**Work done so far and proposal for the further elaboration of Early Warning Water Quality Monitoring System (EW) for the Tisza basin**

The development of the idea of EW system is included in Action 2 and its roadmaps of EUSDR Priority Area 4 (PA4, Water Quality).

One of the front-end activities of ICPDR is the Danube AEWS (Accident Emergency Warning System) and its implementation through the operation of network of PIACs (Principal International Alarm Centres). This system is a logical framework of the proper reaction on the accidents and pollutions that may have international effects, AEWS itself physically does not exist. The detection of any kind of accidents varies from country to country and dependent on the concrete case, there is no unified and regulated, agreed system in Europe yet.

The implementation of an Early Warning Water Quality Monitoring System would result in a solid, physical base of the AEWS. As an initial step to touch the problem a preparatory study was made to find out the possible directions of beginning. This study was focusing on the following four main questions:

* the applicable types of analytical principles/methods and analytical instruments depending on the features to be measured, the usability, reliability and roboustness of certain types of instruments
* the possible ways of settling the monitoring stations with the analytical instruments, types of sampling systems as a function of river bed types, protection against flood, tampering and vandalism
* the principles of the selection of locations where EW stations have to be settled, an initial number of settling locations for an estimation of investment costs
* an estimation of investment and operation costs of such an EW system to find out if it can be financed or not.

Now where we are is that the study is at its final stage. The legal basis of original idea is the Commission Communication and relevant EUSDR documents. The idea for the technical structureof EW system was presented at the Macro Regional Conference last year with a success and getting a general acceptance. The study will be discussed at the regular meeting of ICPDR APC EG (Accident Prevention and Control Expert Group) on 25-26 March.

Two additional things must be mentioned to have a complete and correct picture of the role and importance of EW system within Europe, within the Danube basin. First is that it fits by default in the AEWS system as its physical implementation, fitted with a state-of-the-art international information system providing real time information about the state of transboundary waters and sub basins allowing the maximum possible time to react on any industrial accidents or natural problems, catastrophes. The second inevitable and irreplaceable advantage of EW system is the continuous, real time operation. The implementation of the goals of EU water policy, of the Water Framework Directive (WFD) is threatened by the lack of information, especially in the Tisza catchment sub-region. The EW system on one hand offers continuous information of some parameters of waters, on the other hand can be fitted with some elements of effect based monitoring thus saving the unnecessary chemical analyses.

The next step could be the involvement of the countries of Tisza basin with their local knowledge, expertise and information on their water system and hazard sources. The outcome of this second phase would be a study which basically reflects on the special requirements and conditions of the five Tisza basin countries (SK, UA, RO, RS,HU) taking into consideration the accident risk sites (ARS) and their relations to the water system, the experience of operational or abandoned EW monitoring stations.