



Полноправные люди.
Устойчивые страны.



Report on workshop "Environmental safety of gas and oil pipelines of Belarus"

17-18 September 2015, Minsk, Belarus

Resume

The workshop titled "Environmental safety of gas and oil pipelines of Belarus" was held in the framework of the Linking Environment and Security in Belarus project within Environment and Security Initiative (ENVSEC), which is implemented jointly by the UN Development Programme (UNDP) in the Republic of Belarus and Zoï Environment Network on behalf of the United Nations Environment Programme (UNEP).

The workshop was attended by representatives of the public authorities in the field of industrial safety, emergency situations and environmental protection (republican bodies and their regional divisions), oil and gas pipelines operators, research organizations, international and Belarusian NGOs, media and foreign experts (Germany, Latvia, Ukraine, and the Czech Republic).

The goals of the workshop comprised discussion of the assessment "**Environmental safety of main pipelines in Belarus**"; elaboration of recommendations for improving the legal framework and practices in the field of environmental safety of the main pipelines; and study of international good practices to enhance environmental safety and prevent industrial accidents on the pipelines.

Drafting of the review envisaged examining "**Safety Guidelines and Good Practices for Pipelines**", developed by a group of UNECE experts in 2008, and considering the possibility of further apply of certain provisions of this document in Belarus.

Four recommendations have been developed by the authors of the assessment and presented for discussion, after which they should be finalized with the aim of being implemented:

- *We recommend updating technical regulatory legal acts (technical regulations) of Belarus in the field of pipeline transport in line with the legal and regulatory framework which is being created in the Customs Union and in view of best practices of the EU countries;*
- *We recommend stepping up the work of the Belarussian National Technical Committee for Standardization "Main pipeline transport of oil, gas and petroleum products" (TK 17);*

- *We recommend enhancing planning and actions coordination in the event of emergencies on main pipelines through development and implementation of relevant technical regulations;*
- *We recommend upgrading methodological approaches to risk assessment in emergency on pipeline transport facilities.*

At the meeting, the preliminary analysis of environmental impacts of pipeline accidents (with expert ranking method) on the territory of Belarus was presented within the framework of the review and discussion of the possibility for its improvement by expanding the list of environmental parameters for qualitative analysis.

Materials from the workshop and other project handouts will be sent to the stakeholders to be accounted for and used in their business activity.

Report in full

The workshop titled "Environmental safety of gas and oil pipelines in Belarus" was held in the framework of the Linking Environment and Security in Belarus project within Environment and Security Initiative (ENVSEC), which is implemented jointly by the UN Development Programme (UNDP) in the Republic of Belarus and Zoï Environment Network on behalf of the United Nations Environment Programme (UNEP).

The workshop was attended by representatives of the public authorities in the field of industrial safety, emergency situations and environmental protection (republican bodies and their regional divisions), oil and gas pipelines operators, research organizations, international and Belarusian NGOs, media and foreign experts (Germany, Latvia, Ukraine, and the Czech Republic).

The agenda, list of participants, press release and general information about the event is attached to this report.

Day I, Thursday, 17 September 2015

A. Rachevsky *National Center for Hydrometeorology, Control of radioactive contamination and Monitoring of the environment*, opened the workshop with a brief statement of the importance of the issues tackled by the project for the Republic of Belarus, namely, the issues of environmental safety of gas and oil pipelines in Belarus, including social, economic, and environmental aspects and cross-border cooperation. This event serves a platform for discussions, problems identification, development of proposals and recommendations for the current operators and decision-makers in this area.

Introductory word was also made by:

N. Zharkina, *Ministry of Natural Resources and Environment Protection of Belarus*, stressed the relevance of the topic and said that, despite the fact that the approaches had been generally developed in Belarus, there is a need for an in-depth analysis and evaluation of environmental risks in the operation of the pipeline transport, involving the foreign experience.

E. Baranovsky, *the Ministry of Emergency Situations of Belarus*, expressed the gratitude to the UNECE, UNDP, UNEP, Zoï Environment Network for raising the issue of safe operation of oil and gas main pipelines in Belarus. The project results can be used in taking future actions in the area of improving environmental safety.

I. Tchulba, *United Nations Development Programme (UNDP)*, stressed the importance of international cooperation in the operation of pipeline transport, and expressed his confidence that an extensive list of the workshop participants will allow for the exchange of views and development of a number of solutions.

G. Winkelmann-Oei, *Economic Commission for Europe (UNECE)*, welcomed the participants and briefed on the initiatives of the UNECE to develop Strategy to reduce risks, as well as outlined the Guidelines and Good Practices to ensure the operational safety of pipelines, developed by the UNECE in 2008 and being the object of discussion in the framework of this project.

N. Denisov, *Zoï Environment Network*, informed that the project was initiated by the Belarusian party with its first results being useful and interesting for other countries. The Paper presented for discussion at the workshop - Survey of the environmental safety of pipelines in Belarus - is unique and it is the first attempt to conduct such an analysis.

L. Spiridyonok, *Polotsk State University*, read a welcome address on behalf of the Vice Rector of Polotsk State University. She told about the involvement of the staff of the University in the project, the history of the study of the issues concerning the operation of pipeline transport, and she expressed her confidence in practical relevance of the workshop.

A. Rachevsky introduced the participants and noted that the Belarusian delegation included over 50 persons from various organizations, as well as foreign representatives.

N. Gubskaya, UNDP, briefly presented the project which is called the "Linking Environment and Security in Belarus", its components, objectives, activities and the UNDP tasks for their implementation.

L. Nikolayeva, *Zoï Environment Network*, elaborated on the aims and tasks of the component called "Environmental Safety of oil and gas pipelines in Belarus", presented the work schedule, performers and partners and gave a brief description of the progress.

G. Winkelmann-Oei, presented the activities of the Joint Expert Group of the UN Convention on the Transboundary Effects of Industrial Accidents. In particular, he introduced a draft UNECE Strategy to reduce risks: guidelines, current activities, plans for further development of the research and possible applications of these principles in the countries.

W. Reinhard, *Department of Environment of the Government of the Federal State of Hessen (Germany)*, spoke about the "Safety Guidelines and Good Practices for Pipelines" (hereinafter – the Guidelines): the history of the development of the Guidelines, its structure, principles and approaches set forth in the document, recommendations for the countries, competent authorities and operators. As an example of the application of the principles, he described the process of issuing full-service permits for oil and oil products pipelines in Germany: national legislation, structure of the document, procedure for obtaining permits.

D. Volk, *Department of Supervision of Safety in Industry (Gospromnadzor), the Emergency Situations Ministry*, presented the regulations and policies in the field of environmental safety of pipelines. Taking into account the total length of pipelines in Belarus and their features, there is a need for ongoing inspection of operating pipelines, assessment of their industrial and environmental safety, updating of the procedures for obtaining permits for new facilities. As a result, in recent years, there has been a qualitative increase in industrial safety, reduction of injuries and accidents on main pipelines. Additionally, D. Volk informed of the activities to reduce the accident rate, assess the probability and risk of pollution due to pipeline rupture and conduct training on emergency response.

V. Lipsky, *"Polotsk State University"* presented the first results of the assessment "Environmental safety of main pipelines in Belarus" and drafted recommendations. The aim of the project is to evaluate the safety of the main pipelines of Belarus on the basis of the review and analysis of the Guidelines and their comparison with the current legislation of Belarus in the field of pipelines safety. In addition to a comparative analysis of the Guidelines with the regulatory framework in the field of pipeline transportation of Belarus, there was an overview of statistics of violations and accidents at the enterprises, showing the tendency for incidence decrease. The analysis proves that the Belarusian legislation provides for the environmental

safety of pipelines and generally corresponds to the Guidelines. The study resulted in the development of the four recommendations for safe operation of the pipeline transport in Belarus in future: (1) need for updating and development of technical regulatory legal acts (technical regulations) of Belarus in the field of the pipeline transport; (2) improving of the work of the National Technical Committee for Standardization of Belarus "Main pipeline transport of oil, gas and petroleum products" (TK 17); (3) enhancing of planning and actions coordination in emergencies on the main pipelines; (4) upgrading of methodological approaches to assessment of hazards and emergency risks on the main pipeline transport.

Work in three groups was aimed at discussing the possibility of using the Guidelines and elaboration of recommendations to improve the regulatory framework and safety practices on pipelines in Belarus. Discussion of the recommendations is given below.

Recommendation I *"We recommend updating technical regulatory legal acts (technical regulations) of Belarus in the field of pipeline transport in line with the legal and regulatory framework which is being created in the Customs Union and with consideration for best practices of the EU countries"*

Recommendation II *"We recommend stepping up the work of the Belarussian National Technical Committee for Standardization "Main pipeline transport of oil, gas and petroleum products" (TK 17)"*

Moderator: A. Varonin, "Polotsk State University"

Following the discussions of Recommendations I and II, the additions listed below were adopted:

- a) To initiate setting up a single competent body authorized to approve technical regulations in the field of main pipeline transport, whose absence is one of the reasons for the slow development and approval of new technical legal and regulatory acts;*
- b) To improve the work of Technical Committee (TK17) in all areas which requires creating favorable environment for its activities;*
- c) To start drafting National System of technical regulatory and legal acts for main pipeline transport in Belarus;*
- d) To make a list of technical regulations, which need to be developed, updated or brought in line with regulatory framework of the Customs Union;*
- e) To implement a daily practice of information exchange among operators regarding their current technical regulations and to create a unified database containing the names of technical legal and regulatory acts of the national pipeline transport operators;*
- f) To update SNIP 02-05-06-85 and SNIP III 42-80 complying with current approaches, technologies and requirements for technical legal and regulatory acts.*

Recommendation III *"We recommend enhancing planning and actions coordination in the event of emergency on main pipelines through development and implementation of relevant technical regulations"*

Moderator: V. Lipsky, "Polotsk State University"

Following the discussions of Recommendations III, the additions listed below were adopted:

- a) It is necessary to draft for all operators a single regulatory act containing a sample plan of elimination of emergencies for main pipeline transport facilities;*

- b) *Technical regulations require a full and detailed description of public information issues concerning the presence, state, potential threats and emergencies at hazardous production facilities.*

Recommendation IV *"We recommend upgrading methodological approaches to risk assessment in emergency on pipeline transport facilities"*

Moderator: A. Kulbei, "Polotsk State University"

Following the discussions of Recommendations IV, the additions listed below were adopted:

- a) *It is necessary to develop a geographic information system (GIS), which takes into account internal factors that determine conditions of a pipeline (design solutions, current technical state, type of maintenance, etc.) and external factors that determine the conditions of escalation or de-escalation of accidents (landscape features, geo-seismic impact, vegetation - including rare species of plants, hydrological situation, and others);*
- b) *It is necessary to draft a technical regulation, which shall contain methodology of hazards analysis and risk assessment with regard to a potential accident at a main pipeline linear part.*

Discussion

N. Denisov asked the speakers to comment on the phrase from the report: "pipelines in Belarus are laid in not very favorable conditions."

V. Lipsky said that the main working area of the Department is the protection of water bodies in pipeline accidents. There is a system developed that allows for the implementation of measures, including those dealing with transboundary water bodies. In 2007, its application made it possible to protect the river Ula from oil pollution as a result of the pipeline rupture. This is a pressing issue which needs to be included into technical regulations.

N. Denisov suggested putting this aspect into the list of recommendations.

N. Denisov raised the issue of public participation in the planning of new facilities at the legislative level and its implementation in practice.

A. Stasyukevich said that state environmental expertise, environmental impact assessment (EIA) provides for the respective procedures for discussions and public participation. During examination and designing stage, one takes into account comments received from the public. When obtaining all-service environmental permit, the operator must complete the notification form and inform the public through the media.

G. Winkelmann-Oei said that in Belarus all water bodies are transboundary, and operation of the existing pipelines holds the risk of pollution of surface water bodies.

V. Lipsky confirmed that Belarus is located on the watershed of the Baltic and Black Seas, and it tries its best to reduce the risk of water pollution, because in the event of pipeline rupture polluted water might get into adjacent water bodies through a system of cross-border watercourses. A newly built product pipelines Polotsk-Minsk and Gomel-Minsk are removed from the rivers at the maximum distance.

A. Noreiko proposed to unify the terminology and regulations for the authorities, as there is no common approach for the terms in different technical regulations, especially with regard to prevention and elimination of emergencies.

V. Lipsky agreed and said that this issue had been raised in his speech, and the Law "On Main Pipeline Transport" (09.01.2002 No. 87-3) needs further development and refinement.

A. Rachevsky proposed to add this comment into the recommendation.

Analysis of environmental risk posed by pipelines in Belarus with expert ranking method

A Kulbei, "Polotsk State University", explained that Belarus does not have any approved methods of calculation of environmental risk of accidents on linear objects. Available foreign

techniques with quantitative calculations are very difficult to apply in Belarus. Therefore, the project was an attempt to prepare a qualitative assessment of environmental risk analysis of pipelines on the basis of open and accessible information. To do this, they used the method of expert rankings and only three qualitative indicators were considered: (1) river crossings (distance of a pipeline from riverbeds and river size were criteria for different levels of danger); (2) crossings over special protected areas, and (3) distance between pipelines and settlements. There have been identified four categories of qualitative assessment of pipelines regarding environmental hazards by aftereffects: (1) highest (2) high (3) average, and (4) minor. Some parts of pipelines have been ranked and mapped, according to the above information.

This exercise confirmed the possibility of using a similar approach with the qualitative analysis of environmental risks and the need, firstly, to extend the list of indicators for qualitative analysis and, secondly, to introduce quantitative indicators into the analysis.

Discussion

A. Noreiko asked to specify criteria for the proximity of settlements to pipelines.

A. Kulbei said that during assessment they took the worst-case scenario, when oil comes out and migrates through landscape to a settlement, and gas accidents were estimated by explosive risk.

G. Winkelmann-Oei asked which distances were taken into account when assessing risks for transboundary rivers.

A. Kulbei replied that these are cases when emergency crews do not have time to respond to a leakage, and petroleum flows through a watercourse to a neighboring country. He said that the map was made with the aim of evaluation of possible (potential) environmental risk.

Winkelmann-Oei G. commented that such calculation is applicable to liquid substances, and during obtaining all-service environmental permits one should have to apply another analysis, which will have higher risks and specific values, especially in the calculation of compensation for damages caused by accidents.

A. Kulbei replied that in case of all-service permits, in accordance with the law, they are developing a section on operational safety with appropriate calculations for every specific technical solution. He noted that the above estimate includes only qualitative assessment.

N. Denisov summed up that the speech and analysis is very interesting, the map is quite informative and can be used to assess working conditions of pipelines. He offered to hear views from other industries' experts.

V. Korneyev talked about insufficient rankings and lack of hydrological characteristics. GIS could help increase the number of factors considered.

V. Lipsky cited the example of pipeline accident on the Ula river, when the local conditions determined the degree of contamination: through plowing furrows oil got into the drainage canal with open flood-gate and penetrated into the Ula. He stressed that hydrological conditions are not always a decisive factor. Therefore, in this study, an in-depth analysis was not performed, and the map, in terms of estimates of the river network, is an illustration of the fact that the Belarusian pipelines are potentially dangerous because they pass through a particular landscape and can pose a threat to other countries, because all large river basins in Belarus are transboundary.

V. Zavyalov expressed the wish for further development of this study to account for a lot of conditions considered (geographical conditions, resources for emergency response and so on.), on the basis of which one can take management decisions aimed at prevention of possible accidents.

L. Nikolayeva asked to clarify who has an access to information about risks and whether it is worth while discussing this issue with a view of informing the public.

A. Kulbei expressed the opinion that such information is available at the companies for their internal use, and it is not important to provide such information to the public. However, it is

more important to focus on the main task of the responsible organizations and operators, that is to reduce risks of accidents on pipeline transport.

N. Denisov suggested considering the possibility of developing GIS for the whole territory of Belarus, but showed concern about the inability to obtain the necessary characteristics of the pipelines from the operators.

W. Reinhard noted that the information is important in the design of new pipelines, and it must be communicated to the public.

G. Winkelmann-Oei proposed to develop a methodology for the deterministic approach to risk assessment and pipeline control.

N. Denisov: all new, promising ideas can be a logical continuation of our activities.

Day II, Friday, 18 September 2015

Improving the technical regulatory legal framework and practices in design, construction and repair of pipeline transport facilities

L. Spiridyonok, "Polotsk State University", presented the history of the work of the Department for the development of technical regulatory legal framework. She noted that work is carried out in close cooperation with the operators, taking into account cutting edge technologies and practical experience. She gave the example of the developed technical regulations.

Discussion

V. Lipsky noted that the system of technical regulations evolved over decades in close contact with the Russian developers of technical regulations. In Belarus, in connection with the introduction of the Law "On technical regulation and standardization" it is required to align a number of technical regulations, taking into account the world practice.

A. Kulbei added that when comparing the technical regulations and approaches of Belarus and the European Union, the project-working group concluded that in Belarus there are some missing technical regulations, which allow for analyzing risks of accidents on the pipeline transport. Particularly, he emphasized that the existing technical regulations do not allow for evaluation of linear facilities.

V. Lipsky confirmed that this problem is relevant for everyone: both operators and regulatory authorities.

A. Noreiko proposed to discuss the possibility of including into technical regulations of the issues related to innovative technical solutions in the field of construction of pipeline transportation facilities, as existing technical regulations were adopted in the 1980s. For example, crossing water obstacles by horizontal directional drilling allows for meeting environmental requirements, but significantly increases costs of construction. It is necessary to develop technical regulations, which will calculate the efficiency of construction, taking into account environmental and economic component, therefore, decision-making shall not be determined solely by the cost of construction.

L. Spiridyonok confirmed that horizontal directional drilling is an innovative method and it is necessary to define the conditions for which it is advisable to use this method, so the issues raised are relevant.

V. Lipsky said that the method of horizontal directional drilling is progressive and environmentally effective. But, often they hush up the issue of calculating economic costs for reducing environmental risk during construction. It is necessary to establish a mechanism for the development of technical regulations required in practice. This is an organizational task. He proposed to introduce this issue into the decisions taken at the workshop.

N. Denisov suggested studying the problem of economic and ecological grounding in the international practice and use foreign experience for the conditions in Belarus, if possible. It is an international project that can become a platform for the introduction of foreign best practices.

A. Serakov, as a representative of the operating company «Zapad Transneftprodukt», which is owned by the Russian "Transneft", briefly presented the objectives and activities of the organization. He said that the "Transneft" system has many technical regulations developed. Relevant Research Institute in the "Transneft" system is engaged in the development of technical regulations for all fields of pipeline activity with operation of the pipelines being done according to intra-industry system of technical regulations. At the Interagency Councils, the TK-17 has repeatedly advocated a proposal to consider the guidances of the company as a framework and jointly adapt them to the conditions of Belarus. The company is ready to share its groundwork.

V. Senkevich, BelGISS, reminded that, in accordance with the Law "On Standardization", the majority of technical regulations are voluntary and subject to approval by state authorities. Initiation of the drafting of necessary technical regulations can be done by operators together with TK-17.

D. Elagin supported A. Serakov regarding the need to update the existing technical regulations in the field of design, construction and operation of pipeline transport.

S. Zavalov recalled that in 2007, during a pipeline's rupture there were no documents for the calculation of damages from environment pollution. In 2009, the Council of Ministers of Belarus initiated the development of relevant documents that are currently valid. The operators need to work on prevention, as compensation costs for the operators can be very large. Such technical regulations must take into account the problem of damage to the land, forests of different categories, protected species of flora and fauna, geophysical faults and settlements. He cited an example when at the stage of the investment rationale for a particular facility, damage calculation doubled the return on investment for this facility and revealed the futility of its implementation.

Z. Kisel proposed to develop a methodology for calculating damages for aquatic and semi-aquatic biota.

The need to develop sectoral technical regulations for the introduction of advanced technologies and reduction of risks and after-effects of accidents on pipelines was supported by all representatives of regional bodies with the Ministry of Environment. There was an opinion that it is necessary to finalize the proposed assessment methodology and to expand the number of criteria (geo-ecological aspects, etc.). The economic feasibility of construction should consider an environmental component. One can use indirect methods of calculation, which are already used in practice.

Ensuring environmental safety of pipelines in the neighboring countries and ways of improving cross-border cooperation to prevent and eliminate aftereffects of accidents on main pipelines

L. Vizbule, State Environmental Bureau (Latvia), spoke about the legal basis of the regulation of relations in the field of pipelines operation in Latvia, safety control pipeline system, and problems of existing pipelines operation.

V. Lipsky asked to specify how the emergency response is held on the pipeline transport in Latvia and whether there are specialized units of the operator to respond to an emergency.

L. Vizbule confirmed that at first a leak is tackled by specialized services of the operator and later, especially in major accidents, experts from other companies are to be involved.

E. Fedorenko, Department of Environmental Safety and Waste Management of the Ministry of Environment and Natural Resources (Ukraine), briefly outlined the trunk pipeline network in Ukraine. He stressed that the issues of environmental safety in the operation of pipelines are carefully considered. He introduced the legal framework of Ukraine in the field of environmental safety of operation of pipeline transport, which is very similar to that of Belarus.

He described a risk assessment procedure in the construction of pipelines and which issues are governed by the law in this procedure.

During discussion of the report, the representatives from Belarus were interested in the Ukrainian experience of calculating damages from the fire at the tank farm in Vasylkiv (near Kiev); those who are engaged in eliminating the consequences of accidents on pipelines; those responsible in case of unauthorized access to pipelines, especially when the guilty party is not established.

E. Fedorenko said that the fire damage is calculated in a complex and the Environmental inspection is now addressing the issue of charging damage to the operator. The State Service represented by the Ministry of Emergency Situations carries out all the actions to eliminate the aftermath. In the event of unauthorized access, damage is charged to the subject of the offense, in case when the offender is not established, and there is no ground for legal action.

N. Denisov asked for clarification regarding regulation of cooperation in a transboundary context between Belarus and Ukraine.

L. Nikolayeva explained that Ukraine has signed bilateral agreements with all its neighbors regarding protection of trans-boundary rivers, and the framework of these agreements is the basis of cooperation.

N. Denisov expressed regret that Ukraine is not a party to the TEIA convention which gives advantages in terms of international cooperation on industrial accidents and their elimination.

E. Fedorenko intends to raise this issue with the Environment Ministry following his business trip.

A. Haskamp, «BP-Europa» (Germany), shared basic principles of improving safe operation of oil pipelines and the experience of his company. The report outlined his impressions of the visit to the Belarusian pipelines and he expressed his gratitude for the reception at OJSC "Gomeltransneft Druzhba". He extensively described the procedures for safety checks of pipelines' operation in Germany.

A. Kulbei asked to specify how urgent is the problem of unauthorized incut into pipelines in Europe.

A. Haskamp confirmed that Eastern Europe has such problem. The most important measure to reduce these cases is to increase the frequency of inspections of pipelines, because monitoring system, which was mentioned in the report, only works when some product goes through a pipe.

G. Gnorski, "PCK Raffinerie GmbH" (Germany), spoke about the experience of organizing oil transportation by the example of «PCK Raffinerie GmbH». He briefly spoke about the pipeline system in Germany, current operators and their objectives, and the legislation for the environmentally safe operation in Germany. «PCK Raffinerie GmbH» gives an example of using modern technologies for the safe operation of pipelines, their repair, leakage control, and training.

A. Stasyukevich asked about the options for damage compensation in case of pipeline accidents.

G. Gnorski said that the operator could pay a fine for damages or take a series of measures to restore the environment.

P. Kuchar, «JSC MERO CR» (Czech Republic), talked about the piping system of the Czech Republic. He detailed the Czech legislation in the field of risk assessment, risk assessment principles, risk assessment system and pipelines diagnostic systems.

N. Denisov asked for clarification from the experience of the Czech Republic whether it was necessary to finalize regulations after their approval, given the experience of the operators.

P. Kuchar said that there is no need to finalize the documents.

Wrap up session

V. Lipsky initiated the discussion of the draft summary of the recommendations of the workshop on improving the regulatory framework and safety practices on pipelines in the Republic of Belarus.

N. Denisov proposed to expand the task of the session and discuss international experience and cross-border cooperation in the environmental safe operation of pipeline transport, gather ideas regarding the direction of further actions in the framework of international cooperation.

V. Lipsky noted that the Department has no sufficient information on cross-border cooperation. He asked for the contributions concerning this information and examples of international cooperation.

G. Winkelmann-Oei reminded that Belarus had implemented a project on the system of early warning regarding leaks in pipelines in the basin of the river Neman. This system could be a model for other basins.

E. Baranovsky confirmed that Belarus is ready to cooperate and already has extensive experience of cooperation with the neighboring states on many issues, including a fast response to emergencies, with joint exercises having been held. International agreements have been signed and each operator has plans developed to respond promptly and minimize the aftermath of pipeline accidents. International technical assistance projects help in the development and improvement of such works.

W. Reinhard gave the example of an international plan on the river Rhine which lists all sources of accidental pollution, and this plan can be the basis for the development of other international plans.

G. Winkelmann-Oei informed that similar issues are covered by the UNECE Water Convention, while the Industrial Accidents Convention does not deal with them. And, it may be worth while specifying how the warning system works.

V. Lipsky summarized the session and expressed the opinion that they had discussed the issues being in the center of attention for a long time. However, this meeting's strength was that it brought together representatives of various sectors where operators, environmentalists, scientists and foreign representatives could express their opinions. He promised to attract professionals from all industries for further work. He expressed his gratitude to the organizers. He highly praised the results of the workshop.

L. Nikolayeva thanked the moderators. She confirmed that the workshop is unique with experts from different areas meeting here. The workshop raised urgent issues, particularly those of cross-border cooperation and assistance during accidents on pipelines.

The participants spoke about the results of the workshop. Everyone highly praised their work. They expressed gratitude to the organizers for the opportunity to exchange views, identify existing problems, and get to know opinions of representatives of other organizations.

Media representatives highlighted the great interest of the public in the issues of environmental risk and damage caused by industrial accidents, which soars during emergencies.

Representatives of the operators were able to look at the problem from the outside, because pipeline issues are discussed only during the meetings of TK17. Operators are always ready to meet developers' needs.

Belarusian experts have identified the problems that need to be addressed further. The weaknesses of legislation to be removed have been highlighted. Even though not all questions have their answers, it is already a boost in finding their solution.

Foreign experts reiterated that there is a need to support and implement solutions, and it is important to establish an open exchange of information on pollution sources.

UNDP representatives noted that their task is to provide a platform for dialogue. Given the number of opinions, one can assume that the workshop has been a success. The list of the participants was an advantage, allowing for open and full discussion.

Representatives of Zoï Environment Network expressed confidence that this meeting would be useful. We help organize the process and help you to convey developed recommendations to the competent authorities but the implementation or acceptance is up to decision-makers in a given field of activity.

The workshop was highlighted in a number of media coverage:

<http://greenbelarus.info/articles/23-09-2015/naskolko-bezopasny-belarusskie-truboprovody-ocenili-eksperty-proon>

