



ROADMAP FOR AN ACTION

Priority Area 5 - To manage environmental risks

Action 6 - “To develop rapid response procedures and plans in case of industrial accidental river pollution” - this should include the strengthening of the existing early warning system Danube AEWS, the availability of intervention-specific equipment such as spill-sorb, floating dams, etc, the harmonisation of contingency planning and the promotion of joint exercises. All this should be based on the information already collected by ICPDR which should be further expanded to establish the effectiveness of existing measures and take action where those prove to be insufficient. The work on this action shall be closely linked to the work under the EU Civil Protection Mechanism (i.e. in terms of mobilisation of rapid intervention equipment and assets, harmonised contingency planning and response procedures, joint exercises and training).

Milestone n°1: AEWS system upgrade and refining

- **Work:** Rebuilding the AEWS system using then open-source software framework Drupal. Using open-source software will eliminate the risk of dependency from specific software companies and provide increased flexibility to adapt the system to future needs. Migrating new system to the new ICPDR virtual server to have a stable platform and minimize maintenance costs.
- **Output n° 1:** Danube AEWS based on an open-source software platform (2012);
- **Output n° 2:** Upgrade of AEWS design improving its applicability (2013).
→ **Responsible:** APC EG
→ **Deadline:** end 2013

Output n° 1: The AEWS 2.0 has been developed and the ICPDR at its 15th Ordinary Meeting agreed with bringing it into full operation by 1 March 2013. The system is built on the open source software Drupal and mostly on available modules, no license costs are required. Backup communication is available in the event that the Internet does not work.

Since its launch, the AEWS 2.0 has been in full operation, no alerts except for testing purposes were raised, several informal messages were exchanged and no malfunctions were recorded.

Output n° 2: The AEWS design has been upgraded. It includes among others (i) updatable reports (one report instead of a number of separate messages) which provide consolidated information on an incident and a good overview of changes in report revisions; (ii) one simplified form minimizing the risk of selecting a wrong form or incident; (iii) simplified navigation and better overview on home page; (iv) possibility of comments (using a simple text form) on reports by other PIACs. A quick reference sheet

and system usage tutorials for AEWS 2.0 were prepared by the Secretariat and received very positive feedback from the APC EG. Therefore, four additional tutorials were prepared by the Secretariat and are available as an on-line help on the AEWS site: <https://www.icpdr.org/aews/help> .

Milestone no1 completed.

Milestone n°2: Regular AEWS maintenance

- *Work:* The AEWS tests will be organized with a view of checking the performance of the Danube AEWS. The major attention will be given to checking the preparedness (response time) of the Communication Units of the national PIACs as the recent tests revealed weakness in this aspect. Two unannounced tests will be organized each year out of which one will be targeting 24/7 preparedness while the second test will be more technical, checking an overall management of an accident including assessment of the threshold levels and thus involving the Expert Units.
Every year during a meeting of the ICPDR AEWS experts a practical hands-on training on AEWS operation takes place, at which the Secretariat presents the AEWS system in detail, highlighting the frequently encountered problems and evaluating the performance of PIACs in the AEWS tests. The AEWS experts have then to disseminate the updated know-how on the system operation at the national level to the PIACs staff. To maintain high level of PIAC staff preparedness, organization of regular trainings on an annual basis will be continued.
- *Output n° 1:* Organization of regular performance tests of the Danube AEWS.
- *Output n° 2:* Regular training of AEWS Operators.
→ *Responsible:* APC EG
→ *Deadline:* end 2015

Output n° 1: The test took place on 21 January 2013 and was intended to prepare PIACs for the official launch of the upgraded system. The test was divided into five incidents in order to involve all PIACs. All PIACs participated actively in the test and were able to carry out their essential tasks during an accident. Some minor problems in use of the system during the test provided useful inputs for further optimization of the user interface. The updated system proved to be ready for use and was officially launched on 1 March 2013. The APC EG appreciated the new system considering it to be better than the previous AEWS and very convenient for the purpose. The main objective of the AEWS test in autumn 2013 was to check the functionality of the system, 24/7 operability of PIACs and basic usage of the system. The test has confirmed that the system itself is working as expected from a technical point of view and revealed several problems with delivery of SMS to some recipients. The reason was the change of the application interface of the external SMS gateway provider. The Secretariat adapted the system to avoid these interface problems in the future. The goal of the AEWS test in March 2014 was to check the functioning of the system and the cooperation of PIACs in handling an accident that propagates downstream a large international river. The test was successful as all PIACs participated actively in the test and all PIACs were able to perform their essential tasks within the updated system: confirming receipt of an incoming message (report) and sending a warning message (report with warning status).

The test of the Danube Accident Emergency Warning System (AEWS) on 15 November 2014 was initiated on a weekend's afternoon. Its main objective was to test the functionality of the system, 24/7 operability of PIACs and basic usage of the system. The test has confirmed that the system is working as expected without technical problems.

The goal of the AEWS test in February 2015 was to check the functioning of the system and the cooperation of PIACs in handling an accident that propagates downstream a large international river. The test was divided into 14 incidents in order to involve all PIACs. Each PIAC had the task of creating a report to re-request information to an upstream PIAC and to react on any such requests. All PIACs participated actively in the test and all of them except PIAC BG, were able to perform their essential tasks within the system: creating an incident report, confirming receipt of incoming messages, updating the report and closing the incident. Based on the lessons learned the APC EG agreed upon a number of small amendments of the Danube AEWS to further refine the system operation.

The Secretariat is ensuring the regular maintenance of the AEWS server. The log of system changes is available at <https://www.danube-aews.org/changelog>. To guarantee the timely incident report transfer keeping the possibility of back-up communication by fax was recommended by the Secretariat and PIACs were asked to provide their Fax numbers to the system.

Output n° 2: At the 5th APC EG meeting in April 2013 the Secretariat reviewed AEWS 2.0, presented the key features and demonstrated the system operation providing thus a basic regular training in the AEWS operation. 6th APC EG meeting served as a regular training of AEWS operation. An on-line help on the AEWS operation is available: <https://www.icpdr.org/aews/help>.

Progress made between July 2014 and June 2015:

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Milestone n°3: International standardization of AEWS

- *Work:* In the Danube River Basin there are numerous independent international activities addressing the emergency response (e.g., UN/ECE IAN, CECIS EC MIC, ICPDR AEWS, NATO Disaster Response, IAEA system for reporting on nuclear accidents in cooperation with EC IRIX - International Radiation Information Exchange and ECURIE - European Community Urgent Radiological Information Exchange). Running all these activities, in parallel, leads to overloading the staff at the national alarm centres (established usually under the Civil Protection / Ministry of

Interior). To strengthen the operational cooperation between the emergency response authorities, the UNECE proposed to adopt common standards by all existing warning systems to ensure their full compatibility. It also should be made sure that there is only one point of contact in a given country. This approach would eliminate any potential confusion during an accident management and, at the later stage, it could avoid using of parallel overlapping systems by making them fully compatible & complementary so that triggering one system would be recognized by the others. The ICPDR has been invited by the UNECE to join this standardization process and mandated at its 8th StWG meeting the Secretariat to participate in the process of standardization in notification on chemical accidents upon request of UNECE with the view of maintaining the Danube AEWS as the key warning system in the DRB.

- *Output n° 1: Danube AEWS based on an international Europe-wide standard.*
 - *Responsible:* APC EG
 - *Deadline:* 2015 and beyond

Output n° 1: The APC EG asked the Secretariat to contact the EC to explore the ongoing strategies and plans concerning development of integrated warning systems at the EU level and possibilities of linking such systems with AEWS. The Secretariat met in July 2012 with the Emergency Response Unit at DG ECHO to discuss the modalities of transferring AEWS information to DG ECHO MIC. It was suggested that such message sent to MIC by the Danube AEWS would be only considered as information about a major pollution accident and not as a formal request for assistance as this competence would stay with the national civil protection units. For MIC such message would serve as a pre-warning on potential future assistance needs in the affected region. The APC EG at its 4th meeting did not support this option of sending the AEWS message to MIC because PIACs in some countries have no authorization at the national level to inform MIC.

The ICPDR wrote a letter to the UNECE expressing its willingness to join the standardization process proposed by the UNECE aiming at adoption of common standards by all existing warning systems to ensure their full compatibility. So far no feedback has been received from the UNECE in reaction to the ICPDR proposal.

