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**Fostering implementation of the 2030 Agenda for Sustainable
Development and the Sendai Framework for Disaster Risk
Reduction 2015–2030****Fostering the implementation of the 2030 Agenda for
Sustainable Development and the Sendai Framework
for Disaster Risk Reduction 2015–2030****Note by the secretariat and the Organization for Economic Cooperation
and Development's Chemical Accidents Programme***Summary*

At its eighth meeting (Geneva, 3–5 December 2014), the Conference of the Parties to the United Nations Economic Commission for Europe (ECE) Convention on the Transboundary Effects of Industrial Accidents adopted a workplan that included an activity for the exchange of experience and good practices among Parties (ECE/CP.TEIA/30, para. 87 and annex II). As foreseen as a possibility in the workplan, the activity is to be carried out in the framework of ninth meeting of the Conference of the Parties.

The present document provides background material for the activity, which is to be held in the form of a seminar jointly organized by ECE and the Organization for Economic Cooperation and Development (OECD). The seminar will examine how the work of ECE and OECD on industrial and chemical accidents prevention, preparedness and response can contribute to achieving the 2030 Agenda on Sustainable Development, primarily the relevant Sustainable Development Goals, as well as the priority actions set out in the Sendai Framework for Disaster Risk Reduction 2015–2030.

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On the basis of the seminar, the Conference of the Parties will be invited to consider how these global commitments can most effectively be addressed through, and integrated into, the programmes of work of the Convention and the OECD Working Group on Chemical Accidents. The Conference of the Parties might also identify opportunities arising from the global commitments for increasing the visibility of and enhancing efforts towards industrial accident prevention, preparedness and response.

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I. Background and mandate

1. In 2015, United Nations Members States adopted two major global frameworks: the 2030 Agenda for Sustainable Development in September;¹ and the Sendai Framework for Disaster Risk Reduction 2015–2030 (Sendai Framework) in March.² These two frameworks set out specific goals and targets towards 2030. The 2030 Agenda for Sustainable Development includes a number of Sustainable Development Goals that emphasize the integration of the social, economic and environmental dimensions in supporting sustainable development in all countries. The Sendai Framework sets out specific targets and priorities for action, with a strong emphasis on disaster risk management, the reduction of disaster risk, the prevention of new risk, reducing existing risk and strengthening resilience. The Sendai Framework covers, for the first time, technological disasters. Going through the specific elements of the two frameworks, it appears that a number of Sustainable Development Goals and targets elaborated in the Sendai Framework are directly relevant to or can be associated with efforts towards the prevention of, preparedness for and response to industrial and chemical accidents.

2. Indeed, over the past decades, successive major accidents, from the deadly toxic gas release in Bhopal, India, in 1984 to more recent examples including the Gulf of Mexico Deep Water Horizon oil spill, the Texas City refinery explosion (United States of America), and the Buncefield fire (United Kingdom of Great Britain and Northern Ireland), have raised major concerns regarding the prevention and management of disasters and the sustainability of the affected communities and areas. Even more significantly, there are hundreds of unnoticed chemical accidents every year that cause severe harm to workers, families, towns and their businesses, natural resources and quality of life. There are places that still suffer from the disastrous impacts of events that happened years before. The *Global Chemicals Outlook*³ of the United Nations Environment Programme (UNEP) highlights an increasing chemical intensification of the economy. Industrialized countries still account for the bulk of the world chemical production and the risk of accidents remain in these countries. Yet the production, use and disposal of chemicals is steadily spreading to developing countries and countries with economies in transition, which are often at particular risk of adverse effects from such accidents because of limited regulations or incomplete enforcement of existing rules, reduced awareness of risks and inadequate preventive measures.

3. In the light of this, the Bureau of the Conference of the Parties to the United Nations Economic Commission for Europe (ECE) Convention on the Transboundary Effects of Industrial Accidents (Industrial Accidents Convention), together with the Bureau of the Organization for Economic Cooperation and Development (OECD) Chemical Accidents Programme, discussed the possibility of organizing a seminar to discuss how the work of ECE and OECD on industrial and chemical accidents prevention, preparedness and response could contribute to achieving the goals set out in the two new frameworks, and to inform the risk reduction community of the role of industrial accidents prevention, preparedness and response in achieving the global commitments. The two Bureaux accordingly decided to organize a joint seminar on fostering the implementation of the two new frameworks for industrial accidents prevention, preparedness and response within the ninth meeting of the Conference of the Parties to the Convention.

¹ General Assembly resolution 70/1.

² Available from <http://www.unisdr.org/we/inform/publications/43291>.

³ *Global Chemicals Outlook — Towards Sound Management of Chemicals* (Geneva, 2013).

4. The seminar will address the following questions:
 - (a) How has and will the adoption of the Sustainable Development Goals and the Sendai Framework impact national policies, initiatives and programmes related to industrial accident prevention, preparedness and response?;
 - (b) What opportunities do the sustainable development and disaster risk reduction commitments offer? How can these opportunities be used to ensure that industrial safety remains high on policymakers' agendas towards 2030?;
 - (c) What kind of support do countries need in their implementation of the global commitments? How can ECE and OECD, based on their programmes in the field of industrial accidents prevention, preparedness and response, most effectively support countries within and outside their membership?;
 - (d) How is it possible to cooperate most effectively with other parts of the industrial or environmental management field in order to get more visibility for industrial accidents prevention, and enhanced implementation efforts?
5. The seminar will also attempt to:
 - (a) Raise awareness of OECD and ECE member States of the recent global commitments;
 - (b) Provide a platform for the exchange of ideas and practice for implementing them;
 - (c) Provide input to the future work of OECD and ECE.
6. The main objective of the present paper is to support countries' discussions on how the work of the ECE Industrial Accidents Convention and the OECD Working Group on Chemical Accidents can contribute to foster the implementation of the new global agenda.

II. Work of the Economic Commission for Europe and the Organization for Economic Cooperation and Development on industrial accident prevention, preparedness and response

A. Chemical Accidents Programme of the Organization for Economic Cooperation and Development

7. Following two major accidents in Bhopal, India, and Schweizerhalle, Switzerland, in the mid-1980s, the OECD Governments declared during an OECD Environment Committee meeting at Ministerial Level in June 1985 that they would "ensure the existence of appropriate measures to control potentially hazardous installations, including measures to prevent accidents".⁴ Their discussions resulted in the creation at OECD of a Chemical Accidents Programme in the 1990s. The Programme is managed by the Working Group on Chemical Accidents. Five legal instruments, adopted by the OECD Council, have been developed in the framework of the Chemical Accidents Programme to support OECD member countries in the prevention of, preparedness for and response to chemical accidents:

⁴ Declaration on "Environment: Resource for the Future" (C(85)111) adopted by the Governments of OECD Member countries and Yugoslavia on 20 June 1985, para. 10.

- (a) Recommendation of the Council concerning the Application of the Polluter-Pays Principle to Accidental Pollution;
- (b) Recommendation of the Council concerning Chemical Accident Prevention, Preparedness and Response, which directly refers to the implementation of the OECD Guiding Principles on Chemical Accidents Prevention, Preparedness and Response;
- (c) Decision-Recommendation of the Council concerning Provision of Information to the Public and Public Participation in Decision-making Processes related to the Prevention of, and Response to, Accidents Involving Hazardous Substances;
- (d) Decision of the Council on the Exchange of Information concerning Accidents Capable of Causing Transfrontier Damage;
- (e) Council Act on the list of non-confidential data, which has two elements related to chemical accidents — safe handling precautions to be observed in the manufacture, storage, transport and use of the chemical, and safety measures in case of an accident.

8. The Chemical Accidents Programme is also a forum for participating stakeholders to share experiences on accidents and to learn from each other's challenges and progress. It aims to develop common principles and policy guidance for chemical accidents prevention, preparedness and response, focusing on key issues such as natural-hazard triggered technological disasters (Natech), involvement and awareness of senior leaders in process safety, ageing of hazardous installations, ownership change in hazardous installations and others. Key guidance developed by the OECD Chemical Accidents Programme includes:

- (a) *Guiding Principles for Chemical Accident Prevention, Preparedness and Response*⁵ (*Guiding Principles*) and its *addendum on Natech Risk Management*:⁶ the Guiding Principles set out general guidance on the safe planning, construction, management, operation and review of safety performance of hazardous installations and, recognizing that such accidents may nonetheless occur, how to mitigate adverse effects through effective land-use planning and emergency preparedness and response;
- (b) *Guidance on Safety Performance Indicators for Industry and Public Authorities*:⁷ these two guidance documents aim to help enterprises, authorities and communities to develop an approach for assessing whether the actions designed to improve safety are meeting their objectives and to help set priorities in this area;
- (c) *Corporate Governance for Process Safety — Guidance for Senior Leaders in High Hazard Industries (Guidance on Corporate Governance for Process Safety)*:⁸ this

⁵ *OECD Guiding Principles for Chemical Accident Prevention, Preparedness and Response: Guidance for Industry (including Management and Labour), Public Authorities, Communities, and other Stakeholders*, 2nd ed., OECD Environment, Health and Safety Publications Series on Chemical Accidents No. 10 (Paris, 2003).

⁶ Addendum Number 2 to the OECD Guiding Principles for Chemical Accident Prevention, Preparedness and Response (2nd ed.) to Address Natural Hazards Triggering Technological Accidents (Natechs), Series on Chemical Accidents No. 27 (ENV/JM/MONO(2015)1) (Paris, 2015).

⁷ *Guidance on Developing Safety Performance Indicators Related to Chemical Accident Prevention, Preparedness and Response: Guidance for Industry*, OECD Environment, Health and Safety Publications Series on Chemical Accidents No. 19 (Paris, 2008); and *Guidance on Developing Safety Performance Indicators Related to Chemical Accident Prevention, Preparedness and Response: Guidance for Public Authorities and Communities/Public*, OECD Environment, Health and Safety Publications Series on Chemical Accidents No. 18 (Paris, 2008).

⁸ OECD Environment, Health and Safety Chemical Accidents Programme (Paris, June 2012).

guidance establishes “best practice” for senior decision makers who have the authority to influence the direction and culture of their organizations.

9. Over the years the Chemical Accidents Programme has held many workshops focusing on a wide range of topics, many of which led to the development or launching of guidance or other publications.⁹ These workshops have been held by OECD as well as jointly or in close cooperation with other partners in the field of chemical accident prevention, preparedness and response such as the International Maritime Organization, the European Union and industry. As the landscape of the chemical industry evolves, the OECD Chemical Accidents Programme facilitates discussions on new and emerging issues in relation to chemical accidents prevention, preparedness and response.

B. Convention on the Transboundary Effects of Industrial Accidents

10. The ECE Industrial Accidents Convention is designed to protect people and the environment against the devastating effects of industrial accidents by preventing accidents from occurring, reducing their frequency and severity, and mitigating their effects if they do occur. The Convention also applies to industrial accidents triggered by natural disasters, such as floods, landslides or earthquakes. The Convention entered into force in 2000 and presently has 41 Parties.¹⁰

11. The Convention focuses in particular on transboundary cooperation for industrial accident prevention, preparedness and response. As such, the Convention promotes active international cooperation between countries, before, during and after an industrial accident, and encourages its Parties to help each other in the event of an accident, to cooperate on research and development and to share information and technology. The work under the Convention supports countries in their efforts to effectively prevent, be prepared for and respond to industrial accidents through the activities set out below.

1. Providing policy and normative support

12. The Convention offers a framework for Parties to set up their policy, legal and institutional frameworks at the local, national and regional levels to address industrial accident prevention, preparedness and response. The work of the Convention fosters the international policy dialogue on these matters. The Convention also provides for inclusive governance arrangements involving national competent authorities, the public and industry. It specifies the need to inform and involve the public in discussions and activities related to industrial safety, in particular with regard to transboundary effects of industrial accidents. Normative work includes, among others, the identification of industrial hazardous activities based on annex I to the Convention, which covers hazardous chemical substances and is aligned with the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS). These norms support the safe management of industrial installations producing, handling or storing hazardous chemicals.

⁹ All the publications of the OECD Chemical Accidents Programme are available at the following website: <http://www.oecd.org/env/ehs/chemical-accidents/>.

¹⁰ Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, European Union, Finland, France, Germany, Greece, Hungary, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, the former Yugoslav Republic of Macedonia and the United Kingdom of Great Britain and Northern Ireland

2. Developing guidance materials

13. Under the Convention, guidance documents related to industrial safety have been developed and published including, among others:

- (a) *Safety Guidelines and Good Industry Practices for Oil Terminals*;¹¹
- (b) *Safety Guidelines and Good Practices for Pipelines*;¹²
- (c) *Safety guidelines and good practices for tailings management facilities*;¹³
- (d) *Checklists for contingency planning for accidents affecting transboundary waters*;¹⁴
- (e) Guidance on land-use planning, the siting of hazardous activities and related safety aspects.¹⁵

3. Carrying out capacity-development activities

14. Activities under the ECE Industrial Accidents Convention's Assistance Programme support countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia in building institutional capacity for dealing with the prevention of, preparedness for and response to industrial accidents.¹⁶ In addition, the Programme assists these countries in acceding to and fully implementing the Convention. A guidance document and checklist on safety reports has been prepared and Governments are supported in its application.¹⁷ The Convention has also developed a number of projects in countries that benefit from the Assistance Programme to support national Governments and industry in enhancing industrial safety. The following projects, among many others, have been carried out:¹⁸

- (a) Enhancing governance and transboundary cooperation between the Republic of Moldova, Romania and Ukraine for the prevention of, preparedness for and response to industrial accidents in the Danube Delta;
- (b) Enhancing the institutional, administrative and legal framework for industrial safety in South-Eastern Europe;

¹¹ ECE/CP.TEIA/28, available from www.unece.org/index.php?id=41066.

¹² ECE/CP.TEIA/27, available from www.unece.org/index.php?id=41068.

¹³ ECE/CP.TEIA/26, available from www.unece.org/index.php?id=36132.

¹⁴ ECE/MP.WAT/2015/9. Prepared jointly with the ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention). Available as a publication from the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, document No. 50/2015 (Dessau-Roßlau, Germany, German Federal Environment Agency, 2015) (<http://www.umweltbundesamt.de/publikationen/checklists-for-contingency-planning-for-accidents>).

¹⁵ ECE/MP.EIA/WG.2/2016/10–ECE/CP.TEIA/2016/8 and ECE/CP.TEIA/2016/9, Prepared jointly with the ECE Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) and its Protocol on Strategic Environmental Assessment.

¹⁶ The Assistance Programme is not limited to Parties to the Convention.

¹⁷ See ECE and German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, *Guidelines for preparation and inspection of a safety report* and *Sectoral checklist for preparation and inspection of a safety report* (both German Federal Environment Agency, 2012), available from www.unece.org/index.php?id=31264 and www.unece.org/index.php?id=31262, respectively. Prepared jointly with the ECE Water Convention.

¹⁸ For a list of activities under the implementation phase of the Assistance Programme, see <http://www.unece.org/env/teia/ap/implementation.html>.

(c) Supporting Ukraine in improving the safety of tailings management facilities holding mining waste and preventing accidental water pollution.

4. Fostering the exchange of information and good practices among member States

15. The Convention promotes the sharing of experience and good practices on industrial safety and technological disaster risk reduction as a means to build the knowledge of Governments in these areas at all levels. The Convention acts as a platform for intergovernmental meetings and provides a setting for policy seminars in the framework of the Conference of the Parties. Workshops and field exercises are also organized under the Convention, with the aim of fostering the exchange of information, good practices and technology, in accordance with the Convention's articles 15 and 16. For example, the following events have been organized:

(a) A field exercise to build countries' capacity for early warning and risk reduction under the ECE Danube Delta project (Giugurlesti, Republic of Moldova, 1–3 September 2015);¹⁹

(b) A joint workshop on land-use planning, the siting of hazardous activities and related safety aspects (Geneva, 13 April 2016);²⁰

(c) A subregional workshop for countries of Central Asia on chemicals management, identification and notification of industrial hazardous activities and accidental water pollution (Astana, 26–28 May 2015).

III. 2030 Agenda for Sustainable Development

16. The 2030 Agenda for Sustainable Development (2030 Agenda) enshrines an ambitious and transformational vision to end poverty, protect the planet and ensure prosperity for all. This new framework includes 17 Sustainable Development Goals and 169 targets, which attempt to integrate the social, economic and environmental dimensions of sustainable development. Member States are to use them to frame their agendas and policies for the next 14 years. In the present context, the work for the prevention, preparedness and response to industrial and chemical accidents is particularly relevant to help countries to effectively implement the 2030 Agenda.

17. This chapter presents important linkages between the Sustainable Development Goals and concrete activities of the ECE Industrial Accidents Convention and the OECD Working Group on Chemical Accidents that support countries in achieving related Goals.

Goal 3

Ensure healthy lives and promote well-being for all at all ages

Target 3.9

By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals ...

18. The Industrial Accidents Convention aims to reduce the risk of technological disasters arising from installations where hazardous substances are present. In this regard,

¹⁹ For information on the Danube Delta project, see www.unece.org/env/teia/ap/ddp.html.

²⁰ Jointly organized by the ECE Industrial Accidents Convention and the Protocol on Strategic Environmental Assessment to the ECE Espoo Convention, in cooperation with the ECE Committee on Housing and Land Management.

the Convention promotes prevention, preparedness and response to industrial accidents. The industrial hazardous activities identified by the Convention are based on its annex I, covering hazardous chemical substances, which is aligned with the GHS. The role of the Convention in helping to achieve Sustainable Development Goal target 3.9 is therefore relevant, especially in view of the effects on health and the environment of accidental releases of significant quantities of hazardous substances.

19. All the instruments developed by the OECD Chemical Accidents Programme seek to support member countries in the prevention of chemical accidents and in reducing their impact when they occur. In particular, the Recommendation of the Council concerning Chemical Accident Prevention, Preparedness and Response directly refers to the implementation of the second edition of the Guiding Principles, which set out general guidance for the safe planning and operation of facilities where there are hazardous substances in order to prevent accidents and, recognizing that accidents involving hazardous substances may nonetheless occur, the mitigation of adverse effects through effective emergency preparedness, land-use planning and accident response.

Target 3.d

Strengthen the capacity of all countries ... for early warning, risk reduction ...

20. The Convention is a legal instrument to support countries in their efforts towards technological disaster risk reduction (see chapter IV). The Convention provides the basis for the ECE Industrial Accidents Notification System, by means of which countries can receive alerts about accidents and request assistance. Under the Convention, countries have built capacity for early warning and risk reduction, for example through table-top and field exercises under the ECE Danube Delta project.

21. The OECD Guiding Principles provide, among others, guidance to industry, public authorities and other stakeholders on emergency preparedness and planning as well as on emergency response. They highlight specific modalities for early warning. The emergency planning process should include an elaboration of the methods to be used to inform the public of what to do in the event of an emergency, and how the public will be informed when an accident occurs. Emergency warning alert systems should be in place to warn the potentially affected public when an accident occurs, or if there is an imminent threat of an accident. Specifically, the Guiding Principles state that further use should be made of new technologies to improve early warning of areas where there is a significant risk of environmental damage in the event of a chemical accident.

Goal 6

Ensure availability and sustainable management of water and sanitation for all

Target 6.3

By 2030, improve water quality by ... minimizing release of hazardous chemicals and materials ...

22. The Industrial Accidents Convention provides a framework to prevent the accidental release of hazardous substances. It promotes the safe management of installations producing, handling or storing hazardous substances and, as such, the protection of human health and the environment. Activities support countries in the safe management of hazardous chemicals, through their identification and classification in line with the Convention.

23. The joint work of the Industrial Accidents Convention and the ECE Convention on the Protection and Use of Transboundary Watercourses (Water Convention), through their Joint Expert Group on Water and Industrial Accidents, contributes to the prevention of accidental

water pollution and to enhancing the response to industrial accidents, in particular those with transboundary effects.

24. The OECD Guiding Principles elaborate how emergency planning should aim to avoid pollution of environmental receptors, such as surface and underground water sources and soil, in the event of an accident at hazardous installations. The Guiding Principles consider, for example, groundwater and surface water as among the main pathways for environmental contamination after an accident.

Goal 9

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Target 9.1

Develop quality, reliable, sustainable and resilient infrastructure ...

25. The Industrial Accidents Convention requires that safety aspects are taken into account in land-use planning and the siting of hazardous activities, including those located near borders, and provides guidelines on these matters. The Convention also promotes the development of sustainable industrial infrastructure and the safe management of hazardous industrial facilities.

26. The OECD Guiding Principles strongly highlight the need, when hazardous installations are being developed, to ensure that an appropriate infrastructure exists for emergency preparedness and response, siting and land-use planning and provision of information to the public. They also state that an enterprise based in a developed country with investments in hazardous installations in developing countries or countries with economies in transition should cooperate with local officials to assure that the appropriate infrastructure is in place.

Target 9.4

By 2030, upgrade infrastructure and retrofit industries to make them sustainable ...

27. The Industrial Accidents Convention promotes actions by Governments and operators of hazardous industrial facilities to ensure the safe management of hazardous installations, involving, whenever needed, staff and the population in the surrounding area.

28. Supporting member countries in updating infrastructure is a cornerstone of the work of the OECD Chemical Accidents Programme. The OECD Guiding Principles, as well as specific projects under way in the Programme, give guidance to member countries when hazardous installations need to be brought up to appropriate safety levels. They particularly focus on the importance of bringing an installation up to appropriate safety levels within a reasonable amount of time when an assessment indicates that the installation does not meet internationally accepted safety levels. The Guiding Principles highlight the particular importance of this when an enterprise acquires an existing installation. Specific guidance is also being developed by the Chemical Accidents Programme relating to upgrades in the case of ageing of hazardous installations.

Goal 11**Make cities and human settlements inclusive, safe, resilient and sustainable***Target 11.5*

By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

29. The Industrial Accidents Convention supports Governments in reducing the number of deaths resulting from and people affected by technological disasters. The Convention also addresses natural disasters that could trigger industrial accidents, thus multiplying the effects of such disasters on the population and the environment.

30. All the legal instruments of the OECD Chemical Accidents Programme seek to support member countries in the prevention, preparedness and response to chemical accidents, and in reducing the number of deaths from and the number of people affected by chemical accidents.

Target 11.b

By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards ... resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels

31. The Industrial Accidents Convention requires Parties to take the siting of hazardous facilities into account in their land-use plans or policies, including those of neighbouring countries where there is a risk of transboundary impact. The Convention facilitates cooperation between policymakers in charge of safety and siting of hazardous installations, on the one hand, and land-use planners, on the other. Among others, this is done through a guidance document on land-use planning and the siting of hazardous activities.

32. The Convention stipulates the need for cooperation and coordination not only between countries, but also within countries (horizontally, between different ministries involved, and vertically, between authorities at different levels). Cooperation and coordination are especially important for tackling effectively issues related to technological disaster risk reduction in an integrated way to enhance efficiency and reduce duplications. As such, the Convention is conducive to supporting countries and cities in implementing a holistic management of technological disaster risk.

33. The OECD Guiding Principles have a section on land-use planning. They provide guidance on the development and implementation of land-use planning arrangements (zoning and siting) to contribute to both prevention and mitigation of accidents involving hazardous substances. Land-use planning can be viewed as a preventative measure in that it helps to ensure that hazardous installations and other developments are separated by appropriate distances, thereby preventing adverse effects, or it can be viewed as a means to mitigate adverse effects of releases, fires, explosions and other accidents. The second addendum to the Guiding Principles also directly addresses Natech risk management through specific guidance on how to address such risk.

Goal 12**Ensure sustainable consumption and production patterns***Target 12.4*

By 2020, achieve the environmentally sound management of chemicals ... throughout their life cycle, in accordance with agreed international frameworks ...

34. The Industrial Accidents Convention establishes a framework for safe management of industrial installations, taking into account the protection of human health and the environment. The Convention also provides for the prevention of accidental release of hazardous substances and identifies hazardous activities involving hazardous chemical substances in line with its annex I, aligned with the GHS. It builds the capacity of countries in transition in this regard, notably through its Assistance Programme.

35. The OECD Chemical Accidents Programme considers that industrial accidents prevention, preparedness and response are among the key elements associated with the sound management of chemicals. As such the OECD Chemical Accidents Programme is very much involved in the Strategic Approach to International Chemicals Management (SAICM) work, in particular as it relates to the SAICM 2020 goal on the sound management of chemicals. The work of the OECD Chemical Accidents Programme is also represented in the Inter-Organization Programme for the Sound Management of Chemicals (IOMC). The IOMC Toolbox for Decision Making in Chemicals Management now has a sub-section on Chemical Accidents Prevention, Preparedness and Response, which was developed by the OECD Chemical Accidents Programme.

Goal 13**Take urgent action to combat climate change and its impacts***Target 13.1*

Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

36. The Industrial Accidents Convention provides a legal and intergovernmental framework to support Governments and operators in the safe performance of hazardous activities, including by running risk assessments and taking all appropriate measures to reduce risks. Such risks include those arising from climate change and natural disasters. The Convention also addresses the prevention and mitigation of the transboundary impacts of natural disasters triggering technological accidents. In this regard, the Convention supports countries in harmonizing or preparing joint contingency plans and response exercises, thus providing strengthened resilience to and the adaptive capacity for climate-related hazards and natural disasters.

37. For the past few years the OECD Chemical Accidents Programme has been very much focusing on Natech. In 2015, the programme released specific guidance (as part of the Guiding Principles) on Natech Risk Management. The Programme will continue work on Natech over the coming years. Natech is a key priority for member countries.

Goal 16**Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels***Target 16.6*

Develop effective, accountable and transparent institutions at all levels

38. The Industrial Accidents Convention provides for inclusive governance arrangements involving national competent authorities, the public and industry. It also

assists countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia to build institutional capacity in dealing with the prevention, preparedness and response to industrial accidents through its Assistance Programme.

39. All the instruments and guidance developed by the OECD Chemical Accidents Programme aim to provide support for countries in building institutions that are effective, accountable and which involve decision-making processes that are transparent and consistent with the goal of achieving a high level of safety. The legal instrument developed by the Programme on the polluter pays principle recommends that, in matters of accidental pollution risks, the operator of a hazardous installation should bear the cost of reasonable measures to prevent and control accidental pollution from that installation. This legal instrument should be introduced by public authorities in member countries in line with domestic law prior to the occurrence of an accident in order to protect human health and the environment.

Target 16.7

Ensure responsive, inclusive, participatory and representative decision-making at all levels

40. The Industrial Accidents Convention stipulates the need to inform and involve the public in discussions and activities related to prevention of, preparedness for and response to industrial accidents, in particular with regard to transboundary issues.

41. All the instruments and guidance documents developed by the OECD Chemical Accidents Programme highlight the importance of a responsive, inclusive and participatory decision-making process in the prevention, preparedness and response to chemical accidents. In particular, the OECD Guidance on Corporate Governance for Process Safety aims to raise awareness on the importance for senior leaders to be directly engaged in process safety in order to ensure that the right decisions are made with regard to investment in the safety of a facility.

Target 16.10

Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements

42. The Conference of the Parties to the Industrial Accidents Convention will consider an amendment to the Convention's provision on public information, participation and access to justice at its ninth meeting (see ECE/CP.TEIA/2016/7). Implementation guidance may offer further support to Parties in this area.

43. The OECD Chemical Accidents Programme has a dedicated legal instrument concerning Provision to the Public and Public Participation in Decision Making Processes related to Prevention of and Response to Accidents involving Hazardous Substances. The decision-recommendation is designed to facilitate the implementation by member countries of programmes and policies to ensure that the potentially affected public is well informed about existing or planned hazardous installations and have opportunities to provide input, as appropriate, into decision-making by public authorities concerning such installations.

Goal 17**Strengthen the means of implementation and revitalize the global partnership for sustainable development***Target 17.6*

Enhance ... regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms ...

44. Article 16 of the Industrial Accidents Convention requires that Parties facilitate the sharing and exchange of knowledge for the prevention of, preparedness for and response to industrial accidents.

45. The OECD Guiding Principles provide guidance on the transfer of technology and international investments. The Guiding Principles recognize that public authorities should not discriminate, with respect to safety issues, between hazardous installations managed by domestic enterprises and those that involve foreign enterprises, imported technology or foreign investments. While these principles are drafted in terms of technology or investment flows from developed countries to developing countries or countries with economies in transition, they also apply to other transfers of technology and investment (for example, from one developing country to another), and they incorporate text developed within the context of the UNEP Awareness and Preparedness for Emergencies at Local Level (APELL) programme, with respect to the roles and responsibilities of recipient countries and industry. The legal instrument on Exchange of Information concerning Accidents Capable of Causing Transfrontier Damage directly asks that member countries concerned exchange information and consult one another, on a reciprocal basis if so desired, with the objective of preventing accidents capable of causing transfrontier damage and reducing damage should such an accident occur

Target 17.9

Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals ...

46. Activities of the Convention's Assistance Programme support countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia in their efforts towards the accession to and full implementation of the Industrial Accidents Convention. Should the Convention be opened to countries beyond the ECE region (a decision on this is expected at the ninth meeting of the Conference of the Parties), in the long term other countries, including developing countries, might also benefit from assistance activities.

47. The OECD Chemical Accidents Programme has prepared a specific section in the IOMC Toolbox for Decision Making in Chemicals Management to support developing countries in setting up their chemical accidents programmes. The Programme is increasingly focusing on ensuring that its work is relevant to non-member countries through effective collaboration with partner agencies such as UNEP and ECE.

IV. Sendai Framework for Disaster Risk Reduction 2015–2030

48. The Sendai Framework for Disaster Risk Reduction 2015–2030 was adopted in March 2015 at the World Conference on Disaster Risk Reduction. The Framework sets out

seven targets and four priorities for action, being a successor to the previous framework for action adopted in Hyogo in 2004.²¹

49. This new, non-binding agreement states that “disasters, many of which are exacerbated by climate change and are increasing in frequency and intensity, significantly impede progress towards sustainable development”, thus making a link with the Sustainable Development Goals. There is also an evident relationship between the Sendai Framework and Goal 11, especially target 11.b, which directly refers to the Framework.

50. This chapter presents important linkages between the four priorities for action in the Sendai Framework and concrete activities of the ECE Industrial Accidents Convention and the OECD Working Group on Chemical Accidents that support countries in achieving those priorities.

Priority 1 Understanding disaster risk

51. In accordance with priority 1 “disaster risk management should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Such knowledge can be leveraged for ... risk assessment, for prevention and mitigation ... and preparedness and response.” (Sendai Framework, para. 23)

52. The Industrial Accidents Convention stresses the importance of identifying potentially hazardous activities to be able to target actions for prevention, preparedness and response. It sets out preventive measures to be carried out by national authorities and operators, including legislative and institutional measures. The Convention also deals with the siting of hazardous installations as part of land-use planning policies and measures to minimize risks to the population and the environment.

53. The OECD Chemical Accidents Programme supports public authorities and industry in developing a better understanding of risk at hazardous facilities. For example, the OECD Guiding Principles support industry in developing a safety culture and in conducting a comprehensive hazard identification and risk assessment. The OECD Guidance on Corporate Governance for Process Safety highlights the importance for senior leaders to understand safety risk at their facility and to take informed decisions regarding safety in light of that risk. Risk assessment consists of a number of sequential steps, that is: hazard identification; event scenario assessment; consequence assessment; likelihood assessment; and risk integration and comparison. Risk assessment also provides information to policymakers to help them develop risk acceptability or tolerability criteria against which different objectives or programmes can be assessed.

54. Specifically, priority 1 of the Sendai Framework highlights the importance at the national and local level to “promote the collection, analysis, management and use of relevant data ... make non-sensitive hazard-exposure ... risk [and] disaster ... information freely available and accessible, as appropriate ... [and] build the knowledge of government officials at all levels, civil society, communities, ... as well as the private sector” (Sendai Framework, para. 24).

55. The Industrial Accidents Convention promotes the collection and analysis of data from hazardous industrial activities with potential transboundary effects. The Convention

²¹ For a history of UNISDR and disaster risk reduction, please see <http://www.unisdr.org/who-we-are> or www.preventionweb.net/english/hyogo/isdr/history/

also promotes the sharing of experience and good practices on disaster risk reduction as a means to build the knowledge of Governments at all levels.

56. The work of the OECD Chemical Accidents Programme in all its components looks to promote information exchange, where appropriate, among stakeholders and to raise awareness of process safety at hazardous installations, in particular awareness of senior leaders in companies. The Programme encourages its participating countries to submit reports from major accidents within the European Union to the Major Accident Reporting System.²² This has allowed for the collection of critical data from major accidents and the development of lessons learned.

Priority 2

Strengthening disaster risk governance to manage disaster risk

57. Priority 2 states that “disaster risk governance at the national, regional and global levels is of great importance for ... prevention, mitigation, preparedness, response, recovery, and rehabilitation ... [It] ... fosters collaboration and partnership” (Sendai Framework, para. 26).

58. To that end, priority 2 highlights the importance, at national and local levels to:

(a) “Mainstream and integrate disaster risk reduction within and across all sectors and review and promote the coherence and further development, as appropriate, of national and local frameworks of laws, regulations and public policies”, which among others, “[put] in place coordination and organizational structures”, both horizontally and vertically, among different institutions (para. 27);

(b) “Adopt and implement national disaster risk reduction strategies and plans” (para. 27);

(c) “Guide action at the regional level through ... regional and subregional ... mechanisms for cooperation for disaster risk reduction, ... in order to ... exchange good practices ... for cooperation and capacity development” (para. 28).

59. The Industrial Accidents Convention provides a framework for Parties to set up their legal and institutional frameworks at the local, national and regional levels to address the prevention of, preparedness for and response to industrial accidents. It focuses on technological disaster risk reduction arising from hazardous activities that can cause a transboundary effect in case of accident. The Convention can thus be regarded as a mechanism for regional and subregional cooperation, as it addresses common and transboundary disaster risk reduction among neighbouring and other potentially affected countries, and supports capacity development.

60. The work of the OECD Chemical Accidents Programme supports countries in the development of programmes for chemical accidents prevention, preparedness and response. It provides a forum for participating countries to exchange information on their challenges and progress. The legal instrument on Exchange of Information concerning Accidents Capable of Causing Transfrontier Damage directly indicates that member countries concerned are required to exchange information and consult one another, on a reciprocal basis if so desired, with the objective of preventing accidents capable of causing transfrontier damage and reducing damage should such an accident occur.

²² See <https://emars.jrc.ec.europa.eu/>.

Priority 3**Investing in disaster risk reduction for resilience**

61. Priority 3 of the Sendai Framework states that “public and private investment in disaster risk prevention and reduction through structural and non-structural measures are essential to enhance the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment” (para. 29).

62. More specifically, to achieve this, it is important at the national and local levels to, among others:

(a) “Promote coherence across systems, sectors and organizations related to sustainable development and to disaster risk reduction in their policies, plans, programmes and processes”;

(b) “Promote and support collaboration among relevant public and private stakeholders to enhance the resilience of business to disasters” (Sendai Framework, para. 31).

63. The Industrial Accidents Convention promotes the prevention of technological disaster risks through institutional, legislative and practical measures adopted by authorities and operators. The Convention obliges its Parties to adopt legislation for disaster risk reduction, requiring operators to ensure and demonstrate the safe performance of their activities. The Convention also promotes coherence across sectors by stipulating cooperation among national authorities in charge of industrial accident prevention.

64. The OECD Guiding Principles address, on a number of occasions, the importance of including process safety in investment decisions and provide guidance on how safety should be integrated in these decisions as well as the role of international institutions in this process. For example, financial institutions, in determining the level of funding to be provided to enterprises for investment in a hazardous installation, should take into account the amount of resources needed to comply with safety requirements as well as with corporate safety policies and guidelines. The Guiding Principles recognize that public authorities should not discriminate, with respect to safety issues, between hazardous installations managed by domestic enterprises and those that involve foreign enterprises, imported technology or foreign investments. The degree of safety of installations that involve an investment or transfer of technology from a developed country should be the highest level of safety reasonably practicable according to the current state of knowledge and local circumstances.

Priority 4**Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction**

65. Priority four highlights that the growth of disaster risk means there is a need to “strengthen disaster preparedness for response, take action in anticipation of events ... and ensure that capacities are in place for effective response and recovery at all levels ... The recovery, rehabilitation and reconstruction phase ... is a critical opportunity to ‘Build Back Better’, including through integrating disaster risk reduction into development measures” (Sendai Framework, para. 32).

66. The Industrial Accidents Convention promotes the organization of transboundary exercises to train relevant authorities and the population on preparedness and response. More specifically, in line with the Sendai Framework, the Convention contains obligations to:

(a) Prepare, review and periodically update disaster preparedness and contingency policies, plans and programmes, ensuring the participation of all sectors and

stakeholders, in particular when preparing on- and off-site contingency plans as required by the Convention;

(b) Promote regular disaster preparedness, response and recovery exercises;

(c) Develop and strengthen, as appropriate, coordinated regional approaches and operational mechanisms to prepare for and ensure rapid and effective disaster response, for example, through the use of the ECE Industrial Accident Notification System to request and render mutual assistance in a cross-border context.

67. The OECD Guiding Principles provide specific guidance for building programmes for chemical accidents preparedness and response. Guidance includes industry, public authorities, the public and other stakeholders and covers topics such as land-use planning and the role of the media.

V. Partnerships

68. The ECE Industrial Accidents Convention and the OECD Working Group on Chemical Accidents work in close partnership with other organizations in achieving cooperation and coordination goals. Strategic partnerships are an integral part of the workplan and long-term strategy of the Convention. Partnerships of ECE and OECD are established, among others, with the following organizations:

(a) UNEP: Sustainable Consumption and Production Branch, including its Flexible Framework Initiative and APELL process and programme, and SAICM;

(b) The Joint Environment Unit of UNEP and the United Nations Office for the Coordination of Humanitarian Affairs (OCHA);

(c) The United Nations Economic and Social Commission for Asia and Pacific and other United Nations regional commissions;

(d) The United Nations Office for International Disaster Risk Reduction (UNISDR);

(e) The International Labour Organization, including its Prevention of Major Industrial Accidents Convention (1993);

(f) The Organization for the Prohibition of Chemical Weapons;

(g) The World Health Organization (WHO), including its work on environmental health in emergencies and technological incidents;

(h) IOMC;

(i) The European Commission, including its work on chemical accidents (Seveso III Directive),²³ preparedness and response (Civil Protection Mechanism), the Joint Research Centre and the Major Accident Reporting System;

(j) The Inter-State Council on Industrial Safety of the Commonwealth of Independent States;

(k) The European Chemical Industry Council (Cefic) and its Energy, HSE (Health, Safety and Environment) and Logistics Programme;

²³ Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC.

- (l) The European Process Safety Centre;
- (m) The European Environmental Bureau.

69. Together with partners, the Industrial Accidents Convention and the OECD Working Group on Chemical Accidents work towards common goals and thus jointly support countries in the ECE region in implementing the 2030 Agenda for Sustainable Development and the Sendai Framework through, for example:

(a) Enhancing inter-agency cooperation by holding regular coordination meetings of the inter-agency coordination group on industrial accidents²⁴ between partners, and through the mutual participation in updates on ongoing activities at the respective meetings;

(b) Supporting joint capacity-building efforts through their co-organization or mutual presentations: for example, the Industrial Accidents Convention has joined, via teleconferences, meetings organized in Armenia and Georgia by the Joint UNEP/OCHA Environment Unit and WHO to link countries' efforts to implement the Convention with other policy tools and projects;

(c) Developing joint project proposals, such as, for example, on Natech involving the OECD, the Joint UNEP/OCHA Environment Unit and the ECE Industrial Accidents Convention;

(d) Developing joint training materials and publications, such as the online training on industrial accidents²⁵ and the joint brochure developed through the inter-agency coordination group;

(e) Policy advocacy for industrial accident prevention, preparedness and response, for example through organizing a joint side event at the Fourth Session of the International Conference on Chemicals Management;²⁶

(f) Advocacy of ECE and OECD instruments, tools and guidelines as well as those of partner organizations at conferences, meetings and capacity-building events;

(g) Jointly supporting United Nations Member States in the implementation of commitments, such as those under the Sendai Framework, through the preparation of a UNISDR guide on technological disaster risk reduction in 2016–2017.

²⁴ The Fourth Inter-Agency Coordination Meeting on Industrial Accidents was held in April 2016.

²⁵ Available from <http://www.unece.org/env/teia/pubs/onlinetraining2013>.

²⁶ The joint side event "From prevention to response and recovery: an integrated approach to chemical accidents management" was held in October 2015 and involved the following partners: the UNEP/OCHA Joint Environment Unit, the OECD Working Group on Chemical Accidents, the ECE Industrial Accidents Convention, UNEP and WHO.