

International Mercury Treaty Enabling Activities Program (IMEAP)

Following the signing of the Minamata Convention on Mercury (the ‘mercury treaty’) in 2013 and the release of the IPEN Minamata Declaration on Toxic Metals, IPEN expanded its Mercury-Free Campaign and developed a broad program of treaty-enabling activities to be implemented in conjunction with IPEN Participating Organizations (POs). The International Mercury Treaty Enabling Activities Program (IMEAP) is geared toward raising awareness about the mercury treaty while generating data on key thematic elements of mercury pollution to help enable countries to implement the Minamata Convention.

IPEN launched IMEAP in early 2014 and continues to mobilise resources for IPEN POs to conduct activities that support implementation of the mercury treaty¹.

The key objectives of the IPEN IMEAP are:

1. *Preparing for Treaty Ratification & Implementation:* Creating synergies between NGOs in developing countries with ongoing UN agency or government-led mercury activities and NGO priority-setting.
2. *Enabling Activities to Prepare Countries for Treaty Ratification & Implementation:* Support to NGOs to carry out national and thematic mercury treaty activities.
3. *Communication of Issues Related to Mercury and Treaty Ratification & Implementation:* Global dissemination of project results & south-south collaboration.

The following project forms part of the overall IMEAP activities and contributes to the greater global understanding of mercury pollution issues while providing information that may contribute to Minamata Initial Assessments (MIA) and raise public awareness in preparation for early ratification of the Minamata Convention on Mercury.

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IPEN Mercury Treaty Enabling Activities Project: Russia

Name of NGO: Volgograd-Ecopress

Date: 16.03.2015 (IMEAP: 2014 Phase)

Country: Russian Federation

Title of project: Mercury hot spot in Krasnodar region, Russia

Summary

This report summarises the project conducted by Volgograd-Ecopress in the Russian Federation region of Krasnodar to investigate mercury contamination hotspots emanating from the historical Sakhalin primary mercury mining site and impacting on surrounding water bodies and towns. Mercury intoxication of civilian workers led to prisoners working the mine until the underground and open cast operations ceased in the mid 1990's. Since then a large scale secondary mercury recovery operation has occupied the former mine site extracting commercial grade mercury from up to 10,000 tonnes of waste a year. Much of the secondary mercury is used as compounds in chemical production processes on site and the manufacture of mercury added products like fluorescent lamps. This cluster of industries and others, including an unapproved hazardous waste incinerator near the Kholmetskaya township, are believed to be contributors to contamination in the locality. The implementation of this IMEAP project was the first such study of contamination of fish, soil and water in the region in nearly 20 years. The investigation found sharp upward trends in pollution-related health impacts among the region's population, elevated levels of mercury, lead and arsenic contamination in ambient air, and mercury contamination of fish exceeding the regulatory standards. Surveys of residents were also conducted and supported the findings of the NGO in relation to elevated regional pollution levels and hotspots.

Provide a physical description of the site(s):

The project was implemented in the territory of the mountainous forest zones of Abinskiy district of Krasnodarskiy Krai (region). Project activities covered the area of about 75 km². The territory includes several settlements: Kholmetskaya, Sinegorie, Noviy and Grushki townships, with the overall population of about 23,000 residents. Geographical location of the main settlement - Kholmetskaya township is 44° 51' 0" N и 38° 23' 0" E.

Soils in the area are mainly represented by compacted black earth, while closer to the mountains they are replaced by grey forest-steppe soils. In river valleys, sandy pockets and deposits of soil and gravel mixtures are found. At higher altitudes, grey forest-steppe soils are replaced by grey forest, humus carbonate and brown forest soils. Mountains are composed of layered clay slate, chalky slate, limestone and sandstone layers.

The Sakhalin mercury ore deposit is located at the distance of 15 km to the south from Kholmetskaya township, at foothills of the Greater Caucasus Mountain Range. The deposit is associated with Lower Cretaceous terrigenous formations of the North-west edge of the Greater Caucasus Mountain Range. In terms of ore types and composition, the deposit ores belong to a quartz dacite geo-industrial type.

Two main watercourses in the area include Khabl and Zybza rivers. The Khabl is a left tributary of the Kuban river - it starts in the point of confluence of the Large Khabl and the Minor Khabl

(in Noviy township). The overall length of the river reaches 54 km. Due to impacts of mining activities, the Zybza river seriously degraded. It discharges to the Khabl river in its lower reaches, upstream of the Kryukov water reservoir. According to local residents, in recent 20-25 years, fish in the rivers almost disappeared, and if one manages to catch a fish it may be seriously "infested by worms", so local residents eat only fish from the Kryukov water reservoir.

The mountainous part of the area belongs to the Caucasian area of alpine forests and meadows. Mountain slopes are covered by predominantly oak forests with inclusion of beeches, pine trees, hornbeams, alders, maples, ash-trees, poplars, aspens, wind pear trees and apple trees. In the shrub layer, elder, haw, brier, sloethorn and blackberry bushes grow. The forests are rich in edible plants, wild berries, fruit and nut trees (wild strawberries, blackberries, cornels, pears, cherry plums, belberries, medlars, walnuts, cobnuts. In autumn seasons, edible mushrooms are plentiful in the area - honey fungi, russules, red boletes, etc.

Report on the history of the site.

Identify the activities was carried out in these locations that make it a contaminated site today. Provide information about ownership; government regulatory actions etc:

In the second half of the last century, "Krasnodarrtut" (a state-run industrial association) launched exploitation of mercury ore deposits at Sakhalin mining site nearby Noviy township. Initially, mining operations at the site went smoothly, three new underground mine galleries were cut, the ores had high cinnabar content and - as a result - production targets were met without problems. However, later on, symptoms of mercury poisoning were observed among miners. Additional measurements of air mercury levels in mines did not reveal elevated mercury concentrations, but numbers of mercury poisonings increased at alarming rates. The mining facility managers decided to terminate ore extraction operations at Sakhalin ore deposit. However, the mine stayed idle only for a short time, as inmates of a strict regime penitentiary facility (Novosadoviy township) were mobilised to work in particularly hazardous mines. The ore from the deposit was transported to the mercury processing plant in trucks, through three residential townships - the ore trucks even did not use covers and such arrangements could hardly improve local environmental quality.

The ore extraction operations included both open cast (with use of excavators) and underground mining. The mining activities at the site were cancelled due to worsening socio-economic situation in the country, loss-making financial performance of the mining operations and poor management of the facility. In 1990, the underground mines at the site were closed, and in 1993 open cast operations were also cancelled. From 1993 to 1995, primary mercury was produced from earlier extracted ores, while since 1988 production of secondary mercury from mercury containing products has been initiated at the former mercury plant (since 1998, the plant belongs to a private company - "Kubantsvetmet" JSC).

Now, "Kubantsvetmet" JSC includes a set of production facilities allowing to collect, store, transport, process and neutralise lead and mercury products. It is the only production facility in Russia that operates technologies and equipment for regeneration of lead and mercury. The plant's capacity allows it to process all types of secondary mercury-containing materials (up to 10 thousand tons/year) and produce commercial grade metal of up to 98.89% purity. Waste

processing operations of the plant result in annual production of more than 20 tons of liquid mercury, that is further used by other production units of the facility. Recovered and refined to purity of 99.99999% mercury is used for production of mercury compounds - the facility produces mercury nitrate, sulphate, chloride, thiocyanide, sulphide and iodide.

Production unit "Ekotrom-2" at the facility processes LB and LD type fluorescent lamps of up to 45 mm diameter (up to 500 lamps/hour). In 1998, the plant commissioned a reverberatory kiln for processing of scrap lead, allowing to process up to 15 tons of feedstocks /day and secondary lead recovery level over 99.0%. The kiln feedstock materials are supplied by a battery production plant.

The metal processing plant of the facility operates two tubular rotary kilns, a condensation system, raw mercury storage and a gas purification system. The kilns process up to 30.000 tons of ores annually.

In 2000, some production capacity of "Kubantsvetmet" JSC was transferred to the newly established private company - Mercury Safety Agency Co. The company specialises in provision of services associated with collection, transportation, processing and recycling of hazardous waste. Now, the facility receives mercury-containing waste (up to 1.5 million mercury-containing bulbs only), waste rubber, paints, plastics, liquid waste of oil refineries, clinical waste, outdated office equipment, alcohol-containing waste, animal husbandry waste, waste paper and board.

In 2012, Mercury Safety Agency Co. attempted to construct a major waste incineration plant (a unique one for Russia) near the Kholmskaya township. The plant was intended to incinerate up to 50 thousand tons of hazardous waste, including oil slurries, oil-contaminated soil, chemical production waste, electric appliances, instruments, devices and their components, waste acids and alkaline substances, food and agricultural waste.

Due to protests of local residents and the company's own failure to comply with the due legislation in the course of EIA procedures, the incinerator project was not authorised for implementation. However, according to local residents of Kholmskaya township, incineration units were nevertheless installed and now operate illegally.

Explain the chemical characterization if more than mercury waste is present including the nature of the mercury waste at the site and other chemicals. Report on any available monitoring data for the site, who generated it and any analysis of the data by NGOs or authorities.

According to inspection reports of the Prosecutor's Office and environmental authorities, no cases of pollutant levels in environmental media in excess of applicable limits were registered. However, it is worth noting that pollution was not monitored earlier in areas nearby industrial facilities. Public authorities rely on results from the facilities' own environmental control activities.

At the same time, according to estimates of the Ministry of Ecology of Krasnodarskiy Krai, the environmental situation in Abinskiy district has worsened. While in 2011, it was assessed as "fairly favourable", the State of Environment Report of Krasnodarskiy Krai refers to a "moderately favourable" environmental situation in Abinskiy district. Against the background of

worsening air quality in the whole region, the Ministry notes that the problem of ambient air pollution becomes less relevant to Abinskiy district. The problem of environmental contamination by industrial and household waste in Abinskiy district is considered by the Ministry as persistently high.

According to the environmental authority of Abinskiy district, quality of surface waters at the territory of the district actually remains poor. Water contamination levels remain high due to multiple agricultural pollution sources: wastewater flows of animal breeding farms, drainage water inflows from infiltration fields and rice irrigation systems. Instrumental monitoring control of water contamination by heavy metals is practically non-existent.

In Krasnodarskiy Krai, mercury levels in environmental media are almost never controlled. Levels of lead, benz(a)pyrene, zinc, cadmium, organochlorine and organophosphorus compounds are monitored only in major cities and in large rivers of Krasnodarskiy Krai.

Information on contamination by heavy metals may be found only in reports on research studies at specially protected territories of Krasnodarskiy Krai, including the Caucasian Biosphere Reserve (located to the South-east from Abinskiy district), that were implemented in mid-1990s.

The study of mercury levels in water, soils and fish in the course of this project was actually the first such study in 15 to 20 recent years.

Describe the environmental and health consequences of the contamination.

Provide evidence (if available) of damage to the community or environment including personal testimonies. Include any records of environmental and health incidences or investigations:

According to the State Report on Public Health in Krasnodarskiy Krai for 2008-2012, primary morbidity rates among adult residents of the region increased, including more than 52% share of neoplasms. The general morbidity of children in the same period of time also increased due to neoplasms - by 38.2%, neurological disorders - by 30%, endocrine and metabolic disorders - by 22.9%.

In the course of interviewing residents of Kholmskaya township, they referred to large numbers of cancer-related deaths in 5 recent years among adult residents (aged from 35 to 70 years) at one street of Kholmskaya township, and high incidence of leucosis cases in adjacent Chernomorskiy and Pervomaiskiy communities.

Plants in the forested part of the area nearby the former mercury ore mining site are seriously infested by mistletoe (*viscum album*). Mistletoe is a parasitic plant, local residents told us that it became particularly wide spread in recent decades.

Identify the party or parties responsible for creating the contaminated site (if known):

Now, the RF Government is responsible for creation of the site as it is considered as a historical environmental liability. The site may be rehabilitated under the Federal Dedicated Program for Elimination of Historic Environmental Liabilities, however, the particular site is not incorporated into the Program.

Identify the party or parties currently responsible for managing/supervising the site:

Now, the former mining site is abandoned and it is under control of the Administration of Abinskiy district of Krasnodarskiy Krai. At the site of the former mercury plant, two main industrial facilities of "Kubantsvetmet" and Mercury Safety Agency operate and continue to process mercury-containing materials and waste. These facilities themselves control their sites under industrial facility-level environmental control arrangements.

Describe any plans to clean-up the site(s):

No plans exist now for cleaning and rehabilitation of the area. After decommissioning of the ore mining site "Kubantsvetmet" Co. planned to process more than 7 thousand tons of ore (or about 6 tons of mercury), that were stockpiled nearby the plant. The same plant planned to process another ore stockpile (30 thousand tons or about 25 tons of mercury) nearby former mines and the open pit of Sakhalin ore deposit (former mining facilities). However, no information is available on implementation of these plans.

Describe the system (if any), your country has for recording and mapping contaminated sites:

List the laws and regulations, if any, your country has for managing contaminated sites:

In 2013 the Russian government approved the Federal Programme on Environmental protection for 2014-2025.

The Program objective is to restore damaged ecosystems previously exposed to negative anthropogenic and technological impact as a result of past economic activities. The activities under the Programme include:

- Environmental rehabilitation of the territories affected by mining and the mining industry;
- Environmental rehabilitation of the territories contaminated by oil spills and to prevent this type of contamination in the future;
- Environmental rehabilitation of the territories affected by the processing (mainly chemical) industry;
- Rehabilitation of the territories of big solid waste landfills;
- Elimination of accumulated environmental damage due to the past economic activities in the Arctic zone of the Russian Federation and in coastal areas ;
- Rehabilitation of the territories affected by the elimination of chemical weapons .

The total budget allocated for the implementation of concrete activities under the Programme is 218,664,900,000 Rubles including :

- at the expense of the federal budget - 129 123 100 000 rubles;
- from the budgets of subjects of the Russian Federation - 22.4127 billion rubles;
- at the expense of extra-budgetary sources - 67.1291 billion rubles.

Project Outcomes:

Describe the activity conducted:

At the first stage of the project implementation, we collected and analysed available information, including easily accessible Internet sources, responses to our information requests to public environmental authorities, to production facilities of Kholmskaya township and to R&D institutes.

We analysed public State of Environment reports and reports of the Public Health Ministry of Krasnodarskiy Krai on health status of Krasnodarskiy Krai residents in 5 recent years.

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In Krasnodarskiy Krai, mercury levels in environmental media were almost never controlled. Levels of lead, benz(a)pyrene, zinc, cadmium, organochlorine and organophosphorus compounds are monitored only in major cities and in large rivers of Krasnodarskiy Krai.

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Analysis of long-term time series for the Caucasian Biosphere Reserve revealed that levels of such highly persistent pesticides as 4,4'-DDT and HCH isomers in air, precipitation and natural water bodies at the territory of the Reserve consistently exceeded their levels in other background districts. The Biosphere Reserve area is rather substantially contaminated by heavy metals. The largest (256 km²) contaminated section (section # 1 nearby Guzeripl township) covers the Northern macroslope of the Caucasian Reserve. Industrial impacts on the area are not limited to impacts of industrial facilities of Krasnodarskiy Krai only (e.g. the mercury mining site of Abinskiy district with 3 Hg MACs (Maximum Acceptable Concentration); Belorechensk chemical plant with 3 As MACs), but industrial sources outside the region also contribute (e.g. Nevinnomyssk chemical plant, Astrakhan gas condensate processing plant, etc.).

Arsenic belongs to particularly common pollutants in the area (3 MACs at 23% w/w share in the overall pollution load). Arsenic is registered also in sections # 2, # 3 and #4 with lower concentrations (down to 1.5 MACs) in the Southern part, due to both longer distances and

obstacles for diffusion (i.e. the Greater Caucasus Mountain Range). The same factors define spatial distribution of lead levels. In particular, at lead levels of 2 MACs in section # 1, lead is absolutely absent in section # 2; as the latter section is the most distant one from roads and road traffic (the main source of lead emissions to ambient air).

At the same time, in the case of section # 3, lead concentrations increase from 1 MAC to 3 MACs, while in section # 4 lead levels increase to more than 3 MACs - the increase is attributed to growing anthropogenic pressures from the Greater Sochi urban agglomeration area. Mercury contamination of the Northern macroslope of the Caucasus Mountain Range and 52 km² section # 1 of the Caucasus Reserve is associated with impacts of the mercury processing plant in the South-eastern part of Abinskiy district that is located in close proximity to the North-western border of the Biosphere Reserve (at the distance of about 70 km). Mercury concentrations of 3 MACs in this section decrease to 1.5 MACs in section # 2 and down to 0.0 MAC in sections # 3 and # 4 (the latter sections are located at larger distances from the mercury plant at the opposite sloped of the Caucasus Mountain Range).

In order to assess awareness of different population groups of environmental hazards associated with extraction of mercury ores and operations of the mercury processing plant, we organised a survey of residents in Kholmskaya township of Abinskiy district of Krasnodarskiy Krai. We developed questionnaires with both general questions on environmental quality matters and some specific ones associated with the mercury mining and mercury processing facilities nearby the township.

We surveyed 20 residents of Kholmskaya township of Krasnodarskiy Krai.

The survey results demonstrated that local residents of Kholmskaya township are rather well aware of problem-prone facilities at the territory of Abinskiy district. It is impossible to evaluate whether local residents adequately assess health and environmental impacts of industrial facilities in the district as no dedicated research studies were implemented in the sphere.

From the range of 4 selected potential pollution sources (the mercury mining site, facilities of "Kubantsvetmet" and the Mercury Safety Agency, and the waste incinerator), local residents particularly focused on the Mercury Safety Agency and the waste incineration plant (that is not officially operational yet).

Notwithstanding rather high awareness of local residents of potential adverse environmental impacts of the industrial facilities, they continue to eat mushrooms and berries from forests in vicinity of the facilities, as well as fish caught downstream of the plants. The surveyed residents proposed rather radical measures to improve the situation - i.e. to close all these facilities or some of them.

A detailed analysis of the survey results is provided in a separate report.

At the second stage of the project activities (in February - March 2015), we organised a field visit to Kholmskaya township with involvement of an engineer-technician of the Environmental Control Centre research laboratory. The field visit was designed to identify potential impacts of operational facilities in the area nearby Kholmskaya township (facilities that process mercury-containing and other types of hazardous waste), as well as to assess residual impacts of the decommissioned mercury mining site on the district's environment.

The following samples were taken:

- soil samples nearby "Kubantsvetmet" facilities - along the road that was earlier used for transportation of mercury ore from the mining site to the plant (6 samples),
- water samples from natural water bodies (a stream and the Khabl river),
- water samples from private household wells in Kholmskaya township (3 samples),
- fish from the Khabl river (5 samples) and the Kryukov water reservoir (1 sample).

The sampling process was conducted with participation of local residents of Kholmskaya township, representatives of the Abinskiy district Administration and offices of two political parties. In the course of sampling at the border of the plant sanitary protection zone we communicated with managers of "Kubantsvetmet" plant.

Unfortunately, due to technical reasons, we were unable to take air samples at the border of the sanitary protection zone.

No mercury contents were found in water samples from natural water bodies and wells (i.e. less than 0.00001 mg/dm^3 - the detection limit).

All fish samples contained different mercury levels, in particular, in 2 samples mercury levels exceeded applicable MACs for mercury contents in fish (0.3-0.4 mg/kg, according to MUK 4.1.1511-03, enacted on 30.06.2003) and were equal to 0.44 and 0.49 mg/kg. Two more samples contained mercury levels equal to 0.32 and 0.38 mg/kg.



Fish sampled for contamination by Volgograd -Ecopress

Soil samples were taken at two depths: up to 5 cm, and in the range from 5 to 20 cm. Soil samples taken at the outskirts of Sinegorie township nearby the road that was used for transportation of mercury ore from the mining site to the processing plant, contained mercury under the MAC (at both depths - 0.42 mg/kg and 0.18 mg/kg, respectively).

Based on the research results we produced the information report, including two main parts: the information and analysis parts, containing results of data collection and analysis and the research findings.

The results of our research activities were disseminated among activists of Kholmskaya, Akhtyrskiy and Sinegorie townships, provided to the Administration of Abinskiy district and to environmental NGOs of Krasnodar that deal with environmental problems of Abinskiy district. Besides that, the research results were provided to representatives of two political parties that expressed their interest in the problem (the Fair Russia Party and the Liberal Democratic Party of Russia).

We produced and disseminated two press-releases among local media outlets. Representatives of a local TV station participated in sampling of air, water and soil samples.

Engagement of and impact on Target Groups

Report your engagement with the target groups and the result of the activity on the target groups:

Target groups of the project included representatives of authorities of Krasnodarskiy Krai and Abinskiy district, managers of the mercury-processing facilities and local residents.

Representatives of the Abinskiy district Administration were involved into the project implementation activities from its earliest stage - in selection of sampling locations and in taking samples in vicinity of "Kubantsvetmet" facility. In the course of communicating with local residents at sampling sites, the representative of the Administration assured them, that the District Administration is ready to serve as an active mediator in settling conflicts between the facility and local residents.

Local residents of Kholmskaya township actively interact with managers of "Kubantsvetmet" and the Mercury Safety Agency. Their interactions are associated with permanent conflicts due to unwillingness of the managers to maintain an open information policy and due to their specific production plans (e.g. with intentions of the Mercury Safety Agency to expand its hazardous waste processing operations.)

Representatives of the facility participated in sampling at the border of the sanitary protection zone. The sampling was accompanied by an improvised discussion with active residents of Kholmskaya township. The discussion predominantly focused on lack of access of the township residents to reliable information on the facility's operations, on its pollutant emissions and discharges, on quantity and composition of the production waste and on its waste management operations.

Initially, we cooperated with the township residents remotely. The local residents provided us maximal possible assistance in the sampling process - residents themselves actively participated in sampling operations, especially in the case of fish sampling (it would have been simply impossible without assistance of local residents).

In the course of discussions on the problem and prospective activities in the future, the district residents expressed their serious concerns in connection with virtually non-existent pollution

control and environmental monitoring activities in the district. They recommended and asked for similar research activities in connection with environmental contamination by lead and other heavy metals.

Residents of Kholmskaya township actively address other environmental problems in the district, relying on support of local offices of political parties that actively operate at the territory of Abinskiy district. Representatives of political parties demonstrated their willingness to assist in broad dissemination of the project research results, and to participate in regional lobbying for the need to develop a specialised monitoring program.

In the course of discussions on further steps for improvement of the situation in Abinskiy district, representatives of almost all target groups proposed to organise a conference or a workshop of all stakeholders at the regional level.

Impact on target policies: Identify target policy or policies and the result of the activity on these.

The project results - the report based on collected data, information analysis, research findings and results of the survey - will be submitted to the GEF project coordinator of the mercury pollution sources inventory in Russia project for incorporation of the territory studied to the list of mercury-contaminated areas.

Proposals on further steps for continuation of activities under the project will be submitted for discussion in the framework of the Regional NGO Action Plan on Mercury.

Outreach to Stakeholders

Identify the stakeholders and sectors (development, environment, health, agriculture, industry etc.) that were engaged in this activity, and any potential for follow-up to advance the relationships with these stakeholders:

Health impacts belong to key issues of the project. Unfortunately enough, no specially designed studies were implemented on health status of local residents of Abinskiy district, living nearby mercury waste processing plant and the former mercury mining site.

We requested information on health status of Abinskiy district residents from the Public Health Ministry of Krasnodarskiy Krai, but their reports do not account for specific features of operations of the mercury mining site and the plants for processing mercury-containing and other hazardous waste. In comparison with other districts of Krasnodarskiy Krai, Abinskiy district demonstrates the worst rate of mortality from cardiovascular diseases in employable age (more than 208 cases per 100 thousand residents).

It was impossible to get more detailed information on population morbidity and mortality profiles in Abinskiy district with breakdown by places of residence and occupations in the framework of this project, as such a request would require the Public Health Ministry of Krasnodarskiy Krai to bear additional data processing costs. Besides that, representatives of the public health system refer to citizens' rights for protection of their personal data according to the due Russian legislation (albeit not entirely correctly).

Deliverables, outputs and/or products

List the types of outputs from the activity, including reports, brochures or other information/education/communication materials:

In the course of the project implementation, the following deliverables were produced:

1) A summary report was drafted:

- on historic and contemporary problems of mercury contamination in Abinskiy district of Krasnodarskiy Krai (Part 1);
- on results of sampling soil, water and fish samples in Abinskiy district and analysis of the samples;

2) A summary report was drafted on results of surveying residents of Kholmskaya township with application of a special questionnaire.

3) Two press-releases were produced.

4) A video material on the problem of mercury pollution and sampling activities was produced for "Electron" TV News and posted in the Internet.

Communication Efforts: Describe efforts to communicate this activity to the media and/or general public. Please include media coverage and/or photos or visuals:

In the course of the project implementation, two press-releases were produced and disseminated on problems of mercury contamination in Abinskiy district and the project implementation.

A camera team of local "Electron" TV station was invited to participate in the project - the video materials were aired and posted in the Internet:

<http://www.youtube.com/watch?v=KclSuQ-zTV0&feature=youtu.be>

http://www.youtube.com/watch?v=z207CUqDi_8

<http://www.electron-tv.com/новости-электрон/новости-дня-за-февраль-2015г/>

Research activities, including water, soil and fish sampling, were documented by photos (enclosed to the report).

NGO Recommendations for next steps:

Research studies in the framework of the project supported assumptions that the area nearby the former mercury mining site and operational facilities that process mercury-containing and other types of hazardous waste is under severe anthropogenic impacts. Further activities on these matters may include several steps:

1. In the research sphere, it is necessary to initiate application to governmental environmental and sanitary authorities, recommending them to design a system of environmental monitoring in vicinity of these industrial facilities, particularly in connection with operational hazardous waste incineration units at the site of the Mercury Safety Agency.

2. It is necessary to implement a campaign (or to develop a program, at least) for evaluation of health status of local residents in Kholmskaya township and adjacent communities. These activities may be implemented as a population survey on health matters, analysis of diagnosed

health problems with involvement of representatives of public health system. The results may be compared with the available morbidity and disease incidence data.

3. To develop a promotion and advocacy plan for preventive measures, jointly with the Public Health Ministry of Krasnodarskiy Krai.

4. To implement detailed chemical and biological research studies, and assess health status of different fish species in the Khabl river, the Zybza river and in the Kryukov water reservoir.

5. To produce a brochure on health and environmental hazards of mercury contamination and disseminate the brochure among decision-makers in Krasnodarskiy Krai at different levels (including results of IPEN projects in the sphere).

6. To organise a roundtable in the regional centre (Krasnodar) with participation of local residents, environmental NGOs, representatives of environmental and sanitary authorities, administrations of Abinskiy district and Krasnodarskiy Krai.

What, if anything, changed from the original plans and why?

In the course of the project implementation, research plans were adjusted. After collection and analysis of information on potential mercury contamination in Abinskiy district, we decided that, in addition to fish and soil samples, surface and groundwater samples should be also collected, as well as air samples in vicinity of the facility. As the Zybza river ecosystem was seriously degraded and local residents reported lack of fish in the river in recent years, we decided to sample fish on downstream section of the Khabl river (after its confluence with the Zybza) and in the Kryukov water reservoir nearby the point of discharge of the Khabl.