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AND LIMITATION OF THEIR IMPACT ON TRANSBOUNDARY WATERS**
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**EXPERIENCE WITH THE APPLICATION OF THE INTERNATIONAL EMERGENCY WARNING SYSTEM
FOR THE ELBE (IWA Elbe)**

Discussion paper transmitted by the Government of the Czech Republic */

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I. Introduction

In 1990 the International Commission for the Protection of the Elbe from Pollution (IKSE) was established. In 1991 the international working group for the „Accidental pollution“ met for the first time. Already at the first meeting and the following ones basic principles, definitions and possibilities of communication for the first International Emergency Warning System for the Elbe (IWA Elbe) were discussed. The proposal of the IWA draw on the experience with the application of similar systems for the Weser and Rhine rivers. During the elaboration of the IWA Elbe, specific circumstances valid for the whole length of the Elbe River (from the spring in the Giant Mountains in the Czech Republic over the Federal Republic of Germany to the mouth of the Elbe in Cuxhaven at the seaside of the North Sea) had to be taken into account.

On the basis of the bilateral agreement on the plan principles between the participants in working group H in December 1991 the IKSE approved the IWA Elbe.

In October 1992 the first attempt to test IWA Elbe was made but with a negative result. After the discussion of this result in working group H the measures were put into practice and the second test was performed in April 1993. A positive result with the announcement of a fictive accidental pollution of the Elbe originated in the Czech Republic (CR) was made. In 1994 the first accidental pollution of the Elbe was announced with the help of the IWA Elbe from the Czech Warning Central.

The purpose of the IWA Elbe was to build up a unified emergency warning system for the data transfer (data of place, time, nature and extent of the accidental pollution in the Elbe River Basin). This plan does not include the field investigation of the cases nor removal of the pollution already existing. It only uses the results of the national internal investigation from the relevant institutions.

The basic aim of the IWA is establishment of five main international warning offices. The first warning office is placed in the CR in Prague at the Czech Environmental Inspection, dpt of water protection. The second one is placed at the Country's police headquarters of the Ministry of the Interior of Saxon in Dresden. The third one is placed at the operational centre of the Ministry of the Interior of Saxon-Anhalt in Magdeburg, the fourth one at the Country's Environmental Office of Brandenburg in Potsdam (on the Havel - the Elbe tributary) and the fifth one (for Schleswig-Holstein, Lower Saxony, Mecklenburg-Vorpommern and Hamburg) at the operating police office in Hamburg.

It appears from the above stated that only two warning centrals are not placed at the police office.

II. Experience obtained from the operation of the Warning Central in the CR in Prague

One of the main reason for the location of warning centrals at police offices is their continuous service which is also a basic requirement for the operation of warning centrals.

The location of warning centrals at police offices has its own advantages and disadvantages. Police offices during their continuous operation provide a lot of important services (e. g. in the field of transport, crime, information, disasters etc.). The police have its own well-introduced network of modern communication and documentation technical equipment. At police stations people of various professional specialization work without having detailed knowledge in the field of water accidental pollution or water management. Although the system of sending messages between the warning centrals has been simplified using detailed forms, it sometimes happens that it is rather difficult to explain some return questions to laymen.

However warning centrals placed at the environmental offices suffer from various problems. The Warning Central in Prague had and still has problems to ensure sufficient number of the staff for the operation and as well it has financial problems with refunding the operating staff. On the other hand the operating staff has good expert knowledge in the field. The Warning Central in Prague was placed at the Czech Environmental Inspection (Inspection) because this control (and in present administrative as well) authority already had experts of good experience in this field. The Inspection also had the inner system of accidental pollution messages from inspectors of regional offices, the tested method of investigation of causes, knowledge of overcoming such problems and last but not least the national activity (i. e. all

over the country) and direct control of its regional inspectorates on the territory of the CR. It does not exist (and did not exist before) another water management institution like that with the national activity in this field and with such orientation.

The greatest problem of the Warning Central was to secure its continuous operation and a sufficient number of people for the service at the centre (and later at the directory of the Inspection in Prague) and as well to provide enough financial means for the operation (to cover the services). The above mentioned problems are partly worked out, the main problem which still remains is the absence of workers for the continuous operation of the Warning Central. This problem will be hardly overcome in the near future. This circumstance (together with the time spread of number and frequency of messages of accidental pollution according to the long-term experience) has led us to find the solution for the limited number of staff together with the corresponding technical equipment. The continuity of the Warning Central operation was replaced with the continuous accessibility for the acceptance of the message about the accidental pollution appearance. It is the sophisticated system where telecommunication elements (phone-line, phone-recorder, telefax and mobile phone) for the operation in non-working hours. In that time a worker doing his duty is not at his workplace but he is able to get there in a short time after receiving the message about the accidental pollution. During working hours there is permanently at least one worker at the Warning Central with the corresponding equipment. This way of Warning Central operation assumes elaboration of an appropriate organizational scheme which must be kept strictly. This way of the Warning Central operation should be considered as temporary. It was necessary to accept such a provisional solution of the operation for the period when all the water management legislation, including the problems of industrial accidents, is being reconstructed.

During the warning central operation a language problem arose. The principle of the problem is that the message of accidental pollution is usually sent from the Warning Central in Prague to the other one downstream the Elbe (in Dresden - Federal Republic of Germany). The problem is mainly in spoken language and it was nearly overcome by the written form of messages - warning centrals send their messages either by telefax or telex. It rarely happens that the accidental pollution in the CR is not detected and the message comes from the other side - from the German Warning Central in Dresden. Language problems can temporarily arise especially when discussing details by the phone.

It is very important to identify the accidental water pollution in time which is not directly the duty of the warning central but it is tightly connected with sending messages in time and

with sufficient information. About one half of accidental pollutions is caused by floating substances - mostly petroleum hydrocarbons (oil). Their source on the Elbe River is mostly connected with shipping and rarely with the leakage from factories. Ship accidents or intentional discharge of troublesome waste water directly into the stream may cause them. After the privatization of the ship transport, number of private companies arose without existence of any institution to associate individual transporters. These circumstances cause that dirty waters from the ship engine room contaminated with oil are discharged into the Elbe because their draining and liquidation in corresponding facilities cost money. It is very difficult to prove a moving ship guilty of such an offence and knowing that the ships take advantage of that. They are trying to conceal this illicit activity or they are pretending that they are saving the damaged ship from sinking. Such a pollution can be detected visually. Both the polluters and the people whose profession is from the stream management (or the management of buildings on the stream) or people who find such a case have duty to inform corresponding office about the accident with the leakage of harmful substances.

In recent years corresponding working groups of IKSE prepare groundwork for the involvement of monitoring stations on the Elbe to the warning system for the water quality control of some continuously measured parameters. But the real situation is not as simple as it looks like at first sight. It is necessary to have results from several years observation for the suggestion of emergency limits for putting out an alarm. These warning limits must be checked by another observation whether they fulfil the requirements for the warning system. The working group Accidental Water Pollution of IKSE pushes objective methods of investigation of accidental pollution with the help of monitoring stations on the Elbe and considers it very important.

Within the activities of IKSE the study for the detection of petroleum hydrocarbons over the whole stream length which proves technical possibilities of this type of monitoring. However the costs of such projects are very high so the probability of their realization is very low.

One of the main problems which troubles the Warning Central in Prague is the absence of legislative adaptation which would define the duty for the polluters, relevant authorities and other institutions included in national warning system to send messages of the accidental pollution appearance directly to the warning central. The request for the cooperation sent from the warning central to important potential polluters and to the relevant authorities have not brought expected results. At the present the warning central must rely on the system of sending

messages from regional inspectorates of the Inspection and on the employees of the Elbe River Basin Authority - the stream manager.

All the experience and necessary adaptations in the IWA Elbe from the three years operation were implemented into the proposal for the amendment of this Warning Plan by the working group Accidental Pollution of IKSE. The amendment of the IWA Elbe was approved by the Commission at the conference in October 1995. This amendment of the Warning Plan has been serving for more than four years without the need to change it substantially. The most frequent changes are those which are realized in connection elements and the data on individual participants in the Warning Plan. These changes are being made continuously. In comparison with the original Warning Plan from 1991, conditions for another improvement of the accidental pollution characterization and its evaluation with the help of new evaluating elements were gradually created. These supplements have been worked into the amendment of the Warning Plan. The testing of proper operation of the Warning Plan at least once in two years was accepted as the new important regulation in the amendment.

The Warning Plan is necessary for warning water users in time and it is a good basis for overcoming the accidental pollutions of the Elbe and its tributaries. The revised Warning Plan cannot be perfect of course, especially in its effectiveness. Therefore the main task of the working group Accidental Pollution of the IKSE, other co-operating groups of the Commission and a similar group of the Rhine Commission as well, is to create and improve conditions for the permanent fulfilment of the IWA Elbe.

III. Conclusion

For the improvement of the operation of the Warning Central in Prague and sending messages of accidental pollution between centrals in time it is recommended to ensure:

1. Legislative establishment of the Warning Central in Prague within the national accidental system as the highest institution for accepting and sending messages of accidental pollution in the Elbe River Basin.
2. Incorporation of duty for the polluters and the state administration to announce accidental pollutions within the Elbe River Basin to the International Warning Central in Prague.