

Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

**Sub-Committee of Experts on the Globally Harmonized
System of Classification and Labelling of Chemicals**

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Implementation of the GHS:

reports on the status of implementation

Draft report on the status of implementation of the GHS worldwide: Implementation through international legal instruments, recommendations, codes and guidelines

Note by the secretariat

1. The Annex to this document contains a draft report about the status of implementation of the GHS through international legal, instruments, recommendations, codes and guidelines related to chemicals management.
2. The information has been summarized by the secretariat based on feedback received from international organisations, UN agencies or programmes or collected from publicly available sources and addresses GHS implementation in the following areas:
 - Transport of dangerous goods
 - Pesticide management
 - Occupational safety and health
 - Environment: Characterisation of wastes
 - Prevention of major industrial accidents
3. In addition, information available on GHS related tools and guidance materials is also provided under the following sections:
 - Chemical's assessment in accordance with the GHS
 - WHO chemicals publications
 - WHO/ILO International Chemical Safety Cards (ICSC)
 - OECD tools and work on hazard assessment of chemicals
 - Capacity building, tools and guidance for implementation
 - Guidance on implementation of GHS criteria
 - Capacity-building, training materials and resources
4. The Sub-Committee is invited to review and take note of the information provided in this document. The information contained in the annex to this document will be published on the GHS status of implementation webpage¹ after the session.

¹ http://www.unece.org/trans/danger/publi/ghs/implementation_e.html

Annex

Implementation through international legal instruments, recommendations, codes and guidelines

Transport of Dangerous Goods

For the transport of dangerous goods, the GHS is implemented through the "[UN Recommendations on the Transport of Dangerous Goods. Model Regulations](#)" and the following transport legal international instruments addressing the different modes of transport. All of them are revised every two years and take account of the provisions of the Model Regulations (which are also updated every two years).

For maritime transport (IMO): the International Maritime Dangerous Goods Code (IMDG Code)

The IMDG Code is of mandatory application for 166 States Parties to the International Convention for the Safety of Life at Sea (SOLAS).

For air transport (ICAO): ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI)

The ICAO TIs are of mandatory application for the 193 States Parties to the Convention on International Civil Aviation.

For land (road, rail and inland waterways transport):

By road: Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)

The annexed regulations to the agreement are of mandatory application for international transport between the 52 [Contracting Parties](#) to the Agreement. They are also of mandatory application for domestic traffic in EU and EEA countries through European Directive 2008/68/EC (see note) and in the Russian Federation (Ordinance No.272 of 15 April 2011).

By rail: Regulations concerning the International Transport of Dangerous Goods by Rail (RID) and the Agreement on International Goods Transport by Rail (SMGS) Annex 2

RID is of mandatory application for international transport between the 45 Contracting States to the Convention concerning International Carriage by Rail (COTIF) as well as for domestic traffic in EU and EEA countries through European Directive 2008/68/EC (see note).

Annex II of SMGS is the equivalent of RID but applies to international transport between all countries that were previously republics of the former USSR, Albania, Bulgaria, Poland, Hungary, Slovakia, Iran, Democratic People Republic of Korea, Viet Nam and Mongolia. Some of these countries are parties to both COTIF and SMGS and therefore may apply either RID or SMGS annex II in international transport depending on the countries involved in the international transport operation.

By inland waterways: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN)

The Agreement has 18 [Contracting Parties](#). The Annexed Regulations are mandatory for all contracting parties as well as for domestic traffic in EU and EEA countries through European Directive 2008/68/EC, only for countries which are not linked by inland waterway to other EU countries (see note).

Note: RID/ADR/ADN are revised every two years and take account of the provisions of the UN Model Regulations, which are also revised every two years. Directive 2008/68/EC applies to the transport of dangerous goods by road, by rail or by inland waterways within or between EU Member States. It makes direct reference to the relevant legal instruments implementing the provisions of the UN Model Regulations on the transport of Dangerous Goods by road, rail and inland waterways (i.e.: ADR, ADN and RID) and in addition to make ADR and RID applicable to road/rail transport of dangerous goods in the EU, requires those States with inland waterways linked, by inland waterways, to waterways of other member States to apply the regulations annexed to ADN whether or not they are Parties to the ADN. The Directive entered into force on 20 October 2008. Following its adoption, directives 94/55/EC, 96/49/EC, 96/35/EC, 2000/18/EC and Commission Decisions 2005/263/EC and 2005/180/EC were repealed.

Pesticide management

The **Food and Agriculture Organization (FAO)** promotes the implementation of the GHS in the field of pesticides. Several of its guidelines have been revised and include recommendations and guidance for classification and labelling of pesticides in accordance with GHS criteria: These include:

- FAO Guidelines for the Registration of Pesticides (2010)
- FAO Guidelines on Good Labelling Practice for Pesticides (2015)
- FAO Guidelines on Highly Hazardous Pesticides (2016)

All FAO available guidelines for the implementation of the International Code of Conduct on Pesticide management are available at the [FAO website](#).

The **World Health Organization (WHO)** has used revised classification criteria which take account of the GHS categories for acute oral and dermal toxicity for the WHO Recommended Classification of pesticides by hazard since its 2009 edition. The GHS acute oral toxicity category for each pesticide is presented in the publication and the latest edition (2019) also presents classifications for acute inhalation toxicity for selected gaseous or volatile fumigants.

The **International Labour Organization (ILO)** has developed normative instruments on chemical safety in agriculture including the Safety and Health in Agriculture Convention, 2001 (No. 184) and Safety and Health in Agriculture Recommendation, 2001 (No. 192) which designates a competent authority to establish specific criteria for the importation, classification, packaging and labelling of chemicals used in agriculture and for their banning or restriction. As a complementary tool, the ILO Code of Practice on Safety and Health in Agriculture specifically references the GHS and provides guidance on its application as well as the use of Safety Data Sheets.

Occupational safety and health

The [International Labour Organization \(ILO\)](#) has developed more than 50 instruments, including conventions, recommendations, codes of practice, as well as technical guidance and tools addressing protection of workers from the exposure to hazardous substances. [ILO Chemicals Convention, 1990 \(No.170\)](#) and [ILO Chemicals Recommendation, 1990 \(No.177\)](#) are the main ILO instruments dealing with chemicals. They provide the basis for the sound management of all types of chemicals at the workplace and outline provisions on the

classification and labelling of chemicals, including the responsibilities of stakeholders in this process. The [ILO Code of Practice on Safety and the Use of Chemicals at Work](#) provides detailed guidance on labelling and classification at the workplace level as well as on responsibilities and duties for promoting occupational safety and health. It is interesting to note that many parties to C170 are considered to have implemented the Convention by adhering to the GHS. The implementation of the GHS is therefore a synergistic method of applying certain elements of C170, as well as other conventions that include provisions on labelling and classification (for example the Safety and Health in Agriculture Convention, No. 184).

In addition to these main chemical instruments, a number of additional ILO instruments provide guidance on labelling and classification, including but not limited to Safety and Health in Mines Convention, 1995 (No. 176) and accompanying recommendation and code of practice, Safety and Health in Agriculture Convention, 2001 (No. 184) and accompanying recommendation and code of practice. As many ILO instruments are well aligned with the GHS, they may provide a complementary legal framework to assist countries in practically implementing a number of GHS provisions. Further, the strength of ILO Conventions lies in their legally binding status, thereby providing hard law approach, to many of the provisions of the GHS.

The report "[ILO Instruments on Chemical Safety - Analysis and synergies with other international frameworks on the sound management of chemicals](#)" published in 1 January 2020 provides an overview of all major ILO instruments addressing chemical hazards for human health and safety, as well as the environment.

Environment: Characterisation of wastes

Basel Convention on the control of transboundary movements of hazardous wastes and their disposal

The [Basel Convention](#) addresses hazard identification of wastes in its Annex III, which contains a list of hazardous characteristics (H1 to H13) that are used to determine whether they are subject to control under the Convention. These include wastes that are explosive, oxidizers, flammable, toxic, infectious, corrosive or ecotoxic; as well as those that emit flammable or toxic gases in contact with water and/or air; those liable to spontaneous combustion; organic peroxides; and wastes capable, by any means and after disposal, of yielding another material (e.g., leachate) possessing any of these characteristics..

By decision [BC-13/2](#), the Conference of Parties established an expert working group (EWG) on the review of annexes I, III and IV of the Convention. Annex I lists the categories of wastes to be controlled under the Convention, including both specific waste categories (Y1 to Y18) and wastes having specific constituents (Y19 to Y45). Annex III lists the hazardous characteristics (H1 to H13). The mandate of the group was extended and expanded by the Conference of the Parties in its decisions [BC-14/13](#) and [BC-14/16](#) with, among others, an additional mandate to consider whether any additional constituents or characteristics in relation to plastic waste should be added to annex I or III, respectively, to the Convention.

The purpose of the review of annexes I and III is to: (i) Improve/update the description of categories of wastes in Annex I and the list of hazardous characteristics in Annex III; (ii) Improve environmental controls by including any additional categories of wastes in Annex I and any additional hazardous characteristics in Annex III that occur in practice; and (iii) Clarify the descriptions in Annexes I and III to address conflicts or overlaps.

The expert working group met several times since its establishment. It focused the review of Annex III first on exchanging information on the various proposals put forward and on four general issues namely, the reference to UN class, the alignment with GHS, the alignment with the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), and the level of specificity of H-characteristics, as well as on the testing methods and the structure of Annex III. The EWG exchanged views on the benefits of retaining the UN class with respect to some hazardous characteristics and of possibly introducing the use of

the GHS when relevant, for instance with respect to UN class 9. It also discussed: the value added of establishing thresholds to determine whether a specific waste category can be characterized as hazardous; testing methods; and the possibility of adding new hazardous characteristics, for instance “persistent organic pollutant”.

The expert working group convened initial online sessions of its fourth meeting from 5 to 9 October 2020 and focused its deliberation on the [review of Annex IV and the e-waste entries in Annexes VIII and IX to the Convention](#), bearing in mind that any proposal to amend those annexes are to be made available to Parties by 19 January 2021 for consideration by the fifteenth meeting of the Conference of the Parties. The expert working group also considered how to progress its work on the review of Annexes I and III, taking into account among other things a thought starter prepared by Canada on the review of Annex III and comments received thereon.

It is expected that proposals on the review of Annexes I and III will be considered by the thirteenth meeting of the Open-ended Working Group in 2022 and subsequently by the sixteenth meeting of the Conference of the Parties in 2023. Further information can be obtained from the [Basel Convention](#) secretariat.

Prevention of major industrial accidents

The [UNECE Convention on the Transboundary Effects of Industrial Accidents](#) aims at the prevention of, preparedness for and response to major industrial accidents involving hazardous activities, including to those that may have transboundary effects. Hazardous activities under the Convention comprise the production, use, storage, handling or disposal of hazardous substances. Some examples of hazardous activities are fertilizer or chemical plants, petroleum storage facilities or mine tailings facilities. Parties to the Convention or countries that have committed to implement its provisions are required to identify their hazardous activities, notify potentially affected countries about them before an accident happens and put in place appropriate prevention, preparedness and response measures.

[Annex I to the Convention](#) which includes a list with the hazardous substances covered under the Convention, is divided into two parts: part I contains categories of substances and mixtures, while part II lists named substances. If any of the substances or mixtures in annex I are present at an installation in quantities equal to or greater than those specified, this indicates that a hazardous facility is covered under scope of the Convention and that its provisions must be applied, if the hazardous facility has the potential to cause transboundary effects. The hazard categorisation for the classification of substances and mixtures in part I is in accordance with the GHS.

All information related to the Convention and its implementation (including guidance materials) is available at the [Convention website](#).

Chemical's assessment in accordance with the GHS

Since the adoption of the GHS, several countries, international, intergovernmental and non-governmental organisations have reviewed hazard characterization of chemicals in accordance with the GHS criteria, for their own purposes. This information is, in many cases, publicly available. A non-exhaustive list of available resources is shown below. It should be borne in mind that while some of the GHS classifications available are linked to legal instruments of mandatory application, others are provided only as a tool to help with GHS implementation in a given country, region or sector but are not mandatory. Users should be aware of the applicability and legal status of these classifications.

WHO chemicals publications

Information on GHS classification is now routinely included within published chemical evaluations from WHO, including [Concise International Chemical Assessment Documents](#) (CICADs) and [Environmental Health Criteria](#) (EHCs). The WHO Guidelines

on protecting workers from potential risks of manufactured nanomaterials include a recommendation to assign GHS hazard classes to manufactured nanomaterials and to include that information in safety data sheets to inform workers and employers about the hazards of the products they use.

WHO/ILO International Chemical Safety Cards (ICSC)

WHO started to include GHS classifications in new and updated ICSCs in April 2006. A [database](#) compiling ICSCs was developed by WHO and ILO is available online. It provides direct access to more than 1700 cards in eleven languages. Where relevant, the classification criteria for the GHS have been incorporated in the decision process for determining the information which appears on each ICSC. The ICSCs have been identified as a mechanism for making GHS classifications of chemicals more widely available.

OECD tools and work on hazard assessment of chemicals

OECD assists countries in developing and harmonising methods for assessing risk to human health and the environment, including methodologies for hazard and exposure assessment. On 25 May 2018, the OECD Council adopted a "[Decision-Recommendation on the Co-operative Investigation and Risk Reduction of Chemicals](#)", by which it was decided among other things that "Adherents shall implement the GHS in order to further hazard communication in the supply chain." and recommended that "Adherents communicate and share classifications derived pursuant to the GHS with other Adherents."

OECD has developed or contributed to a number of tools to assist countries with [hazard and exposure assessment](#) and GHS implementation. This is the case for instance of the eChemPortal, an online portal containing data sources and information on chemicals, developed and made available by OECD in cooperation with the European Chemicals Agency (ECHA). The [eChemPortal](#) provides exposure and use information on chemicals and direct links to collections of chemical hazard and risk information prepared for government chemical review programmes at national, regional and international levels. Classification results according to national/regional hazard classification schemes or to the GHS are also provided when available. A GHS classification search function is also available in eChemPortal which can be used to search two of the databases which participate in eChemPortal. It is intended in the future to extend the range of databases which can be searched using this GHS classification search.

Capacity building, tools and guidance for implementation

Guidance on implementation of GHS criteria

The GHS Sub-Committee has developed guidance on the application of GHS criteria. The guidance provides examples on the application of the criteria for several hazard classes and is regularly updated.

Additionally, [sector-specific guidance](#) has been developed by industry. This includes so far: "Guidance on the application of GHS criteria to petroleum substances" and "Guidance on the application of GHS criteria to ores and concentrated for marine transport".

Capacity-building, training materials and resources

UNITAR and ILO are the GHS Sub-Committee's focal points for GHS capacity building activities.

In 2001, both organizations initiated a Global GHS Capacity Building Programme (UNITAR/ILO Global GHS Capacity Building Programme), in response to growing requests from countries for capacity building to support GHS implementation. The UNITAR/ILO programme provides guidance documents, educational, awareness-raising, resource and training materials regarding the GHS.

UNITAR, ILO and OECD also launched a partnership to support implementation of the GHS (UNITAR/ILO/OECD Global Partnership for Capacity Building to Implement the GHS). The aim is to strengthen capacities at all levels and sectors (particularly in developing countries) and promoting implementation of the system.

Available training materials and resources include:

- [Guidance for the development of a National GHS implementation strategy](#)
- [A companion guide to the Purple book](#)
- [GHS e-learning course](#) run twice a year, in English and Spanish.

With the Fifth session of the International Conference on Chemicals Management (ICCM5) expected in July 2021 to develop a new framework the sound management of chemicals and waste beyond 2020, the Global Partnership to Implement the GHS is undertaking a series of activities to ensure commitment to the GHS and develop momentum for the implementation around the globe. (Please contact ILO, OECD or UNITAR for more details.)

The [Inter-Organization Programme for the Sound Management of Chemicals \(IOMC\)](#) developed an Internet-based Toolbox for Decision Making in Chemicals Management ([IOMC Toolbox](#)). The toolbox enables countries to identify the most appropriate and efficient actions and guidance for : a national management scheme for pesticides ; an occupational health and safety system ; a chemical accidents prevention, preparedness and response system for major hazards ; a pollutant release and transfer registers (PRTR) ; an industrial chemicals management system; [a classification and labelling system based on the GHS](#); and a system to support health authorities which have a role in the public health management of chemicals.
