

Russian – Finnish seminar Waste management and circular economy

14.6.2018 Petrozavodsk

The workshop was organized as a supporting activity to the Barents co-operation by the AB-Waste project. AB-Waste is a co-operative project between Russia and Finland managed by the Finnish Environment Institute SYKE. The project is funded by the Ministry for Foreign Affairs of Finland.

The seminar brought together over 50 experts in waste issues from the Russian Barents regions, from both administrative and operational organisations, the Russian Federal level organisations, Finnish governmental organisations and Finnish waste management operators.

The seminar was held at Frigate Hotel in Petrozavodsk, Karelia. The Swedish-Karelian Business and Information Centre, the Ministry of Nature Management and Ecology of the Republic of Karelia and the Barents Euro-Arctic Cooperation Working Group on Environment provided indispensable support in organizing the seminar.

The focus of the seminar was to discuss the most important challenges regional waste management systems in North-West of Russia are currently facing. The aim of the seminar was to promote the sharing of knowledge between Finland and Russia on the best practices for efficient waste processing, utilization and recycling.

The presentations held in the seminar drew a picture of the current situation and challenges of implementing the new legislation on waste management in Karelia and Arkhangelsk. Finnish municipal waste management companies presented their systems, solutions and experiences in organizing integrated waste management in sparsely populated areas and in arranging household hazardous waste collection in Helsinki region. Descriptions of waste related investment projects in Karelia and Komi were presented by NEFCO, the Nordic Environment Finance Corporation. The importance of information and education on the benefits of proper waste sorting and management was emphasized in several presentations e.g. from the Kizhi island.

The organisers wish to thank all the seminar participants and contributors. This was the second seminar organized by the AB-WASTE project. The project will continue with a study tour for the Russian waste experts to Finland in September 2018 and a seminar on “Waste management in small communities in Arctic and Barents regions”, on 5th November, in Helsinki, Finland. The project activities are announced on the Barents secretariat web-pages:

<https://www.barentscooperation.org/en/Working-Groups/BEAC-Working-Groups/Environment/SHE>.

Short summaries of the presentations

New system of waste management from the point of view of the regional operator Ivan Novikov, Avtospetstrans PLC, Petrozavodsk

The regional operator for solid waste management in Karelia started operating 1st of May. The operator is responsible for the overall management of waste in the region. The management is financed from waste fees, which are collected by the regional operator and distributed to subcontractors according to the agreements that will be made. The practical arrangements of waste management will be organized through subcontractors.

Avtospetstrans PLC has made 18 contracts on transports for eight months. These contractors are piloting the waste collection in the Karelia region. Online data will be collected on the transports and

destinations of waste loads. After the pilot project, the distribution of lots and the transports will be rethought. Amount of waste in Karelia is around one million m³.

The process for determining fees has been started by estimating the amounts of wastes produced and costs accumulating from the services. Previously waste fees were based on m² of apartments, in the new system they will be based on number of inhabitants. The 2016 situation was used as the baseline for calculations and the fees have been estimated till 2021.

Experience of transition to the new system of waste management in Arkhangelsk region Ivan Popov, Ministry for natural resources and timber industry of Arkhangelsk region

The processes concerning the organization of waste management are similar to the ones in Karelia. September 2017 the tender for regional operator was announced and the operator was chosen. Unified tariff has not yet been accepted and the region has not been divided into lots. The region consists of 25 municipalities, but 50% of the waste is generated within 3 cities. The rural areas are problematic, but regional operator has to contract all areas in the region. Incineration solutions have been considered for the remote areas. The objective is to reach total transfer into the new system by the end of 2019. Problematic to deal with industrial wastes. If the current landfills are shut down, illegal disposal areas will appear.

NEFCO's activities and ways of operating in Karelia

Kari Homanen and Vitaly Artyushchenko, NEFCO (Nordic Environment Finance Corporation)

NEFCO was created – after the collapse of the Soviet Union – in order to support the Nordic countries' efforts to increase environmental awareness in Eastern and Central Europe. NEFCO provides results-based green financing by providing financing to projects that reduce emissions harmful to the environment. Several forms of funding exist. Investment funds include loan and equity financing for economically viable projects with positive environmental impacts. In Russia public projects have to be approved by Arctic Council or Northern Dimension Environmental Partnership (NDEP). The maximum loan per project under the Investment Fund is EUR 5 million. NEFCO can operate as a partner, lender and/or guarantor. The technical feasibility and financial profitability of the project is carefully examined.

Hazardous wastes and wastes processing are priorities of NEFCO and activities in various regions are ongoing. In Komi a project on waste management was started in 2008 in co-operation with the government. Currently a project on the minimization of methane emissions in Durnos is being prepared, aiming towards an investment project.

Arctic council project on hazardous wastes focuses on destroying pesticide wastes in the Russian Federation. This summer a demonstrative elimination of pesticide waste will take place. Another project focuses on polychlorinated phenols.

Krasnyibor, the last hot spot of Helcom (Helsinki commission) is a closed landfill, but still poses potential threat to the environment. The project is very complicated, and work is only starting in co-operation with several different ministries.

The waste management project in Karelia was first planned in 2009 to recultivate an old landfill and to enhance recycling of wastes. Now in 2018 the regional waste management operator has been selected and the project could be restarted.

BREF presentation: Waste incineration

Ruslan Butovsky, VNII Ecology

In the first phase 300 facilities (pilot facilities) will be permitted with an ecological permit. These will include requirements to comply with best available technologies (BAT) defined in BAT Reference documents (BREFs). 50 BREF documents have been prepared. BREF 9 is on incineration technologies, BREF 15 and 16 are on other issues connected to wastes. They include descriptions and efficiencies of several technologies that can be used as BAT. The BREFs will be updated on

e.g. the efficiencies of technologies in climate change mitigation. The list of 300 facilities may include facilities from Karelia. Some of the Barents hot spots will be among the first ones to start preparation of permits within the Barents co-operation.

Organisation of household hazardous waste collection

Marjut Mäntynen, Helsinki region environment services authority HSY

The clients of HSY waste management include only households, since HSY is run by municipalities and in Finland municipalities are only responsible for household wastes. Enterprises are responsible for their own wastes.

Separate collection of waste fractions is done at premises, Sortti-stations (0.5 Million customers per year) and ecopoints. Certain waste fractions are under producer responsibility, meaning that producers have to organize the collection, recovery and treatment of these wastes with their own expenses. HSY needs to co-operate with the producers.

Funding for the waste management is collected primarily from households as the mixed waste fee. This fee includes also the costs from hazardous waste collection. Household hazardous wastes collection is free of charge.

Waste prevention is prioritized, even concerning hazardous wastes. Household hazardous wastes are collected at hazardous waste collection containers situated e.g. at gasoline stations (70 points in the region). A key to the container can be obtained from the gasoline station by giving ones name and list of wastes to be taken into the container. Additionally, Sortti stations (manned with HSY personnel) have containers for hazardous wastes. Medical wastes are collected at pharmacies and small batteries are collected at groceries. During spring there is a mobile collection for hazardous wastes, metals and WEEE. The most common hazardous wastes from households are paints, batteries, medicines and oils. In spite of all these possibilities for proper separation and sorting of hazardous wastes, there still is 2% of hazardous wastes (such as batteries) included in the mixed wastes.

Waste Act obliges municipalities to organize advisory, information and educational services for minimizing the hazards of wastes. It is easier to educate young than old people. HSY provides educational material to children. Additional activities for increasing the separation of hazardous wastes include decorating the containers from outside to make them look interesting and appealing and installing solar panels on the roofs of containers to get light into the container. Sortti-stations are situated with 10 km distance in between and the hazardous waste containers are situated with 1-3 km distance to secure easy access. Waste sorting and separation needs to be made easy for people.

Organising waste management in sparsely populated areas – case example from the northern Finland

Tuija Ahrikkala; Gulf of Bothnia regional waste management company

The area of Lapland covers a third of the area of Finland, has 200 000 inhabitants, equal with 2 inh/km². As a comparison Germany has 230 inh/km². In the waste legislation there are no exceptions for sparsely populated areas. in Lapland waste can be transported 600 – 700 km. Municipalities are responsible for household waste management.

Waste generation in the region of the company is 700 kg/inh/y making 2kg/inh/day. Of this 0.8 kg/inh/day is recycled. The figures for waste generation are higher than in Finland on average, maybe due to tourists. Landfilling of waste has declined from 1.1 kg/inh/day in 2013 to 0.2 kg/inh/day.

Waste is collected in urban areas as kerbside collection. In rural areas regional collection or kerbside collection can be chosen. Bulky wastes and hazardous wastes has to be brought to sorting

stations, which in urban areas are open 5 days a week, 11 h a day. In rural areas the sorting station is open one day a week for 6 hours. Yet, illegal dumping of waste occurs.

The company has launched a customer card with which waste can be brought to sorting stations free of charge four times a year. This has been a success.

Opinion on separate waste collection in Petrozavodsk by the company working in waste utilization

Vladislav Agafonov; "YVI PTZ" PLC

The company has worked with waste collection and processing for 12 years, also produced some products. Petrozavodsk generates vast amounts of recyclable waste fractions which need to be sorted, cleaned and processed. Glass and paper could be collected separately, other fractions could be collected together. Sorting and recycling would reduce the waste management costs for people and would decrease the amount of waste requiring treatment. Old containers could be modified for separate collection, also vehicles could be modernized. All the operators connected to waste planning, collection, sorting, separation, treatment should be gathered for planning the development of separate collection and recycling activities.

Educational program for specialists working with waste management

Oleg Sheinovskiy, Sistema PLC

The speaker called for co-operation in developing and implementing a programme for educating waste management experts in Karelia. Specialists e.g. from Finland are needed.

Waste management in Kizhi open-air museum: challenges and solutions

Yuri Protasov, Kizhi open-air museum

Collection of separate waste fractions has increased from 2010. In 2017 480 000 rubles was used for waste management, costs arising e.g. from the long water transports. Municipal and industrial wastes are currently separated. Dry closets have been taken in use as part of an international project. Kizhi open-air museum has 140 000 visitors per year, so the dry closets are not enough, additionally toilet modules are needed, but these are problematic due to the chemicals needed.

Educational material is produced in an ongoing project to increase knowledge of importance of proper waste management. Separation of organic waste is started. The local people separate the organic waste but they still often put it in plastic bags in spite of education given. School children visiting the island are educated in sorting and e.g. composting food waste. Batteries are also separately collected, but there is no recovery for them. Illegal dumps occur on the island and the museum tries to remove them during autumn.

Common discussion of the first steps of the new system of waste management in NW Russia

Resolutions from the final discussion of the seminar were produced and are reported in a separate document.