Rebecca T. Richards
Professor, University of Montana and Fulbright Senior Scholar, University of Joensuu, Fall 2005

THE ROLE OF THE INTERNATIONAL NON-WOOD FOOD FOREST PRODUCT INDUSTRY IN LOCAL AND REGIONAL DEVELOPMENT

In recent years, non-wood forest products (NWFPs) have received increasing attention as a means of alleviating rural poverty and promoting rural development while maintaining forest sustainability and biodiversity (see Angelsen and Wunder 2003; Neumann and Hirsh 2001). In general, NWFPs are conceptually defined by the United Nations Food and Agriculture Organization (FAO) as "goods of biological origin other than wood, derived from forests, and other wooded land and trees outside forests" (FAO Forestry 1999). In the boreal and cold temperate forests, the most commonly collected NWFPs are primarily wild berries, mushrooms, and medicinal plants (Lund, Parjari, and Korhonen 1998).

In the Russian Federation, the harvesting of NWFPs, especially wild berries and mushrooms, significantly contributes both to household dietary sustenance and nutrition as well as supplementary household income (Panteleeva 2004). Since the dissolution of the Soviet state in 1991 and the subsequent instability in the food product industry, potato and bread consumption in Russia has increased while dietary intake of foods rich in protein, minerals, and vitamins has declined (Panteleeva 2004). Hence, household consumption of wild berries and mushrooms remains critical for health and well-being. In addition, the sale of wild berries and mushrooms provides significant supplemental household income for many Russian rural households. For some, wild berry sales alone can comprise two-thirds of the family's annual income (Paneteelva 2004), and wild berries provide significant extra cash income for poor rural people (Sossinksy 2002).

Although NWFP harvesting is a critical subsistence and economic activity for rural Russian households, wild berry and mushroom production and collection have declined in recent years. Decades of timber harvest in North and Northwest Russia have resulted in habitat loss that in turn has reduced wild berry and mushroom regeneration to

the point that fruits are smaller and fruiting is unstable and irregular (Chibisov 1999). Similarly, the annual volumes of wild berries and mushrooms both consumed and sold have declined since the early 1930s (Lukin and Gushchin 1999). Declines in collection are attributed to out-migration of rural residents to urban centers and extensive forest cutting in areas accessible to the transportation network that has reduced the volumes of berries and mushrooms, especially in areas close to villages and settlements (Lukin and Gushchin 1999).

Nevertheless, accessible NWFP resources in the Arkhangelsk region alone include almost 35 thousand tons of berries and from 5 to 10 thousand tons of mushrooms per year (Chibisov 1999). However, only 5 to 10 percent of these are collected (Chibisov 1999). In the Kostroma region of Russia south of Arkhangelsk, only 4.1 percent of wild berries harvested are sold at market (Panteleeva 2004). The low proportion of total volumes that is sold can be explained by a weak transportation network since only 10 percent of the total biological yield is accessible (Lukin and Demidova 1999). Because wild berries and mushrooms are produced over a wide geographical area, only limited NWFP production is accessible to collectors and wide variation in NWFP utilization within a given region has resulted. This variation includes the over-exploitation of many accessible areas that has decreased NWFP quality and volume and the under-utilization of NWFPs in remote areas so that most NWFPs in North and Northwest Russia remain inaccessible and hence unharvested.

In the Republic of Karelia (RUK), NWFP collection is a significant rural household subsistence and economic strategy. High unemployment and low wages compel residents of forest settlements to obtain additional income from NWFPs, and the contribution of NWFP supplemental income in relation to wages is significant. During summer and autumn, employees often leave their places of employment to pick berries and mushrooms (Karvinen et al. 2004). Data collected by the Karelian non-governmental organization SPOK indicates that in the region of Pudozh, the annual of harvest of wild berries of approximately 3 thousand tons provides 40 thousand rubles of extra income for 1.5 thousand people or 15 percent of the Pudzoh population (Karvinen et al. 2004). Similarly, Piipponen (1999) notes that in the absence of forestry work and deteriorating village housing support, the collection of wild berries and mushrooms is an important

subsistence and supplemental cash income activity for the rural residents of Koivuselkä.

Despite the socioeconomic importance of NWFP collection in the RUK, only a small proportion of total NWFP production is harvested and sold. In addition to the general limited accessibility of NWFPs, the NWFP industry in the RUK is poorly developed because of weak marketing and the lack of modern processing equipment (Polevshchikova 2005a). This is not surprising given previous findings that poor levels of NWFP commercial development can be explained by a weak road density, low labor wages, and low per capita income of NWFP producers (Ruiz-Perez et al. 2004), factors that are all arguably characteristic of the RUK.

Nevertheless, Russian processing facilities for wild berries in particular are improving to the extent that in recent years, Swedish and Finnish buyers have found it difficult to purchase sufficient volumes of Russian wild berries at competitive prices (Simo Moisio, personal communication, 7 November 2005). Despite such progress, however, the NWFP industry in Karelia remains relatively undeveloped despite a significant competitive advantage of bordering Scandinavia and the European Union relative to other northern regions of Russia.

Developing the RUK's competitive advantage in marketing NWFPs could be strategically approached through value chain analysis as initially described by Porter (1985) and more recently pragmatically applied by international development researchers and practitioners (e.g., Kaplinsky and Morris 2001). The value chain approach emphasizes identifying the complete range of activities that are required to bring a product or service through the different phases of production from inception to consumer and then to final disposal after use (Kaplinsky and Morris 2001). Because the value chain approach recognizes that enterprises are interlinked chains of production and exchange activities operating in different regions, researchers also focus on chain governance and mapping different vested interests and power relations that influence how income and employment are distributed along different links within and between the chains. Hence, value chain analysis has been used to analyze why particular countries and types of enterprises have found it difficult to penetrate certain sectors (e.g., Mayoux 2004).

In the case of the NWFP industry, two analytical concepts of value chain analysis are especially relevant. These are a) barriers to access or harvesters' ability to collect NWFPs and b) barriers to market or their and other buyers' opportunities to sell NWFPs.

In the RUK, forest management and use are controlled by state organizations through a hierarchical system from the Federal Forest Service of Russia (FFS) central level in Moscow down to the regional and local levels in the RUK. The FFS establishes federal forest policy, which the RUK State Forest Committee, *Goskomles*, follows as the highest regional forest authority and administrative unit of the region (Piiponen 1999).

The federal Forest Code is the primary policy body of legislation and regulation that governs management and use, including NWFP access, to Russian forests, which are still owned by the state and have not been privatized (Piiponen 1999). Although the RUK has its own legislation and regulations concerning forest use, the recent adoption of the federal Forest Code has resulted in changes in RUK regional forest regulations. As of 1999, short-term forest use permits and lease agreements by the respective forest state authorities have been the primary means of usufructs for timber harvesting enterprises (Piiponen 1999).

Because NWFPs have typically been viewed as timber by-products in the Russian Federation, in general, gathering NWFPs such as wild berries and mushrooms is a permitted forest use under Article 80 and may be made available free-of-charge. However, forest parcels may also be made available under leases or concessionary agreements with a fee that is established for each particular NWFP (Polevshchikova 2005a, Kukuev 1999) so that such free-use access may be restricted as it is with ginseng (Panax ginseng) leases in the Russian Far East (Warner, Simonov and Gibson 2004). Currently, few if any data exist on the degree to which access to RUK forest land is held in leases or concessionary agreements for NWFP harvesting purposes, and most if not all RUK forest lands are currently open to free harvesting of NWFPs by Russian citizens (Polevshchikova 2005a). Hence, access of NWFPs in the RUK is not currently limited by rival, exclusionary land tenure laws and regulations as it is in other countries of the world such as the United States and the United Kingdom-- although potentially, barriers to access through leasing and concessionary agreements could be erected in the future. At present the greatest barrier to access is the

weak transportation network that limits the harvesting of NWFPs as well as the sale and marketing to geographically narrow and often overexploited forest areas near roads, waterways, and railway lines.

Currently, the greatest constraints on expanding NWFP economic activities and maximizing NWFP income and employment opportunities in the RUK exist in the form of barriers to markets. In addition to the weak transportation infrastructure and lack of processing equipment, the absence of competition among NWFP buyers in local markets means that harvesters receive only spot market prices (Polevshchikova 2005b). Such prices tend to follow the typical supply driven curve as NTFP commodities with wide seasonal price fluctuations depending on the time of the season and seasonal productivity. In the RUK, this is currently the existing NWFP value chain, a chain in which links are relatively centralized and economic activities are few in number.

In contrast, niche marketing through contracts by diverse but cooperating buyers would better insure a higher value-added NWFP demand driven curve. Such a curve would mean fewer seasonal fluctuation and a greater number of economic activities, and hence more employment and higher income, along the NWFP value chain. However, as Perner (2004) notes, at least one of the barriers to NWFP niche marketing is the difficulty for Russian products to be "organically certified" since new NTFP companies in Russia have not been able to complete such certification while suppliers require it for the global market. Other barriers to market include the problems that inventive NWFP Russian entrepreneurs have encountered in licensing and sanitary inspections while trying to organize ecotours involving the collection of wild berries anad mushrooms (National Parks for Joint Benefits 2004). These experiences are echoed by those working in and with the NTFP industry in the Russian Far East where the three primary factors limiting NTFP business growth have been identified as the lack of business financing, weak management expertise, and the costly bureaucratic obstacles that often require legal assistance (Warner, Simonov and Gibson 2002). Hence, barriers to market are currently exert a greater braking effect on building stronger NWFP value chains in the RUK than barriers to access.

Despite historical declines in NWFP production and consumption, NWFPs remain significant contributors to subsistence and supplemen-

tal income household well-being in the RUK. Although NWFPs are currently abundant in total production, much of this annual production is unfortunately relatively inaccessible to many RUK inhabitants because of the wide geographic area that cannot be reached via the weak transportation network. Despite the sociopolitical changes since 1991, most RUK forest NWFPs remain legally to RUK citizens so that exclusive leases and concessions do not at present further excacerbate the problems of transportation access.

However, barriers to market for NWFP harvesters and buyers in the RUK are considerable. These include the lack of competition among buyers, difficulties in niche marketing, and bureaucratic obstacles that all prevent the NWFP industry from transforming its present commodity-based, supply driven chain to a potentially consumer-driven, demand pull chain. Where the former chain provides harvesters, particularly the rural poor, with limited supplemental and seasonal income on the spot market, the latter could potentially provide higher wages and steadier employment through global niche marketing. Policy support for such a transformation would be required at both the regional and federal levels of government.

I would like to thank Evgenia Prokohova for her Russian translation of my presentation at the conference. Research support from the Academy of Finland Project Project 104940 at the University of Joensuu, the University of Montana's Faculty Exchange Program, and the binational Fulbright Senior Scholar program of the U.S. Department of State and the Fulbright Center in Finland is gratefully acknowledged. I would also like to thank the University of Joensuu Department of Geography and the Karelian Institute for conference registration and travel support.

References

1. Angelson, A.,Wunder, S., 2003. Exploring the Forest-Poverty Link: Key Concepts, Issues and Research Implications. CIFOR Occasional Paper No. 40. Source: http://www.cifor.cifor.org/publications/pdf_files/OccPapers/OP-40.pdf.
2. Chibisov, G. 1999. Impacts of forest management on the yield of berries and mushrooms. In: Niskanen, A., Demidova, N. (Eds.), Research Approaches to Support Non-Wood Forest Products Sector Development. EFI Proceedings No. 29, European Forest Institute, Joensuu, Finland..

3. FAO Forestry, 1991. Towards a harmonized definition on non-wood forest products. Unasylva 50, 71 pp. Source: http://www.fao.org/docrep/x2450e/x2450e0d.htm.
4. Kaplinsky, R., Morris, M. 2001. A Handbook for Value Chain Research. Paper prepared for the International Development Research Center, Institute of Development Studies, Brighton, United Kingdom.
5. Karvinen, S., Markovsky A.V., Rodionov A.V., Rogov A.A., Sikanen L., Tsypuk A.M. 2004. Notions on the Forest Sector of the Republic of Karelia (on the Official Data and Results of a Questionnaire Study). Monograph. Institute of Economy of the Karelia Center of Science of the Russian Academy of Sciences. Petrozavodsk.
6. Kukuev, Y. 2005. Non-wood forest products in Northwest Russia. In: Niskanen, A., Demidova, N. (Eds.), Research Approaches to Support Non-Wood Forest Products Sector Development. EFI Proceedings No. 29, European Forest Institute, Joensuu, Finland.
7. Lukin, I., Demidova, N. 1999. Location and accessibility of non-wood forest products in Arkhanelsk, Russia. In: Niskanen, A., Demidova, N. (Eds.), Research Approaches to Support Non-Wood Forest Products Sector Development. EFI Proceedings No. 29, European Forest Institute, Joensuu, Finland.
8. Lukin, I., Gushchin, V. 1999. Non-wood forest products, their harvested volumes and household consumption in Arkhangelsk region, Russia. In: Niskanen, A., Demidova, N. (Eds.), Research Approaches to Support Non-Wood Forest Products Sector Development. EFI Proceedings No. 29, European Forest Institute, Joensuu, Finland..
9. Lund, G., Pajari,, B.,Korhonen, M. (Eds.), 1998. Sustainable Development of Non-Wood Goods and Benefits from Boreal and Cold Temperate Forests. EFI Proceedings No. 23, European Forest Institute, Joensuu, Finland.
10. Mayoux, L. 2003. Participatory Value-Chains for Pro-Poor Enterprise Development. Paper at the Community of Practice on Value Chains in Rural Development, Employment and Income Division, Swiss Agency for Development and Cooperation, Berne, Switzerland. Source: http://www.sdc-valuechains.ch/resources/resource_en_4.pdf
11. National Parks for Joint Benefits. Business Planning and Consultations. 2004 National Parks for Joint Benefits News (November 2003 – March 2004). Source: http://www.parksandbenefits.com/news/march2004.htm.
12. Neumann, R.P., E. Hirsch., 2001. Commercialisation of Non-Timber Forest Products: Review and Analysis of Research. CIFOR/FAO. Source: http://www.cifor.cirfor.org/publications/pdf_files/mgntfp3.pdf.
13. Panteleeva, O. 2004. Effective Food Chain Management in the Wild Berries Business of Russian Rural Economies. Paper presented at the International Food and Agribusiness ManagementAssociation (IFAMA), Montreaux,

Switzerland 12 June 2004. Source: http://www.ifama.org/conferences/2004 Conference/Papers/Panteleeva1032.pdf.
14. Perver, P.J. 2004. The business of Russiaäs Forest. BISNIS Bulletin 5 (April). Source: http://www.bisnis.doc.gov/bisnis/BULLETIN/apr04bull5.htm.
15. Piiponen, M. 1999. Transition in the Forest Sector of the Republic of Karelia. International Institute for Applied Systems Analysis Interim Report IR-99-070. Laxenburg, Austria.
16. Polevshchikova, N. 2005a. An overview of the poverty and NWFP situation in the Republic of Karelia, Russia. In: Lacuna-Richman, C., Turtiainen, M., Bzrszcz, A. (Eds.). Non-Wood Forest Products and Poverty Mitigation: Overviews and Cases. Research Notes 166. Faculty of Forestry, University of Joensuu, Finland.
17. Polevshchikova, N. 2005b. Non-wood forest products and social-economic problems of the forest settlements. Paper presented at the Second Workshop of the Academy of Finland Project on Poverty Alleviation and Non-Wood forest Products: A Comparative Study in Tropical and Temperate Forest Contexts, Prague, Czech Republic (18 November).
18. Porter, M.E., 1985. Competitive Advantage: Creating and Sustaining Superior
Performance, New York: The Free Press.
19. Ruiz-Pérez, M., Belcher, B., Achdiawan, R., Alexiades, M., Aubertin, C., Caballero, J., Campbell, B., Clement, C., Cunningham, T., Fantini, A., de Foresta, H., García Fernández, C., Gautam, K. H., Hersch Martínez, P., de Jong, W., Kusters, K., Kutty, M.G., López, C., Fu, M., Martínez Alfaro M.A.,, Nair, T.R., Ndoye, O., Ocampo, R., Rai, N., Ricker, M., Schreckenberg, K., Shackleton, S., Shanley, P., Sunderland, T., Youn., Y. 2004. Markets drive the specialization strategies of forest peoples. Ecology and Society 9(2): 4. Source: http://www.ecologyandsociety.org/vol9/iss2/art4/.
20. Sossinksy, S. 2002. Picking wild berries and other gainful employment. The Moscow News. Source: http://english.mn.ru/english/issue.php?2002-30-16.
21. Warner, R., Simonov, E., Gibson, D. 2002. Biodiversity Assessment for Russia. Report submitted to USAID/Russia (March). Source: http://www.biofor.com/documents/Russia%20Final%20Version%20PDF.pdf.