



*BARENTS EURO-ARCTIC COUNCIL  
WORKING GROUP ON ENVIRONMENT  
Norwegian Chairmanship 2016-2017*

## **Meeting on Exclusion of the Environmental Hot Spots of the Republic of Komi from the Barents List**

11-12 October 2017

Syktyvkar, Russia

Venue: Government of the Republic of Komi

The meeting was chaired by Ms Hanne Aronsen (Norwegian Environment Agency) co-Chair of the Barents WGE Subgroup on Hotspots Exclusion (SHE)

### **Minutes**

**Final 27 October 2017**

**1. Introduction.** **Roman Polshvedkin** (Senior Deputy Minister, Ministry of Industry, Natural Resources, Energy and Transport of the Komi Republic) welcomed the participants of the meeting on behalf of the Ministry of Industry, Natural Resources, Energy and Transport of the Komi Republic. He underlined progress made by the Komi Republic in the Hot Spots elimination process, and mentioned rather high level of pollution remaining in the industrial centers of the region (such as Syktyvkar, Uhta and Vorkuta). The meeting will focus on Ko7, Ko3-2, Ko1 and Ko2-1. Waste management won't be discussed at the meeting due to the complicity of the situation related to changes in the Russian environmental legislation. In the beginning of 2018 regional operator in solid waste sector is to be appointed, and the Republic will continue negotiations with NEFCO. Mr. Polshvedkin expressed gratitude to Tatiana Tyupenko for assistance on organizing the meeting.

Co-Chair of the Barents WGE Subgroup on Hot Spots Exclusion (SHE) **Hanne Aronsen** (Norwegian Environmental Agency) thanked the organizers for inviting the SHE group to Syktyvkar to meet with the regional Hotspot Exclusion Group (HEG). The other co-Chair of the SHE Subgroup, Maria Dronova from the Russian Ministry of Natural Resources and Environment, couldn't participate in the event.

**2. Hot Spots exclusion procedure.** **Åke Mikaelsson** (Swedish EPA) informed about the steps of the Hot Spots exclusion procedure adopted by the Barents Environment Ministers in 2010. The presentation is available in Russian and can be distributed among the hot spots owners.

**3. Ko7 Wood processing industry waste management.** **Alexander Gibezh (tittel)** informed about Ko7 Wood processing industry waste management, which is a priority issue for the Ministry of Industry, Natural Resources, Energy and Transport of the Komi Republic over many years. Solving this environmental problem has contributed to development of bioenergy sector. Government of the Komi Republic subsidized production of biofuels, which resulted in opening of about 20 enterprisers in 7 Komi districts which produce pellets and briquettes. Bigger companies are also starting production of biofuels, and now there is a concern if the amount of newly generated wood waste (annual amount exceeds 2 million tons) will be sufficient in the future. Development of the sector benefits to the socio-economic

situation brings new working places, extension of internal market of biofuels and more affordable energy sources. The adopted Road map “Development of Bioenergy in the Komi Republic for 2016-2018” implies construction of communal boiler houses working on biofuels, converting of existing communal facilities from electricity (coal burning) to pellets and briquettes, as well as promotion of bioenergy among the private sector through awareness raising activities (including the web-page <http://biotoprk.ru>). Four sites for temporary storage of wood waste have been constructed in order to facilitate for production of wood pellets and briquettes. By 2020, it is planned to double the amount of communal boilers working on biofuels (for the moment, more than 20 projects are finalized) and to replace heavy oil and coal with bioenergy (coal will remain only in northern districts with no forests).

Two heat and power plants (HPPs) in Syktyvkar (Syktyvkarskaya and SevLesPil HPPs) are using wood waste to produce electricity; two more HPPs (Azimut and Mondi HPPs) are under construction/modernization. Syktyvkarskaya and Mondi HPP are utilizing (combusting) old wood waste (in proportion up to 70/30%), which cannot be used in biofuels production. Newly generated wood waste is also utilized for technological purposes on the industrial sites (heating) and old wood waste is used for production of wood fiberboard at a local factory.

Norwegian-Russian bilateral project on Cleaner Production has contributed to competence enhancement in bioenergy sector in the Komi Republic and resulted in development of business-plans for further implementation. Forest industry will most likely increase in Komi the coming years, and there is a big potential for further utilization of wood waste. Bioenergy potential of the forests districts exceeds local energy demands; therefore, biofuels can be exported.

Republic of Komi cooperate with other Barents regions (especially, Arkhangelsk region where wood industry plays a bigger role in regional economy) in order to exchange knowledge and best practices. Plans for further development include production of bioethanol supported by Swiss investors, and creation of bioenergy cluster in cooperation with SYKE, Finland.

**Given all above-mentioned progress, the Ministry proposes to exclude Ko7 from the Barents Hot Spots list.**

**The co-Chair added that Ko7 had been chosen as one of the three pilot Hot Spots for elaboration of Specific Exclusion Criteria. Tatiana Tyupenko has coordinated development of Specific Exclusion Criteria for hotspot Ko7, which were adopted by SHE and the Komi Hotspot exclusion group during the SHE-61 meeting on 27 September 2017. Both climate aspect (reduction of greenhouse gasemissions) and management of old wood waste are included in the Specific Exclusion Criteria . As the Action Plan (Road map) for the Ko7 hotspot has been implemented in parallel, the next step will be to report on the SEC fulfillment of the Specific Exclusion Criteria. After considering the documents, SHE will give recommendations to WGE. Deadline for submission of the documents is 20 October.**

**It was also suggested that Mr. Gibezh would be invited to the Meeting of Environmental Ministers, which will be arranged in Vadsø, Norway, on 29-30 November 2017, to present the results of the Komi Government in elimination of Ko7.**

**4. Ko3-2 Mondi Syktyvkar JSC. Chief ecologist of Ko3 Mondi Syktyvkar JSC Dmitry Ocheretenko presented activities of the factory on upgrading of sewage system. In 2015, the Hot Spot was divided in two parts: Ko3-1 Emissions to air and Ko3-2 Waste waters discharge; and the air-emission part was**

excluded from the list in 2015 as a result of the large-scaled reconstruction of soda recovery boiler units (STEP project).

Waste water treatment plant of Mondi Syktyvkar operates waste waters from the Mondi Syktyvkar pulp and paper mill factory, 100% of waste waters from the city of Syktyvkar, Ezhva district and neighboring industrial plants. Water intake from the Vychegda River amounts to 12,000 cubic meters per hour; over 80 million cubic meters of water is treated per year. Since 2013, the waste water treatment plant has been upgraded in order to improve operating efficiency, quality parameters of waste waters and occupational safety at the plant. The upgrades with the budget over 1 billion rubles included construction of a mixing chamber for blending industrial and municipal waste waters and a station for mechanical treatment of domestic sewage; modernization of secondary sedimentation tanks (12 pieces) and aeration tanks (4 pcs); upgrade of the second stage pre-aeration system; cooling of waste waters of the cellulose bleaching section and other measures. A project for further upgrades (the "BEST project", estimated 3.3 billion rubles), started in December 2016, will complete modernization of the waste water treatment facilities by the end of 2018, enabling to apply for exclusion of Ko3-2 in 2019.

Following the questions, Mr. Ocheretenko added that specific water consumption at the mill amounts 65 cubic meters (other PPM in Russia consume more than 100 m<sup>3</sup>; in Europe this rate equals 30-40 m<sup>3</sup>). Wood waste and sludge are combusted for heating purposes, according to the BAT regulations.

**Åke Mikaelsson** thanked Mr. Ocheretenko for the presentation and proposed to arrange a seminar/Business Role Play on BAT in pulp and paper industry on the site of the Mondi Syktyvkar JSC in 2018 in cooperation with the BAT Bureau. Mr. Ocheretenko supported the suggestion and mentioned involvement of Mondi in the on-going BAT process through regular branch seminars "Pulp&Paper Russia", activities arranged by RAO Bumprom (Russian Association of Pulp and Paper Organizations and Enterprises) and elaboration of BAT Handbook on pulp and paper. **Ruslan Butovsky** added that the factory is listed among 300 pilot enterprises to apply for complex environmental permit starting from 2019.

**It was concluded, that negotiations on a branch seminar to be arranged in 2018 would be continued by SHE in dialogue with the BAT Bureau; progress achieved by the Mondi Syktyvkar JSC could be reflected in the Hot Spots Outreach material being prepared for the Ministerial Meeting in November (if time); and documents for exclusion of Ko3-2 would be developed after completion of BEST project in early 2019.**

**5. Ko1 Vorkutaugol coal mines.** Chief ecologist of Ko1 Vorkutaugol JSC **Natalia Vishnyauskene** prepared a presentation on the environmental achievements made by the Hot Spot owner, but wasn't able to take part in the meeting. The presentation was shown to the SHE members, followed by the comments from Rosprirodnadzor.

As a part of reducing the negative impact of methane gas on atmospheric air, Vorkutaugol JSC utilizes methane, using it as fuel at gas-burning boiler houses for heating of administrative buildings of the mines and overhanging buildings of the ventilation shafts. Degasification of the mines, started back in 1956, allows to reduce greenhouse gas emissions and benefits the occupational safety for the workers in the mines. In 2013, at Severnaya mine Vorkutaugol JSC implemented a project on utilization of degassing methane at gas engine power plants with simultaneous generation of heat and electric energy for the needs of the mine.

According to the permit granted by Rosprirodnadzor in 2015, emissions to air from the Ko1 Vorkutaugol coal mines are within the Maximum Allowable Emission levels (ПДВ); and Rosprirodnadzor routine inspections showed no violation of existing regulations. In 2017, the company got a diploma for Utilization of Degassing Methane-project within the All-Russia contest on climate planning.

Deputy Head of Rosprirodnadzor Department of the Komi Republic **Sergey Ermilov** confirmed compliance of the Vorkutaugol JSC with the current environmental regulations (FZ on Protection of Atmospheric Air). Routine field inspections in 2012 and 2016 showed no violations, inspection acts have been submitted to SHE (data from 2016 allowed to update of Screening and Analyses report, submitted to MNR). Hotspot Ko1 Vorkutaugol coal mines is included to the Barents list due to methane emissions (which is a natural process in coal mining). **Utilization of mine methane is proceeded in accordance with the current Russian legislation, which is precondition of the Hot Spot's exclusion.** New BAT legislation will set more requirements to the coalmining industry, but it comes into force not earlier than 2019.

**Ruslan Butovsky** mentioned that in the list of 300 pilot enterprisers to apply for complex environmental permit, Vorkutaugol are presented as five separate mines and asked if it would be feasible to divide the Hot Spot in five. Mr. Ermilov answered that although all mines have different underground constructions due to the coal depth, some of the mines have common shaft, and it's not possible to separate the emissions. **Åke Mikaelsson** added that the company should be encouraged to follow the BAT regulations due to climate issues, emphasizing fragile Arctic ecosystem. Mr. Ermilov said there were no economic measures of encouraging Vorkutaugol JSC, which is a part of a big Severstal concern. For the moment, the company is putting more efforts to the safety enhancement (especially after the accident at Severnaya mine).

**Co-Chair reminded that the main criteria for the exclusion are compliance with the Russian legislation and none transboundary pollution, and informed about the expert desk study to evaluate S&A report submitted by Ko1, which is commissioned by NEFCO. The Nordic environmental authorities currently have no experts available on coalmining. Therefore, NEFCO has built a team of consultants from the USA and Russia, headed by Mr. Vladimir Litvak to review the information. After SHE receives the report of Mr. Litvak (expert group if required), expected within the coming weeks, the new information will be taken into consideration and a recommendation will be given to the WGE when appropriate.**

**6. Ko2-1 Cement Northern Company, Vorkuta.** Mr. **Sergey Ermilov** (Rosprirodnadzor) gave an overview of the situation with the Vorkuta cement plant, which was included to the Barents hotspot list due to high level of dust emissions. Unscheduled inspection in 2012 showed large amounts of contaminants to the atmosphere, exceeding 15,000 tons per year. The company had no permit for air emission, no filters were installed to reduce the emissions. In accordance with the inspection, the company developed an Action Plane agreed with the MNR and implemented in 2008-2013. Own investments amounted in around 2 million Euro. In 2014, the cement plant got a permit for air emissions until 2018. In 2015, Rosprirodnadzor carried out routine inspection of the plan showing compliance of the emissions with the Russian legislation. Dust emissions before the electric filter amounted to 960 g/s, after – 4.7 g/s (regulations allow emission level of 13g/s); decontamination index equals 99.5%; gross dust emissions decreased by 45 times. **The Ministry proposes to exclude hotspot Ko2-1 from the Barents Hot Spots list.** For the moment, the company is not operational, due to economic reasons (stopped working in January 2017); the bankruptcy procedure has to be started.

**Åke Mikaelsson** informed the group that the Vorkuta Cement Plant had also been in cooperation with ACAP under the Arctic Council, due to possible emissions of dioxins, and was chosen by ACAP for a possible PSI (Arctic Council Project Support Instrument) funding in order to eliminate dioxin emissions. If the Hot Spot is excluded from the Barents list, it would be more difficult to argue the importance of the PSI project. The project foresees installation of on-line monitoring station on the pipe of the plant (research made by the Danish company KOWI showed insignificant amount of dioxin emitted by the factory).

**After a long discussion, it was decided to go further with the exclusion process, based on that the initial reason for inclusion to the Hot Spot list - high levels of dust emissions - had been solved by the Hot Spot's owner. Roman Polshvedkin suggested that the Vorkuta Cement Plant would be excluded from the list with recommendations to ACAP to continue PSI project on combatting dioxin emissions if the plant start operations (which doesn't seem possible for the moment due to difficult economic situation, ownership problems and challenges in educating new personnel). The co-Chair concluded that a Rosprirodnadzor statement about hotspot Ko2-1 should be submitted to the SHE group by Komi Republic as soon as possible. SHE may then consider a recommendation to the WGE when appropriate.**

7. The meeting was followed by a study-visit to a newly opened pellet production company in Sysolsky district and Promtech-invest company's new site for a full-chain wood production (including manufacturing of briquettes from generated wood waste) to be opened within the coming months. The SHE members also visited a kindergarten using biofuels for heating purposes.

#### LIST OF PARTICIPANTS 03.03.2017

1. Hanne Aronsen, Norwegian Environment Agency (NO)
2. Olaug Bjertnæs, Norwegian Environment Agency (NO)
3. Åke Mikaelsson, Swedish Environmental Protection Agency (SE)
4. Helena Dahlbo, Senior Researcher, SYKE (FI)
5. Roman Polshvedkin, Ministry of Industry, Natural Resources, Energy and Transport of the Komi Republic (RU)
6. Alexander Gibezh, Ministry of Industry, Natural Resources, Energy and Transport of the Komi Republic (RU)
7. Igor Lyzlov, Ministry of Industry, Natural Resources, Energy and Transport of the Komi Republic (RU)
8. Evgeny Potarov, Ministry of Industry, Natural Resources, Energy and Transport of the Komi Republic (RU)
9. Andrey Krivoshein, Ministry of Industry, Natural Resources, Energy and Transport of the Komi Republic (RU)
10. Andrey Totkov, Ministry of Industry, Natural Resources, Energy and Transport of the Komi Republic (RU)
11. Sergey Ermilov, Rosprirodnadzor Department of the Komi Republic (RU)
12. Dmitry Ocheretenko, Mondi Syktyvkar LPK (RU)
13. Elena Patova, Komi Science Center of RAS (RU)
14. Roman Vasilevich, Komi Science Center of RAS (RU)

15. Tatiana Tyupenko, Representative of the Komi Republic in BEAC RWGE, NEFCO Consultant
16. Ruslan Butovsky, VNII Ecology, NEFCO Consultant
17. Henrik G Forsström, NEFCO
18. Maria Dianova, IBS