



Forest Resources and Technologies (FOREST) Project

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Quarterly Report

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Submitted by

**Winrock International
Chemonics International Inc.
The Heron Group, LLC**

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I. Introduction

Winrock International, in partnership with Chemonics and the Heron Group, was awarded the Forest Resources and Technology (FOREST) Project on July 21, 2000. This five-year project is based in Khabarovsk, Russia and will be implemented July 2000 - July 2005 in the Russian Far East and Siberia. The major goal is to promote sustainable forest management and preserve Russian forests as a globally important carbon sink, of tremendous economic importance to Russia as a source of jobs and overall economic growth, as well as a critical habitat for rare and endangered species. The FOREST Project achieves these goals by focusing on four technical components: forest fire prevention, pest management, non-timber forest products and secondary wood processing, and renewable energy alternatives. This report covers the 3rd quarter of Year 3 of the FOREST Project, January 1 – March 31, 2003.

II. Executive Summary

Russia possesses over 22% of the world's forested area. For the Russian Far East and Siberia, the forestry sector represents a primary source of jobs, and tremendous economic value for the local communities as it is the largest export item from the region. The FOREST Project ensures that Russia's forest will continue to be protected, remain a source of jobs to the Russian Far East and Siberia for decades to come, as well as a valuable environmental and sustainable resource and globally significant carbon sink.

During this reporting period, through support provided by the FOREST Project, the local centers for forest protection have been able to employ a new modern labor-saving technology of pheromone pest monitoring, which is now being implemented in 12 leskhozoes. As a result of monitoring 370,000 hectares, the center receives sufficient information on Siberian moth population density covering an area of 11 million hectares and thereby protecting an estimated sum of over \$15.5 billion (\$1400/hectare x 11 million hectares) valuable forestry resources to the Russian Federation, and the overall global economy. Currently FOREST is working closely with the Ministry of Natural Resources and the Center for Forest Protection to ensure that Russia's forests are safeguarded against pests, and during this period together we identified the need to perform evaluations on 1 million hectares of forest on Sakhalin Island, valued at \$1.4 billion.

FOREST worked with and trained over 150 foresters in fire prevention, and 80 foresters on pest monitoring, for a total of 130 federal foresters trained. This is particularly significant from the perspective that we are working alongside the Russian government in many cases implementing activities which will be a direct benefit to Russia and its population. In working with foresters, FOREST is ensuring there will be a capacity for these activities to continue sustainable forestry management following the conclusion of the project in 2005. In addition, the FOREST Project worked with 57 educators in fire prevention techniques who are currently developing a capacity to pass this knowledge to school age children based on a developed format (curricula) created out of the project. At this mid-point in the project, FOREST considers developing a sustainable legacy to be integral to the future success of forestry in the Russian Federation; in as much this will be the focal point for the remaining period of this project – ensuring a sustainable legacy for

the FOREST Project so that activities which support forestry will be institutionalized within Russian structures and carried on for decades to come.

On Sakhalin Island, a first of a kind Saw Filing Center was created with a \$30,000 FOREST grant; the center has now provided training to 10 people from 4 different companies, increasing each company's output by an estimated 20%, with a significant step toward sustainability by providing a new service on the island – the sharpening of saws. This is particularly significant to Sakhalin Island as it now enables all secondary wood processing companies the ability to have their saws expertly sharpened on the island, making them much more competitive in their product pricing and more able to compete regionally by cutting costs. In addition, the center has provided a forum for passing on this knowledge to all SWPs, which due to isolation and lack of knowledge and skills on the island, these SMEs were forced to send products abroad for correction and in some cases, repurchase in the past. Altogether across the Russian Far East, it is estimated that FOREST has assisted NTFP and SWP companies generate new sales in excess of \$2,000,000 thereby sustaining and creating employment for an estimated 500 persons in the region.

The Khabarovski Krai Administration has requested that FOREST Project experts assist the Ministry for Forest Industry in providing technical assessment on companies located in DeKastry interested in designing and constructing biomass boilers. The Krai intends to implement a program in DeKastry to develop an industrial center for timber production, and we are now awaiting fund allocation for this initiative. FOREST also responded to the Khabarovski Krai's request to provide training on implementation of "Dry Kiln" technology based on Governor Ishaev's mandate to increase wood processing levels within the region. In reference to Sakhalin Oblast, FOREST is being asked to put together a trade mission of secondary wood processing companies to Japan; we expect to accomplish this activity during the next quarter.

FOREST client Igirma-Tairiku is expected to convert 120,000 m³ of wood wastes per year to produce an additional 150,000 m³ of dry lumber for export to Japan, Austria, and Germany, resulting in an estimated profit of over one million USD/year. Ground has been broken on the building and this project is moving forward. By September/October 2003, it is expected that two (13 MW thermal) out of four biomass-fired DKVR/10/14 boilers from Biyskenergomash will be installed in Igirma to supply energy for 10-12 new dry kilns and to heat a new sawmill. Likewise, potential savings from self-generation of fuel and electricity for another FOREST company client, Terneyles, is approximately \$ 500,000/year and over \$ 200,000/year savings from the cost of disposing wood-wastes. This process FOREST has implemented is resulting in a core base of Russian experience in biomass energy, creating working examples that will serve as models for other companies in the region and across the Russian Federation.

The following is a more in-depth reporting on each of the four components within the FOREST Project for this period.

III. The Four Components of FOREST

A. Fire Prevention

1. Economic Overview

The Fire Prevention Component's activities contribute directly to supporting economic growth by encouraging public participation to improve Environmental Resource Management (ERM). The component continuously identifies and partners with new groups to deliver trainings, organize community events, and disseminate forest fire prevention materials. This quarter, two component partners, the Institutes for Rising Skills for Teachers in Primorski and in Sakhalin independently initiated, organized and conducted trainings of the Forest Fire Prevention School Age program where a total of 57 teachers were trained; this is leading to direct institutionalizing of a sustainable capacity to produce these trainings in the Russian Federation. Both of these trainings took place absent of financial or technical assistance from FOREST. Another way the component involves new groups in forest fire prevention activities at a very minimal cost to the project, is through journalist contests. Journalists who have produced articles or other media on forest fire prevention topics can compete for cash prizes based upon the content of their piece and the appeal to the general public. As the FOREST Project proceeds over the remaining two years, staff will work to further institutionalize the programs developed into Russian structures, both governmental and NGOs to ensure there is a sustainable legacy. It is anticipated that this work will have a profound effect on the development of an overall fire prevention program for Russia long after the FOREST Project has concluded, thereby ensuring the forests of the Russian Federation will continue to provide a source of jobs and growth to those communities that depend on this sector for their livelihood and sustenance.

2. Highlights and Results

- FOREST engaged journalists and artists in actively developing and disseminating fire prevention messages through a series of contests held in Khabarovski Krai, Krasnoyarski Krai, and Sakhalinskaya Oblast during this quarter to support the publication and broadcasting of fire prevention media products that will most resonate with the public. The journalist contest is an example of how the project has acted as a catalyst to encourage media groups and others to be effective communicators of forest fire prevention messages. Winners of the fourth round of the journalist contest in Krasnoyarski krai (for publication of fire prevention materials), Nina Shunina and Alexandre Kovalenko, received their awards in January.
- Foresters improved their public outreach skills with FOREST Project training. The foresters' training process has allowed foresters to broaden their networking with other leskhozoes as a way to offer each other support and to exchange the knowledge and experience they have gained through their work with communities. Contact with their peers has come at an important time for them (and Russia) as other resources have become more and more limited due to national and international economic and political circumstances. The training has also had an effect in the area of individual capacity building; foresters have discovered their strength and increased their confidence in communicating forest fire prevention messages to local communities. Five three-day trainings on developing and strengthening communication skills for the leskhozoes of Sakhalinskaya Oblast and Krasnoyarski krai were held in February and March. 150

foresters were trained during this period. Environmental prosecutors, education specialists, and experts from the mass media served as part of the training faculty. Panels were held with local populations invited, to further enforce the foresters' interaction with persons and communities.

- The Administration of the town of Nekrasovka requested materials for their Festival Welcoming Spring, and the figure skating team of the Khabarovsk Children's Sports school distributed fire-prevention materials at their annual New Years concert. Fire prevention materials are now often requested for public events, attesting to the institutionalizing of the materials already developed under the project --- Russian organizations see value and a need for these fire prevention materials.
- Rest area sustainability ensured with Club "Boomerang" (Sakhalin) completing the construction of three recreation sites, which were specifically located in high-risk fire zones, as a means of developing awareness and striving for forest protection. The club's management conducted a contest on 'fire prevention' and 50 adults and children participated. Twenty-two works of art were selected for an album as well as for an open exhibition. Three winners were selected for printing and their work is being placed in these high risk fire zones to further increase public awareness to protect the forest. Korsakovski leskhoze (Sakhalin) took over the responsibility for maintaining the forest furniture of three rest areas; this will secure the long-term sustainability of the rest areas, which are located on the foresters' patrolling routes. FOREST anticipates by the end of this year, we will have transferred the maintenance of the remaining rest areas to the leskhoze.

3. Success Story

Forest Fire Prevention School Age Program Self-sustaining

The first Forest Fire Prevention School Age program training took place in Vladivostok, Primorye on March 19, 2003. In October, 2002 ElenaYakovleva participated in a training-of-trainers seminar of the Forest Fire Prevention School Age Program and was given a draft version of the program for review, adaptation and implementation. Elena shared her experience at the seminar and later promoted ideas on the program with colleagues from other schools, working closely with the Primorski Institute for Rising Skills for Teachers (PIPKRO). The Institute saw value in the program and conducted a pilot project using an abbreviated curriculum of the FOREST-developed School Age program training. Elena has been offered a position to conduct further such trainings at the Institute. This was the first School Age Program training to take place in Primorye, as FOREST continues to strive for integration of the Forest Fire Prevention School Age Program into a Russian institution. Similarly, in Sakhlinskaya Oblast, a Forest Fire Prevention School Age Program training was initiated, organized and conducted by the Institute for Rising Skills for Teachers (PIPKRO) free of financial support or technical assistance from the FOREST Project; thirty-four educators were trained in a seminar. FOREST's School Age Program is now becoming a self-sustaining program and is recognized within the institutions of child education professionals for the value it brings to educating Russia's children.

Training-of-Trainers a Success in Strengthening Foresters' Communication Skills

Natalia Gorskikh, Head of the Department of Skill Improvement for Forester Managers for the Divnogorsk Forestry Technical School in Krasnoyarski Krai, took what she learned at the recent round of regional foresters' training sessions to her own classroom where she passed her new fire

prevention knowledge on to an additional 30 foresters who were attending a three-week session on forest management. She will continue in this endeavor to train professional foresters by returning as a faculty member to the Divnogorsk Forestry Technical School for skill improvement. Natalia is one of over 70 Krasnoyarski Krai forest professionals who have received fire prevention training through the FOREST Project. She now uses these new skills and training to teach Practicum students who are training for a career in Forestry Management.

4. Project Focus Areas – Activity Information

Ongoing Activities

- FOREST forges an active partnership in Komsomolsk. The Administration of Komsomolsk-on-Amur has requested the FOREST Fire Prevention staff to come and meet with them to discuss the coming forest fire season. FOREST continues to work closely with its active partners in Komsomolsk, among them: NGOs “Alliance” and “Strazh Taigi”, local TV and radio stations, and child education specialists (Junior Forest Rangers, school teachers, etc). FOREST Fire Prevention staff will also begin a new emphasis to begin to seek buy-in from high level governmental structures, particularly the Russian Forest Service, and possibly the Ministry of Education.
- FOREST materials produced and distributed 69,000 tip sheets, 2,000 copies of the fire ring poster, picnic poster, and school posters through leskhozoes and fire departments of Khabarovsk kraia at the request of the Forest Committee. FOREST continues to institutionalize the program by working with The Department of Forest Protection of the Forest Committee, who is now responsible for the distribution of FOREST materials. 170,000 tip sheets were delivered to Irkutsk and another 170,000 to Primorye to help initiate fire prevention activities before the forest fire season starts. Three Sakhalin fact sheets and two Krasnoyarsk fact sheets were printed and distributed among foresters of the two regions during foresters’ trainings. Distribution of fact sheets to other partners in Krasnoyarsk and Sakhalin will continue in March. Two more fact sheets on forest fire prevention in Krasnoyarsk are being developed.

Upcoming Activities

- Refocus the component on creating a national legacy – looking toward institutionalizing the Fire Prevention program over the next two years; this will now be the primary focus of the program
- Re-evaluation of activities for the upcoming work plan placing an emphasis on those that have been successful

5. Results by Objective (Indicators)

Component One Indicator	Third Quarter Results	YTD Results	Year 3 Targets
IR 1.6.5(3) Number of groups participating in forest fire education/ communication program	133	687	156
1. # NGOs	0	12	6
2. # Community groups	2	13	5
3. # Mass media	0	41	15

Component One Indicator	Third Quarter Results	YTD Results	Year 3 Targets
4. # Schools/ extracurricular organizations	57	218	100
5. # Leshozes with foresters participating	74	132	30

6. Key Deliverables Accomplished Per Approved Workplan

- 23 educators were trained in the first Forest Fire Prevention School Age program training in Primorye
- 34 educators were trained in the first Forest Fire Prevention School Age program conducted in Sakhalin without financial or technical assistance from the FOREST Project
- 69,000 tip sheets; 2,000 copies of fire ring posters, picnic posters, and school posters are currently being distributed through leskhozes and fire departments of Khabarovski Krai
- 150 foresters trained in first round of foresters' trainings in Krasnoyarsk and Sakhalin

7. Level of Effort

During the quarter (January 1 – March 31, 2003) approximately 654 days or approximately 30 months (22 day/months) were spent on Component 1. See Appendix B for detailed breakdown of persons, activities, and time.

B. Pest Management

1. Economic Overview

The Pest Monitoring Component developed an economic analysis of timber losses from Siberian moth damage during the 1990s outbreak in Krasnoyarski Krai. The area of forest destroyed from insects and diseases in the Russian Federation varies considerably (from 15,000 to 200,000 hectares) with an average volume loss of 25.3 thousand hectares per year. Based on the minimal price of a cubic meter of non-specific wood sold, these losses would vary from 71.5 to 957.8 million Rubles with 121 million Rubles per year as an average. Recalculation of the average unit price by the forest harvesting industry indicates that these losses will increase by 10 times at a minimum (Rusova, 2003). During the 1990s a Siberian moth outbreak in Krasnoyarski Krai it was estimated that 6,179 million Rubles of forest were lost (Sokolova, 1999), including stumpage costs, the costs of growth loss in surviving trees, as well as the cost of reforestation. Losses were estimated at 44, 000 rubles (or roughly \$1,400 US) per hectare. When the new FOREST pest monitoring system is fully operational in 2005, it will allow early detection of an outbreak to be characterized by: a) the area and the cost of treating the outbreak will decrease by a factor of 3; and b) the loss of merchantable timber will decrease by a factor of 21. Depending upon the size of the outbreak zone, FOREST's pest monitoring team could conceivably save Russia \$10 - \$100 million USD, ensuring the forest for the Russian Far East and Siberia will be a continued source of value and output for the country's economy, as well as a stabilizer for the global economy with reference to wood products, and an important environmental global sink.

2. Highlights and Results

- The Center of Forest Protection of the Buryatia Republic will, without expense to the project, establish and maintain a network of fifty pheromone traps in the mountainous forests of the Republic. The Center also will also work together with FOREST Project Consultants to create a map of the regions of outbreaks of the forests pests in the Buryatia Republic. The Center plans to publish this map on their own and to distribute it in the leskhozoes of Transbaikalia. This addition to the pest monitoring system comes as a result of a desire on the part of the Center to be involved and learn more about how to use the new technology – a legacy for the component. Hard copy maps have been created displaying the regions of outbreaks of the main forest insect pests in the Yenisey Region of Siberia and these are being passed to the The Department of Forest Protection of the Committee of Natural Resources.
- Based on FOREST Project's work completed during the last quarter of 2002, results display a considerable increase in population density and we anticipate that this will provide an opportunity to better predict incipient outbreaks and plan resources accordingly.

3. Success Story

As a result of the FOREST Project, a previously unmonitored 1 million hectares of forest in Sakhalin Oblast will be explored by a special forest pathology expedition from the Russian Center for Forest Protection. This decision was taken by the Ministry of Natural Resources of the Russian Federation based on results of a recent inspection supported by FOREST's Pest Monitoring unit. Sakhalin Oblast is one of the 6 regions of the Project, although the region does not have special forest protection service ensuring the valuable economic resource is safeguarded. FOREST Project made a professional evaluation of the forest health situation on the island and recommended the Ministry to pay special attention to a potential emergency situation with respect to the forest pests and diseases on Sakhalin. As a result of FOREST's work in this area, we have raised the awareness of the Russian government to the need to protect Sakhalin's forest. FOREST is now requesting the Russian government to consider establishing a Center for Forest Protection in the region so that these 1 million hectares of forest are forever protected for their estimated value, roughly \$1.4 billion (\$1400 x 1 million hectares).

As a result of the FOREST Project, leading experts on forest protection from Moscow, Krasnoyarsk, Khabarovsk and Vladivostok organized and conducted a training seminar for 80 forest protection staff members of the local Forest Protection Centers and leskhozoes of Eastern Siberia, thereby displaying a clear initiative toward sustainable pest monitoring. As a result of the training, participants learned modern methods of forest insect pest monitoring including GIS-technology application and pheromone monitoring. Organized jointly by the Irkutsk Center for Forest Protection and FOREST staff, the seminar took place at the end of December 2002 in Irkutsk, a site chosen specifically for the region's maximum risk to potential Siberian moth outbreaks. Through support provided by the FOREST Project - courtesy of USAID - the local centers for forest protection have been able to employ a new modern labor-saving technology of pheromone monitoring, which is now being implemented in 12 leskhozoes. As a result of monitoring 370,000 hectares, the center receives sufficient information on Siberian moth population density covering an area of 11 million hectares and thereby protecting an estimated

\$15.5 billion (\$1400 x 11 million hectares) of valuable forestry resources to the Russian Federation, and the overall global economy.

4. Project Focus Areas – Activity Information

Ongoing Activities

- Began development of a handbook - Forest Pests and Disease Monitoring Methods. The handbook will provide a description of the methods of monitoring on coniferous and leaf beetles, steam and soil insects, and other plant-feeders and forest diseases (contact and distant), methods on conditions characterization of forest crops in the pest-holes, methodology of required laboratory analysis, and basic ways of interpretation of monitoring results. The purpose of this activity is to fully cover all potential diseases which can kill the economic value in the forest, and educate foresters of disease symptoms so they can be appropriately and timely countered to ensure the value of the forest is retained.
- Recent Pest Monitoring focus has been on preparations for the seminar/training session and Working Group meeting in Vladivostok during mid-April. This will be a period of refining the future direction of Pest Monitoring for the overall project; 50 forest protection specialists from Khabarovsk and Primorskiy Krai will be attending including the Director of all of the Centers of Forest Protection – Lyuba Matyusevich. Ms. Matyusevich will now be an integral leader in this activity thereby ensuring the activity is institutionalized into the Russian government to safe-guard Russia’s forests for decades to come.
- A private, woman-owned company “Print” located in Krasnoyarsk is now commercially producing pheromone traps for insect pest monitoring. Collaboration between the FOREST Project and “Print” has helped the company to improve the quality of the trap and simultaneously lower production cost by 15%. Forest protection organizations and agricultural specialists have now contacted “Print” to learn about the possibility of purchasing pheromone traps. In this endeavor, the FOREST Project has ensured there is now a sustainable capacity to produce the pheromone traps in Russia.

Upcoming Activities

(insert here)

5. Results by Objective (Indicators)

Pest Monitoring Results as per USAID/Russia’s Strategic Objectives

SO 1.6 Environmental Resources Managed More Efficiently to Support Economic Growth

IR 1	Previous Total	This Quarter Total	LOP total	Comments
(3) Businesses showing improved performance	2	9	9	Local Forest Protection Centers in 7 regions; 1 pheromone trap producer and 1 pheromone dispenser producer
IR 4				
(2) Hectares monitored	200,000			

(3) Regions adopting NRM practices	5	8	8	

6. Key Deliverables Accomplished Per Approved Workplan

- Work Plan development and Working Group Session
- Handbook for Monitoring Tree Diseases
- Trap preparation for summer season
- Hard copy maps have been created indicating moth counts and outbreak zones
- Trained 80 foresters in Pest Monitoring
- Trained 24 women in Pest Monitoring

7. Level of Effort

During this quarter (January – March, 2003) approximately 235 days or 11 person months (22 days/month) were spent on the Pest Monitoring Component. See Appendix B for detailed breakdown of persons, activities, and time.

C. Non Timber Forest Products and Secondary Wood Processing

1. Economic Overview

Traditionally the Russian Far East has been looked upon as a resource base, with significant raw material exports but insufficient attention to increasing value-added processing that can benefit the regional economy in both non-timber and timber sectors. Local companies lack proper know-how, equipment, technology and training, and marketing capabilities are extremely weak. In response, the FOREST Project during this quarter conducted two seminars addressing issues now understood to be obstacles to improving product quality, increasing returns, and being able to remain a ‘going concern’ – and thereby a source of jobs to the local communities. For example, FOREST organized a seminar in the secondary wood processing sector for Siberia and the Russian Far East, focusing on kiln-drying capacity and improving kiln performance as clear prerequisites to creating long-term sustainable enterprises in this industry as margins have quickly deteriorated on sales of green timber. Local SMEs now understand the only legal way for this sector to remain a valuable source of jobs to the Russian Far East is by making a transformation to processing the wood and creating value-added products. This will ensure that these companies can remain competitive on a global scale and thereby - remain a source of valuable jobs in the Russian Far East.

2. Highlights and Results

- NTFP association member LLC APS Produkty (Khabarovsk) concluded a one-year \$208,000 contract with a Korean company Volchoice Castrol Ltd, for export of Chaga. As the company’s first export contract, it represents a significant achievement for the 15-person enterprise, increasing annual sales by over 500% and providing steady employment to 450 local harvesters. The contract was the direct result of participation in the “Natural Products Expo Asia” trade show in Hong Kong, organized by the FOREST Project.
- Also as a result of the Hong Kong show, Ruan Co., Ltd. concluded a one-year, \$657,850 contract with Bizarra Corporation (Japan) for the export of shredded and granulated

vacuum-packed Chaga and licorice extracts, with the LLC Natural Laboratory (a member of the RFE NTFP Association) acting as general contractor for packing and product supply, and Ruan Company providing the necessary licenses and permits.

- A new \$150,000 contract has been signed between a RFE NTFP association member company Bely Kon and a Korean company Dazzi Plan to export shredded vacuum packed chaga as a result of marketing through a RFE NTFP Association web site. In the last two months, the NTFP E-trade outlet has generated sales within Russia worth 28,000 Rubles, two requests for dried Schizandra, one request for wild berry syrups, and one request for herbal teas.
- An advanced technology to produce adipose extract through CO₂ extraction was acquired by Nature Lab, a member of our Khabarovsk NTFP Association, through a host national volunteer expert with a specialization in equipment selection, as recruited by FOREST. This technology is extremely important to local NTFP processors because it significantly increases the final value of their products. The FOREST consultant assisted Nature Lab in identifying the specific type of extractor needed relative to the company's available financial resources and developing the extractor installation layout.
- Matur Company, a member of Krasnoyarsk NTFP Partnership, expanded its product line, increased its output, and defined an advertising campaign which helped it to target a new market and thereby increase sales by \$2,000, as a direct result of assistance provided by a National volunteer recruited by FOREST to develop a marketing program for processed wild berry.
- FOREST and Wildlife Conservation Society (WCS) initiated a collaborative effort to assist NTFP processors and harvesters in the Russian Far East. FOREST and WCS developed a small proposal to incrementally fund on a cost-sharing basis two NTFP company representatives to take part in a small trade mission to Harbin, China. FOREST and WCS consider this proposal a first step to making tangible impact on a collaborative level, and we are now considering other such opportunities to leverage resources to assist NTFPs in the region.
- Executive Director of Region 7 Association served as a National volunteer to assist the Krasnoyarsk NTFP Partnership in strategic planning, association management tools, and development of a fundraising program. Facilitated by FOREST, the assignment also helped identify opportunities for collaboration in marketing and production between the two associations, their respective memberships, and a need to develop standards for export with organic certification and policy regulations to be presented to Russia's federal government .
- Region 7 member firm Kretchet (Inter-Regional Public Organization of Hunters and Fishermen) signed a supply agreement for delivery of 900 metric tons of honey, totaling \$900,000, over three years. Beginning with a new harvest this upcoming May, 2003, the contract will employ 204 bee-keepers (15 women, 189 men) and 10 purveyors (2 women, 8 men). Other Region 7 member firms also signed contracts including, CJSC Vostok-Pushnina for supply of 21 tons of Siberian Ginseng to Spain, LLC Kur-Vostok-Urmi for supply of 500 kg of birch bud to France, LLC Kur-Vostok-Urmi for supply of Chaga anti-cancer mushroom to Japan, Amurbiopharm – Taiga for supply of 11 metric tons of herbal teas to Pharma & Food Company, Hungary.
- The Sakhalin Educational Center for Cutting Instrument Specialists ("Saw Filing Training Center"), a FOREST grantee, graduated two rounds of saw filing specialists and

began providing fee-based saw maintenance services to Sakhalin SMEs. The Sakhalin Association of Forest Product Processors established the Center with a \$30,000 FOREST grant and assistance from the Oblast Administration's Departments of Forest Industry and Education and association member Dary Morya. Better saw maintenance enables companies to reduce milling costs, produce a higher-quality product, and improve labor productivity by as much as 20%. A more consistent, higher-quality cut means costs are further reduced by lower engine loads and power inputs. Better saw maintenance also means improved environmental performance – higher yields and less raw material waste. Fees for training and saw filing services also improve association sustainability; the Center has received its first payment (\$635 USD) for maintenance of 30 saws from the Parusnovsky Woodworking Enterprise. Training has been provided to 10 people from 4 different companies, who upon returning to their companies received a higher wage while simultaneously improving their companies' productivity and product quality.

- 1,036 site visitors have registered on the Russian Far East SWP Association (DOD) web site, with 70% visiting more than once. As of February, 2003, visits were registered from Russia, Ukraine, USA, Japan, Finland, Canada, Denmark, Great Britain, Hungary, the Netherlands, Latvia, Estonia, Singapore, South Africa, Germany, Poland, Greece, Argentina, Switzerland, New Zealand, and Austria. Currently there have been 10-12 requests per week for information on products manufactured by the DOD members, with the majority of these requests also coming from foreign companies. DOD members have been communicating with potential partners based on those requests. The website has been used to announce several DOD seminars, already resulting in the Association collecting \$500 in seminar registration fees.
- Upon request of the Khabarovski Krai Timber Industry Ministry and the Russian Far East Secondary Wood Processors Association, FOREST conducted a two-day seminar entitled "Dry Kilns, Boilers and Wood Wastes: Economic Expediency, Technical and Technological Solutions." Delivered by Russian kiln-drying and boiler experts, the seminar was attended by 65 SME managers as well as international kiln-dried product buyers, and provided a wealth of new information for companies, enabling them to contact local and international kiln manufacturers to negotiate contracts, and put them in contact with financial institutions. The added value from kiln-drying has been estimated at \$25-35 per m³ (on top of cost savings from wood waste utilization and independent power generation). One company, installing 12 new 250 m³ kilns and estimating 40 cycles per year and \$25/m³ return to kiln-drying, has projected added annual profits of 90 million RUR; our seminar has allowed companies an opportunity to seek this added value. This is particularly significant as Governor Ishaev, Khabarovski Krai, has established a regional directive urging local wood processing companies to implement dry kilns, and thereby become value added processors in the krai.
- FOREST grantee SibGTU RIC (Krasnoyarsk) made a first step towards sustainability by providing paid services. Upon order, web-sites were developed for two SMEs (an advertising company and the Krasnoyarsk NTFP Association) for total amount of \$440.

3. Success Story

Forest Line Company, Yuzhno-Sakhalinsk

Following participation in a trade mission to China organized by FOREST, Sakhalin-based Forest Line Company has initiated a \$130,000 project for a new glue-lam (a type of edge glue –

finger joint products) production line oriented toward the Japanese market. Consequently, efficient and effective kiln-drying has become a crucial element to the company; FOREST recruited a Russian wood-drying specialist, Dr. Tupitsyn of the Khabarovsk Polytechnic Institute, to provide equipment and operational recommendations to the company. Dr. Tupitsyn recommended a 40-50 m³ dry kiln and provided a contact to the Promdrev kiln manufacturing company in Khabarovsk. This resulted in a linkage directly between two FOREST association members of the Khabarovsk Secondary Wood Processing Association. The project is underway and will be completed by September 2003, 100% funded by Forest Line. Forest Line director Vladimir Belomestnov will also be taking part in the FOREST trade mission to Japan in June, 2003.

East Sakhalin Wood Production Company

Facing financial and operating hardships, Vakhrushevsky WP Shop approached FOREST for assistance in developing a business plan to modernize its structure. FOREST recruited a National volunteer who did an analysis and completed a business plan that enabled the company to identify strategic directions and concentrate its resources. The volunteer assisted company management in re-naming the entity -- The East Sakhalin Wood Production Company -- to match a new company strategy that was developed. Subsequently, the company has obtained a 1.5 million RUR (\$50,000) bank loan to reconstruct its facilities which has been used in repairing their dry kiln operation. Already, the company is producing high quality dry molding and created an 11 new jobs with a production increase of over 12%. Upon full completion of the project (reconstruction process) this summer, it is expected that The East Sakhalin Wood Production Company will produce over 210,000 m³ of dried lumber per month, thus increasing its total production volume by 90% with a 50% increase in company profit.

4. Project Focus Areas – Activity Information

Ongoing Activities

- Assistance to companies participating in "Dallesexpo 2003" trade show (Khabarovsk, May 2003) is being provided
- Delegation coordination for "Ligna 2003" trade show in May
- Delegation coordination for Sakhalin - Japan Trade Tour, with the Japan Lumber Journal
- Development of NTFP Policy and Regulations
- Export and foreign investment facilitation for TTS Les and other Krasnoyarsk/Irkutsk companies
- Consultant assistance to Sakhalin Association in preparation of partnership grant proposals
- Follow-up to Dry Kiln & Boiler Seminar: facilitation of further training and kiln/boiler investments
- NTFP Export Certification Seminar followup

Upcoming Activities

- April 1: Annual Meeting of Siberian Wood Processors' Association (SOD) to approve the strategic plan developed by a FOREST volunteer expert.
- April 18-19: Krasnoyarsk NTFP Partnership Annual Meeting (chairman election, association development strategy).
- April-May: U.S. volunteer to assist 'Forest Line' with Japan/Southeast Asia market study

- May 15-18: NTFP companies to participate in a regional exhibition "Dallesexpo 2003" in Khabarovsk.
- May 24-31: Krasnoyarsk and Sakhalin companies will travel to Hannover, Germany to attend Ligna Plus 2003 wood-processing equipment exhibition.
- June 18-19: Advisory Council Meeting, Sochi.
- July 1-10 (tentative dates): RFE-Siberia- Japan Trade Tour

5. Results by Objective (Indicators)

SO 1.6 Environmental Resources Managed More Efficiently to Support Economic Growth				
	This Quarter	Year 3 to date	LOP total	Details
IR 1.6.1.1 - Business associations strengthened	0	2	7	<p>This indicator only counts new FOREST partner associations (none this quarter). However, six of seven association partners developed new services, contributing to the Association Strengthening sub-indicator for increased services:</p> <ul style="list-style-type: none"> • Region 7: trade show facilitation • Region 7: Volunteer Expert technical assistance services • RFE NTFP Association: trade show facilitation • RFE NTFP Association: E-trade outlet via website • Krasnoyarsk NTFP Partnership: E-trade outlet via website • Sakhalin Association: saw filing training • DOD: passing product requests to members via website • DOD: kiln seminar coordination • Siberian Wood Processors Association: strategic planning and Annual Meeting
IR 1.6.1.2 - Businesses participating in associations	2	28	197	<p>German wood-processing equipment manufacturer Weinig joined DOD; one additional member joined Region 7.</p>
IR 1.6.1.3 - Businesses showing improved performance	12	21	35	<p>8 businesses showed newly improved performance:</p> <ul style="list-style-type: none"> • Vostokbioproduct (pharmacopoeia certificates for 10 new products - herbal mixes) • APS Produkty (\$208,000 Chaga export contract to Korea, 500% sales increase and jobs for 450) • Bely Kon (\$150,000 Chaga export contract to Korea) • Nature Lab (adoption of modern technology for adipose extraction) • East Sakhalin Wood Production (increased production [12%] and profit, new loan, new technology) • Ruan Company Ltd. (with Nature Lab, \$657,850 Chaga export contract to Japan) • Nord Baikal (increased domestic sales) • Forest Line (adoption of new processing and drying technology, new product line) <p>The following four businesses improving performance were reported by 'Region 7' at its annual meeting.</p>

				<p>Although occurring earlier, these were not included in earlier reports so are added here:</p> <ul style="list-style-type: none"> • Kretchet Inter-Regional Public Organization of Hunters and Fishermen (\$900,000 three-year honey supply contract, employment for 204 bee-keepers and 10 purveyors) • CJSC Vostok-Pushnina (supply contract, 21 tons of Siberian gingseng to Spain) • LLC Kur-Vostok-Urmi (2 supply contracts, 500 kg of birch bud to France and Chaga to Japan) • Amurbiopharm – Taiga teas (supply contract, 11 metric tons of herbal teas to Hungary) The following business, while not adding to IR 1.6.1.3 since it had already improved performance, was assisted to make further improvements on the sub-indicator noted: • Matur (expanded product line and sales increase)
SO 2.1 More Open, Participatory Society				
	This Quarter	Year 3 to date	LOP total	Details
IR 2.1.2.2 - Advocacy campaign conducted	0	1	1	Sakhalin and DOD Associations’ joint appeal to regional administrations for changes in export duties to favor processed wood products over raw logs.
Winrock International Indicators				
Training participants (participants in an organized seminar to which they are invited specifically for training)	121	159		<ul style="list-style-type: none"> • NTFP Export Certification Seminar, March 2003 – 30 participants. • Kiln-Drying & Boiler Technologies Seminar, March 2003 – 65 partic. • Strategic planning workshop, SOD, March – 4 partic. • Strategic planning, Region 7, January – 22 partic. • Association Management & Advocacy Training, November 2002 – 20 partic. • “Saw Filing Training Center” of Sakhalin Association (FOREST grant-funded) – 10 trainees thus far. • Grant-Writing Training, September 2002 – 8 partic from 4 associations
Direct Beneficiaries (Individuals/companies that work directly with the Project through training, technical assistance, and grants)	161	220		<p>This quarter:</p> <ul style="list-style-type: none"> • 13 volunteer assistance assignments • 121 training participants • 27 attended Region 7 Annual Meeting, facilitated by FOREST <p>Year Three to Date:</p> <ul style="list-style-type: none"> • 25 volunteer assistance assignments • 16 companies provided U.S. consultant assistance • 17 trade show participants • 159 training participants • 3 grantees

6. Key Deliverables Accomplished Per Approved Work plan

- Completed database of SWP and NTFP companies in RFE and Siberia
- NTFP Export Standards Seminar (RFE and Siberia NTFP Associations);
- Kiln/Boiler Seminar (DOD and Khabarovski Kraii Ministry of Timber);
- E-commerce (DOD, RFE NTFP, KR NTFP) Development for Associations;

7. Level of Effort

During this quarter (January – March, 2003) approximately 419 days or 19 person months (22 days/month) were spent on the NTFP/SWP Component. See Appendix B for detailed breakdown of persons, activities, and time.

D. Component 4 – Renewable Energy Alternatives/Biomass

1. Economic Overview

Forests are one of Russia's most important natural resources and especially important to the economy of Siberia and the Russian Far East. Currently, the primary export product from the Russian Far East is raw logs. Increasing value-added processing in Russia will produce major financial and economic benefits for the region. The greatest opportunity for adding value to forest products in the near term is through the addition of drying capacity fueled with biomass wastes. With effective management, the forest products industry should be the largest employer in the region for the foreseeable future.

The primary barriers to greater value-added processing in the region are the availability and high cost of energy and the limited and expensive transportation infrastructure. FOREST Project focuses on decreasing the cost of energy and increasing the reliability of supply to the forest products industry. Although biomass residues are widely used throughout the U.S. forest products industry, there is limited experience with biomass energy in Russia as the central government during the Soviet period subsidized the supply of fossil fuels. Biomass energy systems can produce significant cost savings and profit earnings by: a) utilizing biomass wastes for which companies currently pay a disposal cost, b) replacing purchased fuel and electricity with self-generation, and c) production of higher quality wood products that are more competitive in the international market.

For instance, with increased boiler capacity, FOREST client Igirma-Tairiku is expected to convert 120,000 m³ of wood wastes per year to produce an additional 150,000 m³ of dry lumber for export to Japan, Austria, and Germany, resulting in an estimated profit of over one million USD/year. Likewise, potential savings from self-generation of fuel and electricity for another FOREST company client, Terneyles, is approximately 500,000 USD/year and over 200,000 USD/year savings from the cost of disposing wood-wastes. This process FOREST has implemented is resulting in a core base of Russian experience in biomass energy, creating working examples that will serve as models for other companies in the region and across the Russian Federation.

2. Highlights and Results

- Igirma-Tairiku has nearly completed construction of the foundation for a new boiler house. FOREST Project biomass energy experts worked alongside Igirma-Tairiku and Biysk Boiler Manufacturing company to modify the design of Biysk design boilers and Pomerantsev furnaces to burn biomass wastes that formerly had to be buried due to the inability to burn them in available Russian equipment. By Sept. 2003, it is expected that two (13 MW thermal) out of four biomass-fired DKVR/10/14 boilers from Biyskenergomash will be installed to supply energy for 10-12 new dry kilns and to heat a new sawmill.
- Terneyles has considered three different furnace and boiler model options based on cost estimations for designing a cogeneration plant (30 MW thermal). FOREST Project experts assisted Terneyles in preparing bid packages to negotiate better prices from Russian and international suppliers. Once selected, design firm Turboblock Service will begin the detailed design of the facility.
- Based on design and business plans developed with FOREST Project assistance, Parusnovskiy DOK has completed 135,000 USD loan documentation from the Sakhalinskaya Oblast Administration to develop construction plans for a dry kiln and biomass-fired boiler (0.45 MW thermal) complex, and to purchase equipment. The funds are expected to be disbursed in June 2003.
- Krasnoyarski Krai has incorporated Yartsevo's proposed construction of a cogeneration plant (4 MW thermal energy) in its Forest Industry Development Program. The plant will provide power and heat supply to 1,100 beneficiaries in the remote settlement of Zotino, and to a new sawmill to produce 50,000 m³/year of dry lumber. Based on design and business plans developed with FOREST Project assistance, including technical expertise and guidance to Kaluga Turbine manufacturers in installing Kaluga steam turbines, Yartsevo is appealing to IBRD for finances.
- Amurskiy has completed construction of its installation site for a 2.5 MW Kovrov boiler plant. Once installed in June/ July 2003, Amurskiy will be able to expand its particle board production from 8,000 m³ to 20,000 m³.
- In a design review session, FOREST biomass energy experts enabled partner companies and design firms to move forward with their proposed biomass projects by resolving technical problems and identifying opportunities for improved fuel storage coverage and handling, boilers, grates, steam extraction, and other elements of the biomass combustion system.
- Having successfully installed a sawmill, a 100 m³ Katres dry kiln complex, and launched a 1 MW biomass boiler with FOREST Project assistance, Voyage served as a model site visit for participants in the Khabarovski Krai/FOREST hosted Dry Kiln and Boiler Seminar to learn about operational issues and technology options (Russian and foreign). The project will enable Voyage to utilize wood wastes to fire the boiler, providing heat for the kilns to dry about 5,000 m³ of lumber per year, amounting to 130,000 USD/ year in added value and 10-20 thousand USD/ year in disposal costs avoided.
- Having received FOREST Project assistance, Gorinskiy LPH has successfully operated a 1 MW biomass boiler and kiln complex since December 2002. The company is actively seeking market opportunities to earn profits on added value timber products. Currently, lumber export contracts are being developed with ITOCHU Corporation, Japan.

- Having assessed the cost of a Wellon's cell as too high, Terneyles is considering three other boiler and furnace options in the design of a cogeneration plant. FOREST staff continue to work with Terneyles in this capacity.

3. Success Story

Igirma-Tairiku is a long-term FOREST partner and pioneer in introducing new biomass technologies to Siberia. Previously lacking available Russian equipment to produce heat and power from its wood wastes, Igirma-Tairiku had been paying large disposal costs to bury its biomass wastes. FOREST Project biomass energy experts then worked alongside Igirma-Tairiku and Biysk Boiler Manufacturing company to modify the design of Biysk design boilers and Pomerantsev furnaces to enable efficient combustion of these wastes. As a result, agreements have been signed between Igirma-Tairiku and Biysk Boiler Manufacturing company for the design, manufacture, and installation of four biomass-fired DKVR/10/14 boilers (25 MW thermal) from Biyskenergomash. Igirma-Tairiku has nearly completed construction of the relevant infrastructure to house these boilers. When installed, the boilers will supply energy for 10-12 new dry kilns and to heat a new sawmill. This new boiler capacity will convert 120,000 m³ of wood-wastes per year into heat that will be used to produce an additional 150,000 m³ of dry lumber per year for export to Japan, Austria, and Germany, with an estimated profit of over one million USD/year. The investment in boilers will also produce local jobs for construction in the short term and increased employment at the processing facility in the medium and long term. As a model firm, Igirma-Tairiku is sharing its newfound technical knowledge with companies also interested in installing similar biomass facilities.

4. Project Focus Area – Activity Information

Ongoing Activities

- Russia FOREST Project biomass energy experts are reviewing the technical and business plans Yartsevo developed for a biomass cogeneration plant (5 MW) and the technical options TTS-Les is considering for construction of its biomass cogeneration plant (30 MW).
- Development of economic models for project analysis and calculation of economic benefits from biomass energy projects.

Upcoming Activities

- Site visit to Parusnovsky DOK, recent recipient of Sakhalin oblast funds, to move forward the construction of a biomass boiler complex, and to Chakh-Poof, a potential candidate for a FOREST Project grant, to determine the company's technical and financial status.
- TM Baikal plans to complete the detailed design of a 13 MW boiler house whereby two Biysk biomass boilers will be installed.
- Posters will be presented at the Energy Conservation Exhibitions in Irkutskskaya Oblast to disseminate information on biomass energy use and the Component's activities.

5. Results by Objective (Indicators)

SO 1.6 Environmental Resources Managed More Efficiently to Support Economic Growth				
IR 1.6.2 Operating efficiency of businesses adopting environmentally -friendly practices improved				
	Year to Date	This Quarter	LOP Total	Comments
Businesses showing improved environmental practices	8	4	14	Yartsevo and Parusnovskiy DOK developed a TEO. CKTI and Sibgiprobum were trained at a design review session.
<i>Results tracked additionally to the SO table indicators</i>				
Amount of economic benefit received by local businesses as a result of introducing new biomass energy plant	USD 300,000 per year	-	N/a	1 MW boiler + 300 m3 dry kiln complex at Gorinskiy KLPH. Economic benefit in the form of increased profits from valued-added dried lumber exported to Japan.
Number of local institutions, with increased capacity to design and construct biomass energy facilities	6	2	N/a	Design firms GNC LPK, (Moscow), Krasnoyarsk Institute for Technical Physics developed TEOs/construction plans for biomass energy facilities at Parusnovskiy DOK (Sakhalin); Yartsevskiy LPK (Krasnoyarsk Krai), Sibgiprobum (TM Baikal), Energomash-Eastern Siberia (Yeniseyles), and CKTI (St.-Petersburg) took part in a design review session.
Number of people, who received training in biomass energy use through biomass energy workshops, design review meetings, study tours, seminars (male/female/total)	100/8/108	46/2/48	N/a	Irkutsk Design Review Session in March 2003. Khabarovsk Dry Kiln & Boiler Seminar in March 2003.

6. Key Deliverables Accomplished Per Approved Workplan

- Parusnovskiy, DOK's TEO for the construction of a 0.45 MW thermal biomass energy plant in Sakhalin
- Yartsevskiy LPH's TEO for the construction of a 5 MW thermal biomass energy plant in Krasnoyarsk kraï

7. Level of Effort

During this quarter, approximately 307 days or 14 months (22 days/month) were spent on the Component. See Appendix B for detailed breakdown of persons, activities, and time.