он соответственно определенно давит.

We feel a lot of pressure from China, because there are a lot of Chinese workers...and the flow of cheap labor definitely puts pressure on us.

This same Senior Executive of the Timber Company observed that their main concerns, in this regard, were the mechanization and productivity of labor. Meanwhile, an RFE Construction Worker and Former Logger noted from firsthand experience that forest sector workers can be trained easily and that Russian ingenuity can be a real asset. Yet, the Construction Worker also commented on the culture of hard drinking in Russia, and spoke about how the culture of alcohol consumption in Russia can severely limit worker productivity.

Theme 4.1b: Land –Forests

Several issues came up when discussing forest-use issues with interviewees. The two factors that interviewees discussed the most were the length of forest leases and the process of acquiring a lease (and commentary on that process). Two interviewees expressed their opinions on the 10 to 49 year tenure length. A Senior Administrator to a Forestry Institute in Moscow indicated that even though 49 years is the maximum lease length,

Многие регионы дают на 10 лет, не больше, некоторые на 20 или 25, это у кого какие подходы

Many regions give out 10-year leases, or shorter, whereas some give out 20- or 25-year leases; it depends on their approach.

And an Advisor(A) to the Russian Federal Duma’s Committee of Natural Resources noted:

У нас минимальный срок представления в аренду ну например для заготовки древесины 10 лет, максимальный 49 лет, фактически это практически собственность ну, за исключением возможности распоряжаться землей и продавать ею, да это в общем то достаточно широкий спектр полномочий собственника.

We have a minimal lease term for, say, harvesting timber, which is 10 years and a maximum term of 49 years –in fact, it’s almost private property, except for the ability to dispose of land and sell it –so generally the owner has a fairly wide range of authority.

An important aspect of the ‘Land-Forests’ theme was interviewees’ perceptions about the process of acquiring rights to lease forest land. Many interviewees were asked to describe the process of leasing forest land and then asked to comment on it. Box 4.1 indicates the process as it was understood and described by interviewees. Several aspects were corroborated by more than one interviewee and all of the major steps were agreed upon by all interviewees who spoke about the process.

Box. 4.1: Process of Acquiring a Lease to Harvest Forest Land¹²

- 1) Forest Fund land (land that is available to be leased or be protected) is categorized into that which is currently leased (Фонд арендованных лесных земель) and that which is unleased (Фонд неарендованных лесных земель [свободный фонд]). Unleased forest land, in addition to being available for leasing, is also available in the interim by contract for intermediate thinning or 'salvage operations' or 'sanitary logging' (all designed to improve forest health).
- 2) Company files a request and submits an application in writing to the authority in charge of forest management for the region in which the forest is located (in Primorskiy Krai this is the Департамент лесного хозяйства Приморского края / Forestry Department of Primorskiy Krai (<http://www.primorsky.ru/authorities/executive-agencies/departments/forestry/>) and in Khabarovskiy Krai this is the Управление лесами Правительства Хабаровского края / Forest Administration of Khabarovskiy Krai (http://www.khabkrai.ru/regime/upr_les.html). Along with request, a deposit is submitted to secure space in an upcoming auction.
- 3) The above authority begins the process needed to hold an auction for the lease of the requested area by:
 - a) Preparing a forest inventory (проектирование лесного участка) which provides information on the allowable harvest volumes, species composition, economically feasible timber, etc.) and other documentation about the area and making this information public at least sixty days prior to the auction itself.
 - b) Evaluating and reviewing the completeness of the information provided to potential bidders of the auction.
- 4) The auction is conducted. The losing companies have their deposit returned to them.
- 5) Within 10 days after the auction is held, the regional authority must issue a provisional lease contract to the highest bidder (hereafter, referred to as 'tenant') for the agreed upon term. Within 1 month the lease contract (договор) must be registered with the official government arm that registers the transaction of the real estate (Federal: <https://rosreestr.ru>, Primorskiy Krai: <http://www.to25.rosreestr.ru>, Khabarovskiy Krai : <http://www.to27.rosreestr.ru>)
- 6) By entering into a contract with the government, the tenant agrees to pay the lessor (federal government) a land rent (арендная плата) on a monthly, or quarterly, basis. The amount of this land rent is based on the initial inventory completed by the regional authority. If at any point the rental rate is not paid, in accordance with contractual obligations, the federal government will submit a claim to the court for termination of the contract. In addition to the accrual of interest, a penalty fee for the termination of the contract (termed 'damages from breaking the contract') can be added to the initial debt that the firm owes the government.
- 7) The tenant receives a forest harvest declaration and can begin operations.
- 8) The tenant may contest certain issues in the contract (договор), like liability.
- 9) The tenant is required to submit a project plan to the regional forest management department which can be very similar to pre-auction documentation, but will contain adjustments to planned commercial harvest volumes, thinning volumes, as well as planned replanting estimates.
- 10) The tenant may hire a forest inventory company to re-calculate volumes so as to assure more accuracy.
- 11) The regional forest management department is required to monitor the tenant and make sure their practices do not deviate from the volumes stipulated in the lease contract. Yearly, provinces administer a bidding process to inventory leased land. Inventories are carried out by the winning firm, which is typically a local affiliate of the national forest inventory enterprise (the national enterprise is ROSLESINFORG/ Рослесинфорг, while the Far East provincial affiliate is DALESPROEKT / Дальлеспроект). With the assistance of the provincial forestry department, these enterprises do spot checks on forest land where forest management activities had been carried out. The tenants can select the local *lesnichestvo* to assist their case in checking for compliance and yearly (non-public) reports are produced in which the quality of work is rated. One thing that is often checked for is the volume of replanting, which can, at the minimum just entail the promotion of natural regeneration (содействие естественному возобновлению леса). If the company has not engaged in reforestation within one to two years of a commercial harvest, then the company risks paying fines. On non-leased land, these checks on forest management activities are done in order to oversee how well public funds were utilized.

¹² The process, as described by the interviewees, does represent an accurate understanding of the actual process that is outlined generally in the Forest Code (Russian Federation, 2006).

Interviewees were then asked to comment on the leasing process. With regard to the auction mechanism (steps 3 and 4 in Box 4.1), a Senior Administrator at a Forestry Institute in Moscow indicated that companies previously entered into a competition for concession based on what services they would provide (which included things such as technology, financing, local employment, etc.). Yet, this interviewee noted that the new system of auctions that was instituted with the new Forest Code of 2006 meant that firms the winner of an auction was whichever company was willing to pay the most money. The highest bidder, and hence winner of the auction was not necessarily the company that would help the economy of the forest industry the most. The previous system of competition for concessions was viewed by this interviewee as more of a mechanism of accountability than the current system of auctions.

An additional element of the auction mechanism that was discussed is that there are ways for companies to engage in racketeering and collusion during the auction process. A Senior Administrator at a Forestry Institute in Moscow explained how racketeering can happen:

В России все таки идет сговор и он уже идет перед аукционом, могу сказать схему как это происходит, я сам(а) бывал(а) на таких аукционах и наблюдал(а) со стороны, вот например, берём какой-то регион, 10 компаний хочет выйти на аукцион, приезжает одиннадцатая из Москвы и говорит давай мне деньги иначе я тебе буду повышать цены умышленно, если тот откажется то он ему сорвет аукцион, он доведет до каких-то космических цен и договор не состоится ни у кого.

In Russia, there are companies engaged in conspiracy prior to the auctions. I myself have witnessed auctions from the side where, take, for example, some region where 10 companies want to go to auction. An 11th firm from Moscow comes to the others and states, “give me money or I will raise the price intentionally.” If the initial company refuses, then the 11th firm would disrupt the auction by raising the price to some outrageous price so that no one would end up winning the contract.

This interviewee continued to describe how collusion can take place:

Появилась возможность заключать договор с единственным участником - тоже может быть сговор. Договорились что на этот участок вот ты идешь, на другой вот - ты один, и с тобой по минимальным ценам заключают договор.

There is also now the opportunity to enter into a contract with a single participant-competitor in the auction. This can be turned into collusion. Prior agreements can be made with auction participants stipulating that one company win one auction at the reserve price, another company win another auction at that reserve price, etc. Contracts are awarded then at only the minimum reserve lease prices.

Another aspect of the leasing process that one interviewee spoke about was the requirement to monitor and check harvest activities on leased land (step 11 in Box 4.1). According to interviewees, regional forest management departments are responsible for monitoring work of tenants, but as a Senior Staff of a Regional Forestry Research Institute noted:

Если, например, принципиально, если они [арендаторы] не выполняют какой-то из пунктов этого договора, их должны в принципе лишать аренды. Но обычно сходит всё с рук.

For instance, if they [leaseholders] don't fundamentally fulfill any aspects of the contract, then they should, in principle, have their lease revoked. But usually they get away with anything.

Theme 4.1c: Capital –Infrastructure/Roads

When thinking about capital and infrastructure as a production factor in Russia, one of the most fundamental aspects of infrastructure is a transportation network. The expansiveness of Russia's territory given its lack of transportation infrastructure was of concern to several interviewees. In particular, an Advisor(B) to the Russian Federal Duma's Committee of Natural Resources noted that there are:

Огромные площади где нет дорог где трудный доступ, там вот как раз Дальний Восток, вот Сибирь там огромные площади, где за неделю месяц не обойти пешком.

Huge expanses of territory where there are no roads; it's hard to suppose that, for instance, in the Far East or Siberia, there are such huge expanses where you wouldn't cover the whole territory by foot in a week, or even a month.

A Senior Engineer for a division under the Federal Forest Agency in Moscow noted that the biggest concern for Russian forestry is the low density of forest roads:

Для нас ну для лесов России, лесные дороги [самые важные], потому что протяжённость у нас ну если брать на единицу площади по сравнению с европейскими странами она там 10, 15, а то и 20 раз, ну в зависимости естественно от региона она ниже, это естественно очень серьёзная вещь, очень серьёзная вещь, потому что любые транспортные издержки и количество дорог вещь достаточно затратная, это как более серьёзная вещь.

For us, well...for Russian forests, forest roads [are the most important], because the extent of our roads, depending on the region (province), is compared to European countries... are 10, 15, or even 20 times lower. It is, of course, a very serious thing, because transportation expenses and the number of roads are all quite costly. It is a very serious thing.

This sentiment was also echoed locally in the RFE by a Senior Administrator for an RFE Provincial Government Committee on Forest Industry. This interviewee noted:

В крае слабо развита сеть автомобильных дорог, а лесные платежи по той системе, которая существует ,строится в зависимости от удалённости места заготовки древесины до места ее отгрузки. Дорожная составляющая автомобильная развита слабо, поэтому отдалённость от пункта заготовки до места отгрузки довольно приличное. Сегодня расстояние для вывозки у нас сегодня переходит за 150, 200 км, а то и больше. Дороги собственно лесовозные не того качества, которое может быть хотелось, поэтому они такие низкие

In the province, the network of roads is poorly developed and the system of forest payments that exists is structured according to its remoteness of location relative to its shipment location. Road infrastructure is poor and so the distance from the point of harvesting to the point of shipment is quite significant. Today, the hauling distance surpasses 150-200km or even more. The quality of logging roads is low.

The corollary dependent factor that is directly affected by absent transportation infrastructure in Russia is the unavoidable, yet variable, high cost structure for all transportation services.

Additionally, the lack of energy infrastructure in the RFE means that fuel and energy costs are high. Many of these costs are addressed in the next theme.

Theme 4.1d: Costs associated with Factors of Production

Various costs are associated with acquiring and utilizing land, labor, and capital-infrastructure. It should be noted that the costs that are paid as part of any dealings with the shadow economy are considered under the section of ‘Federal and Regional Governance’ (Section 4.2) under the sub-theme ‘Soviet-and Post-Soviet Institutional Legacies’. Two sub-themes that emerged with regard to official costs were the starting bid price for the forestland lease auctions, as well as the costs associated with transportation. With regard to the starting auction price, the view of many interviewees was that the cost structure is quite complex and that, in general, the costs were relatively low. Both of these factors are addressed below.

Despite the logical view that a Senior Executive for an RFE Timber Company considered the current land rental costs entirely acceptable, all other interviewees viewed the leasing costs as particularly low.¹³ A Senior Staff from a Regional RFE Forestry Research institute noted that the average price per cubic meter of roundwood is approximately 50-100 rubles, or 2-3 dollars.

A Senior Administrator for an RFE Provincial Government Committee on Forest Industry agreed with this assessment and emphatically said:

¹³ A Senior Staff for a Regional RFE Forestry Research Institute raised an exception with regard to much higher, and according to the interviewee, adequate, lease rental rates on forest land where there is substantial valuable hardwood species, like oak and ash. This interviewee noted that if a parcel that contains valuable oak is leased, then the combined leased rent and stumpage could be as high as 1,500 thousand rubles (approx. 45,000 USD). In this case, the interviewee noted, the fees are similar to European fees, and comparable to a world standard.

Конечно лесные платежи должны быть дороже... В материальном или в стоимостном выражении это не очень значительная сумма. Где то в пределах 2-3-долларов в зависимости от породы и удаленности.

Of course forest payments should be more expensive. In terms of material, or value, it is not very significant...somewhere in the range of 2-3 dollars depending on the species and the distance.

When asked about the costs of leasing land and if they were adequate, a Senior Staff from a Regional RFE Forestry Research Institute noted:

В принципе это болевой вопрос...потому что это будет влиять как-то сразу на цены лесоматериалов, на потребление дров . Это комплексно, на государственном уровне будет затронута вся система экономики, поэтому наше правительство как-то старается не трогать эту систему . Пока у нас это так есть.

In principle this is a painful question...because it would immediately affect the price of timber and on the consumption of firewood. This is complex; at the state-level the whole system of economics would be affected so our government is not trying to alter the system somehow. For now that's what we have got.

In terms of the complexity of cost structure, this Senior Staff from a Regional RFE Forestry Research Institute explained that the beginning single bidding price at an auction for forest land is comprised of several different constituent payments which are sent to different authorities:

Государственные платежи, так называемая попенная оплата в кавычках как ее раньше называли , очень небольшая.... Небольшой, плюс к нему добавляется земельный налог. Он тоже совсем небольшой . Земельный налог идет в районные власти , местный налог остается в районе и в крае. А попенная оплата вся уходит, минимальная, в федеральный бюджет .

Government payments, it used to be called stumpage, is very small.... Not much at all...plus add to that the land tax. It, too, is not very much. The land tax goes to regional government, and the local tax stays within the region and province. But the stumpage all gets sent, however small, to the federal budget.

The portion that goes to the federal government, the federal government's forestland rent

(арендная плата), is established in the Forest Code (No. 133-ФЗ from 28.07.2012), Article 73 (Russian Federation, 2006). A Senior Advisor(A) to the Russian Federal Duma’s Committee of Natural Resources noted that the rental fee is based on an initial classification of the activity that the land will be used for and whether that activity results in the withdrawal of resources from the land (for instance, the difference between harvesting timber and recreational use). Several interviewees corroborated this and also added that rental rates vary by region as well as species composition and the area of the leased parcel. These factors make up the cost of one cubic meter of standing timber (стоимость одного кубометра древесины на корню)—previously referred to as stumpage (попённая плата). Additionally, the starting bid price for forest leases also takes into account the proximity of timber stands to accessible forest roads. According to an Employee at a local RFE ENGO, this cost, which is figured into the total forest land rent,

Зависит от породы, от сортности, от дальности вывозки – чем дальше вывозки, тем дешевле - чем ближе к пути, к транспортной составляющей, тем дороже... Устанавливается этими платежами в ходе расчётов, какого-то конкретного участка по наличию доступных ресурсов, рассчитываются на участок количество доступных ресурсов перемножается на стоимость каждого кубометра и в дальнейшем эти минимальные платежи устанавливаются в виде аукционной цены, по лоту конкретно, по конкретному участку, за который потом конкурируют участники аукциона.

Depends upon species, timber quality-grade, and haulage distance –the farther it is to haul to the road the cheaper, the closer it is to transportation services the more expensive.... These payments are set in the calculations of some specific area and by the presence of available resources which is then multiplied by the cost per cubic meter and then, ultimately, these minimum payments establish the base auction price, by specific lease area, on which competitors bid.

Importantly, this ENGO Employee touched upon a very important aspect that several interviewees also alluded to: all of these calculations help determine the forest land rent which is paid regardless of how much actual harvesting activity is done. With regard to the importance of

transportation costs, an Advisor (B) to the Russian Federal Duma's Committee of Natural Resources noted that transport costs for companies were particularly high, even to the point where it might not be worth cutting down trees because the hauling and transport costs would be so high and thus make the whole operation uneconomical. A Senior Administrator for a Provincial Government Committee on Forest Industry noted:

Говорить о затратах, транспорт для лесной промышленности он очень важен. Ну затраты где-то транспортной составляющей себестоимости занимает в пределах 40%.

Speaking about costs, transportation is very important for the timber industry. The transport component of total costs is in the range of 40%.

A Senior Engineer for a division under the Federal Forest Agency also noted the importance of transportation costs by noting that distances of

...500, и 600,и 700 километров, до 1000 километров, это по железной дороге, как правило, поэтому транспортные тарифы естественно они очень серьезно влияют на стоимость дерева.

...500, 600, 700 kilometers...up to 1000 kilometers by rail is typical, so freight rates naturally have a large effect on the cost of wood.

And a Senior Staff from a Regional RFE Forestry Research Institute noted:

В лесной промышленности...считается, что вывозка древесины рентабельна 200км до пункта отгрузки на железную дорогу или в порт . Ну и следовательно некоторые просто лесные массивы в принципе экономически недоступны.

The forest industry ...thinks that timber is only profitable within 200km to the point of rail or port shipment. Consequently, some forests are just economically unavailable.

An Employee from an RFE ENGO noted a dynamic that is caused as a result of high transportation costs of hauling logs long distances, and the low rental costs of forest land farther

away from roads:

Что ещё...более удручает, так скажем, что более негативно никто не наказывает за оставленную древесину на лесосеке, которая остаётся там. Иногда до семидесяти восьмидесяти процентов... такое бывает.... потому что берётся самое лучшее, остальное срубленное оставляется.

What's more depressing, say, more negative, is that nobody punishes for the felled timber left at the harvesting site which remains there. Sometimes 70-80% [of the felled timber remains]...it happens...because only the best wood is taken off the site, the rest of the felled wood is left at the site.

Additionally, a couple interviewees touched upon the high costs of energy in the RFE. The lack of energy production in the RFE drives up the cost of electricity in this region, and is a potential barrier for the development of newer-energy intensive industrial processes used in the manufacturing and processing of value-added wood products. A Senior Staff from a Regional RFE Forestry Research Institute observed:

И плюс нет у нас энергии столько, здесь нету столько электричества, чтобы это все перерабатывать. Это нам надо бы было строить новую экономику в регионе.

Plus we do not have much of an energy base in place. Many here do not have electricity to process at all. We'd have to build a new economy in the region.

4.2 Federal and Regional Governance

Several different aspects of federal and regional governance were discussed by interviewees. The topics discussed under this broad category fall into three distinct themes: Soviet and post-Soviet institutional legacies (Theme 4.2a), 2007 Federal policies (Theme 4.2b), and international trade of Russian timber (Theme 4.3b).

Theme 4.2a: Soviet and Post-Soviet Legacies

Within the Russian forestry sector, two of the most notorious realities are the presence of corruption and illegal behavior. While these phenomena are not exclusive to the forest sector and can be seen as part of a larger historical dynamic of governance and institutional aspects of the post-Soviet Union, the Russian forest sector, in particular, is known to be rife with dealings in various aspects of the informal economy, from bribery to illegal logging.

One aspect of governance that several interviewees touched upon was that if the government was going to try to genuinely fight these issues, they needed to find better ways of using leverage (система рычагов) as a controlling mechanism to encourage people to adhere to the law. The notion of leverage, and related concepts, came up with several interviewees. According to one interviewee, a Senior Administrator for a Forestry Institute in Moscow, there need to be both positive and negative incentives:

Как у нас знаете поговорка есть в России, воспитывают методом кнута и пряника, хорошо сделал -- пряник сладкий, плохо -- кнут, вот, поэтому у нас в законодательстве кнут есть а пряников нет, а нужно еще поощрять хорошо арендатора, если он качественно сделал какую то же систему поощрения а ее нету на сегодня.

There is a saying in Russia that you can train someone using the carrot and the stick method. If you do something well or adhere to the guidelines then you get something sweet; if you don't, then you get the stick. Here, for example, in the government there is a 'stick' but no 'carrot'. We need to encourage the notion of a good tenant, like if the tenant uses a quality management system, we need to encourage this, but currently we don't do this.

While this interviewee spoke of the need for a positive set of incentives (the 'carrot' in the carrot and stick analogy), several other interviewees suggested that the government's 'stick' disincentives were not strong enough. A local construction worker and previous forest sector employee noted:

The penalty is the regulations – following the regulations should be controlled by the penalties. If you go beyond the rope, so to speak, you are getting hit by the penalties, and that penalty might be severe. Of course the more severe the penalty is, the fewer people will cross the rope. So that might be a good solution. On one hand, are fines and penalties, real severe penalties. For example, in the United States and Canada, everyone is afraid of penalties. Whereas, penalties in Russia are modest, ... and therefore, sometimes, well I know that, sometimes... where there are some issues, some operational issues, and the management is thinking, "Okay, we have two ways, one is to follow our goal and one way is to adhere to the rules. Which way should we go? Which is more profitable? ... Very often it is profitable just to pay the penalties. This is a problem.

Turning now to the several different types of corruption and bribery that exist in the forestry sector, one aspect of corruption that was previously mentioned (in Section 4.1) was the potential for corruption to take place during and after auctions for forest leases (p. 34-35). A local RFE construction worker and former logger noted that many people outside of Russia use the terms corruption and illegal logging interchangeably. This interviewee noted that Russians exclusively view corruption as giving money under the table. This interviewee observed in detail the pervasiveness of corruption:

I have to admit that there is corruption everywhere. For example, the government officials and the officers. If you are trying to do business, let's speak about forestry, you have to pay for the license to cut and you have to give kickbacks for someone to arrange for the license faster. And then, you have to pay the local authorities, local forestry officers, for them not to notice the illegal cutting in this particular site. And then you have to pay the traffic police in order to bring the logs out and to deliver them to the log yard. And therefore there is corruption everywhere. There are some firm taxes, so to speak. The amount of revenue of remuneration, there is a fixed price, but everyone is trying to get some more from that.

[...]

The corruption is growing. The kickbacks are large. If you are planning some business or something, so you have to be ready to give some kickbacks. Unfortunately, this is true ... On one hand, the government is struggling with corruption. But that fight is like... fighting ... somebody who has given 300 rubles to a traffic policeman. This is just an example. But those who are stealing – let's call a spade a spade – who are stealing millions of dollars, they are really high up, and they are never punished probably because they are sharing. Probably this is the reason and therefore there is huge corruption in the higher elevation....

[...]

The amount of bribes is increasing. There is even official statistics and all that. First time I heard on the radio about that there is a special term 'average size of bribes' or something like that. First I heard about that, I was shocked. And I thought, "What the fuck are they talking about! How do they know the average bribe? How do they figure that?" This was a great mystery to me. ... Generally the amount of bribe was 20,000 or 15,000 rubles, about 500-700 bucks.

This RFE construction worker touched upon many important aspects of corruption in Russian society that were echoed by several other interviewees, including interviewees who worked in the RFE and Moscow. A Senior Administrator for a Forestry Institute in Moscow noted that the federal government has started to fight corruption, yet any sense of a result is unclear. This interviewee added that the first place to look for corruption in the forestry sector, though, is to see if the company that has the harvesting rights is owned by a relative of the mayor, governor, head of large company, son of the head of a large company, etc. The local RFE Construction

Worker brought up similar observations about how hard it is to have non-corrupt monitoring of forestland:

The question is who is going to control? Which body or which person will come to the site and monitor? If it is [somebody] who lives in the same village, and whose brother in law is the manager in this company and they are drinking and hunting together, then in this case, is this real control monitoring? Of course not.

The aforementioned corrupt means used to bypass monitoring of forests where there is unlawful cutting taking place is an example of how corruption and illegal logging often go hand in hand.

All interviewees spoke about the topic of illegal logging, how it is a matter of major concern in the RFE and for all of Russia, and presented their specific views on the issue. A Senior Administrator for a Forestry Institute in Moscow noted that the term ‘illegal logging’ (незаконная рубка) as it is used sometimes includes many different activities, several of which this particular interviewee did not think should be counted as ‘illegal logging.’ This Senior Administrator explained:

На мой взгляд, незаконной рубкой- это когда вот вы пришли, у вас нет никаких договоров, а просто взяли и вырубали, либо когда компании за пределами отведённого участка рубят. Когда внутри неправильно что-то сделали, я не считаю это не незаконной рубкой. Это нарушение технологических требований, это нарушение технологии. Сейчас пытаются это сделать Верховный Суд, и сдать постановление в котором будет сказано что такое незаконная рубка, сейчас проект готовится, мы будем ждать от этого. Ну моё мнение что такое незаконная рубка -это когда нет разрешительных документов, а когда есть документы но что то не правильно сделал, это не незаконная рубка.

In my opinion illegal logging is when you do not have any sort of contract but simply cut trees down or when a company cuts outside an allotted area. When something is not done correctly inside a leased area, I do not think that it is illegal logging. This is a violation of technical requirements, a technical violation. Currently, the Supreme Court is trying to pass a resolution in which a formal definition of illegal logging will be passed, but

we will wait on that. Well, my opinion is that illegal logging is when there are no permits, but when documents exist and the work is not properly done, it is not illegal logging.

Thus, according to this Senior Administrator for a Forestry Institute in Moscow, it appears that any time a company or individual is cutting without documents it could be considered ‘illegal logging.’ This includes the possibility of companies or current forestland tenants cutting beyond their allotted boundary area (когда компании за пределами отведённого участка рубят). Yet, based on several interviewees’ responses, it appears that several loopholes exist. Interviewees were split, however, as to whether wood that has been harvested by means of these loopholes qualifies as ‘illegal logging.’ One loophole that an interviewee spoke about was the ability for companies to over-cut their allotted amount within their own leased area. A Senior Administrator for a Forestry Institute in Moscow noted:

В договоре есть ответственность в виде неустойки, он срубил на два дерева или на пять деревьев больше, мы посчитали и сразу его привлекли к ответственности.

In the contract there is the liability to a penalty of overcutting, whether it is two or five trees, etc. How many trees have been overcut are counted and then the company is held accountable.

In addition to overcutting legal amounts on land where there is a current lease contract, another method that some companies will utilize is to harvest different species than were assigned in their contract. For instance, an Administrator for a Nature Reserve located in the RFE noted:

Эти рубки были согласование с лесной службой – но, к сожалению, в процессе рубок, вырубалась не та древесина, которая отводилась и нас это волновало –то есть рубились породы, которые полностью запрещены к рубке. И мы принимали активны участия в том, чтобы противодействовать. Поэтому, вскрывали такие случае, мы обращались к правоохранительные органы, и конечно, в итоге, мы обращались к местному сообществу и результат совместной действия через семь лет мы добились того, что сейчас рубки запрещены.

These harvests were in agreement with the Forest Service –but, unfortunately, during harvesting, the trees that were logged were not the species assigned for logging. We took an active role in counteracting this. Therefore, we opened a case with the law enforcement authorities and in sum we were able to turn to the local community for help and after 7 years we have been successful in making this sort of felling prohibited.

An additional loophole that was discussed by interviewees is found through (pre-commercial) thinning operations as a cover to ‘thin’ trees that are merchantable and ‘thin’ species that have been banned from commercial harvesting (like, Korean pine). One interviewee noted that this method was utilized often which suggests that bribes and corruption are used in order to have the necessary people turn a blind eye. However, according to a Senior Administrator for a Provincial Committee on Forest Industry:

Но тем не менее в этом году на территории края принят закон об обороте и отдельных полномочиях, в области оборота древесины, в соответствии с которым предусмотрено, что мы будем осуществлять контроль за древесиной поступающей на пункты отгрузки и отгружаемые оттуда. То есть, на стадии отгрузка древесины железнодорожным водным речным транспортом, будет выявляться нелегально заготовленная. А лесные инспектора они ездят по лесу смотрят и там черного лесоруба с топором выискивают.

Nevertheless, this year a province passed a law on back of an individual mandate in the area of timber trafficking, which stipulated that will exercise control over the timber arriving and leaving at the points of shipment. This is the stage of shipping timber by rail or river transport that illegal harvested timber could be identified. Forest inspectors ride through the woods and look and seek out illegal logging lumberjacks.

An Advisor(A) to the Russian Federal Duma’s Committee on Natural Resources noted:

У нас, к сожалению, есть некоторые проблемы с взаимоотношениями по экспорту на Дальнем Востоке связано это с проблемой нелегальных рубок в том числе при участии наших соседей. Это не секрет, что значительное

количество нелегальных рубок и нелегальных лесозаготовок на Дальнем Востоке идет с участием Китайских компаний.

Unfortunately, we have some problems with relationships regarding exports in the Far East connected to problems with illegal logging, including the participation of our neighbors. It is no secret that a significant number of illegal felling and harvesting in the Far East involves Chinese companies.

Meanwhile, interviewees expressed unanimous agreement that the main perpetrators of illegal logging and illegal trafficking of timber were small companies whose reputation was not on the line, or individuals from remote towns who were struggling to make a living. A Construction Worker in the RFE and former Forest Sector Employee explained:

But speaking about illegal cutters, you see this is kind of a sad story, unfortunately. People go for illegal cutting because they need money. Usually they live in small communities and there are no other jobs. Practically, for those people who cut the tree and take the chain saw and cut the tree, they use some old-outdated worn out equipment to bring the logs out of the forest. For them, this is the only way to feed their families, unfortunately. And they are punished. But those who hire them, who arranged all those schemes – usually those who are pulling the strings, they exist at the higher elevations and therefore the struggle with corruption goes at the low elevation - it's like the top of the iceberg and therefore there is no success.

And a Senior Staff from a Regional RFE Forestry Research Institute observed:

Крупные фирмы они физически не могут часто заниматься какими то незаконными заготовками. Если у них возникает лишняя древесина, то это связано именно с учетом лесного фонда, а не с их криминальной деятельностью. ...

Large firms are often physically unable to engage in some sort of illegal logging. If they have extra wood, it is in connection to the miscounting of the Forest Fund inventory, not with their criminal activities.

An Administrator for a Nature Reserve in the RFE noted:

Ситуация на Дальнем Востоке постепенно улучшается в том плане, что приходят всё-таки рубить крупные компании. Крупные компании... стараются подавить всякие мелкие нелегальные организации, которые заготавливают лес.

The situation in the Far East is gradually improving in the sense that larger, more well-established companies are coming in. Larger companies try to suppress any small clandestine organizations.

A Senior Executive for an RFE Timber Company shed some light on some of the firsthand struggles the company deals with when trying to suppress small clandestine organizations:

У нас есть еще специальное отделение лесной охраны. Это порядка 25 человек. Это спецтехника, спецсредства, которые занимаются чисто охраной леса. Просто охраной леса. Потому что у нас на сегодняшний день порядка [сотни тысяч] гектаров и периодически подвергаются незаконным рубкам, т.е. со стороны местных там браконьеров. Люди заходят, в деревнях иногда нет работы т.е. очень просто зайти спилить несколько деревьев и можно получить наличные деньги. Поэтому мы занимаемся лесоохраной, но хотя это такая тоже неурегулированная законодательством деятельность. Потому что мы не имеем права не допускать на свои арендные участки людей, т.е. не имеем права. Не имеем права их досматривать, не имеем права находиться там с оружием, изымать технику. Мы можем только там обнаружить незаконную рубку, обнаружить рубщика. Даже задержать их не имеем права. Мы должны сообщить в милицию и она уже должна действовать. Но тем не менее мы этим занимаемся.

We also have a special forest protection division. It's about 25 people. This is a special technical division, with their own technical means, to protect the forest. Because we currently have [hundreds of thousands of] hectares and it is periodically subject to illegal logging by local poachers. People come from the villages when there is no work since it is easy to go cut down a few trees and get cash for them. This is the reason we protect our own forests, although it is still not an entirely resolved lawful activity. We do not have the rights to forbid people from coming onto our leased areas. We do have the right to inspect them, we have no rights to be there with guns, or confiscate equipment. We can only detect illegal logging there, find the sawyers. We don't even have the rights to detain them. We need to inform the police and they will follow-up. But we still do it.

Theme 4.2b: 2007 Federal Policies

Interviewees were asked to discuss their thoughts on the federal government's recent policy changes, which began in late 2006 with the passing of a new redaction of the Forest Code. In

2007, Russian increased its roundwood export tax rate significantly, and also the Ministry of Industry and Trade (*Minpromtorg*) instituted priority investment projects. As has been previously mentioned (p. 9 in Introduction) all of these initiatives were described in full in *Minpromtorg*'s 2008 document titled 'Strategy for the Development of the Forest Complex to 2020.' An Advisor(B) to the Russian Federal Duma's Committee on Natural Resources noted optimism that this fairly recent Strategy will be 100% realized. A Specialist for a Regional RFE Agency Forestry District was equally optimistic about the effect these new policies have in the RFE:

Что касается,... ввода пошлин на круглые лесоматериалы и механизм приоритетных инвестиционных проектов, всё таки, конечно же положительная в частности касающаяся дальневосточного федерального округа есть. Как бы,...это увеличение производства пиломатериалов, это увеличение доходности в бюджеты всех уровней, то есть соответственно,... механизм приоритетных проектов -...это уже крупнее инвестиции, это уже выполнения мероприятий лесохозяйственных и обязательств по строительству тех же дорог и освоения лесных ресурсов, то есть, ну положительная реакция вот на нормативные акты.

As for the introduction of export taxes for roundwood and the mechanism of priority investment projects, there is a positive aspect in particular regard to the Far East Federal District. There has been an increase in timber production, an increase in the budget earnings, on all levels; that is, the mechanism of the priority projects...it is already involving serious investments, and forestry activities have already been performed and there have obligations to build roads and develop forest resources; so yes, I have a positive reaction to these policies.

An Advisor (B) to the Russian Federal Duma's Committee on Natural Resources noted that with such recent new changes taking place throughout various aspects of the domestic forestry sector, it was important that many people followed and researched the effects of these policies. Both Advisor(A) and Advisor(B) observed that the dissemination of information, as well as discussions about the effects of the recent laws are carried out by the Federal Forest Agency (*ROSLESHOZ*) in addition to other departments and regional authorities, as well as academic

institutions. Advisor(B) noted that the role of academic institutions isn't just to disseminate information, but also to conduct scientific research to help determine the effectiveness of these policies. One major theme that several interviewees spoke about was that, even if these policy changes might do some good for the economy, a major problem within Russian domestic forest policy has been the constant tweaking and changing of laws. Thus, these new changes caused some interviewees to remark that stability was needed first and foremost. A Senior Staff of a Regional RFE Forestry Research Institute observed:

Просто нужна стабильность. Только стабильность и все и тогда все будет налажено. ...Нужна именно стабильность. Надо очень умеренно принимать изменения в лесном законодательстве. Все бесконечные изменения приводят к дисбалансу в лесном комплексе и это никому не выгодно. Ни лесоготовителям, ни лесной охране, ни государственным органам, потому что меняются все время условия игры. А они не должны меняться.

Just stability is needed. Only stability and then everything will be fixed. ...Stability is what is needed. It is necessary to make very moderate changes to the forestry legislation. All the endless changes result in an imbalance of the forest complex and it isn't beneficial to anyone, not to foresters, forest protection, or to public authorities because the rules of the game are changing all the time. They do not need changing.

Thus, in order to understand interviewees' perspectives better on the recent policy changes, they were asked to comment on each of them, starting with the most recent changes to the Forest Code. Several interviewees commented on the fact that the newest redaction of the Forest Code transfers much oversight and appropriations of the nation's forests away from the Federal government and to regional governments. A Senior Administrator of a Provincial Government Committee on Forest Industry remarked:

Полномочия российской федерации в области лесных отношений краю переданы и на территории края их исполнением занимается управление лесами.

The Russian Federation's federal authority over matters of provincial forestry issues have been transferred to the territory of the province, which directly implements forest management.

Yet, a Senior Staff of a Regional RFE Forestry Research Institute was more emphatic about the effects of the re-shuffling of authority:

Сейчас государство не выполняет в какой-то степени свои функции, сейчас вопрос идет во время, как бы сказать... идет реформирование. Снижение произошло передачи полномочий из федеральных органов в субъекты. Поэтому идет кадровая перестановка, как бы сказать вот этих лесников, лесной охраны и должностных лиц. А так как реформа в процессе поэтому лесозаготовитель делает сейчас все что хочет, пока идут кадровые перестановки. И некоторые районы вообще остаются без контроля.

Currently, the Federal government is insufficiently fulfilling its functions, which is taking place concurrently with the, how to say, reformation process. The transfer of powers from Federal agencies to the provinces has caused a decrease [in performance of regulatory function]. So goes the reshuffle of foresters, forest guards and officials. And since the reforms are ongoing, while there are staff changes, loggers can currently do as they wish. Some areas are left without any control.

This same worry was echoed by an Employee of an RFE ENGO. This interviewee noted that the reshuffling of jurisdiction in the new Forest Code, as well as the 2010 creation of a Ministry of the Russian Federation for the Development of the Far East Federal District that has its headquarters in Khabarovsk, could mean that forest use and protection might no longer be controlled by Federal authorities:

Эти нововведения приведут к негативным последствиям так как согласно идее этого министерства ресурсы, которые благодаря программе развития Дальнего Востока будут введены ... в использование, [леса] будут не подконтрольны федеральному законодательству.

These new policies may lead to negative consequences because in accordance with the Ministry of Resources, through the program of the development of the Far East, forests will be not controlled under Federal law.

An Advisor(B) to the Russian Federal Duma’s Committee on Natural Resources observed that as this shift takes place, it is essential that the regions must not contradict any federal laws, but that:

...все остальное, в принципе, дозволено / ...everything else, in principle, is permitted

A second 2007 policy initiative of the Federal government’s was the Ministry of Industry and Trade’s 2007 institution of priority investment projects. Several interviewees provided details on the requirements of acquiring priority investment project status and most interviewees provided their commentary on this new federal policy. Priority investment projects in the forestry sector were established in June 2007 by Russian Federation Resolution No. 419 to attract investments into Russia’s domestic timber processing sector. The basic requirement that a company must fulfill in order to be considered for priority project status is a guaranteed investment of at least 300 million rubles (approximately 10 million USD). Interviewees were asked about the process of acquiring priority investment status and then asked to comment on it. Box 4.2 indicates the process as it was understood by interviewees.

Box 4.2: Application Process for Forest Sector Priority Investment Projects¹⁴

- 1) Company develops a business plan. The business plan must include a full financial breakdown of the company and the full funding sources for the planned investments. Also a description of the full production chain for the whole project, what kind of economic returns are expected over a given timeframe, and various economic indicators of how the project will focus on the development of infrastructure within the region, social development.
- 2) Submit business plan to the Ministry of Industry and Trade (*Minpromtorg*) of the Russian Federation in Moscow. Minpromtorg will consult with the Federal Forest Agency (*Rosleshoz*).
- 3) *Minpromtorg* has the final say and can accept or deny the application.
- 4) If granted priority investment status, Company may begin to start operating under the privileges and preferences that are stated in Russian Federation Resolution No. 419 (2007) as well as its various amendments, like No. 53 (2010) and No. 450 (2011). Privileges include auction free leasing of land (no auctions), and the Company pays 50% lease rent.

An Advisor(B) to the Russian Federal Duma’s Committee of Natural Resources noted that the mechanism of priority investment projects offers companies an easy way to access resources and

¹⁴ The process, as described by the interviewees, does represent an accurate understanding of the actual process of obtaining priority investment projects that is outlined by MINPROMTORG (2012).

that the government wishes to develop the forest industry infrastructure and job opportunities across Russia's vast territory. This Advisor(B) observed:

Я думаю, что государство направлено на то что бы облегчить доступ, я думаю что взаимовыгодно что инвестор получает какую-то выгоду, и государство тоже получает какую то выгоду, может быть и долгосрочно, но ничего страшного.

I think the government is aimed at something that would facilitate access; I think that is mutually beneficial as the investor receives some benefits and the government receives some benefits, which may be felt only in the long-term, but that is okay.

While priority investment projects are an exclusive program of the Federal Ministry of Industry and Trade (*Minpromtorg*), regions and provinces in Russia try to encourage development projects in their area. According to a Senior Administrator of a Provincial Government Committee on Forest Industry:

Естественно у нас в крае созданы тоже системы льгот и преференций, которые на уровне края мы поддерживаем, вот эти проекты, которые признаются приоритетными.

Naturally, in our province we also create a system of privileges and preferences that are at the Province level for these projects, which are a recognized priority.

A Specialist for the Regional RFE Agency Forestry District noted that as of August 2012, the RFE had 13 priority investment projects in the region: seven in Khabarovskiy Krai, three in Primorskiy Krai, two in Amurskaya Oblast, and one in Jewish Autonomous Republic. Box 4.3 provides a brief summary of the 10 approved priority investment projects in Khabarovskiy Krai and Primorskiy Krai (as of August 2012), which is based on descriptions of these projects given

by several interviewees.¹⁵ Commentary on some of these companies was given by a couple interviewees. In particular, Rimbunan Hijau’s investments in Khabarovskiy Krai and Les Eksport’s investments in Primorskiy Krai were discussed. A Senior Administrator for a Provincial Government Committee on Forest Industry noted that of all the priority investment projects in Primorskiy Krai and Khabarovskiy Krai, Rimbunan Hijau was the only one with 100% foreign capital. It is important to note, however, that almost all of the priority investment projects that have been accepted by *Minpromtorg* have some amount of foreign funding (as

Box 4.3: Priority Investment Projects in Khabarovskiy Krai & Primorskiy Krai

Khabarovskiy Krai:

- Arkaim (Аркаим) – is implementing a project in the area of Octoberskiy-Vaninskiy region, which is in its first stage produces 500,000 cubic meters of lumber and 140,000 cubic meters of particleboard per year. Then they added wood-pellet production. After first stage of production the company plans to expand its quantity of output and the range of products to include dried lumber, glue-laminated timber furniture components, and furniture board.
- Amur Forest (Амур Форест) is implementing a project in the Berezovoi Solnechnoiy region to produce 150,000 cubic meters of lumber, and 75,000 cubic meters of chip processing depending on the equipment. The company anticipates moving into the production of dried, planed lumber.
- Rimbunan Hijau MDF (Римбунан Хиджау МДФ) is implementing a project near the town of Khor to produce an MDF (medium density fiberboard) plant producing 150,000 cubic meters of MDF.
- Dallesprom (Дальлеспром) is implementing a project near Vanino to produce lumber, manufactured veneer, and possibly looking into MDF and wood chips.
- Ros-DV(Рос-ДВ) is implementing a project near Sukpai to produce lumber and components for wooden houses.
- Asia Les (Азия Лес) is implementing a project in the Berezovoi Solnechnoiy region for a timber processing facility.
- Dallesprom (Дальлеспром) is implementing another project to build a pulp and paper mill located in Amursk.

Primorskiy Krai:

- Les Eksport (Лес Экспорт) is implementing project to build three-layerd parquet flooring near Dalnerechensk.
- TerneiLes (Тернейлес) is implementing a project to build a veneer manufacturing facility in Plastun.
- Primorsklesprom (Приморсклеспром) is implementing a project to build timber processing facilities and sawmills in Svetlaya and Olga as well as a laminated veneer facility in Chuguevka.

noted by a Specialist for a Regional RFE Agency Forestry District). Rimbunan Hijau is a Malaysian company with operations around the world. According to a Senior Administrator for a Provincial Government Committee on Forest Industry, Rimbunan Hijau has 4 groups of

¹⁵ More detailed information on these projects can be found from the following websites (in Russian): <http://mpr.khabkrai.ru/contents/33/> (Khabarovskiy Krai) and <http://primamedia.ru/news/dv/12.10.2011/174659/primorskie-predpriyatiya-lesnoy-promishlennosti-zainteresovani-v-zaprete-na-vivo.html> (Primorskiy Krai).

companies within Khabarovskiy Krai. A Senior Staff for a Regional RFE Forestry Research Institute noted that the company leased a very large forest area of around a million hectares, in the north of Khabarovskiy Krai and described their plans:

В общем они хотят взять лес в аренду для посадки лесных плантаций. Чтобы по ускоренной системе выращивать древесину. Но так как руководство у них малазийское, они бы хотели за пятнадцать лет его вырастить, но в наших условиях это нереально.

In general, they want to turn the forests they have leased into forest plantations in order to expedite the timber growing enterprise. However, since their management is Malaysian, they would like to grow trees to have a 15-year rotation age, but in conditions such as ours, this is just not doable.

This Senior Staff remarked that a 40-year rotation age might be more realistic, and additionally wondered what their long-term plans were:

Они взяли бывшую компанию "Форест Стар" Американскую...."Форест стар" продала бизнес, так же может и Римбунан Хиджау продать бизнес. Когда, например, какие-то ресурсы исчерпаются и они посчитают, что нерентабельно заниматься этим. В капитализме нельзя предугадать, что захочет хозяин.

They took over the former American Company 'Forest Star.'... 'Forest Star' sold their business, just as Rimbunan Hijau could sell its business. When, for instance, some of the resources are exhausted and they believe it is not profitable for them to continue operations. In capitalism, it is impossible to predict what the owner wants.

Interviewees also spoke about Les Eksport's investments in Primorskiy Krai. An Employee at an RFE ENGO noted that even though Les Eksport was a Russian company, their capital assets were from Chinese sources. Almost all interviewees were familiar with the company Les Eksport because, they admitted, there was a current controversy taking place between the company and World Wide Fund for Nature (WWF) over an area of land in the Bikin river valley at the north end of Primorskiy Krai, near the border with Khabarovskiy Krai. Box 4.4 provides a brief

background as to the facts of the controversy as they have been reported in published, public news articles. However, it is important to mention the general range of comments from interviewees on their perceptions of this controversy. Several interviewees felt that since Les Eksport was a well-established, large company with a reputation to uphold, the company would not want to damage its reputation and hence not engage in unethical behavior. Other interviewees felt strongly that Les Eksport was engaged in a scam to receive even more highly valued forest land as part of their priority investment project agreement. Nevertheless, when interviewees were asked to view the controversy from Les Eksport's perspective, they admitted to understanding that if the federal government was going to make value-added wood processing a priority it needed to be able to ensure that companies were gaining enough resource-base for production purposes. Yet, when interviewees viewed the controversy from WWF's perspective, several brought up questions related to whether certain areas of Russia, including the Far East, had enough timber viable stocks of specific, highly valued species to supply new production facilities.

Box 4.4: Background to the Les Eksport / WWF Controversy in Primorskiy Krai

Joint-stock company 'Les Eksport' (also transliterated from the Russian 'ЛесЭкспорт' as Les Export) is a large timber company in the RFE and operates a parquet flooring mill near the town of Dalnerechensk, close to the Chinese border. Historically, WWF and Les Eksport have worked closely on several projects together. Les Eksport was given priority investment project status in 2010 by *Minpromtorg* and received expedited leases on forest land in the Bikin River Valley, Primorskiy Krai. One of the parcels of forest that Les Eksport received as part of its deal with *Minpromtorg* for having priority status overlaps an area of the Bikin Valley that is currently a pine-nut harvesting zone (Pozharskiy Pine Nut Harvesting Zone). Les Eksport had previously signed on to a commitment with WWF resolving that they would not lease any protected areas (защитные леса) which includes pine nut harvesting zones. WWF -Amur branch insists that Les Eksport give up its rights to lease the area if it wishes to partner with WWF in the future, while Les Eksport contends that the pine-nut harvesting zone has had 'intermediate thinning' operations take place for years that are even more destructive than their operations would be and that it is their legal right to start leasing the area. The controversy is heavily nuanced and has been going on for over two years. In July 2011, Russian Federation First Deputy Prime Minister Victor Zubkov chaired a meeting about the issue. This controversy has received heavy media coverage in Russia, but there is little English-language information that is non-partial (reported neither from Les Eksport's nor WWF's perspective).

With regard to an overall evaluation of priority investment projects as an initiative to modernize and develop Russia's domestic forest sectors, interviewees' perspectives were nuanced. That is, while many interviewees observed that the motivations of the investment project were in line with their wishes for the development of Russia's forest industries and that the production and export of more value-added forest products had greatly increased since 2007, they also expressed several trepidations. A Specialist from a Regional RFE Agency Forestry District noted that the investment projects, when viewed comprehensively, have helped to increase the RFE's production of lumber by 30% since 2007 and that overall the range of timber products that the RFE sells domestically and exports has increased and expanded greatly. Yet, Advisor(A) to the Russian Federal Duma's Committee of Natural Resources noted that, in general, priority investment projects were a good idea, but worried about their implementation:

Вот вопрос как они реализуются и развиваются. Конечно, если всё будет идти так как заложено в Стратегии это было бы очень неплохо. Но я думаю, что, к сожалению, на практике, как правило, не вполне удается добиваться тех результатов, которые запланированы.

The question is how they are realized and developed. Of course, if everything goes as it is indicated in the Strategy that would be very good. But I think that, unfortunately, in practice, the planned results are not achieved.

Furthermore, another advisor, Advisor(B), to the Russian Federal Duma's Committee of Natural Resources observed:

Инвестиционные проекты помогают нам быстрее развиваться... конечно, за счет инвестиции может быть мы отдаем, да, свои ресурсы. Они не всегда может быть полезны и выгодны для нас. Но, в основном, приоритетные инвестиционные проекты, конечно, нам дают возможность быстрее развиваться, и в экономическом и в социальном плане.

Investment Projects are helping us develop faster...of course, in order to get investments, perhaps we give away our resources, which cannot always be useful or beneficial to us. But, the idea

of these priority investment projects is to give us the ability to develop faster, both economically and socially.

A Senior Executive for an RFE Timber Company noted that the government has helped companies greatly but noted that under the contract of priority investment projects, the government was required to supply each of the 78 companies that received priority status with adequate forest land. A Senior Administrator for a Forestry Institute in Moscow had several problems with investment projects. This interviewee's biggest concern was the risk that the government may face if some of these heavily subsidized companies go bankrupt:

Я могу очень красивый инвестиционный проект нарисовать... очень красивый, и получить за пол цены без аукциона большой лесной участок. Вот сейчас подходят стройки инвестиционных проектов. Там должны быть построены дороги, инфраструктура, а ничего нет, и вот... сейчас я думаю, что будут судебные процессы по расторжению договоров. Ну и что, он обанкротиться, уйдет, кто будет убытки замещать государству?

I can very beautifully design an investment project, very elaborately, and receive forest land at half price and without engaging in an auction. Here there is a great construction site for an investment project. Roads and infrastructure should be built, but there is nothing...now I think that there will be trials for the termination of contracts. What if the company is bankrupt...gone – who will compensate for the losses to the government?

The third of the major initiatives that the Russian Government implemented in 2007 was to increase its export tax on roundwood logs (See Simeone 2013a for a thorough background to Russia's roundwood export tax). All interviewees confirmed the role that the export taxes played in the government's overall design for its forest industry and felt that the government's idea to partner export taxes with subsidies in the form of investment projects seemed like a good idea. For instance, an Advisor(A) to the Russian Federal Duma's Committee on Natural Resources noted:

Что касается экспортных пошлин то конечно в свое время государства пошло на этот шаг на увеличение размеров

пошлины для того что бы направить переработку лесных ресурсов как бы внутрь страны. Вот и приоритетные проекты тоже должны сыграть в этом свою роль -то есть создать новое производство где была бы переработка, не ориентироваться “на сырьё.”

With regard to the export taxes, of course, at the time the government took this step to increase the size of the taxes in order to redirect the processing of forest products into the country. And priority investment projects play a role in this in order to create new facilities that would not be oriented to ‘raw materials’

Most interviewees felt that the increase in roundwood export taxes to 20% and then 25% played a positive role in helping to move Russia away from roundwood exports since 2007. Yet, a couple interviewees noted that while these taxes seemed to have helped Russian objectives, they are still relatively recent policies and thus only in the medium-to-long-term might we really be able to evaluate their effectiveness. Several interviewees cited a well-known, and very apropos, Russian proverb: лес рубят — щепки летят (literally: when trees are cut, chips fly; figuratively: one action can have an inevitable effect on many other things, there is a ripple effect of unintended consequences). For instance, the same Advisor(A) to the Russian Federal Duma’s Committee on Natural Resources observed that this government policy was justifiable for the goal of developing wood processing facilities domestically, yet

...в тоже время, что касается бизнеса, то я думаю, что не всем это нравилось и от части может быть какой то бизнес который занимался исключительно экспортом сырья пострадал, от, но к сожалению, когда требуется что-то какую-то реформу, щепки летят, у нас говорят...

...at the same time, with regard to business, I think that not all liked it, especially since those involved businesses that exclusively exported raw wood suffered...but, unfortunately, when something needs reform, inevitably there are some losers.

In this regard, several interviewees expressed concerns about the Russian government's idea of ultimately moving the roundwood export tax to 80%. The reasons interviewees stated mostly had to do with the fact that the development of Russian processing, they felt, would need to precede any serious increase in the roundwood export tax rate. A Senior Staff from a Regional RFE Forestry Research Institute observed:

Для Дальнего Востока, это [высокие пошлины] совершенно было бы неприемлемо...потому что здесь нету, как бы сказать, трудовых ресурсов, перерабатывающих мощностей, которые могли бы справиться с этим объемом древесины. Это надо было бы все строить заново и строить другую экономику. Неоткуда было бы взять людей. Завоз гастарбайтеров из Китая - это тоже не решение проблем. Зачем нам?

For the Far East, [high export taxes] would be very unacceptable...because here we have no labor, processing capacity, which could deal with the volumes of roundwood on the domestic market. A different economy would have to be already built here. There would be nowhere to get labor. Guest workers from China? This is not the answer either. Why should we?

An RFE Construction Worker and former Forest Sector Employee noted that even though the government had not raised the export tax to 80%, the impact of even the 25% tax rate caused many businesses and small factories to go bankrupt. This interviewee noted:

Our government announced that the customs duties would go up to 80% from the 1st of January 2008 – if I remember that right – and well, most of the companies decided to shut their operations down because they didn't produce anything in Russia because they were only buying logs and selling them to China, Japan and Korea. ... Those who were smart readjusted their capacities in their facilities and started producing lumber. The other people who didn't have any long-term plans for development or anything just went out of business. Those companies who survived so far, some of the companies are still exporting round logs. You know the situation is interesting because on one hand the government is trying to stimulating and trying to give support to processing here in Russia, but on the other hand there is a lot of local investors in Russia, capital and companies that don't want to produce anything because, you know, it's difficult...it's difficult to produce anything. It is much easier to buy and to sell

and there are many companies that do not want to deal with production – there is the conflict.

An additional point that was brought up by several interviewees was the effectiveness of the export tax to thwart exports of all species and all grades. This point was mentioned by both an employee for an ENGO and by a Senior Executive for a RFE Timber Company. The employee at an RFE ENGO noted:

Но к сожалению, повышение пошлин в той форме, в которой они были введены не являются некой полумеры. То есть,... это не сильно ограничило – можно сказать почти не ограничило вывоз наиболее ценных твердолиственных пород древесины.

But, unfortunately, the increase in export taxes in the form which they were introduced is only a half-measure. That is, exports were not very limited – you could even say that it did not restrict the export of the most valuable hardwoods.

This view was also expressed in detail from a Senior Executive of an RFE Timber Company:

Вывоз кругляка остается рентабельным в стране как и мягких пород, твердых тем более. Даже 100 евро на куб не влияет на первые и аукционные сорта. Ты можешь легко экспортировать с большой долей прибыли не перерабатывая это. Поэтому реализованы 14 инвест. проектов, а не все 70, которые были заявлены. Это конечно связано - кризис, дешевое финансирование и не доведенная до конца политика по запрету вывоза кругляка. Поэтому попытки государства были, то есть, направить отрасль на глубокую переработку, на получение добавочной стоимости, чтобы были дополнительные рабочие места, не были доведены до конца.... Я могу сказать за твердолиственные дуб и ясень. На сегодняшний день существует пошлина 100 евро с куба.Ну вот аукционные сорта, первые сорта, дуба, ясеня. Они эту пошлину, ну устраивало, легко можно было платить.

Roundwood exports continued to be cost-effective for softwoods, even for hardwoods. Even at an export tax rate of 100 euros per cubic meter, the first and auction grade exports were not affected. You could still export roundwood and make a lot of profit without actually doing any processing. That is why only 14 investments were carried out, out of 70 that were announced. Of course, this is also connected with the crisis, cheap financing and policies that haven't been fully carried out. Therefore, the government's attempts to direct industry into

downstream processing industries, to obtain more value and create more jobs, have not been carried out in full. I can say that for hardwoods like oak and ash, today there is a 100 euro per cubic meter tax. At least for qualities such as auction- and first-grade oak and ash, this duty is easy to pay.

Theme 4.2c: International Trade of Russian Forest Products

Interviewees were asked to discuss the influence of international markets on the RFE forest sector. Not only did interviewees speak about the RFE's primary export markets, China and Japan, but also brought up the role of Russia's burgeoning domestic consumer market as well as European markets. Furthermore, interviewees were asked for their views on Russia's WTO accession and how they felt that might affect the RFE forest sector.

A local RFE construction worker and former forest sector employee observed that it has been very hard to sell Russian sawnwood in the Japanese market:

Russian factories in 2007 or 2008...started producing lumber – but that lumber was sold in Japanese markets because the Japanese are so picky, so to speak. Their demand for quality was too high, extremely high. Their policy in general was like a double-standard or maybe there is just a Japanese mentality because they were not buying 100% of the volume – they were buying only fractions...maybe 35% because there is a lot of different sizes and dimensions of boards and they were buying only particular grades and dimensions. Some grades [of lumber] were still sitting in the berth and so in the long-run, it turned out to be very difficult to sell Russian wood in the Japanese market.

According in interviewees, China, on the other hand, is seen as an ever-present source of demand for Russian wood. A Senior Administrator for a Provincial Government Committee on Forest Industry noted that selling into the Chinese market means low prices, however:

Наличие низкой цены, в связи с тем, что в Китае появился дешевый лес из Северной Америки и Новой Зеландии приводит к тому, что наши Китайские партнеры снижают цены. При наличии такой пошлины, 25% и снижении цен, а

у нас за последний год цены на круглый лес в Китае снизились порядка 50-60 долларов. Это ставит в определенную финансовую зависимость наши предприятия, ухудшает их финансовое состояние.

The presence of low prices is due to the fact that in China there is cheap wood coming from North America and New Zealand which leads our Chinese partners to lower their prices. In the presence of export tax rates of 25% and lower prices we have seen roundwood prices in China fall by 50-60 dollars. This poses a certain degree of financial dependence on our businesses and their financial condition worsens.

Yet, despite recent decreases in China's imports of roundwood from Russia since 2008, an Employee for a RFE ENGO noted:

Но также если считать, спрос –именно китайского рынка к древесине, которая здесь рубится и потом поставляется в Китай – тоже капитальными вложениями –... то роль китайского рынка и роль китайского капитала- так скажем, всеобъемлющая основная и можно сказать единственная.

And if you also consider demand -specifically Chinese demand for wood that is harvested here in Russia and then shipped to China- and capital investments -... then the role of the Chinese market and role of Chinese capital is pervasive and, one can even say, it's the only game in town.

A Senior Executive for an RFE Timber Company noted that Chinese produce a lot of products in Russia, but that they are not recognizable under their own typical brands, as they sell more products when they operate under the auspices of other firms or other networks of people.

However, a Senior Staff for a Regional RFE Forestry Research Institute noted that it appears that most companies in Jewish Autonomous Republic (JAO) and Amur Province are of Chinese origin and have a Chinese name and Chinese capital, but in Khabarovskiy and Primorskiy Krai, this is not the case:

Есть такие [Китайские] фирмы, но их очень мало . Есть некоторые фирмы с Китайским тоже капиталом. Но в основном Китайский капитал направлен на лесозаготовки и переработку древесины. Они обеспечивают рабочей силой, обеспечивают бывает своим оборудованием. Но по моему

ситуация достаточно нормальная. Если Китайцы нуждаются в древесине, они вкладывают деньги в эту заготовку...они стимулируют переработку этой древесины именно для собственных нужд, по своим стандартам. Поэтому ничего страшного такого не происходит.

There are some of those [Chinese] companies, but very few. There are some companies with Chinese capital, too. But mostly Chinese capital aimed toward harvesting and the processing of timber. They provide the labor force and sometimes provide their own equipment. But, in my opinion the situation is quite normal. If the Chinese are in need of timber, then they are putting money into the purchases...and they stimulate the processing of timber for their own created need, by their standards. Therefore, this is perfectly normal.

However, not all wood production in the RFE has been oriented toward Asian export markets.

Domestic consumption of wood has increased dramatically over the last several years. An RFE

Construction Worker and former Sector Employee explained:

A lot of companies cut down their export operations and they started to sell their production in the domestic market. The consumption in the domestic market was huge. I know this because I've been working in the freight forwarding company. In particular, what we were doing was receiving...there was a lot of machinery coming into Russia – imports, like bulldozers, excavators, graders, etc. In my company, we were receiving that machinery and loading it onto the railroad platforms and fixing (that is, securing) the cargo. We used to use a lot of lumber to secure the cargo. And I was buying, purchasing, and in charge for replenishing the materials and therefore I know about them. Sometimes it was difficult to buy lumber on the domestic market. This was a kind of discovery for me... We may sell everything here domestically because the consumption is so huge ...residential housing and everything, industrial construction, framing, and so on.

Additionally, two interviewees noted that only recently, since the institution of the federal government's policy initiatives in 2007, some companies in Primorskiy Krai and Khabarovskiy Krai have started to export higher-quality value-added products to Europe. A Senior Executive for an RFE Timber Company noted that Russian companies compete with European manufacturers with regard to the quality of their products, whereas they compete with Chinese

producers with regard to the price. A Senior Administrator for a Provincial Government Committee on Forests Industry noted that in 2010 was the first time in history that sawnwood from Khabarovskiy Krai and was shipped to EU countries including Belgium, Germany, France, and Italy. This Senior Administrator noted that several of the companies that received priority investment projects in both Primorskiy and Khabarovskiy Krai were starting to export to EU countries. This interviewee noted that some of the sawnwood was made...

...из дальневосточной лиственницы. Специфичная порода, которой нет ни в Европе, ни в другой части России. Очень хорошего качества, такие пиломатериалы там быстрее продаются, но отвечающего условиям иного европейского рынка, они отвечают.

...from Russian Far East larch [and other] specific species which do not grow in Europe or other parts of Russia. The sawnwood is very good quality and is sold in Europe quickly as [the companies] respond to meet the conditions of the European market.

Interviewees also addressed Russia's recent WTO accession and how they thought WTO accession may affect the RFE forest sector. An Advisor(B) to the Russian Federal Duma's Committee on Natural Resources commented that exports of roundwood will become even more profitable, especially in the border areas. An Employee for an RFE ENGO noted that if, as part of WTO accession, roundwood export taxes decreased significantly, then it would be a...

...негативный эффект – возврат к прошлому.

...negative effect, a return to the past.

The Senior Administrator for a Provincial Government Committee on Forest Industry, pointed out, however that WTO accession also means that import tariffs will also be lowered which will help enable value-added processors in Russia to import their equipment at lower prices.

4.3 RFE Forestry

Interviewees also discussed issues related to the overall category of forestry issues in the RFE.

Themes within this category include interviewee perspectives on: the support RFE businesses receive (Theme 4.3a); issues affecting the competitiveness of RFE timber processing companies (Theme 4.3b); shifts in the average size of companies in the forestry sector (Theme 4.3c); forest management in the RFE (Theme 4.3d); the role that forest certification plays in the RFE (Theme 4.3e).

Theme 4.3a: Support for Business

The two types of support that interviewees spoke about were the federal government's role in furthering business and the types of assistance that business can find locally within the RFE. An Advisor(B) for the Russian Federal Duma's Committee of Natural Resources spoke about the willingness to support issues that arise with businesses:

Мы во первых с начала должны знать что проблемы есть... мы всегда открыты к диалогу с бизнесом, если бизнес обратится с какой-то проблемой что трудно что-то применять, или исполнять то мы конечно же пойдём на встречу посмотрим как это можно улучшить, или может быть они злоупотребляют, мы проверим, да, мы всегда открыты.

We first need to know what the problem is... we are always open to dialogue with business, if the business appeals to us with what the problem that it is difficult to apply or fulfill something, then we, of course, will go to meetings and see how we can improve the situation, or maybe something is being abused, and so we will check. We are always open.

Yet, a Senior Staff for a Regional RFE Forestry Research Institute expressed a desire for more government involvement:

Мне кажется Государство должно влиять на конкурентоспособность, она должна следить за легальным

оборотом древесины, чтобы крупные культурные фирмы имели преимущества. Но не такие преимущества, что им как бы дают преимущества, а именно то что они много вкладывают денег в производство, в социальную инфраструктуру и так далее. ...У них высокая себестоимость продукции, а вот эти вот мелкие фирмы, которые не вкладывают денег в социальную структуру, не вкладывают денег в производство, на строительство дорог. Они их должны выявлять, наказывать за то что они именно совершают преступления. Вот если Государство будет эффективно работать, все встанет на свои места и будет развиваться нормальный, культурный бизнес. Государство должно именно выполнять свои функции контроля и тогда оно снизит эти аномальные явления.

I think the Government should influence the competitiveness; it should look after the legal trade of timber in order for major civilized companies to have advantages. Not so they have the kind of advantages, but so they would be given advantages, in particular since they are investing a lot of money in processing, social infrastructure, and so on. They have high production costs, unlike small companies which don't invest in social infrastructure, or invest money into processing or roads. They should identify them and punish them for any crimes these companies commit. Now only if the Government would work effectively, everything would fall into place and we would develop normal, civilized business. The Government should carry out all of its functions of control and then it will reduce these anomalies.

A Senior Executive for an RFE Timber Company observed:

В целом конечно хотелось бы большего внимания со стороны государственных органов именно в плане помощи производителям.

In general, of course I would like more attention from Government agencies in terms of assistance to producers.

Within the RFE, interviewees spoke about current collaborative efforts to support businesses. A

Senior Administrator for a Provincial Government Committee on Forest Industry spoke about collaborative efforts between Primorskiy Krai and Khabarovskiy Krai:

Взаимодействия существует между нашими министерствами но и не только между нашими министерствами. У нас есть допустим ассоциация ДальЭкспортЛес, члены которого находятся и работают и в Хабаровском и в Приморском

крае. У Хабаровского края есть союз лесопромышленников и экспортеров. И в Приморском крае такая организация есть. То есть, мы постоянно контактируем, обмениваемся информацией, приглашаем друг друга на те мероприятия которые проводятся, на выставки, форумы какие-то самые постоянно контактируем. То есть, полное взаимопонимание.

Interaction exists between our ministries but not only between our ministries. We have DalExportLes, whose members are located and work in Khabarovskiy Kai and Primorskiy Kai. Khabarovskiy Krai has an association with forest industry representatives and exporters. In Primorskiy Krai a similar organization exists. That is, we are in touch, share information, invite each other to activities that take place, exhibitions, forums. That is, we share full common understanding.

Forest sector industries in the RFE do take part in business associations, however. When asked what types of services their company receives from such organizations, a Senior Executive for an RFE Timber Company noted:

Мы там обсуждаем какие-то общие проблемы, о нашей отрасли....Многие вещи, в плане лесного законодательства, они не урегулированные остаются. [...] К сожалению в отрасли [значение: в Государстве] много работает некомпетентных людей, там периодически подвергаются корректировкам новые лесные законодательства, приводятся в соответствие с российским законодательством старые. И не всегда учитывают интересы лесозаготовителей, лесной промышленности. Поэтому, в этом плане ассоциация нам является помощью, чтобы мы могли не лично, как компания представлять свои интересы на федеральном уровне или там на местной власти. Но через ассоциацию путем консолидации там нескольких лесопромышленников или всего комплекса, транслировать свои интересы наверх.

We discuss common problems of our industry...Many of the things, with respect to forest legislation, are not regulated. [...] Unfortunately, a lot of incompetent people work in the government and periodically new forest legislation is adjusted to be brought in line new federal laws. And they do not always take into account the interests of loggers or the forest industry. Therefore, through industry associations we are helped since we can't go personally as a company to represent our interests to Federal or regional authorities. But through the association, through the consolidation of several timber industries, our interests are represented higher up.

Theme 4.3b: Competitiveness of RFE Processing Companies

Interviewees spoke about their perceptions of issues facing the competitiveness of forest sector companies in the RFE. Issues included the RFE's general low economic development, corruption, and the lack of technical ability and technology infrastructure. In regard to economic development in the RFE, an Advisor(A) to the Russian Federal Duma's Committee of Natural Resources noted that companies' competitiveness is directly related to the socio-economic development of the RFE. In particular, this interviewee stressed the need for a higher density of roads and energy facilities as the main obstacles for further development of value-added processing infrastructure in the RFE. This perspective reflects some of the dominant issues that interviewees expressed related to the costs associated with factors of production (Theme 4.1d, p. 44). Additionally, the same interviewee, Advisor(A), also noted how problems with corruption are particularly acute in the Far East. However, several interviewees felt that the most severe issues facing competitiveness of forest sector companies was connected with the low technical ability and lack of advanced technology that the forest sector uses. An Employee for an RFE ENGO suggested that it was factors connected to the low quality of wood processing and secondary product manufacturing that were limiting the competitiveness of forest industry companies. This interviewee noted that if there could be increased investments into advanced processing technology, then...

...качество переработки должны здесь расти. / ...quality processing here should increase.

An RFE Construction worker and former forest sector employee also noted that quality processing equipment was essential, but noted that even in the last 5 years Russia has been able to make much progress in this regard:

Russian quality has become much better because factories were buying better machinery –Japanese machinery, Korean

machinery. In the crises of 2008, a lot of forest companies went bankrupt in Canada, America, and Japan and some companies have been fortunate in buying used equipment from companies in these countries. Right now a lot of used, but new to Russia, forest processing equipment is being sold to Russia from Finland, Germany, Canada, United States, and Japan. And a lot of new factories have been developed. For example, TerneyLes – there is a joint venture between Russian company Terney and Japanese company Sumitomo Corporation.

A Senior Administrator for a Provincial Government Committee on Forest Industry felt that the RFE needed to figure out how continue to promote the new value-added processing capacity that had already been planned and realized over the last several years. Meanwhile, a Senior Executive for an RFE Timber Company noted that the interviewee's company has been making major investments over the last several years and that the company now sells air and kiln dried softwood and hardwood lumber for export but that it pays the same 10% sawnwood export tax rate as other exporters do for exporting green lumber. From this interviewee's perspective, the company has high costs due to the length of drying and storage time and thus would be more competitive on the export market if tax rates reflected those cost differences.

Theme 4.3c: Firm Size

Interviewees expressed several observations about the size of companies in the forest sector in the RFE. A couple of interviewees felt that the changing dynamic of firm size was a function of the Federal Government's policies over the last several years. Others interviewees did not identify what, they thought, caused the shift, but did provide commentary on potential effects this would have in the RFE. A Senior Engineer for a division under the Federal Forest Agency (*ROSLESHOZ*) observed:

У нас таких небольших предприятий не очень выгодно.

We have such small enterprises that are not very profitable.

A Senior Staff from a Regional RFE Forestry Research Institute noted that small businesses and small property owners have suffered greatly as a result of the recent government policies of 2007 and noted that many have gone out of business. In fact, an Advisor(B) for the Russian Federal Duma's Committee on Natural Resources commented:

Я думаю что мелкий и средний бизнес который перерабатывает древесину, он может исчезнуть практически весь, останется либо очень крупный и будут как правило вывозить...

I think that small- and medium- sized business that process wood will practically disappear entirely, and almost all that remains will be either large-scale or tend to export...

However, according to a Senior Executive of an RFE Timber Company, a large number of small- and medium-sized businesses still exist in the RFE, but the situation is not necessarily ideal. In reference to Primorskiy Krai, this interviewee notes:

На сегодняшний день в Приморском крае есть 350 лесных пользователей. ...Да, 350 лесопользователей - это много. Потому что в лесе все-таки, на такой территории, могло бы действовать, именно арендаторов, 10-15 компаний, которые бы за счет эффекта масштаба имели возможность строить дороги большие. Имея большую аренду, имея возможность привлекать инвестиции, то есть, соответственно строя стратегию на долгую окупаемость, на 7-10 лет. Они могли бы строить дороги в тайгу, мосты и т.д. А когда 350 компаний, из них там 10 более менее как-то обладают там 100,000 гектаров и выше. Остальные обладают там 10 гектаров, ну 10,000 гектаров, 5,000 гектаров. Ну о каком развитии такой компании можно говорить. Соответственно больше идет какой-то нелегальный оборот под видом документов и т. д. Регулирования в этом плане нет. Нет механизма изъятых участков. Самотеком здесь развивается больше и государство на это не обращает внимание. Только там в период пожаров каких-то, в период обеспечения населения дровами.

To date, Primorskiy Krai has 350 forest users... Yes, 350 users... that's a lot. Because in these forests, after all, in such a territory, there should exist only 10-15 leaseholders, that is, companies, which, due to economies of scale, would be able to

build a big road. Having a large lease area, having the ability to attract investment, and accordingly develop a strategy for a long payback of maybe 7-10 years. These companies could build bridges into the taiga, bridges, etc. But when there are 350 companies and, perhaps 10 of those hold leases for 100,000 hectares or more, the rest hold leases for 5,000 or 10,000 hectares, what kind of development can those companies undertake? Accordingly, there is more activity in illegal log trades by use of fake documents, etc. There's no regulation in this respect. There is no mechanism to expropriate tenants. It is developing here extremely haphazardly and the government isn't paying any attention. They only pay attention when there are fires, or to make sure people have adequate firewood.

This Senior Executive's perspective is shared by an RFE Construction Worker and former Forest Sector Employee. This interviewee observed that it is important to think about the potential behaviors of big or small companies and suggested that companies which are supported through the government are most likely respect their image. The interviewee continued:

[These companies] are not stupid – they are smart companies. They will follow the procedures and they will have to adhere to the regulations. They will have to do everything properly- first, in order to defend themselves from every accusation, and then, not to spoil their image. And third, they are thinking about the future. So they will try to minimize their environmental impact. But speaking about some other companies – some smaller companies - if they have the license, they might say, we have the license, so just get out of our way. Get the hell out of here! This is the problem.

Theme 4.3d: Forest Management

Interviewees spoke about several aspects of forest management and silvicultural practices in the RFE. Many forest users in the RFE only cut trees for firewood and thus do not 'manage' their forest per se for economic profit. Any person or company that leases land in the RFE for profit based from timber harvesting is required to view the forest from a management perspective. Within forest management, the initial starting place for any harvesting activity is a forest inventory and a forest management plan. These plans are usually based on previous inventory

data and may include sample plots to determine the accuracy of previous data. In the RFE, it is often true that what exists as an initial inventory is often wrong. A Senior Executive of an RFE Timber Company observed:

У нас в России, то что на бумаге есть леса и то, что есть в действительности, некоторая разница существует. Потому что, лесоустройство, то есть, мониторинг лесов проводился 30-40 лет назад, на основе космических снимков, не натурным прохождением по земле. Соответственно он приблизительный, плюс это было 40 лет назад. На сегодняшний день многие леса пройдены рубками, там лесхозы рубили, плюс пожары. От пожаров очень много страдает леса. Плюс это незаконные рубки и фактически, когда ты приходишь на участок, то есть ты основываешься на документах тридцатилетней давности, а приходишь на участок и делаешь лесоустройство, то там может быть другой состав, по объему, по возрасту и так далее, ну, несколько другое.

Here in Russia, on paper there appear to be forests, but in reality several discrepancies exist. This is because forest management, for instance monitoring and inventory has taken place 30-40 years ago and was based on satellite images, not on-the-ground collection. Accordingly, it was only approximate, plus it was 40 years ago. Since then, many forests have been logged, *leshozes* harvested timber, and many forest fires have occurred. Many forests have burned as a result of fire. Plus, there's illegal logging. In fact, when you travel to the forest site and you have 30 year old documents, and you begin to do a management plan, you find that there may be a different inventory, by volume, by age, and so and so forth.

If the starting inventory is changing for the above reasons, determining how much aggregate forest land exists in Primorskiy Krai and Khabarovskiy Krai can be particularly difficult. With regard to these provinces determining the annual allowable cut (AAC) for its tenants and also having forests that can still be leased out as part of priority investment projects to help bring investment and modern processing infrastructure into the region, a Senior Staff of a Regional RFE Forestry Research Institute noted that:

В принципе, у нас не так уж много леса на Дальнем Востоке, чтобы организовывать его заготовку.

In principle, we don't have much forest in the RFE in order to organize logging operations.

Several interviewees spoke about some of the historical ecological effects of forestry harvesting in the RFE. Importantly, there is very little, if any, history of intensive forest management in Russia. A Senior Administrator of a Forestry Institute in Moscow observed:

У нас нет плантаций практически в России. Нет, у нас естественный лес, и там все это делается. Специальных плантаций коммерческих, коммерческого выращивания древесины у нас нет в России.

We have practically no plantations in Russia. No, we have natural forest and that's where we do everything. Special commercial plantations and commercial cultivation of wood does not exist here.

One aspect of the utilization of natural forests that interviewees discussed was the practice of replanting. Trees can only regenerate via two methods: natural regeneration and by human planting. Two interviewees (a Local Construction Worker and a Senior Executive of an RFE Timber Company) likened tree growth to that of a vegetable growing in a garden. Yet, both of these interviewees then admitted that reforestation is a serious problem in Russia. It is important to remember that it was established earlier in this chapter (Section 4.1b) that tenants are required to partake in replanting as part of their contract to lease forest land. According to a Senior Executive of an RFE Timber Company, the minimum requirement for replanting, in accordance with Russian law, is the promotion of natural regeneration (содействие естественному возобновлению леса). Nevertheless, it was also established in the same section (Section 4.1b) that tenants are often able to get away with anything in regards to replanting and other required forest practices. Box 4.5 details the various ways regeneration takes place in Russia, as directly quoted from an Employee for an RFE ENGO.

Box. 4.5: Forest Regeneration in Russia (as described by an Employee for an RFE ENGO)

Лесовосстановление у нас ведётся двумя тремя путями - но два основных пути есть:

1) **Первая –эта, так называемое, содействие естественному возобновлению.** [...] Когда после рубки, в основном, выборочной рубки, сохранился подрост и по суду ничего не надо делать. То есть, ты просто аккуратно рубишь и ты уже, так называемо, ты уже вносишь свою лепту в создание лесных по сути культур -то есть, созданием молодых насаждений. Эти площади включаются потом в фонд лесовосстановления, ими любят очень отчитываться потому что, данные мероприятия не требуют никаких затрат но на бумаге это очень большие площади как бы вновь созданы.

Второй подпуть – это тоже содействие естественному возобновлению – это так называем минерализация почвы на рубках. В основном, это тоже почти никакие мероприятия – то есть, это повреждение верхнего напочвенного покрова. Механическое повреждение когда идёт трелёвщик так это делает, так повреждает. И потом, там легко возобновляются какие-то породы. ... Вот это является тоже мероприятием.

Третьем вариантом этого содействия является подсадка культур. Подсадка уже саженцев куда-нибудь в лес в такие места. Вот.

2) **А вот второй серьёзной формой лесовосстановления является непосредственно создание культур из семенного материала либо из саженцев, который выращивались в питомниках.** И это уже конечно серьёзные инвестиции – по сравнению, по крайней мере, с тем, что было сделано до этого. Вот, то есть, они связаны с выращиванием сначала из семени – сеянца, так называемый, один год там, потом возвращению до возраста трёх-пяти лет. Вот, то есть, потом покупку его <из> питомника (если нет своего питомника), после этого посадка, но на этом, на самом деле, все мероприятие не заканчиваются по законодательству – законодательству для того, чтобы получить лес <ты> должен за ним ухаживать.

Regeneration is done by two or three methods, but there are two main ways:

1) **The first is the promotion of natural regeneration**, as it is called, which is when, after a harvest, principally a selective harvest, the understory is preserved and legally you don't have to do anything else. That is, you simply have to fell carefully and in doing so you have done your part towards the cultivation of more forests, in essence, by contributing to the propagation of trees. These areas [of reforested land] are then included in the Reforestation Fund (фонд лесовосстановления), which they [The Federal Forest Agency, *Rosleshoz*] love to account for since these activities require no monetary expenditures, and on paper it is a huge area that has been newly created.

The second option that is also considered part of the promotion of natural regeneration is the mineralization soils on harvesting. Basically, this, too, requires almost no activity –that is, it is the scarification of the upper layer of groundcover. Mechanical scarification is just by the movement of a skidder, that's it. And then, the regeneration of some species is easier. That's also considered a procedure.

The third option that is also considered the promotion of natural regeneration is through replanting. Replanting seedlings from somewhere in the forest to that area. That's it.

2) **The second major form of reforestation is to establish seed trees outright, either from seed or seedlings that are grown in nurseries (artificial regeneration).** This is, of course, already a serious investment compared, at least, with what has been done prior. Here, the nurseries are connected with growing, first from seed, seedlings, as they're called until 1 year, and then grow them until they are 3-5 years old. Here, you can buy them from the nursery (if you don't have your own), and then plant them. But, in fact, the whole procedure hasn't been completed yet under existing legislation –that clarifies that if you receive forestland, you must look after it.

This Employee from an RFE ENGO noted, however that reality is not what's on paper:

Вот, это самая большая проблема, которая у нас существует: То есть, любят отчитываться “вот он там в землю саженцами”. Вот что потом с ним происходит ни кого не интересует потом они либо сгорают либо затеняются другими породами быстрорастущими, и в результате, на бумаге что-то хорошее, а потеряна куча времени, средств...вот...но...как бы всех всё устраивает. Никто, на самом деле, не доводит эти насаждения до той стадии когда они в последствии реально могут сами расти. Я уже не говорю, о том чтобы готовить из них хорошую древесину - это уж точно никто не делает...

This is the biggest problem we have here: that is, they love to report “there's the regen in the forest.” But, what ends up happening to the regen after it has been planted, and no one is interested in it, is that it either burns or is shaded-out by faster-growing species, and, as a result, on paper things look good, but in fact it is a loss of time and money...and yet...everyone seems satisfied. No one, in fact, sees that these potential crop trees have reached the stage where they can grow successfully. I am not even talking about pruning and prepping the trees to make good quality logs - for sure no one does that...

A Senior Staff at a Regional RFE Forestry Research Institute noted that in the RFE, 80% of forests that have undergone some form of reforestation are regenerated by a method that falls under the classification of natural regeneration. This interviewee explained:

На Дальнем Востоке еще не нарушены естественные такие вот связи. Поэтому, если сохранить подрост или сделать выборочную рубку, то лесосека очень хорошо восстанавливается. По космическим снимкам вы можете это все увидеть.

There is still a natural connection that hasn't been disturbed in the RFE. Therefore, if you save the undergrowth or make selective harvests, then the harvested area will regenerate well. You can see this based on satellite images.

This interviewee noted that sometimes a harvested area's understory was minimal or had burned, and thus, there was a need for companies to use artificial regeneration methods. The interviewee explained:

Некоторые арендаторы вынуждены, не имеющие своего посадочного материала, покупать посадочный материал у специализированных предприятий. И обычно это предприятия лесного хозяйства нашего - спецсхоз. Специальное хозяйство для выращивания посадочного материала. И вот они монополисты. У них очень дорогие посадочные материалы. А некоторые предприятия они, как бы, вкладывают деньги в такие-же хозяйства и по заказу выращивают более дешевый посадочный материал. Они фактически финансируют, авансируют выращивание этого посадочного материала. И у них получается раза в 4-5 дешевле.

Several tenants that do not have their own seed source are forced to buy seedlings from special companies. Usually these are state forestry enterprises. They are specific facilities for growing seedlings. They've got a monopoly. They have very expensive planting material. Some companies invest in such facilities and, by request, grow cheaper planting stock. [The companies] actually fund the advanced cultivation of planting stock. Their saplings are 4-5 times cheaper.

An Employee of an RFE ENGO also noted that if you had enough capital to invest in a nursery, then the company would avoid paying high sapling costs and thus receive higher profits and, in the end, be utilizing better forest management. Additionally, a Senior Executive for an RFE

Timber Company noted:

Мы несем за лесовосстановление, несем ответственность мы. Во первых когда формируется план освоения лесов, лесоустройства, когда мы заключаем договор аренды, мы за свои деньги делаем лесоустройство и план освоения. План освоения предусматривается в соответствии с российским законодательством, содействием естественному лесовосстановлению. Ну т.е. там рубки ухода, прореживание, лесозамещение породами. Так мы занимаемся в рамках проекта лесосооствления, т.е. подписывается программа сколько мы должны посадить где каких пород. Для этого мы например вот в этом году создали свой лесопитомник. ... Высаживаем саженцы, потому что большая проблема нет посадочного материала.

We are responsible for reforestation. First, when we develop a plan for the development of forests, a forest management plan. When we sign a lease for land, we, with our own money, do a forest management and development plan. The development plan is done in accordance with Russian law and the promotion of natural regeneration. Well, there is pre-commercial thinning,

intermediate thinning, and the replacement of specific tree species. We are engaged in a project to develop forestland –that is, we’ve signed onto a program of how much we should replant, where, and which species. Just this year, for this purpose, we have, for example, built ourselves a tree nursery. We are growing saplings since the lack of planting stock is a big problem.

Nevertheless, it was evident to many interviewees that genuine reforestation was needed throughout much of the RFE. An RFE Construction Worker and former Forest Sector employee noted, that, in reality:

Reforestation and regeneration is a huge problem...I only thought that this is the obligation of the cutting company, of those who are sustaining and cutting the wood and they have to plant something. But usually this is not done. The view is, for example, this is a forest, and in three years new trees will come up one way or another.

A Senior Administrator at a Forestry Institute in Moscow suggested:

Я бы наверно по другому сделала, дело в том что сегодня арендатор, он сам осуществляет рефорестейшн - лесовосстановление - за свой счет, и ведет все хозяйственные работы. Поэтому он не стремится сделать это хорошо и качественно, по этому я бы считала что может быть увеличить арендную плату, но потом ему возвращать за качественно выполнение работы. Вот это бы было правильно, тогда был бы у государства, был бы рычаг, контрольный механизм, контролировать плохо сделал. У него нет стимула.

Probably, I would have done it differently. That thing is, today the tenant carries out reforestation at his own expense and pays for replanting at his own expense, and carries out all of the management tasks. Therefore, the tenant doesn’t strive to do quality, good work. For this, I would think that maybe we should raise the forestland rent (арендная плата), and then return some of it for fulfilling quality work. That would be okay, since then the government would have leverage, a controlling mechanism to control if work was done poorly. There is no incentive.

This dynamic has meant that many forest tenants are currently cutting on some second-growth, but also there still exist areas of virgin timber. In fact, a Senior Staff for a Regional RFE Forestry Research Institute noted that within the RFE:

Все 50% лесозаготовок ведутся в девственных лесах.

Fifty percent of all logging operations are carried out in virgin forests

Given the problems with replanting in Russia and the continued utilization of natural forests, one of the other aspects that interviewees discussed was the ecological issues associated with utilizing forests in this way. An RFE Construction Worker and former Forest Sector employee observed that since there wasn't equally as much genuine replanting as there was harvesting, companies typically only sought to harvest the biggest and highest quality trees in virgin forest.

This Construction Worker noted:

There is not too much big diameter logs anymore.[...] And yet, on one hand, the companies that are logging need to have profit. Therefore, they need to cut as much as they can. Also, how to say... cutting on the bed of the river versus the mountain. It is much easier for them to cut logs in the mouth of the river rather than climbing up the hill. For example, in Khabarovskiy Krai there is a big problem with that. Forests are severely cut in the river beds, and the rivers become shallow. [...] In the long-run, the forest is dying. The solution for cases like that, I don't know about the incentives, but there should be some limitation if cutting logs affects the rivers. Of course, there are some regulations on that, but I don't know if it is followed or not. I think it's easier to cut there where it is easier.

This perspective was corroborated with an Employee from an RFE ENGO. The interviewee noted:

У нас в ходе рубок выживает наихудший, самый убогий, сами корявый, и самый слабый и самый непродуктивный с точки зрения семенного потомства, качество семенного материала и т.д.. А выбирается посредством этих рубок самое здоровое и продуктивное и т.д. Вот это тот перекоп.[...] Характер всё то комплекса начиная от лесозаготовки к лесопереработке должен быть оптимизирован на следующем уровне: должны рационально использоваться все виды ресурсов – то есть, не сниматься сливки самые.

From the perspective of establishing a good seed source, and seed bank, here, during harvesting it is the worst, poorest, most

crooked, weakest, and most unproductive trees that are left uncut. The trees that are harvested are the ones selected to be the most healthy and productive. Here is the problem. The nature of the industry, from harvesting to timber processing, should be optimized to use all types of resources efficiently -that is, we need to stop taking only the best trees.

A Senior Executive of an RFE Timber Company noted the forest management practices of the Company and elaborated on how large companies, like theirs, has the means to manage the forests they lease responsibly:

Лес - это возобновляемый ресурс, т.е. это как картошка. Только период не каждый год копаешь, а раз в 30-40 лет, ну там зависит от породы, 70 и т.д. То что садим, мы планируем, т.е. если у нас аренда на 50 лет и с правом, т.е. это позволяет компании строить долгосрочные схемы. Даже в связи с тем что мы инвестировали инвест. проект, период окупаемости там всех инвестиций у нас порядка 7 лет. Во первых у нас объем изъятия древесины с наших лесных участков гораздо меньше, чем по миру. В Канаде, в Америке с гектара изымается порядка 3-х кубов и больше преобладают сплошные рубки. У нас больше преобладают выборочные рубки. Мы изымаем порядка 0,6 куба с гектара..... Т.е. у нас есть естественный прирост древесины. На некоторых участках превышает в 2 раза, почти в 3. То есть, минимально в 2 раза естественный прирост древесины годовой. Это выше, чем изъятие идет. Плюс идут лесопосадки и т.д.

The forest is a renewable resource –that is, it’s like a potato, but instead of harvesting it every year, it’s every 30-40...well, depending on the species, 70 and so on. We plan what we plant – that is, if we have a lease for 50 years and that allows the company to build long-term plans. Even, connected to the fact that we have invested in an investment project, the period of payback for all our investments is in the range of 7 years. First, the volume of excess timber that we have in our leased lands is many times less than exists around the world. In Canada, in America, three times the cubic meters are extracted per hectare, and there clear-cutting is common. More common for us is selective harvesting. We extract around 0.6 cubic meters per hectare. ... That is, in some areas we have an annual increment that is more than a factor of 2, almost 3 times [larger]. That is, minimally, [we harvest annually] 2 times [lower] than the average annual increment. Plus, there’s reforestation, and so on.

Theme 4.3e: Forest Certification

Interviewees also expressed their views on forest certification and the role that certification plays in the RFE. An Advisor(B) from the Russian Federal Duma's Committee on Natural Resources noted the positive aspects of certification, especially when big companies seek certification. Yet, this interviewee expressed the view that the government wishes to have its own national legislation that would regulate their own national certification standard, which, they hoped, would integrate into voluntary forest certification through Pan-European Forest Certification (PEFC). The idea, as Advisor(B) suggested, would be to have the legislative level of the Russian Government attached to each aspect of the supply chain so that it can be traced at the Federal level. A Senior Staff from a Regional RFE Forestry Research Institute noted, however, that Forest Stewardship Council (FSC) was the standard system in Russia and thus it is well known. This interviewee noted that there was not much difference between FSC and PEFC other than nuances, but that companies should, indeed, become certified by one. The interviewee commented:

И если просто компания не занимается нелегальным оборотом древесины, то и нее вообще не должно никаких быть проблем.

If a company is not engaged in the illegal timber trade, then there should not be any problems [with becoming certified].

However, a Senior Executive for an RFE Timber Company noted that the only way to become FSC certified in Russia was to have the blessing of WWF, one of the key stakeholders in the FSC certification process. Additionally, this Senior Executive noted:

Сейчас вот эта сертификация под большим вопросом , т.е. ее не признают, пытаются отменить. Ну есть еще европейские стандарты сертификации. Мы считаем, что мы полностью подходим под экологические требования. Просто нельзя применять чрезмерные требования. Допустим, по этой сертификации, ЛПС требует, там у тебя выходит на арендных участках , которые ты арендуешь даже , ты

платишь за них ежегодно аренду. А ты отказываешься в рамках сертификации от 30% иногда 40% этой территории. Ты за нее платишь аренду, охраняешь ее, содержишь, а готовить ты там не можешь. Это идет в разрез с самой теорией устойчивого лесопользования и законодательства.

Currently, certification is a big question –that is, it is not [well] recognized –they are trying to change that. Well, there is also the European Certification standard (PEFC). We believe that we comply fully with environmental requirements. But they just can't use excessive demands. Let's say, for this certification, FSC requires that you abandon some land that you have rented. You pay each year for the lease and yet, under the requirement as part of the certification, you refuse to use 30% or 40% of the territory. You have paid for the lease, protect the land, hold onto it, and yet can't even use it. This is at odds with the theory of sustainable forest management and legislation.

5) Discussion and Conclusion

Information collected from interviewees on various topics related to the forest sector in Primorskiy Krai and Khabarovskiy Krai was presented in the previous chapter. It is clear that the issues facing forest sector development in this part of Russia are numerous and infused with social, political, and cultural legacies. What follows will be a discussion of some of the most salient issues that have emerged from this research, since, in reality, none of these categories, themes, or sub-themes exist in isolation. The forest sector in Primorskiy Krai and Khabarovskiy Krai functions within legal, economic, ecologic, and cultural spheres of influence that are not mutually exclusive. This chapter provides a discussion and synthesis of the results in order to better understand the connections that exist within and between themes. The structure of this discussion attempts, where possible, to follow the order in which themes were first mentioned in the results section.

Interviewees' responses about the availability of factors of production in the RFE expose some of the underlying development challenges that face remote regions in Russia. In fact, while the RFE is the narrow subject studied in this thesis, all of the interviewees' comments in regard to labor, land, capital, and the associated costs, are not unique to the RFE, but can be considered development challenges for the whole of the forest sector in the Russian Federation. With regard to land, there are many aspects of the Russian tenure system that interviewees touched upon and that this chapter will discuss; one of the fundamental aspects of Russia's current tenure system that deserves attention is tenure duration. Russia's forests are federally owned and leased for terms ranging from 10 to 49 years for forest harvesting operations. While Article 72 of the Federal Forest Code (Russian Federation, 2006) does indicate that tenants nearing the end of

their lease period have a preferential right to renew their lease term, Nelson et al. (2003) note that “one of the fundamental problems of the tenure system is that the lack of ownership, coupled with the long time frame between harvests, reduces the likelihood that a company will receive the benefits from its reforestation activities” (p. 241). While the dynamic this creates for incentives to reforest land will be discussed later in this chapter, it is important to note the fundamental problem that is created due to differences in the ecology of northern forests. As was discussed in the Introduction (see p. 3) the underlying ecological productivity and growth rates of boreal forests are particularly low. Even in the areas of the southern RFE that are void of permafrost soils, the rate at which trees grow and mature to harvest does not coincide with the tenure length. For instance, “such terms [of even 49 years] do not correspond to the conditions required for forests to reach the definition of ‘mature’ in the RFE commercial forests, which is 80-150 years” (Forest Trends, 2004, p. 13).

The behavior of individuals and firms in the RFE forest sector is often tied to choosing factors of production that allow for as large a profit as possible, which often means trying to minimize any and all costs. Interviewees’ comments on the costs incurred during forest sector operations touched upon two important issues. First, according to a Senior Staff from a Regional Forestry Research Institute (see p. 38), the stumpage part of the forest lease payment does not get sent to regional or provincial authorities, but to the federal government. This may create a lack of incentive for a local administration to try to receive higher stumpage prices. Second, transportation costs seem to cause an accessibility gradient for available resources. This gradient can be thought of in terms of von Thünen’s model of land use with respect to the tradeoff between transportation costs and land rent (see p. 13). Indeed, as one interviewee noted, the cost

of forest land rent depends upon how far the forest stand is from transportation services (see interview with an RFE ENGO on p. 46). That is, the closer forests are to transportation services, the more expensive they are to lease, whereas more remote forest stands are cheaper to lease. While the notion of an ‘accessibility gradient’ results from Russia’s vastness and uneven distribution of its population relative to its natural resource stockpiles and the fee structure for leasing forest land, this situation was compounded by a large increase in transportation tariffs during the transition period of the 1990s. This increase in transportation tariffs “outstripped the growth of forest product prices and the inflation rate” (Forest Trends, 2004, p. 26).

Thus, forests within close proximity to transport services, like rail, became heavily exploited as forests farther away remained uneconomical to exploit, and logging took place even closer to border regions or seaports where transportation costs could be kept as low as possible (Forest Trends, 2004). As an example of the accessibility gradient that exists, Alexander Sheingauz noted in 2004 that in the RFE, “it is difficult to find leases that are both available and profitable: the establishment of [sawmills] and investment in existing ones are also not very reliable” (Forest Trends, 2004, p. 31). Furthermore, Tysiachniouk (2012) notes that the Russian railway has a monopoly on transportation of timber and the frequent imposition of additional taxes to use rail transport continues to make the movement of timber over long distances even more unprofitable. Recently, in order to combat this issue, the Minister of Natural Resources and Environment for the Russian Federation, Sergei Donskoi, proposed introducing discounts for transporting timber over 600km (Russian Federation, 2013a).

An additional dynamic of high transportation costs is created under the current system of forest lease payments in Russia. That is, forest tenants are not charged based on what they harvest, but rather, are charged an up-front, annual land rent fee that is paid by the tenant regardless of how much timber is actually harvested (see Theme 4.1d: Costs associated with Factors of Production, pp. 44-48). The lack of government fees associated with harvesting timber, combined with the high costs associated with yarding and transportation, result in felled timber being left at the harvest site, as waste. This fact was noted by an interviewee (Employee at an RFE ENGO, p. 48), as well as identified by A.S. Sheingauz in 2000 and corroborated by Yanfang (2008). Sheingauz (2000) observed that large quantities of felled timber were left at the extraction site and noted “in the RFE, not less than 1 extra cubic meter of timber is left wasted for each 3 extracted cubic meters of timber” (p. 135). The lack of conscientiousness with regard to wasted timber seems to suggest that there are no economic or legal incentives for harvesters to change their behavior. This wasteful situation could be remedied to account for all felled timber by creating a system of incentives through federal and regional policies. A Senior Administrator for a Forestry Institute in Moscow spoke of a carrot and stick analogy to describe a much-needed system of leverage that could help align incentives (see p. 50). Sheingauz (2000) observed that “the payments for forest resources should also become a powerful lever to regulate and stimulate rationalization of forest use; unfortunately, the revenues are designed so they do not play this role” (p. 147).¹⁶ It is clear that since Sheingauz’s comment in 2000, little has been done to properly incentivize responsible use of remote forest resources.

¹⁶ The notion of ‘rational use of natural resources’ is a direct and literal translation into English from the Russian: рациональное использование природных ресурсов. This is particularly vague to a native-English speaker because, what is, after all ‘rational use’? Couldn’t any use, perhaps, be rational? An equally vague, but more appropriate translation would be ‘efficient use of natural resources.’ Not only does this translation mirror the opaqueness of meaning that is found in the Russian phrase and is, at least, conceptually ‘rational’ to native English speakers, it is much closer to the full-sense of the use in Russian. Antonova et al. (2008) provide a Russian-language definition of ‘*ratsionalnoe* / rational’ which is “the most complete and efficient use of individual forest utility value or industrial utilization without harming other beneficial utilities, the condition of the natural environment and biodiversity –that is, a utility value which achieves a Pareto optimum” (p. 20, translated by the author)

Additionally, an issue that many interviewees commented on and described in detail was that the government has the ability to use leverage and adjust the system of incentives in order to alter the pervasiveness of corruption and illegal logging. Yet, interviewees noted that the government did not use leverage effectively and thus there exist many ways to skirt the rules and regulations. For instance, interviewees spoke about a variety of ways that timber can be harvested via loopholes (see pp. 43-47) like over-cutting their leased land, cutting beyond their leased boundary area, and cutting different species than initially approved. The ‘illegality’ of these actions and their repercussions are given in Table 5.1. Actions that take place within logging class ‘A’ are not defined as ‘illegal’. While some of the cases of loopholes, like harvesting species different than allowed by contract, would be classified under Logging Class ‘A’, Sub-class ‘b’, and be considered in violation of technical requirements (just as the Senior Administrator for a Forestry Institute in Moscow interviewee noted on p. 45), other loopholes, like cutting in adjacent land outside of one’s leased area, would be classified under Logging Class ‘B’, Sub-class ‘b’, and be defined as ‘illegal logging’.

Two important aspects of these loopholes become evident when Table 5.1 is examined. First, when looking at ‘share of total area, %’ (3rd column), there is most likely more forest area in Russia that can be classified as having had a technical violation on it (Logging Class ‘A’, Sub-class ‘b’), than forest areas where no violations have occurred (Logging Class ‘A’, Sub-class ‘a’). Second, Table 5.1 also indicates the current measures taken by the Federal government to reprimand a violation (5th column, ‘Forest User (Tenant) Liability’). Based on interviewees’ observations about how the government could better demonstrate its use of political leverage by providing additional, more nuanced, ‘carrots’ and more severe ‘sticks,’ it would seem that a

forest tenant that has committed any aspect of violation escapes without much punishment. For instance, Logging Class ‘A’, Sub-class ‘b’, is deemed in violation of technical requirements and thus the tenant receives sanctions but harvesting rights are not affected. While the severity of the sanctions are unknown, if operations are allowed to continue, then it could be that tenants continually opt to not follow the regulations and find it more profitable to make ‘technical violations’ and cut the timber they wish to cut (this was suggested by a Local Construction Worker and is referenced on p. 43).

Table 5.1: The Structure of Illicit (Illegal) Timber Harvesting in the Forests of the Russian Federation and the Division of Responsibility

Logging Class	Sub-class	Share* of total area, %	Source of Damage	Forest User (Tenant) Liability	Corrective Action
A. Timber harvesting (cutting) is done on the basis of permits in compliance with the applicable procedures of the Russian Federation	a) In accordance with applicable policies and procedures of logging	< 20	Damage is possible, but is predetermined by deficiencies in regulatory framework	Forest user shall not be liable if meeting all conditions of the project	Improving the legal and regulatory system
	b) In accordance with the applicable policies and procedures of logging, but in violation of technical requirements	< 35	Damage to the imperfection of the predefined technological process and violation of technological discipline	The Forest user shall be held responsible under sanctions + without termination of logging activities	Strengthening of Forest Protection and Control
	c) In accordance with permits, but with intentional disregard or distortion of applicable procedures and rules of timber harvesting	< 15	The damage is predetermined by intentional actions for unrelated reasons (vandalism)	The forest user shall be held responsible under administrative and criminal liability + with restricted logging rights	The same, plus the support of the public
		< 15	The damage is predetermined by intentional actions for selfish reasons (profit)	The forest user is criminally liable + termination of logging activities	The same, plus the support of the public and law enforcement
B. Timber harvesting is carried out without permits (poaching)	a) Small quantities for personal use	< 1	The damage is predetermined by way of targeted criminal actions	The forest user shall be responsible under civil and criminal liability	Reinforcements of administrative and judicial system
	b) On an industrial scale in order to receive profit	< 9	The damage is predetermined by way of targeted criminal actions	The forest user shall be held responsible under criminal liability	Strengthening of the legal proceedings

*Maximum probable extent of violation

Source: World Bank, 2011, p. 20; World Bank, 2010, p. 8 [In Russian, translated by the author]

An important question concerning the pervasiveness of these sorts of violations is whether the wood itself, (for any of the violations in question) is confiscated.¹⁷ The confiscation of illegal timber and equipment is recognized by the UN FAO (2005) as an important ‘best practice’ for improving law compliance in the forest sector because it decreases the profitability of illegal operations (see UN FAO, 2005, pp. 46-57). Yet, in Russia, timber harvested under violation still enters the supply chain and even the government, sometimes, is required to compensate the responsible (out of compliance) company for any loss in business (Rossiiskaya Gazeta, 2011). Nevertheless, if a tenant has harvested timber illegally, or in violation of a technical requirement, and gets away with it, the tenant will usually find ways of making sure the wood has adequate, legal, documentation. As WWF (2013) notes, this is problematic as there is illegal wood in the supply chain and yet everyone has correct documents. Wood that is harvested as part of ‘salvage operations’ or ‘sanitary logging’ (Step 1, Box. 4.1, p. 40) on un-leased land is not subject to stumpage or land rent (since the land is not actually leased, technically) and thus there are incentives to harvest commercial quality wood instead during these operations and to have this wood enter the supply chain with all other harvested wood of legal (and illegal) origin (WWF, 2013a; Forest Trends, 2006). That is, a legal framework is used as a template for illicit harvesting. With regard to tenant liability and the corrective actions that need to take place to strengthen the current structure (5th and 6th columns of Table 5.1), WWF (2013) notes that “specialists of the Primorskiy Krai Forest Management Agency registered 691 cases of illegal logging in 2011... [Yet] of the violations registered in 2011, only 16% [of them] made it to trial” (p. 18). Equally as important is the fact that only 8% of sentences against tenants are prosecuted for violations that are larger than 90 cubic meters –the average ‘official’ volume of illegal

¹⁷ In this way, illegal harvesting (or wood harvested under a technical violation) and the movement of illegal timber through the supply chain resembles any of the well-known examples of poaching and trading flora and fauna, like the illegal ivory trade.

harvesting in the Far East (WWF, 2013a). There are large discrepancies between ‘official’ and unofficial data.

Since the break-up of the Soviet Union, Russia has attempted to fully decentralize its forest harvesting decisions through several editions of its Federal Forest Code. Many interviewees were concerned about the most recent restructuring of forest oversight and jurisdiction of forest governance due to the changes in the newest Forest Code of 2007 and the creation of the new Ministry of Far Eastern Development (*Minvostokrazvitya*). For instance, the comment from a Senior Staff of a Regional Forestry Research Institute about the pervasiveness of single bidder and winner auctions (see p. 42) corroborates Yanfang’s (2008) analysis, which pointed out that the auction mechanism newly instituted in the 2006 Forest Code allows for collusion.

Additionally, it is important to note that Brown and Wong (1993) describe the implications of achieving efficiency in harvest levels under a quasi-decentralized system. Brown and Wong (1993) note, “while a local agent is free to choose the values of some variables, other variables whose values are needed to achieve an optimal harvest are controlled by the central government...even if the goals (such as production levels) are accurately specified to maximize some national objectives (such as welfare), there remains a lot of room for the regional units to choose the type of production process to satisfy its own objective and at the same time fulfill the assigned goals” (p. 212). The most recent version, the 2006 Forest Code, attempted to correct the problems of inefficient quasi-decentralization with mixed success (Hitztaler, 2011).

Interviewees expressed their concerns regarding the recent ‘reshuffling’ of forest governance and protection from federal to regional (and provincial) authorities (see pp. 51-52). Only by

situating interviewees' concerns within their historical context is it possible to observe that their worries are connected with the fact that such a high percentage of 'commercial' harvesting occurs under the aegis of legal intermediate harvesting operations, such as thinning, and sanitary and salvage harvesting. While the federal government transferred authority to regional governments, it did not directly appropriate funds to the regions to fulfill these new duties and tasks, and thus interviewees noted that there was a decrease in oversight and regulatory control of forest lands. The interviewees seemed to indicate that they didn't trust local, provincial, or regional governance structures (take for instance, an RFE ENGO Employee's general nervousness, expressed on page 52, that forest governance and oversight decisions won't be made at a federal level). Their concerns are not ill-founded; the pervasiveness of commercial harvesting via loopholes was born out of the need for provincial government-owned forest management enterprises (then called *leshozes* and which received only a portion of their funding from the federal government) to balance their budgets in the late 1990s and early 2000s and thus they turned to intermediate thinning (which they were allowed to do) as a means to fill the budget gap (Forest Trends, 2006). During the Soviet era, the central government covered greater than 90% of the costs in the provinces, yet by the mid-2000s only 25-30% of the Federal Forest Service budget was covered by the federal government (Forest Trends, 2004). "The Forest Service finances the rest from profits yielded by intermediate cutting; ... as a result, foresters are forced to switch from doing intermediate cutting for the purpose of stand improvement, to undertaking commercial high-grading for immediate returns" (Forest Trends, 2004, p. 18). Moreover, some species are banned from commercial harvesting, like Korean pine (a valuable softwood), yet harvesting during 'thinning' operations allows these trees to be cut 'legally'.

WWF (2013) shows that certain valuable hardwood species are logged during intermediate thinning operations and are then added to the legal supply chain. Thus, the harvesting of certain species ends up being beyond the legal, permitted amount. WWF (2013) explains:

In 2010, the forest agencies of Primorsky and Khabarovsk Provinces authorized the logging of 452,213 m³ of Mongolian oak, the region's most valuable hardwood. From these two provinces 340,780 m³ of oak products (logs, boards, glued panels and veneer) were exported in 2010, mostly to China. But calculating the 'roundwood equivalent' of these exported products shows that at least 905,702 m³ of oak timber would have to be logged to produce them, or 200% the permitted volume. At least half the exported oak was stolen" (p. 9).

WWF (2013) quoted the former head of the Primorskiy Province Forest Management Agency, Pyotr Diuk. In 2010, Diuk was featured in a secretly filmed, undercover television expose titled 'Dark Forest' and noted then that there may be only 5 to 10 years left of the oak stock in Primorskiy Krai and 10 years left for ash if the high levels of harvesting continue. WWF's analysis and Diuk's stark appraisal of the available oak and ash available for harvest in Primorskiy Krai is an important addition to this analysis given that some of the frustrations fueling the Les Eksport & WWF controversy have to do with the miscalculation of the true quantity of timber stock, particularly valuable hardwoods, that exists in many of the forests in Primorskiy and Khabarovskiy Krai.

Indeed, on the 19 June 2013 at a meeting on the implementation of priority investment projects in the timber industry with Prime Minister Dmitry Medvedev, the Minister of Natural Resources and the Environment of the Russian Federation, Sergei Donskoi noted severe problems with the implementation of priority investment projects. The third most pressing issue raised by Minister Donskoi was in relation to 'outdated forest management materials:'

“According to the Federal Forest Agency, forest management information for over 60% of the forest land is obsolete. Often neither forest management authorities, nor the investors have up-to-date information about the make-up of forest plantations, timber reserves, or their quality. This increases business risks and makes production and economic planning impossible. Of course, we need to be aware of the prospects of forest resource in order to be able to implement priority investment projects and have fresh data about the quantity and quality of forest projects. To do so, we need to perform a forest inventory in commercially promising forest areas. The recently adopted state programme allocates nine billion roubles for these purposes, but the funding mechanism for this nine billion hasn’t been properly set up.”
(Russian Federation, 2013a, para. 15)

As of the 19 June 2013, there have been 117 priority investment projects announced with a projected total investment of 419 billion rubles (12.7 billion USD) and projected creation of 44,000 jobs in the forestry sector. Yet, to date, only 27 projects of the 117 have been launched, with an actual investment total of 80 billion rubles (2.4 billion USD) (Russian Federation, 2013b). The first two issues Minister Donskoi raised were equally as important and touched upon several of the underlying trepidations of interviewees. The first issue that Minister Donskoi raised was that the amount of timber land that had been provided to investors was too low in some regions. Interestingly, Minister Donskoi cited one case of the opposite happening in Primorskiy Krai, where investors were leased an area that was almost double their processing capacity. The second issue raised by Minister Donskoi was that investors’ projected progress has been severely delayed and fallen behind schedule (evidenced by the fact that only 27 projects have begun). Moreover, Donskoi noted that some companies that have received investment projects status have resorted to reselling timber instead of processing it and noted that often these companies just end up exporting raw unprocessed wood (Russian Federation, 2013a). Minister Donskoi put forward two proposals:

“We propose establishing additional grounds for refusing to sign auction-free lease agreements if a forest plot is not included in the concept of a priority investment project and also establishing

grounds for terminating lease agreements with companies carrying out priority investment projects if they do not comply with the project schedule” (Russian Federation, 2013, para. 12).

The second of Minister Donskoi’s proposals touches upon an aspect of priority investment projects that one interviewee, a Senior Administrator for a Forestry Institute in Moscow (p. 59), was afraid might happen. That is, this interviewee was concerned that potential investors would create wonderful proposals on paper with the anticipation of receiving large subsidies, and end up not being able to fulfill the initial project plan and thus the government would reap all the losses and receive no gain. An additional point made by Minister Donskoi was the need to build energy infrastructure within Russia to improve the competitiveness of the Russian forest sector and priority investment projects. Minister Donskoi’s comments focused on how bioenergy could be used to develop an energy industry by processing low-grade timber and wood waste (slash). Interviewees touched upon the fundamental need in the Far East for the presence of more energy facilities. Indeed, one of the major costs associated with forest industry processing in the RFE are high energy costs (Forest Trends, 2004).

Interestingly, interviewees expressed general consensus that the larger the company operating the forest leases, the better off the Far East would be in almost every matter (from the ability to build roads, construct energy facilities, invest in nurseries, and be clean of illicit activities).

Interviewees’ unanimously viewed the presence of larger, more reputable firms in the Far East as a positive development. According to Alexander Sheingauz, “during the transition period, the number of enterprises and users in the forest sector increased four to five times” (Forest Trends, 2004, p. 26). Research from NGOs (like Forest Trends, 2006) corroborates what many interviewees noted with respect to illegal logging; it tends to be done more by smaller

companies. However, WWF (2002) found that “the largest volume of overcutting and cuttings beyond the limits of a site [that is, concession] tend to be found on the cutting sites of big-lease holders” (p. 10). Interviewees’ comments (presented in Themes 4.3a and 4.3c) support the generally held view that small firms do nothing for the economy as they are viewed as unreliable operations that often engage in illegal activities. Nevertheless, even those companies that may be honest, just small, do not have the money to invest in long-term planning. Thus, it seems that the general view is that only large investments for ‘deep processing’ facilities that attract attention and marketing power (so they have a name brand to protect) offer the RFE any potential to escape its struggles with development, corruption and crime.

However, the extent to which these investments and companies with longer-planning horizons may lead to better forest management practices, is unknown. It is important to remember that in relatively slow-growing forests like those in Russia, and where the tenure lease length is shorter than the rotation age, there is very little financial incentive to invest resources in regeneration (Adamowicz, et al., 2003). Adamowicz, et al. (2003) note that, “forest management legislation and regulations often link the allocation of timber harvest rights to a commitment for reforestation...[...] however, it is crucial to recognize that these regulations are contrary to the underlying financial forces driving firm behavior” (Adamowicz, et al., 2003, p. 190). This is particularly true in boreal forest ecosystems where the main financial value of the forest is in the standing timber and the “pure financial incentives are to remove mature standing timber and minimize effort on regeneration and related activities” (Adamowicz, et al., 2003, p. 191).

However, concerning the management of northern forests, the reality of these incentives calls into question the notion that northern forests are thought of as renewable resources. Indeed, Brown and Wong (1993) note, “while much of the economic research on forestry treats timber as a renewable natural resource and investigates issues such as the optimal length of rotation, the Soviet Union is drawing down old growth timber and not replacing it” (p. 213). It is important to remember that two interviewees likened forests to gardens as justifications for their utilization and exploitation (see p. 82). However, it also appears from interviewees’ comments that Russian forests are not managed like a garden, i.e. there is no intensive forest management in Russia and there is little monitoring and follow-up management of regeneration. Therefore, given that Russia is continuing to draw down virgin timber stocks and not monitoring their replacement, forests in Russia could best be thought of as a non-renewable resource (Brown and Wong, 1993).

Under the current institutional and jurisdictional system, providing incentives to companies to re-examine the sufficiency of current status-quo management and monitoring is particularly difficult in the RFE. For example, consider the RFE Timber Company Senior Employee’s comments (see pp. 82-83) on the onerous demands that companies must comply with in order to become certified by the Forest Stewardship Council (FSC). This Senior Executive of an RFE Timber Company noted that they were not willing to set aside forest land that they had leased in order to protect flora and fauna. Yet, on 14 August 2013, another large RFE Timber Company, TerneyLes, which holds priority investment project status and has been certified by FSC since 2011, signed a memorandum of understanding with WWF which confirmed that TerneyLes will give up logging in some areas where it currently leases forests. The area it has agreed to conserve includes old growth forests (145,000 hectares) and floodplain forests (59,000 hectares) as well as

an additional 400,000 hectares of area where the company has agreed to preserve the forests to help habitat preservation for the Amur tiger (WWF, 2013b). In fact, as of 2012, the total number of companies certified under FSC in Khabarovskiy Krai and Primorskiy Krai was 20 and 21, respectively (FSC Russia, 2012). Thus, while some companies in the RFE find it unimaginable to voluntarily give up some logging rights and protect forest land, other companies are adopting this strategy.

Conclusion

The objective of this thesis was to provide a case-study analysis of some of the most recent and salient issues affecting forest sector development in Primorskiy Krai and Khabarovskiy Krai, two of the most biodiverse provinces in Russia's easternmost region, the Far East. This thesis examined and categorized current stakeholders' perceptions in order to determine a ground-level understanding of current issues affecting forest sector development and the extent to which recent federal government policies designed to develop and modernize its domestic forestry sector are seen as effective. Based on the results of this research it is evident that the Russian government's attempts in 2007- 2008 at policies that would provide incentives for forest sector investments and modernization did not fully address some of the underlying issues with rule of law, property rights enforcement, and evasion that still exist in many areas of Russia. Yet, the federal government's attempts were not futile; that is, compared to many years of neglect during the post-Soviet era, the domestic forest sector recently has become more of a priority than it ever has for national politicians, researchers, and the media. While the federal government's policies may have helped RFE forest sector development in some aspects (for instance, to bring in investment in the form of the 13 priority investment projects in Primorskiy Krai and

Khabarovskiy Krai), these policies may still allow for de facto arrangements between stakeholders which continue to entangle forest sector development with controversy and struggle. Understanding individual and corporate responses to incentives is fundamental to designing effective public policies. Thus, one goal of this research was to provide some suggestions as to potential areas that policy-makers might consider. What follows is a list of six recommendations:

1) The federal-regional changes with regard to jurisdictional duties of the Russian forest sector appear to be more of a hindrance than a help (see pp. 14-24, 57-60, and 91-99). Achieving the financial and administrative means to try to accomplish the intended results of restructuring has also been a struggle. One recommendation, in this regard, is for federal policy-makers to partner with other countries that have similar, or nearly similar tenure systems, and to collaborate in order to identify key aspects to federal-regional governance that work well in other countries. Previous researchers have drawn parallels between Russia's and Canada's northern forests (see p. 31) and thus a potential area for future research and collaboration could be between Russian and Canadian forestry professionals, administrators, lawmakers, public servants, and academics.

2) Based on Brown and Wong's (1993) analysis on the efficiency of forest management under a quasi-decentralized governance system (see page 99) and the results of federal and regional forest governance issues since the breakup of the Soviet Union (see pp. 98-99), it is evident that a new system of forest governance, inclusive of federal and regional dynamics, is needed in Russia and ought to be discussed and addressed by all stakeholders. If regions and provinces are to hold partial authority, it is essential that a solution be found for these administrative units to

balance their budgets in a way that does not involve taking advantage of harvesting loopholes in the Forest Code. Brown and Wong (1993) suggest that short of giving the central government authority to control all endogenous variables, one option might be a “tax system which will induce the local government to choose the optimal path of harvesting [...] Precisely, a tax is imposed on the resource (hectares) to be harvested” (p. 231). A tax, or fee, imposed by regional authorities on harvested timber could increase regional revenue and encourage more responsible harvesting practices (see p. 94). The creation of a new fee, separate from the forest lease payment (of which little revenue goes back to the local or regional authority), that might closely resemble stumpage fees in the United States, could help align regional incentives of all stakeholders and provide revenue for regional and provincial forest management functions.

3) Given the detailed accounts by interviewees as to the outdated and inaccurate nature of Russian forest inventories (see pp. 80-85 and 99-100), as well as the comment by Minister of Natural Resources and the Environment of the Russian Federation, Sergei Donskoi (see page 100), an essential, necessary first step, is that Russia conduct a country-wide audit of its forest resources. Given the sheer scale of forest resources in Russia, the ideal scenario of conducting a full-country audit before distributing additional forest lease rights to any companies is unrealistic. However, there are a variety of options involving public-private partnerships that might provide a starting place for the development of an accurate, and up-to-date, forest inventory. Partnerships could be mandated and required to start audits and inventories in areas that are known to be particularly problematic and/or contain valuable timber stock. Requiring that companies perform full audits of forest resources with the help of other stakeholders as a condition of acquiring a new lease is essential, but since many productive forest lands in the RFE

are already under lease for long-term contracts, an additional mechanism is needed (see pp. 81-82). One suggestion is that companies could be required to develop a timeline for a continuous forest inventory of their resources with the help of regional foresters and representatives of a local ENGO.

4) It was evident from interviewees' comments that forest resources in Russia were viewed as a renewable resource; utilization of RFE forests was seen as resembling a longer-term version of a garden. While, in theory, there can be many parallels between forest management (silviculture) and agriculture, given the reality that Russia's forests are not managed intensively, this analogy does not work (see pp. 103-104). Referring to forests as a garden does not appear to be appropriate given the lack of intensive planting, care, monitoring, etc. in Russia. In fact, there may be several circumstances where Russian forest resources would best be modeled as non-renewable resources, particularly if there are distinctions drawn between species and locations (see pp. 103-104). Increasing education to both professionals and the public as to responsible utilization and exploitation of renewable and non-renewable resources could facilitate a more grounded understanding of Russia's forest resources and the long-term effects of current management practices. Further study on the pervasiveness of this 'forests as a garden' mentality and its implications would be particularly helpful for determining long-term recommendations.

5) Pervasive evasion thwarts many intended results; there are examples of companies using large-scale government initiatives like priority investment project subsidies to 'use the system' by acquiring forest land for half-price and then continuing to export unprocessed wood instead of building processing mills and infrastructure (see p. 101). There needs to be stronger

repercussions for not adhering to laws and more creative, nuanced ways of providing positive incentives for people to follow the rules (see pp. 49-50 and 94-95). With regard to instituting more nuanced ‘carrots,’ a Senior Administrator for a Forestry Institute in Moscow suggested (see p. 50) that the Russian government should devise financial incentives for companies to manage their forests responsibly. This interviewee suggested an important recommendation: “the government should raise the forestland rent (арендная плата), and then return some of it for fulfilling quality work” (p. 86). With regard to instituting stronger ‘sticks’ or punishments, one recommendation is that the government raise its fines, penalties, and sanctions to the point where their strength acts as a deterrent to repeat offenses for individuals and companies (see pp. 95-96).

6) Interviewees’ comments regarding the current operational definition of illegal logging highlight a problematic aspect of the administrative labeling of illicit forest activities in Russia. Despite the fact that the Supreme Court of the Russian Federation tried to pass a resolution of a formal definition of illegal logging (see p. 52), agreement has not yet been reached and no resolution has been passed. While there may be justifiable reasons from an administrative perspective for considering some unlawful activities as violations of technical requirements, it seems like certain activities ought to be considered illegal logging from a forest management perspective—for instance, cutting the wrong species within an already leased area, or creating false justifications for cutting valuable species during a thinning operation on un-leased land. In order for Russia to tackle issues of corruption, crime, and illegal activities in its forest sector, a stringent, internationally accepted definition of illegal logging must be acknowledged by all stakeholders.

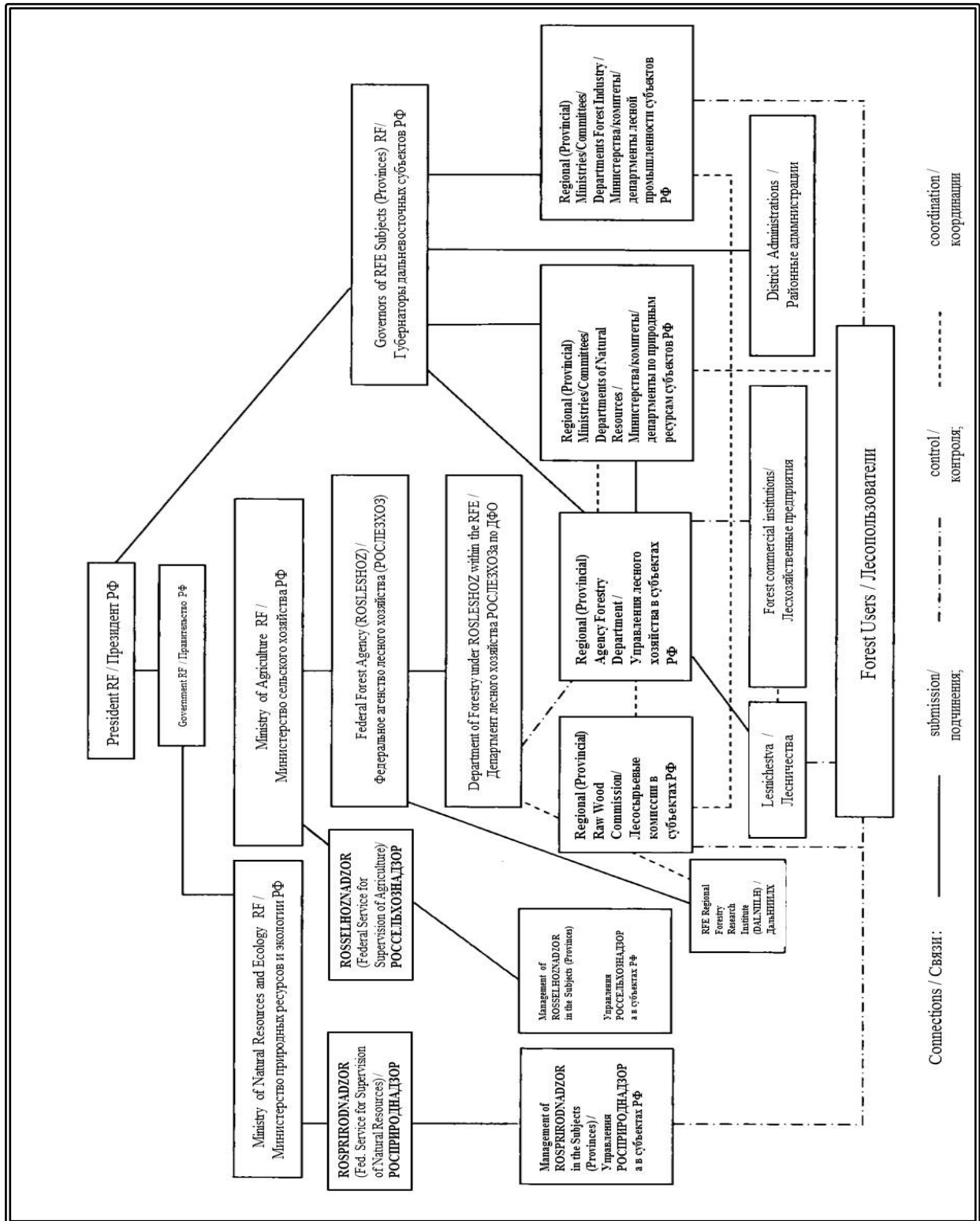
Based on this research, it is important to note that all of the current institutions, policies, and management practices account for the unfavorable results observed in the RFE forest sector and that problems on one issue create problems in all of the other aspects of performance.

Remembering that the forest sector in Primorskiy Krai and Khabarovskiy Krai functions within legal, economic, ecologic, and cultural spheres of influence that are not mutually exclusive is important when trying to suggest solutions to the problems that are described in this thesis.

Improvements to Russia's system of governance—including property rights and rule of law—are of paramount importance. However, within the current institutional framework and an unlikely drastic shift in domestic forest governance structures, the aforementioned six recommendations provide ideas for an incremental approach to remedy the challenges facing the sustainable development of Russia's domestic forest sector.

Appendix A: Flow chart of government jurisdiction of forest land

Figure A.1: Forest land jurisdiction under the Forest Code of 2006 (Antonova et al., 2008, p. 46).



Appendix B: Additional Maps of the Russian Far East (Source: WWF, 2008).

Figure B.1: Species Diversity Indices in the southern RFE (p. 32)

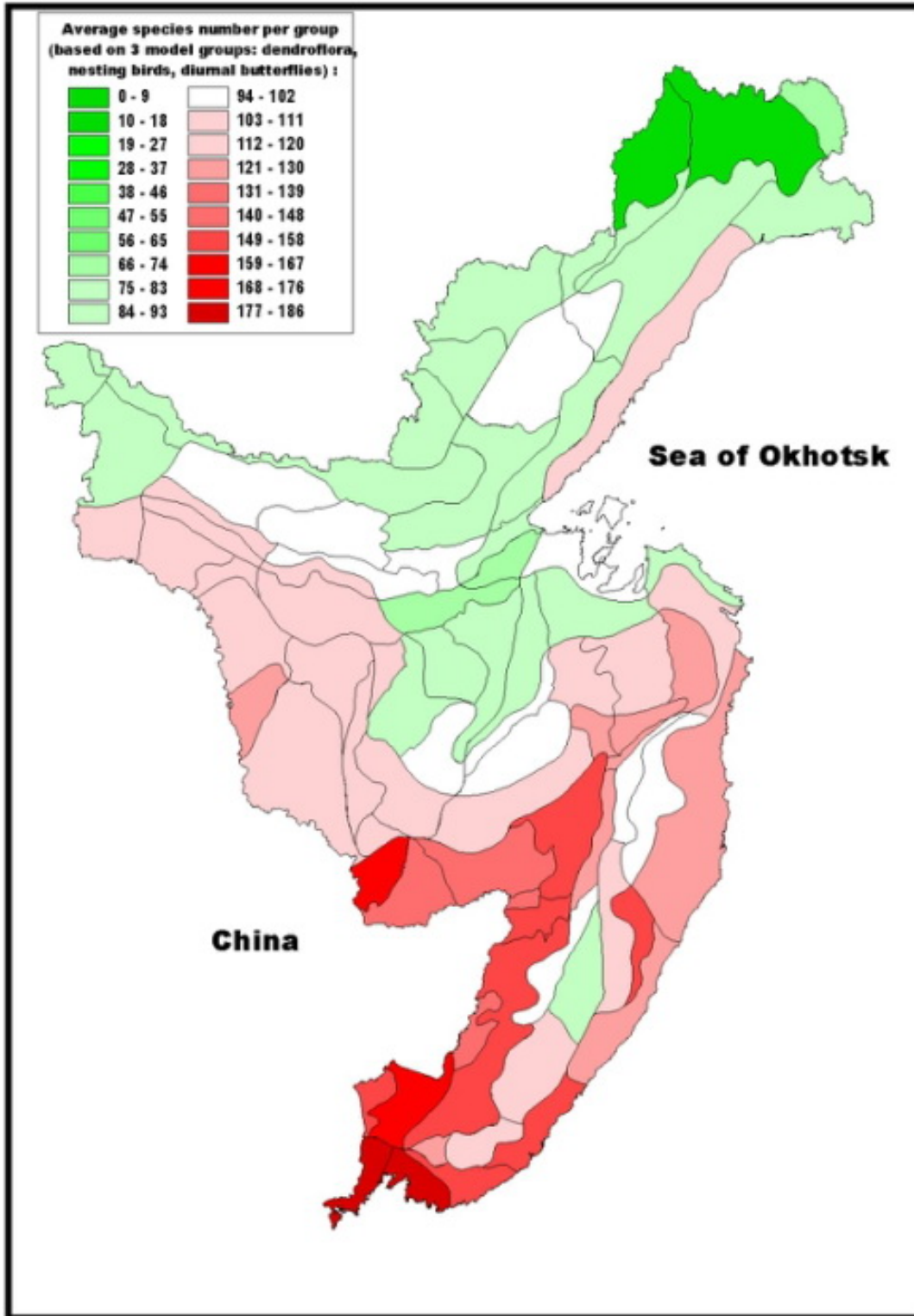
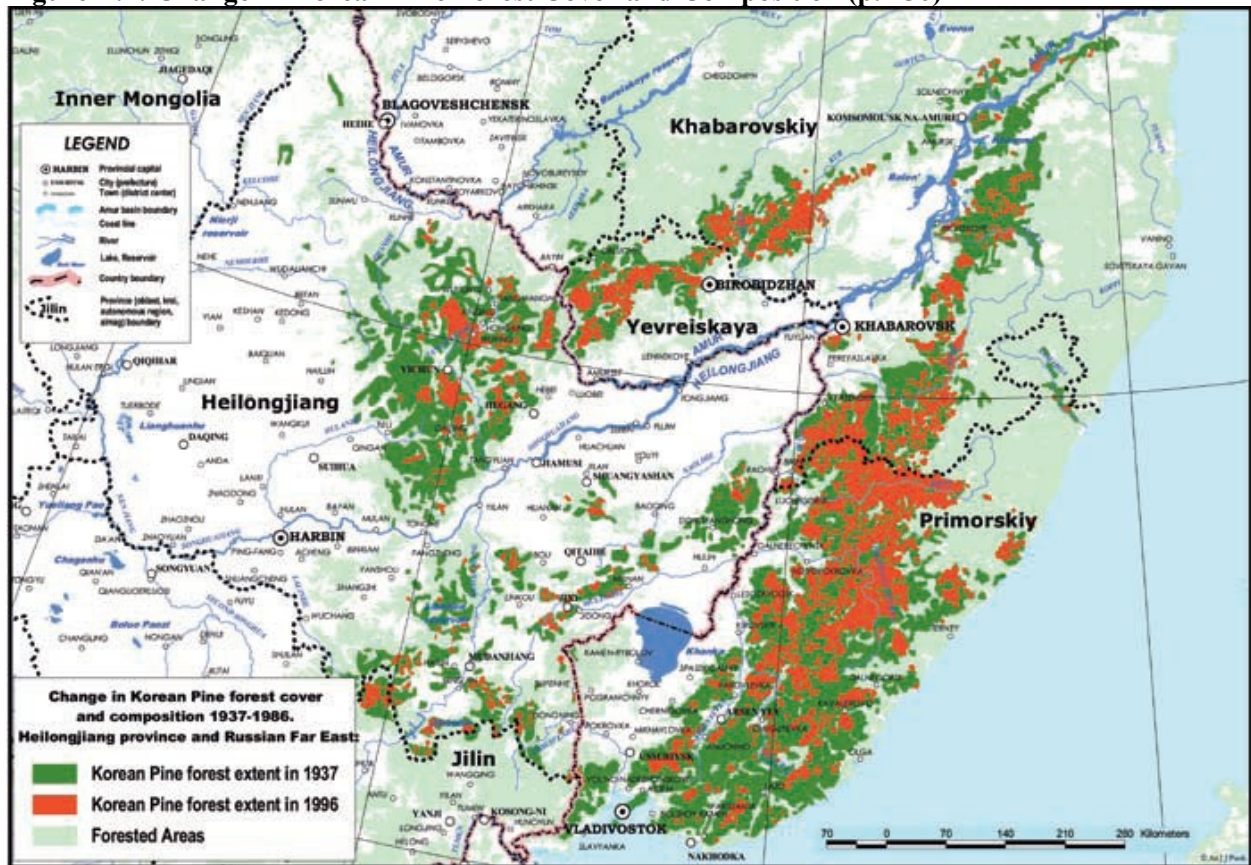


Figure B.4: Change in Korean Pine Forest Cover and Composition (p. 256)



Appendix C: Research Introduction (in English and Russian)



Summer 2012

Hello!

My name is John Simeone. I am a graduate student at the University of Washington in Seattle. I would like to interview you as a part of my research. The interview will last around 1 hour. Your responses are voluntary and you may elect to abstain from answering any questions. I will ask questions related to the forest sector in the Far East: timber resources, policies intended to support the forestry sector, forest resources, economic and business decisions, forest management and environmental considerations.

The purpose of my research is to identify the economic reasoning, incentive structure, and forest management practices that companies operating in the Russian Far East forestry sector face as a result of changing federal forest policies. This research will contribute towards finding out the effectiveness of federal policies as well as helping to illuminate some of the continued issues that the forest industry faces in this particular region of Russia. The interview will be only used by me for research purposes. To this end, I will be audio recording this interview so that I can correctly understand and consider your responses. After I have transcribed your interview, I will delete the audio file. Upon completion of this research project, all transcriptions will be fully deleted and erased from my computer.

If you have any questions, you can reach me by email at: jsimeone@uw.edu. I appreciate your time and assistance with my research.

Respectfully,
John Simeone
jsimeone@uw.edu

Здравствуйтесь!

Мне рекомендовали Вас, как одного из крупных экспертов в лесном секторе на Дальнем Востоке.

Меня зовут Джон Симеони. Я аспирант Вашингтонского университета в Сиэтле . **Университет Вашингтона обращается к Вам с просьбой помочь в проведении исследования, ответив на ряд вопросов.** Собеседование длится около 1 часа. Ваши ответы будут нести добровольный характер, и Вы можете воздержаться от ответов на любые вопросы. Я буду задавать вопросы, связанные с лесной отраслью на Дальнем Востоке: о лесных ресурсах, политике, направленной на поддержку лесного хозяйства, экономических решениях, лесном хозяйстве и охране окружающей среды.

Цель моих исследований состоит в том, чтобы понять, как лесопромышленные компании Дальнего Востока реагируют на изменения федеральной лесной политики. Мне хотелось бы узнать, как изменения федеральной политики влияют на экономические стимулы и методы лесопользования. Эти исследования будут способствовать выяснению эффективности федеральной политикой, а также помогут осветить некоторые вопросы, которые имеют важное значение в лесной отрасли в этом регионе России. Интервью будет использовано только для исследовательских целей. Я запишу интервью на диктафон, чтобы правильно понять и перевести Ваши ответы. После завершения данного исследовательского проекта, все интервью будут полностью удалены и стерты с моего компьютера.

Если у Вас есть какие-либо вопросы, Вы можете связаться со мной по электронной почте: jsimeone@uw.edu. Я ценю Ваше внимание и желание помочь данным исследованиям.

С уважением,

Джон Симеони
jsimeone@uw.edu

Август 2012 г.

Appendix D: Survey Instrument (in English and Russian)

Module 1: General Info

- a. Today's date
- b. Name
- c. Name of organization
- d. Job title
- e. Tenure in job
- f. Previous position
- g. What is your affiliation with the forestry sector in the RFE?
- h. Education
- i. Specialty
- j. Primary responsibilities
- k. Number of employees in company/unit within company?
- l. Specific type of timber mill (for example, MDF mill)

Module 2: Enterprise Characteristics

- a. Please state the full name of the company you work for?
- b. Is it a multi-national company?
- c. Number of employees? How many Russians? How many foreigners?
- d. Date, place of incorporation
- e. Ownership - Government agency? Private company?
 1. What is the hierarchical structure of your command/jurisdiction?
 2. Who are some of the investors/shareholders? Where did financing come from?
 3. Are there multiple affiliates or branches of the same organization in different locations? How are the branches differentiated from one another? Is there communication in directives and oversight between the branches/companies and also between companies and its parent company?
 4. Is your firm a member of a business association or chamber of commerce?
 5. What services do you receive from the association or associations to which you belong, and what is the value of these services to your firm?
 6. Are there any services that significantly reduce the costs of your firm or significantly increase the sales of your firm? (Examples include: lobbying government, resolution of disputes, information on market access, information on standards of quality, information on government regulations).

Module 3: Firm-level questions

- a. What is the proposed and actual timber production? What is production output?
- b. What is the timescale of this establishment's production targets for your various products?
- c. Does this establishment use production performance indicators to compare different teams of employees? Why or why not?
- d. Within your organization/company, what normally happens when a process problem arises, for example, machinery breakdowns, human errors or failures in communication?

- e. Are production performance indicators monitored in your business? How many and what types? How often are the indicators collected and shown to managers? Shown to workers?
- f. What is the spatial extent of each mill and lease area? Is it adequate based on current needs? Expected future needs?
- g. Where does the timber that your firm processes go? Where is it processed? How is it transported there? Who are the consumers of these timber products? What percentage is sold domestically? Exported directly? Exported through a distributor?
- h. For domestic sales, can you give me a sense of where your product goes? Small-companies? Multi-national firms? Your firm's parent company or other subsidiaries?
- i. How many competitors do you face? In Russia? Abroad?
- j. By what margin does your sales price of wood exceed your operating costs (i.e. the cost of material inputs plus wage costs but not overheads and depreciation)?
- k. Have you ever had any business disputes? If so, have you brought any of them to court?
- l. To what degree do you agree with this statement? "I am confident that the legal system will uphold my contract and property rights in business disputes".
- m. Have you had any losses as a result of theft, robbery, vandalism, or arson against your establishment? If so, when and please describe the estimated value of your losses?
- n. Would you briefly describe your current business strategy?
- o. Has your business strategy changed since 2005?
- p. How would you describe your firm's interactions with other companies? With other stakeholders? With non-governmental organizations? With government agencies involved in overseeing the forest industry?

Module 4: Government Taxes, Tariffs and Subsidies

Section A: General: Government Relations

- a. How easy is it to obtain laws and regulations affecting your organization? Please explain how you go about obtaining laws and regulations?
- b. Would you evaluate the interpretation of the laws and regulations that affect your business as consistent and predictable?
- c. How has the export tax and the federal subsidies (priority investment projects) altered the decisions your firm makes?
- d. Has your firm ever sought to influence the content of laws or regulations affecting it? Please explain.
- e. Can you name any groups or individuals that work to influence recently enacted national laws or regulations that have a substantial impact on your business?
- f. Is it common for organizations in the forestry sector to have to pay some "irregular additional payments/gifts to get things done" with regard to customs, taxes, licenses, regulations, services, etc.?
- g. How often is the following statement true? "If a government agent acts against the rules I can usually go to another official or to his superior and get the correct treatment without recourse to unofficial payments/gifts."
- h. When firms in the forestry sector do business for services or contracts with the government, how much of the contract value would be typically paid in additional or unofficial payments/gifts to secure the contract?

Section B: Priority Investment Status

- a. Since 2007, has your organization received any subsidies from the federal, regional, or local government, or any other sources? If yes, please be specific and indicate what was the average amount of these subsidies as a percent of average annual sales?
- b. Since 2007, how have Federal subsidies in the forest sector affected your business?
- c. Did your company apply for priority investment status? If your company did not apply for priority investment status, why not?
- d. Who did you approach?
- e. Would you please describe the steps needed to acquire a priority investment status?
- f. How do you view the policy process to acquire 'priority investment status'?
- g. Was it an easy process to navigate?
- h. Did you run into any problems?

Section C: Export Taxes on Roundwood

- a. How has the 2007 Federal government policy on export taxes on roundwood affected your business?
- b. How will the lowering of the tariff rate due to World Trade Organization (WTO) accession affect your business?
- c. Are there other issues related to the export tax on roundwood that you believe affect business in the Russian forestry sector?
- d. Have you observed more foreign direct investment into the timber industry in Russia since 2007 and the imposition of the export tax?

Module 5: Finance and Accounting

- a. What proportion of your organization's working capital and new fixed investment has been financed from: internal funds, borrowed from local banks, borrowed from state owned banks including development banks, foreign banks, trade credit, leasing arrangements, etc.?
- b. Does your organization use international accounting standards (IAS)?
- c. Does your organization have its annual financial statements reviewed by an external auditor?
- d. How much has your firm reinvested out of profits per year from 2007-today?
- e. Does your organization have plans for any new investments? Please describe.
- f. What role do transportation costs have?
- g. What are some other costs that your company deals with regularly?
- h. Does the price of input materials fluctuate? Please describe.
- i. Does the price of your good(s) that you are producing fluctuate? Please describe.
- j. How do you differentiate between short-term and long-term sources of profit?
- k. What are the prices that firms pay for stumpage
 1. How is the stumpage price determined?
 2. How sensitive are firms to changes in stumpage price?

Module 6: Work Force

- a. What percent of your current, permanent full time workers are: managers, professionals (e.g. accountants, engineers, scientists), skilled workers, unskilled workers, support workers (e.g. administration, sales)?
- b. Do you offer formal training for your employees?
- c. Who does the formal hiring for your organization? Where is this person/office located?
- d. How much time did it take you to fill your most recent vacancy for a manager? For a professional? For a skilled worker? For an unskilled worker? For a support worker?
- e. How do you deal with workers who do not meet expectations in their position?
- f. Hypothetical question: If you could change the number of regular full-time workers your organization currently employs without any restrictions (without seeking permission), what would be your optimal level of employment?
- g. Where does your workforce for the mill come from? Are the workers Russian? Foreign workers? Are you bringing in guest workers? Do you see a reliable Russian work force in rural regions for the forest industrial sector?
- h. Does your organization hire external consultants? If so, how often and what companies are used and for what purposes?

Module 7: Forest Resources

- a. Gaining access to forest lands
 1. How are forests leased from the government?
 2. Would you please describe the process and expenses involved for acquiring a forest lease that includes harvest rights?
 3. What is the total area leased by your organization?
 4. Would you briefly describe the forest area allocation, lease tenure length? Were other lease lengths discussed?
 5. What is the nature of forest management for your company? Who manages the forest management?
 6. What is the relationship that your organization has with those who manage the forests? Do they ever act in a way that is counter to your wishes?
- b. How is wood supply determined?
- c. Are these numbers accurate? Do you do your own measurements to arrive at a more precise available supply?
- d. How do the given numbers for wood supply affect your decision making?
- e. Of the forests that Russia considers 'exploitation forests' is there a reliable supply from the areas you are familiar with?
- f. *How would you describe the forest management practices? How are forest management decisions made?
- g. Who is responsible for replanting? Is it successful? What are the costs associated with replanting? Is this a cost that is internalized by private companies?
- h. Is there any monitoring of forest land?
- i. Are there any areas or forests that are ecologically important in the area leased by your firm?
- j. Is there a desire to lease more land that is adjacent to currently leased land?
- k. What do you think of forest certification?
- l. How do you view your timber harvesting practices (in the area of your jurisdiction)?

m. How would you describe the timber harvesting impacts on habit and environmental values (either that you are responsible for *or* you know goes on)?

Module 8: Concluding questions

- a. What is the role of Chinese investments (or other foreign financing) in the forest sector?
- b. Do you think that the possibility of a downturn in the Chinese housing sector has a potential impact to your business?
- c. Can you suggest at least one key (governmental) reform that you think should be implemented in order to increase competitiveness in the RFE forest sector?

Is there anything else you'd like to add – any questions or comments?

Thank you very much for having taken the time. The information you have provided is very important input for the evaluation of forest sector conditions in Russia. Please feel free to follow-up on any questions at any time in the future. You can reach me at the email address on my business card.

Модуль 1: Общая информация

- a. Дата
- b. Имя, Фамилия, и Отчество
- c. Название организации
- d. Должность
- e. Срок работы
- f. Предыдущая должность
- g. Каково ваше отношение к лесной отрасли на Дальнем Востоке?
- h. Образование
- i. Специальность
- j. Основные обязанности
- k. Количество сотрудников в компании / подразделений компании?
- l. Конкретный тип лесозавода (например, МДФ мельница)

Модуль 2: Характеристики организации

- a. Укажите полное название компании, в которой Вы работаете?
- b. Это многонациональная компания?
- c. Какое количество сотрудников? Сколько русских? Сколько иностранцев?
- d. Дата и место регистрации.
- e. Кто является собственником Вашей компании? Тип предприятия.
 1. Что является организационной структурой предприятия?
 2. Кто является инвестором / акционером? Кто финансирует данное предприятие?
 3. Сколько филиалов Вы имеете? Чем филиалы отличаются друг от друга? Какая существует связь между материнской и дочерними компаниями?
 4. Является ли Ваша компания членом ассоциации деловой или торгово-промышленной палаты?
 5. Какие услуги Вы получаете от ассоциации, к которой Вы принадлежите, и какова стоимость этих услуг?
 6. Есть ли какие-либо услуги, которые значительно сокращают расходы или значительно увеличивают продажи Вашей компании? (Например, лоббирование правительства, разрешения споров, информация о доступе на рынки, информация о стандартах качества, информация о правительственных постановлениях)

Модуль 3: Вопросы о компании

- a. Какова цель объемов производства? Какой объем производства?
- b. Каковы сроки выполнения производственных заданий?
- c. Использует ли данное предприятие производственные показатели производительности для сравнения различных сотрудников? Почему?
- d. Что обычно происходит в случае возникновения какой-либо проблемы, например, производственной аварии, человеческих ошибок или неудач в общении?

- e. Контролируются ли показатели эффективности производства в Вашем бизнесе? Сколько их и какие именно? Как часто показатели собирают и предоставляют менеджерам компании? Как часто их предоставляют рабочим компании?
- f. Каков масштаб данной организации и арендуемой области? Достаточен ли он для текущих потребностей? Достаточен ли он для будущих потребностей?
- g. Куда направляют лесоматериалы после обработки? Где они обрабатываются? Как происходит процесс транспортировки? Кто является потребителем этих лесоматериалов? Какой процент лесоматериалов продается на внутреннем рынке? Какой процент экспортируется напрямую? Какой процент экспортируется через дистрибьютора?
- h. Куда распределяют лесоматериалы на внутреннем рынке? В малые компании? В международные фирмы? В Вашу материнскую компанию, либо различные дочерние компании?
- i. Кто является Вашим конкурентом в России и за границей?
- j. На сколько стоимость лесоматериалов превышает эксплуатационные расходы (т.е. расходы на материальные затраты, затраты на заработную плату, процентные ставки, кроме накладных расходов и амортизации)?
- k. Возникали ли у Вас когда-либо коммерческие споры? Если да, случались ли у Вас разбирательства в суде?
- l. В какой степени Вы согласны с данным утверждением? "Я уверен, что правовая система поддержит мой контракт и права собственности в коммерческих спорах».
- m. Случались ли у Вас потери в результате кражи, вандализма или поджога на Вашем предприятии? Если да, то укажите время и опишите (расскажите о) предполагаемое значение ваших потерь?
- n. Опишите текущую бизнес-стратегию?
- o. Изменилась ли Ваша бизнес-стратегия с 2005 года?
- p. Как бы Вы описали взаимодействие вашей фирмы с другими компаниями и с другими заинтересованными сторонами? С неправительственными организациями? С правительственными учреждениями, занимающимися контролем лесной промышленности?

Модуль 4: Государственные налоги, тарифы и субсидии

Раздел: Общие вопросы: отношение с государством

- a. Каким образом Вы узнаете о новых законах и нормативных правовых актах, касающихся Вашей отрасли?
- b. Каково Ваше мнение по отношению к законам и нормативным актам последних 5 лет, касающихся Вашей отрасли?
- c. Каким образом экспортные пошлины и субсидии из федерального бюджета (приоритетные инвестиционные проекты) влияют на решения Вашей фирмы?
- d. Стремилась ли Ваша фирма повлиять на содержание законов и нормативных правовых актов, касающихся Вашей отрасли? Каким образом?
- e. Перечислите организации или заинтересованные лица, которые стараются каким-либо образом повлиять на законы или нормативные правовые акты, касающиеся Вашей отрасли.

- f. Как часто организациям лесной промышленности приходится оплачивать нерегулярные дополнительные платежи в отношении таможенных пошлин, налогов, лицензий, услуг и т.д.?
- g. В какой степени Вы согласны с данным утверждением? "Если государственный чиновник действует в не соответствии с какими-либо нормативными правовыми актами, то я всегда могу обратиться в высшестоящий орган или к иному должностному лицу."
- h. Когда организации лесного сектора имеют дело с правительством, какая сумма дополнительных или неофициальных платежей оплачивается, включая цену контракта?

Секция В: приоритетные инвестиционные проекты

- a. Получала ли Ваша организация субсидии из федерального, регионального или местного самоуправления? Укажите среднюю сумму этих субсидий в процентах от среднегодового объема продаж.
- b. Каким образом федеральные субсидии в области лесного сектора повлияли на Ваш бизнес с 2007 года?
- c. Подавала ли Ваша компания заявку, чтобы получить приоритетные инвестиционные проекты? Почему?
- d. К кому Вы обращались?
- e. Опишите Ваши действия, необходимые для приобретения статуса приоритетного инвестиционного проекта?
- f. Каково Ваше отношение к процессу, связанному с приобретением статуса приоритетного инвестиционного проекта?
- g. Насколько сложным был процесс?
- h. Сталкивались ли Вы с какими-либо проблемами?

Раздел С: пошлины на экспорт круглого леса

- a. Каким образом федеральные законы об экспортных пошлинах на круглый лес повлияли на Ваш бизнес?
- b. Каким образом, по Вашему мнению, снижение пошлин, связанных с присоединением России к Всемирной торговой организации (ВТО) повлияет на Ваш бизнес?
- c. Существуют ли какие-либо другие проблемы, связанные с экспортными пошлинами на круглый лес, которые, по Вашему мнению, повлияют на бизнес в области лесного сектора в России?
- d. Рассматривали ли Вы какие-либо прямые иностранные инвестиции в области лесного сектора на Дальнем Востоке с 2007 года?

Модуль 5: Финансы и бухгалтерский учет

- a. Какая доля оборотного капитала и инвестиций Вашей организации финансируется из средств, взятых в долг у местных банков, государственных банков, включая развивающиеся банки, международные банки, торговые кредиты, лизинг и т.д.?
- b. Использует ли Ваша организация международные стандарты бухгалтерского учета?

- c. Существуют ли в Вашей организации годовые финансовые отчеты, проверенные внешним аудитором?
- d. Какую сумму Ваша организация реинвестирует из общих доходов каждый год с 2007 года по настоящее время?
- e. Планирует ли Ваша организация осуществить капиталовложения?
- f. Насколько важны транспортные расходы?
- g. Существуют ли какие-либо другие расходы, немаловажные для Вашей компании?
- h. Колеблется ли стоимость сырья? Расскажите более подробно.
- i. Изменяется ли стоимость продуктов, которые Вы производите?
- j. Как Вы различаете источники краткосрочного и долгосрочного финансирования?
- k. Каков налог на порубку государственного леса?
 - 1. Как устанавливается налог на порубку государственного леса?
 - 2. Насколько чувствительны фирмы к изменению налога на порубку государственного леса?

Модуль 6: Рабочая сила

- a. Какой процент сотрудников текущего периода является руководителем, квалифицированным специалистом (например, бухгалтером, инженером, ученым), неквалифицированным специалистом, вспомогательным персоналом?
- b. Существует ли у Вас формальное обучение персонала?
- c. Кто занимается наймом сотрудников в Вашей организации? Где располагается его/их офис?
- d. Сколько времени Вам потребовалось, чтобы заполнить последнюю вакансию для менеджеров? Для квалифицированных работников? Для неквалифицированных работников? Для вспомогательного персонала?
- e. Как Вы относитесь к сотрудникам, которые не оправдывают Ваших ожиданий?
- f. Гипотетический вопрос: Если бы Вы могли изменить количество сотрудников без каких-либо ограничений (без разрешения), что являлось бы для Вас оптимальным уровнем занятости?
- g. Откуда Вы привлекаете рабочую силу? Есть ли у Вас русские рабочие? Иностранцы рабочие? Привлекаете ли Вы гастарбайтеров? Считаете ли Вы надежной русскую рабочую силу в сельских районах для лесопромышленного сектора?
- h. Нанимает ли Ваша организация внешних консультантов? Как часто, какие компании Вы предпочитаете и с какой целью?

Модуль 7: Лесные ресурсы

- a. Получение доступа к лесным землям
 - 1. Каким образом осуществляется аренда лесных земель?
 - 2. Опишите процесс и расходы, связанные с арендой лесных земель, включающие рубки ухода за лесом?
 - 3. Какова общая площадь арендованных земель, принадлежащих Вашей организации?
 - 4. Опишите распределение площади лесов и срок их аренды. Думали ли Вы о каких-либо других сроках аренды?

5. Каков характер лесопользования для Вашей компании? Кто управляет лесным хозяйством?
6. Какова взаимосвязь между Вашей организацией и теми, кто управляет лесным хозяйством? Совершали ли они когда-либо действия, противоречащие Вашим желаниям?
- b. Каким образом устанавливается предложение на древесину? Каким количеством древесины Вы владеете?
- c. Насколько точными являются эти цифры? Проводите ли Вы какие-либо вычисления, чтобы подтвердить данные цифры?
- d. Каким образом данные цифры влияют на принятие решений?
- e. Существуют ли среди эксплуатационных лесов надежные поставки из фондов, с которыми Вы знакомы?
- f. Как бы Вы описали лесное хозяйство? Каким образом принимаются решения, связанные с лесным хозяйством?
- g. Кто несет ответственность за лесовосстановление? Насколько это успешно? Каковы расходы, связанные с лесовосстановлением? Эти расходы оплачиваются частными компаниями?
- h. Существует ли мониторинг лесных угодий?
- i. Существуют ли леса, арендованные Вашей организацией, которые являются экологически важными?
- j. Хотите ли Вы получить в аренду больше земель, примыкающие к Вашей арендованной земле?
- k. Что Вы думаете о лесной сертификации?
- l. Каково Ваше отношение к вырубке лесов на Ваших арендованных землях?
- m. Как, по Вашему мнению, рубка лесов влияет на окружающую среду?

Модуль 8: Заключительные вопросы

- a. Какова роль китайских капиталовложений (или других внешних источников финансирования) в лесном секторе?
- b. Как Вы думаете, каким образом возможность спада на китайском рынке жилья повлияет на Ваш бизнес?
- c. Можете ли Вы предложить какие-либо улучшения, которые, по Вашему мнению, поспособствуют повышению конкурентоспособности на Дальнем Востоке в лесном секторе?

Есть ли у Вас какие-либо вопросы ко мне? Или, может быть, Вы хотите что-нибудь добавить?

Большое спасибо за то, что Вы нашли время на интервью. Информация, которую Вы предоставили, внесет неоценимый вклад в оценку развития лесного сектора в России. Вы можете связаться со мной по адресу электронной почты, который предоставлен на моей визитке.

Appendix E: Outline of Themes and Sub-themes from Results Section

Overarching categories:

- Category 4.1: Factors of Production
- Category 4.2: Federal and Regional Governance
- Category 4.3: RFE Forestry

Category 4.1 Factors of Production

- 4.1a) Theme: Labor and Labor Productivity**
- 4.1b) Theme: Land-Forests**
 - Leasing forest land
- 4.1c) Theme: Capital-Infrastructure**
 - Vast areas without roads
- 4.1d) Theme: Costs associated with Factors of Production**
 - Fees connected with leasing forest land
 - Transportation costs

Category 4.2 Federal and Regional Governance

- 4.2a) Theme: Soviet and Post-Soviet Institutional Legacies**
 - Carrots and Sticks (кнут и пряник)
 - Corruption
 - Illegal Logging
- 4.2b) Theme: 2007 Federal Policies**
 - Views on Federal-Regional Dynamics
 - Forest Code
 - Priority Investment Projects
 - Roundwood Export Tax
- 4.2c) Theme: International Trade of Russian Timber**
 - Chinese and Japanese and EU export markets
 - Domestic Market
 - WTO Accession effects on export market

Category 4.3 RFE Forestry

- 4.3a) Theme: Support for Business**
 - Government Support
 - Industry Association
- 4.3b) Theme: Competitiveness of RFE Processing Companies**
 - Connected to General Economic Development
 - Connected to General Levels of Corruption
 - Connected to Technical Ability, Technology
 - Connected to Effects of WTO on RFE
- 4.3c) Theme: Firm Size**
- 4.3d) Theme: Forest Management**
 - Ecological Effects of Forestry in RFE
 - Commentary on Forest Management and Land Leasing Issues
- 4.3e) Theme: Certification**

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