

**Sixth HELCOM PITF Regional Workshop  
Cracow, Poland  
25-26 September 2001**

**CONCLUSIONS**

1. In the light of recent developments HELCOM PITF is reconsidering its focus on activities and has established a Preparatory Group to highlight relevant issues to be taken into account.

PITF has encouraged the Preparatory Group (PG) to continue arranging Regional Workshops in collaboration with governments and representatives from the local, regional and national level and the International Financial Institutions (IFIs).

2. At the invitation of the Ministry of the Environment of Poland the Sixth PITF Regional Workshop was held in Cracow on 25-26 September 2001. The Agenda of the Workshop as well as the List of Participants are attached as Annexes 1 and 2, respectively.  
.1-2
3. The Workshop was opened by Ms. Bernadetta Czerska on behalf of the Ministry of the Environment, and welcomed by Mr. Bogdan Cisak, Director of the Regional Board for Water Management in Cracow .
4. The Meeting elected Mr. Göte Svenson, Chairman of HELCOM PITF, as Chairman and Mr. Dariusz Stanislawski, Ministry of the Environment, as Co-Chairman of the Meeting.
5. The Meeting set up a Drafting Group for formulating the Draft Conclusions of the Workshop to be agreed upon at the end of the Meeting. The Group was composed of Ms. Adriana Dembowska and Ms. Monika Stankiewicz from Poland and Mr. Claus Hagebro from the Secretariat of the Helsinki Commission, who also acted as the Rapporteur.
6. The Meeting was addressed by key-note speakers from the National Fund for Environmental Protection and Water Management (Ms. Anna Czyzewska), the Ministry of the Environment (Mr. Tomasz Walczykiewicz) and the Regional Board for Water Management in Cracow represented by Mr. Adam Jarzabek.
7. Ms. Anna Czyzewska, National Fund for Environmental Protection and Water Management, described the possibilities of financing environmental projects in Poland with a focus on the different forms of financial support provided by the National Fund. Water pollution control and water management is one of the financing priorities. In relation to the HELCOM JCP Hot Spots the National Fund has supported several wastewater treatment projects. Thanks to the National Fund the capacity of wastewater treatment plants increased to 5.3 million m<sup>3</sup>/day, which is almost half of all industrial and municipal wastewater discharged into surface water.
8. Mr. Tomasz Walczykiewicz, Ministry of the Environment, gave a presentation on the legal and institutional framework for river basin management in particular in relation to the new Water Law and the Water Framework Directive.

9. Mr. Adam Jarzabek, Institute of Water Engineering and Management, Cracow University of Technology, presented the water protection strategy in the Upper Vistula River catchment basin. The presentation encompassed description of protected areas, water quality classification and the prioritization of surface water resources under special protection. The main action needed is installation of sewerage and collection systems and construction/modernization of wastewater treatment plants.

10. Information on the ten Hot Spots were delivered during eight presentations. The history and the recent development and implementation of environmental measures were described. The investments have been substantial at most of the presented Hot Spots.

The Hot Spots in the Katowice Region are particular because the three Hot Spots are agglomerations of many industrial and municipal enterprises. The completion of the task to identify individual "sub-hot spots" will hopefully allow specific requirements to be set and regular control to be conducted facilitating environmental improvement.

The presentations of investments in municipal wastewater treatment plants were encouraging. The activities have led to the possibility of deletion from the List of Hot Spots within the next years.

While the municipal wastewater treatment plants are relatively simple to evaluate the industrial Hot Spots are more difficult. Large investments have been made during the last ten years and major and impressive improvements have been reached. Some of the industries are now ready or nearly ready for deletion from the List. Specific, well-defined monitoring data for discharges and emissions should be compared with national requirements and Helsinki Convention Recommendations and, when relevant, compared with international BAT/BEP information.

11. The Workshop took note of the information given and the assessment of the present state of the Hot Spots located in the southern Poland. It was the impression that the Workshop provided more balanced and reflective information than the Annual Reports normally provide.

By site type the Hot Spots in the southern Poland belong to:

- municipal and industrial wastewater treatment (6 Hot Spots; Nos 88/107/108, 86, 87.1, 90) and
- industry (4 Hot Spots; Nos 87.2, 89, 91, 92).

12. The Meeting noted with appreciation that the well-prepared documentation was elaborated in both English and Polish languages giving a solid basis for the discussion.

### 13. **Final evaluation**

The Workshop reflected progress in the development of the Hot Spots in the southern part of Poland. Major results have been achieved and the development is encouraging. This includes the positive and engaged attitude of the responsible actors with regard to integrating environmental aspects into their decision-making. Still, there are tasks to do and realistic plans for future pollution reduction measures were presented during the Workshop.

The Joint Comprehensive Environmental Programme (JCP) operates with a 20 years' implementation period, and the impression from the Workshop was that we can expect to see the deletion of the Hot Spots in this region before the end of that period.

It was observed that the combination of the environmental fee and fine system and the environmental fund system functions very well, and the Polish Government was congratulated on the successful implementation of this “carrot and stick” approach.

During the final discussion several observations were made:

- The economic impact on the enterprise’s return due to the environmental investments is to a certain degree counteracted by the amount of fines saved after the investments have been implemented;
- During the implementation of actions so far the foreign investment has been rather low (about 6%) while most investments originate from the enterprises themselves (46%). The other sources have been: the ecological funds (25%), national state and commercial banks (13%), state investments (5%) and other sources (5%). The state investments have been decreasing during the last years;
- The relatively low foreign contribution is to a certain degree surprising because one of the ideas of the JCP is to transfer resources from West to the East;
- The EU Water Framework Directive is expected to play a major role for the future environmental investments. According to the new Water Act the Polish river management plans require identification of water quality and sources of impacts (“hot spots”) and financial measures have to be identified in relation to these;
- Substantial changes in the ownership of enterprises, closing of some, and reduction of production in others as well as privatisation have lead to the improvements we observe today;
- The presentation of the Hot Spots in the Katowice Region was interesting and will lead to a proposal to the PITF on establishing sub-hot spots. Some improvement has taken place within this region but the situation is still unsatisfactory and this division might have been made earlier;
- The positive development of the environmental situation in Poland is positive not only from the view of the Baltic Sea but will result in major improvements in Poland itself.

One important outcome of the Workshop was the agreed opinion that some Hot Spots may now be ready for deletion from the List of Hot Spots. HELCOM looks forward to the Polish decisions and presentation to the next meeting of the PITF. Other Hot Spots will be ready for deletion within a few years.

The Workshop expressed the wish that the organizers of the Workshop and the regional authorities concerned, in cooperation with the HELCOM Secretariat and the PG, should compile a Thematic Report with an assessment of the Hot Spots as well as a presentation of the findings at the Workshop.

It was proposed to prepare the report after all the Polish Hot Spots are analysed. At the next possible workshop the organizers wish to present more information about foreign investments, the effect of the fee/fine system and the role of water companies. An additional issue of the next possible workshop will be the agricultural hot spots, which is a very difficult issue.

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**AGENDA FOR THE WORKSHOP**

1. Welcome
2. Election of the Chairman
3. Adoption of the Agenda
4. Address by Key-note speakers
5. Stock taking
6. Problem analysis
7. Identification of necessary actions and actors
8. Proposals including timetable for actions
9. Reporting and conclusions

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**LIST OF PARTICIPANTS**

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**Polish JCP Hot Spots – Timetable for deletion submitted by Poland**

Hot Spot name	Environmental impact	Projects planned/in course of implementation	Necessary actions	Proposed date for deletion
<p>"Plaszow" Wastewater Treatment Plant in Cracow Hot Spot no. 86</p>	<p>The plant is overloaded; the certain amount of sewage over 7 000 m<sup>3</sup>/h is overflowed without treatment. Average concentration of pollutants [g/m<sup>3</sup>] and treatment efficiency (%) as of 2000: BOD<sub>5</sub> - 120 (52 %) COD - 216 (52%) Total nitrogen - 34.6 (16%) Total phosphorus - 2.6 (57%).</p>	<p>Modernisation and extension of the WWTP (ISPA grant) - degree of pollutants reduction will comply with the national law, EU Directive and HELCOM Recommendations.</p>	<p>Modernisation and extension of the WWTP.</p>	<p>January 2007</p>
<p>"Kujawy" Wastewater Treatment Plant in Cracow Hot Spot no. 87.1</p>	<p>Mechanical-biological treatment with nitrification and de-nitrification processes and biological de-phosphate treatment. All parameters are in compliance with the water use permit, requirements of UE Directive and HELCOM Recommendations. Average concentration of pollutants [g/m<sup>3</sup>] as of 2001: BOD<sub>5</sub> - 11.8 COD - 22.0 Total nitrogen - 4.4 Total phosphorus - 0.9. Sewage sludge after exposition to methane fermentation and dehydration on filter press is transported to disposal sites in Silesia.</p>	<p>II stage of the treatment plant: - extension of the sewage system in the surrounding areas, disposal of the sewage from the west part of city system (reduction of the "Plaszow" WWTP load); - improvement in stabilisation process; - development of sedimentation system.</p>	<p>Extension of sewage system.</p>	<p>January 2003</p>
<p>"Tadeusz Sendzimir" Steel Plant in Cracow Hot Spot no. 87.2</p>	<p>Emission to the air [Mg/year] as of 2000: Dust – 3 259 SO<sub>2</sub> – 6 027 NO<sub>2</sub> – 42 054 CO – 42 054 CnHm – 349. The overall water circulation in the Plant is closed. Most generated waste is harmful to the environment (containing oils, heavy metals – Mn, Pb, Cr, Cd, Zn, Ni, Cu, Al, asbestos, phenols, tar substances). Some of the waste is re-used up to 100%. Other waste is disposed at the Plant's landfills.</p>	<ul style="list-style-type: none"> <li>- Modification of coke-quenching tower construction;</li> <li>- installation of combustion gas recirculation at the sinter belt no. 2;</li> <li>- modernisation of installation for dust removal;</li> <li>- modernisation of electrofilters at the power boiler no. 2;</li> <li>- construction of coal dust blowing devices (into the blast furnaces);</li> <li>- improvement in the sewage system;</li> <li>- organisation of new landfills;</li> </ul>	<ul style="list-style-type: none"> <li>- Implementation of the system for continuous measurement of the emission from the Power House Department;</li> <li>- implementation of the computer system for the modelling of emitted pollution dispersion in current meteorological conditions;</li> <li>- application of BAT with regard to the reduction of emission and system of wastewater quality monitoring.</li> </ul>	<p>*) Due to the radical restructurisation of the steel industry in Poland, privatisation process and not settled position of the Plant as a part of the Polish Steel Plant Holding, there is no possibility to plan new environmental investments and to determine the date for hot spot deletion.</p>



		- installation of containers for waste similar to communal waste.		
<p>“Organika-Azot” Chemical Plants Joint Stock Co. in Jaworzno Hot Spot no. 89</p>	<p>Concentration of pollution in wastewater [mg/l] as of 2001: COD (Cr) – 122.9 TOC – 23.1 Phosphorus – 0.85 Nitrogen – 4.12 Copper – 0.239 Zinc – 0.153 Mercury – 0.001. Discharges of hazardous substances to the surface waters:  <ul style="list-style-type: none"> <li>• due to the polluted Plant’s area - norms are exceeded with regard to AOX - 7.06 mg/l; insecticides, including: DDT - 8.48 µg/l HCH - 157.4 µg/l DMDT - 10.3 µg/l</li> <li>• due to unseal installation - high chlorphenwinphos concentration (697 µg/l).</li> </ul> </p>	<p>Laboratory research is conducted to prepare the project for modernisation of the Plant's wastewater treatment technology, particularly with regard to reduction of pesticides residue concentrations. Pesticides pollutant concentrations, including DDT exceed the national standards for sewage discharged to the groundwater. It should be underlined that this is mainly the result of past production activities, which caused the pollution of the Plants’ area, rather than current methods. The other reason is a partly unsealed waste site. Survey to analyse the ground contamination was conducted (1998-2000).</p>	<p>Reclamation of polluted Plant's area, including elimination of environmental nuisance caused by old unsealed hazardous waste disposal sites - estimated cost of that programme is about 100 Million PLN (25 MEUR) (without external assistance not possible to realise by the Plant).</p>	<p>Not earlier than 2004</p>
<p>"Boruta" Dyestuff Plant in Zgierz Hot Spot no. 90</p>	<p>The "Boruta" has been included in the JCP List due to the discharges of pollution in wastewater. In 1998 a closing down process of the "Boruta" was started due to the recession and the fall in production. Four companies have emerged. Only one generates the industrial wastewater discharged to the Municipal Wastewater Treatment Plant in Zgierz. <u>Municipal Wastewater Treatment Plant in Zgierz</u> operates as a mechanical-biological. Pre-treatment of sewage is conducted separately for the municipal wastewater and the industrial wastewater. Average concentration of pollutants [g/m<sup>3</sup>] and treatment efficiency (%) as of 2001: BOD<sub>5</sub> - 4.6 (98.0%) COD - 52.2 (92.1%) Total nitrogen - 11.7 (78.3%) Total phosphorus - 0.7 (88.0%). Generated sludge is dehydrated on the traps and treated by oxide lime. The Plant has a certificate which allows for the use of the sludge for the agricultural purposes.</p>	-	<p>Relevant HELCOM Recommendations are fulfilled.</p>	<p>2001</p>

<p>"Dwory" Chemical Firm Ltd in Oswiecim Hot Spot no. 91</p>	<p>Emission to the air [Mg/year]: Dust total 743 Gases total 2745 (without CO<sub>2</sub>) including: Mercury 0.039 Styrene 13.3 NOx 1064 SO<sub>2</sub> 1357 Vinyl chloride 0 Chlorine 0.177 Hydrogen chloride 1.32 Ammonia 15.967.</p>	<ul style="list-style-type: none"> <li>- Modernisation of the Municipal-Industrial Wastewater Treatment Plant; project aiming at reduction of the emission (exchange of burners to the low-emission burners);</li> <li>- reduction in water use, new technologies for waste utilisation.</li> <li>- Regeneration of titanic electrodes what may result in periodical deterioration of the wastewater quality.</li> </ul>	<ul style="list-style-type: none"> <li>- Reduction in water use;</li> <li>- full introduction of closed water systems;</li> <li>- new technologies for preliminary wastewater treatment.</li> </ul> <p>HELCOM Recommendation 6/3, 20/6 are fulfilled - lack of information on AOX concentration in wastewater.</p>	<p>2003</p>
<p>"Bolesław" Metallurgic and Mining Plants in Bukowno Hot Spot no. 92</p>	<p>Emission to the air [Mg/year]: Metalloiferous dust - 1 including: Zn - 0.8 Pb - 0.002 Cd - 0.0002 SO<sub>2</sub> - 416.4. Generated wastes - 2563.7 thousands Mg/year, including wastes disposed 19.6 thousands Mg/year. Treated wastewater discharged to the surface waters - 164267 thousands m<sup>3</sup>/year, including mining waters - 155141 thousands m<sup>3</sup>/year. Pollution load discharged to the surface waters [Mg/year]: Zn - 194.4 Pb - 22.1 Cd - 0.96 SO<sub>4</sub> - 36461.1.</p>	<ul style="list-style-type: none"> <li>-</li> </ul>	<p>There are no relevant HELCOM Recommendation for ore mining and non-ferrous industry. Heavy metals concentration in discharged waters and wastewater is below the level required by the HELCOM Recommendation 20E/6 taken as a reference. BAT is applied.</p>	<p>2001</p>