



## AFTERWORD

Current road construction technologies in Sweden, Russia and the Komi republic were studied in the frame of Russian-Swedish Forest Sector Cooperation Program (RSFSCP). An innovative road construction technology with use of unconventional materials in road construction for the Komi republic (crushed stone, gravel) has been specially worked out for the Komi republic conditions, where wooden (lezhnyovka) roads are traditionally constructed, in the frame of the project by the Swedish experts and the Russian forest road construction specialists.

The basic layer of the suggested technology is made of low-grade wood (originally – crushed wood), which is an available and cheap material and might be produced just on construction site and there is no need in transportation of the materials for remote distances. Use of geonet is another innovation which is mostly used for public road construction on soils with low bearing capacity and is rather cheap and produced in Russia.

The unique character of the project is in joint researchers' and experts' attempt to find out the solution to one of the most important problems of the forest cluster in the Russian Federation – transport accessibility of forest resources and all-seasons forest road construction. The peculiarity of the project is in its industrial applicability, which resulted in the test road construction with the use of geonet in July 2009, in Sysolsky region (Komi), Bortom-Baza-23.

Control measurements of the constructed test road were carried out in September 2009 and June 2010 by the students and lecturers from Syktyvkar Forest Institute and Moscow State Forest University (Figures 39–41 see in Russian text).

JSC «Ezhvadorstroy» (subsidiary enterprise of OJSC «Mondi Syktyvkar») continues carrying out a set of experiments with different technologies and materials, which is a proof of the industrial applicability of the chosen R & D activities.

There is some data, which can currently prove that forest road construction with use of geonets, felling residues, low-grade wood, wooden constructions can be less expensive and labor intensive. To sum it up, one can make a conclusion that use of geonets and geotextile materials allows to have uniformly distributed soil bearing load and is a perspective technology in all-seasons forest roads construction.

### Conclusions

1. One should get an understanding that the road is not the means for wood supply from the forest, but the infrastructure, which guarantees sustainable territory development and sustainable forest management in the long-term perspective.

2. One should combine operational planning and logistics issues with the forest roads network planning in forest companies.

3. Forest roads planning and timber logging should be coordinated with the seasonal maintenance of the roads, especially during the spring-fall period.

4. All-seasons forest roads network is a requirement for sustainable forest management and use.

