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Conference of the Parties to the Convention on the Transboundary Effects of Industrial Accidents

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Item 15 of the provisional agenda
Plan of action under the Convention

Recommendations from workshops and seminars held in the period between the sixth and seventh meetings of the Conference of the Parties

Note by the Bureau

Summary

In the inter-sessional period since the sixth meeting of the Conference of the Parties to the Convention on the Transboundary Effects of Industrial Accidents (8–10 November 2010), three regional workshops and seminars were carried out in accordance with the workplan for the Convention: a joint seminar on land-use planning around hazardous industrial sites (November 2010); a workshop on cost-effectiveness for major accident prevention (October 2011); and a seminar on the occasion of the twenty-fifth anniversary of the Sandoz accident (November 2011).

According to the mandate from the Conference of the Parties (ECE/CP.TEIA/22, para. 76 (e) (iii)) to report on the outcomes of its activities, the Bureau compiled the present document containing recommendations from the three activities.

Introduction

1. The Convention on the Transboundary Effects of Industrial Accidents (Industrial Accidents Convention) was the framework for the organization of three activities in the form of seminars or workshops carried out in the period since the sixth meeting of the Conference of the Parties. The activities organized were: a joint seminar on land-use planning around hazardous industrial sites (The Hague, 11–12 November 2010); a workshop on cost-effectiveness for major accident prevention (Warsaw, 12 October 2011); and a seminar on the occasion of the twenty-fifth anniversary of the Sandoz accident (Bonn, Germany, 8–9 November 2011).

I. Joint seminar on land-use planning around hazardous industrial sites

2. The joint seminar on land-use planning around hazardous industrial sites was held on 11 and 12 November 2011 in The Hague, back to back with the sixth meeting of the Conference of the Parties (8–10 November 2010). It was organized in the framework of the Convention and the United Nations Economic Commission for Europe (ECE) Committee on Housing and Land Management. By virtue of that cooperation, the seminar offered a unique platform for the exchange of views and experience between authorities and the private sector on issues surrounding land-use planning and industrial safety. The Ministry of Infrastructure and the Environment of the Netherlands hosted the joint seminar.

3. The purpose of the seminar was to facilitate a dialogue at the international level, aimed at building better understanding between stakeholders working on industrial safety and land-use planning, so as to ensure safe neighbourhoods around major hazardous industrial facilities. In particular the seminar sought to:

(a) Signal safety concerns regarding new developments around major hazardous industrial facilities and to discuss the role of land-use planning in hazard prevention;

(b) Identify the priorities and interests for safety authorities, land-use planners, operators of major hazardous industrial facilities and real-estate developers in their work and how that relates to hazard prevention;

(c) Share experience, good practices and challenges on cooperation between different stakeholder groups from ECE countries and to discuss the availability of different instruments and policies;

(d) Identify possibilities and formulate recommendations on how best to improve cooperation.

4. Representatives of the stakeholders involved (safety and land-use planning authorities, industry and real-estate developers) took part in the seminar and presented their points of view and the respective priorities. The discussion was facilitated by an interactive, real-world multimedia simulation that allowed for a free-wheeling exchange of information and showed the different, and at times competing, points of view regarding planning and industrial safety. The participants appreciated the simulation and they saw it as a good basis for building awareness with authorities at the local level in the area of land-use planning and safety, and for inspiring them to establish good cooperation and coordination in the development process.

5. The participants agreed that safety aspects were not well integrated in land-use planning and that cooperation was lacking between the main stakeholders. Limited communication and a lack of easy access to information were contributing to the situation. In addition they pointed at the lack of transparent procedures in legislation.

6. The participants drew conclusions and recommendations for the national and for the international levels, as follows:

(a) *National level recommendations:*

(i) In order to ensure cooperation, countries should consider introducing transparent procedures that would impose cooperation or mandatory communication between parties involved in safety and land-use planning at an early stage of any development. Alternatively, a protocol identifying the responsibilities of the various actors (i.e., who does what) should be introduced;

(ii) Apart from procedures, effective cooperation should be strengthened through the organization of meetings for land-use and safety agencies at the national and local levels aimed at building understanding and trust between them;

(iii) In order to ease access to information, Geographical Information Systems should include risk assessments associated with the hazardous industrial sites, or databases with relevant information should be developed;

(iv) Land-use plans for areas in the vicinity of hazardous industrial sites should be open for review by safety authorities before their approval;

(b) *International level recommendations:*

(i) The seminar's participants recognized the usefulness of the meeting and recommended that periodic meetings at the international level be organized to discuss challenging cases in safety and land-use planning, brainstorm on alternative developments scenarios, and thus identify possible solutions and learn from each other. Such meetings could involve serious gaming on land-use and safety aspects;

(ii) Criteria or standards for safety and land-use planning incorporating long-term trends should be jointly developed by a group of safety and land-use planning experts. These criteria or standards should consider different levels of development by different countries;

(iii) A publication containing best available practices on safety and land-use planning and addressing clearly and simply the societal risks should be prepared;

(iv) An advisory community on the web for discussing challenging cases could be considered.

II. Workshop on cost-effectiveness for major accident prevention

7. The workshop on cost-effectiveness for major accident prevention was held in Warsaw on 12 October 2011 under the auspices of the Conference of the Parties to the Industrial Accidents Convention and the European Union Committee of the Competent Authorities for the Implementation of Directive 96/82/EC (Seveso II Directive).[1]

[1] Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances.

8. The workshop offered a unique platform for the exchange of views and experience between authorities and the private sector on issues surrounding cost-effectiveness for major accident prevention. The Government of Poland's Chief Inspectorate of Environmental Protection and National Headquarters of the State Fire Service hosted the workshop.

9. The purpose of the workshop was to facilitate a dialogue at the international level to discuss different systems for assuring major accident prevention in view of their costs, in particular from the perspective of public authorities, and to identify opportunities and possible solutions for cost optimization. More specific objectives were as follows:

(a) To signal potentially unnecessary costs in ensuring major accident prevention;

(b) To initiate discussion on possible solutions for cost optimization;

(c) To attempt to formulate concrete solutions for influencing future developments for achieving better cost-effectiveness.

10. The workshop was divided into two sessions. Session I focused on assessing the degree of effectiveness and efficiency for ensuring major accident prevention. The presentations showed the main risks to the effective and efficient work of competent authorities and operators of hazardous activities in the area of major accident prevention. In addition, the opportunities and possible solutions for cost optimization, as well as consequences of inadequate major accident prevention, were highlighted.

11. Session II focused on discussing future developments for achieving better cost-effectiveness. The following points were noted:

(a) Hazard rating can be the basis for planning and preparing inspections if a clear methodology is in place for the creation of ratings;

(b) Insurers look in a different way at the losses than authorities (property loss versus environmental loss and injuries), therefore increasing the role of insurance in process safety (e.g., risk assessment by insurer being linked with that of the authorities) requires careful evaluation and may need appropriate development of a legal basis;

(c) The implementation of the same safety standard can differ from country to country, making it difficult to harmonize procedures;

(d) Despite differences in procedures, introducing a joint inspection mechanism should be further explored between countries having the same safety standards. A starting point could be the establishment of a joint team of inspectors by two neighbouring countries with the same safety standards for inspecting enterprises having operations in both countries (consent by the enterprises is suggested);

(e) The management of change needs to be ensured both by industry and the authorities to avoid any loss of knowledge, competence, capacity, etc;

(f) Multidisciplinary inspections can be effective if an enterprise's capacity allows for it, but this might not be the case for small and medium enterprises;

(g) Field assessment (inspection) should be given priority over desk assessment (safety report assessment). At the same time, safety reports should be established in an appropriate way and serve as a document to manage safety by operators. Clear guidance still seems to be necessary on what a "to the point" safety report should look like;

(h) Operators should be given the possibility to use the tools and methods for safety and risk assessments that they understand best.

12. Participants drew the following conclusions from the workshop:

(a) There are opportunities for increasing effectiveness, including cost-effectiveness, for major accident prevention;

(b) These opportunities require careful evaluation by competent authorities in countries, so that implementation of a potential solution will bring the expected results;

(c) If demand is confirmed, working out certain solutions should be undertaken at the international level (e.g., elaboration of guidelines for joint inspections, guide on management of change, guide on methodology for hazard rating, study on incorporating insurance into systems for safety assurance, and simplification of reporting obligations for both competent authorities and operators of hazardous activities);

(d) Effectiveness, including cost-effectiveness, is not only linked to field and desk safety assessments. The potential for increasing effectiveness lies in other elements of safety management, such as land-use planning, and such opportunities should be further explored.

III. Seminar on the occasion of the twenty-fifth anniversary of the Sandoz accident

13. The seminar on the occasion of the twenty-fifth anniversary of the Sandoz accident was held on 8 and 9 November 2011 in Bonn, Germany. The event was organized under the leadership of the Government of Germany, with the support of the secretariats of the Industrial Accidents Convention and the ECE Convention on the Protection and use of Transboundary Watercourses and International Lakes (Water Convention).

14. The objectives of the seminar were the following:

(a) To reflect on the work carried out and progress achieved in the area of prevention of accidental water pollution in the ECE region;

(b) To examine existing deficits in the prevention of water pollution by chemical substances, and formulate the way forward to address those deficiencies;

(c) To reflect on the results to be presented by the Joint Expert Group on Water and Industrial Accidents with regard to the methodology for harmonized contingency planning for accidents with potential impacts on transboundary watercourses.

15. The participants in the seminar agreed on the conclusions and recommendations set out below.

16. *Challenge 1. Risk coming from shipping*:

(a) *Conclusion:* 25 years after the Sandoz accident, the transportation of hazardous goods by ship, but also by other means of transportation (railway, pipelines, road), poses a risk potential for water pollution that is higher than that from fixed major industrial installations, in case of accidents. To this end, a study suggesting possible policy or governance solutions for decreasing the risk potential should be prepared;

(b) *Recommendation:* The Joint Expert Group on Water and Industrial Accidents should be tasked by the Bureaux of the Industrial Accidents and Water Conventions, in cooperation with the Transport of Dangerous Goods Section of the ECE Transport Division, with carrying out a relevant study and preparing a set of recommendations.

17. *Challenge 2. Definition of pollution and new sources of risk*:

(a) *Conclusion:* After the Sandoz accident there were a number of accidents at fixed industrial installations that did not fall under the scope either of the ECE Industrial Accidents Convention or the EU Seveso Directive, such as tailings management facilities. Nevertheless, these installations pose a high pollution risk to watercourses. Also, micropollutants — emerging and unknown substances, especially pharmaceuticals and nano particles — create new risks to the maintenance of the good condition of transboundary waters. Both issues need to be addressed;

(b) *Recommendation:* The Bureau of the Industrial Accidents Convention should initiate a discussion on tailings management facilities, with a focus on how to increase prevention of accidents related to them. Including tailings management facilities explicitly in the scope of the Convention, through a relevant amendment, could be a possible solution. Development of a checklist for tailings management facilities should also be considered. Regarding the new risk sources, such as micropollutants, it was suggested that the Working Group on Integrated Resources Management of the Water Convention take this issue into consideration in its future work, to the extent possible.

18. *Challenge 3. Communication technologies and information to the public*:

(a) *Conclusion:* Recent experience has shown that communication in case of an accident continues to be a challenge. On the one hand, communication problems arise from the incompatibility of the systems used across different agencies (technical aspects in communication). On the other hand, in some cases the existing tools are not properly used or the information is not communicated properly due to mistrust (human aspects in communication). In this context, efforts should be undertaken to increase the compatibility of the systems and to build trust among different stakeholders in the transboundary context, including the public, in order to ensure effective communication;

(b) *Recommendation:* The Conference and the Meeting of the Parties to the Industrial Accidents and Water Conventions, respectively, should encourage the exchange of experience and good practices among Parties, and promote the continuous organization of trainings and development of self-training kits, aimed at improving communication in case of an accident and building trust and understanding between different stakeholders in the transboundary context.

19. *Challenge 4. Risk of complacency in ensuring prevention and maintaining a high level of safety*:

(a) *Conclusion:* Achieving a relatively high level of safety may give the impression that hazards and risks are under control and that no more substantial efforts are needed in this area. Such a perception — complacency — could lead to a deteriorating safety level and consequently to the occurrence of accidents. It was also noted that due to the complacency phenomenon, the level of knowledge is decreasing and that expertise is not transferred from one generation to another. These issues need, therefore, to be addressed. In addition, in recent years more incidents have been detected at processing plants rather than at storage plants of industrial facilities. This may be due to the fact that the primary attention after the Sandoz accident was given to storage plants that have a higher risk potential and for which a catalogue of preventive measures has been elaborated and implemented. The work should continue with the elaboration of a catalogue of preventive measures and its implementation at processing plants;

(b) *Recommendation:* The Conference and the Meeting of the Parties to the Industrial Accidents and Water Conventions, respectively, should encourage awareness-raising campaigns to address complacency and to promote activities aimed at the transfer of

knowledge between generations of safety experts. The Joint Expert Group on Water and Industrial Accidents should be tasked by the Bureaux of the Industrial Accidents and Water Conventions with the elaboration of a catalogue of preventive measures for processing plants, with special attention to handling fire waters at these plants.

20. *Challenge 5. Reliable and up-to-date inventories of risk sources*:

(a) *Conclusion:* The availability of inventories of activities that represent a hazard to waters, and the exchange of inventories between countries, still seem to be a challenge. Countries should therefore be assisted in developing tools for ensuring the exchange of inventories containing reliable and updated information;

(b) *Recommendation:* The Joint Expert Group should be tasked by the Bureaux of the Industrial Accidents and Water Conventions with analysing ways and means, as well as suggesting solutions, to ensure the availability of up-to-date inventories and their continuous exchange.

21. *Challenge 6. Enforcement of procedures and safety standards, including personnel and technical capacity*:

(a) *Conclusion:* The prevention, preparedness and response to industrial accidents, in particular to those affecting waters, can only be effective if adequate policies are in place and if a sufficient number of competent experts and the necessary equipment are available to implement and enforce these polices. Therefore, awareness-raising activities, in particular oriented to policymakers and to the public, should be continuously undertaken to ensure the allocation of the relevant budgetary means and public acceptance, including for joint monitoring stations. The expert community should be promoting its work, especially with regard to policymakers, by showing how numerous small incidents are prevented from developing into major accidents. With regard to the strengthening of the competence of the relevant experts, sharing of experience, knowledge and good practices should be encouraged. This should be done, on the one hand, across different generations of experts and, on the other hand, the knowledge and the expertise should be transferred to countries with economies in transition. For the latter, the organization of joint inspections should be promoted;

(b) *Recommendation:* The Conference and Meeting of the Parties to the Industrial Accidents and Water Conventions, respectively, should encourage and promote awareness-raising activities in order to ensure the allocation of adequate budgetary means for prevention, preparedness and response to accidental water pollution. The governing bodies should also promote activities focused on sharing of experience, practices and knowledge.

22. The participants in the seminar requested that their conclusions and recommendations be submitted to the relevant bodies of the Industrial Accidents and Water Conventions for further decisions and action.