

# **IOMC: Assisting Countries with the Transition Phase for GHS Implementation**

*Tools and resources of the  
Inter-Organization Programme for the Sound  
Management of Chemicals (IOMC)  
to support implementation of the  
Globally Harmonized System of Classification  
and Labelling of Chemicals (GHS)*

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**IOMC**



**unitar**

United Nations Institute for Training and Research

*This publication was developed in the IOMC context. The contents do not necessarily reflect the views or stated policies of individual IOMC Participating Organizations.*

The Inter-Organization Programme for the Sound Management of Chemicals (IOMC) was established in 1995 following recommendations made by the 1992 UN Conference on Environment and Development to strengthen co-operation and increase international co-ordination in the field of chemical safety. The participating organizations are FAO, ILO, UNEP, UNIDO, UNITAR, WHO and OECD. The World Bank and UNDP are observers. The purpose of the IOMC is to promote co-ordination of the policies and activities pursued by the Participating Organizations, jointly or separately, to achieve the sound management of chemicals in relation to human health and the environment.

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## **1. PURPOSE AND OVERVIEW OF THE DOCUMENT**

The purpose of this guide is to identify IOMC tools and resources aimed at helping countries prepare for and implement the Globally Harmonized System of Classification and Labelling of Chemicals, GHS (including classification and labelling, hazard communication, and safety data sheets (SDS), where appropriate). It does not specifically include the many other instruments designed to help with general chemicals management, although several are mentioned in the context of the implementation of the GHS. These other materials can be accessed in more detail in the IOMC document “National Implementation of SAICM: A Guide to Resource, Guidance, and Training Materials of IOMC Participating Organizations” (see <http://www.who.int/iomc/saicm/en/index.html>). As GHS implementation is an on-going and dynamic process, new materials not mentioned in this version of the guide will become available over time and so it is suggested to use the guide as a starting point to find relevant materials, in particular by accessing the various websites that are listed to search for relevant or updated documents.



## **2. OVERVIEW OF THE GHS**

### **2.1 Why the GHS was developed**

Chemicals are essential inputs for most of our physical needs. However, through the different steps from production to handling, transport, use, and disposal, they may present a hazard to human health and the environment. For more than 30 years, identifying, collecting, and communicating information on the hazards posed by chemicals has been a major issue for local, national, regional, and international authorities. Different jurisdictions developed distinct chemical classification systems which had merits within their local area, but sometimes created confusion at the wider level. The diverse classification and labelling systems used different criteria for hazard assessment which in some cases meant that different health and safety information was communicated for the same goods which may be traded across national borders. Many other jurisdictions have no system for chemical hazard assessment and communication, but may nevertheless receive chemicals with no standardised information or no information at all. Hazard assessment is the foundation for all chemicals management and, without this, chemical management is likely to be insufficient and lead to negative consequences for human health and the environment.

Given the reality of the extensive global trade in chemicals and the need to develop national and regional programmes to ensure their safe use, transport and disposal, it was recognized that an internationally-harmonized approach to classification and labelling would provide the foundation for such programmes. Once countries have consistent and appropriate information on the chemicals they import or produce in their own countries, the infrastructure to control chemical exposures and protect people and the environment can be established in a comprehensive and consistent manner.

The "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)", addresses classification of chemicals by types of hazard and proposes harmonized hazard communication elements, including labels and safety data sheets. It aims at ensuring that existing information on physical hazards and toxicity from chemicals is available in order to enhance the protection of human health and the environment during the handling, transport and use of these chemicals. The GHS also provides a basis for harmonization of rules and regulations on chemicals at the national, regional and worldwide levels – an important factor for trade facilitation.

The GHS has been designed to cover all chemicals including pure substances and mixtures and to provide for the chemical hazard communication requirements of the workplace, transport of dangerous goods, consumers and the environment. While governments, regional institutions and international organizations are the primary audiences for the GHS, it also contains sufficient context and guidance for those in industry who will ultimately be implementing its requirements.

### **How the GHS Can Assist the Strategic Approach to International Chemicals Management (SAICM)**

Following the adoption of SAICM at the first International Conference on Chemicals Management (ICCM-1) in February 2006, countries are now entering a first phase of SAICM implementation. The 3 main outcomes of the SAICM process are:

*Dubai Declaration on International Chemicals Management*  
*Overarching Policy Strategy (OPS)*  
*The Global Plan of Action (GPA)*

SAICM recognizes the development of the GHS among the achievements in international efforts to promote the sound management of chemicals in recent years. It encourages the implementation of GHS in all countries and acknowledges its potential as a key tool to help meet the WSSD's 2020 goal of sound chemicals management. The GHS is particularly relevant to the fulfillment of SAICM objectives in the area of "knowledge and information", as set out in the SAICM Overarching Policy Strategy. Further information can be found at: <http://www.chem.unep.ch/saicm/>.

The SAICM Quick Start Programme Trust Fund (QSPTF) provides a time-limited source of funds to support initial enabling capacity building and implementation activities in developing countries, least developed countries, small island developing States and countries with economies in transition. Participating Organizations of the IOMC may act as executing agencies under the SAICM QSPTF and/or assist countries in developing project proposals. The SAICM Quick Start Programme Trust Fund may be able to be accessed for national GHS implementation projects. For further information on the SAICM QSPTF see: <http://www.chem.unep.ch/saicm/qsptf.htm>.

In its 2002 implementation plan, the World Summit on Sustainable Development (WSSD) encouraged countries to implement the GHS as soon as possible, with a view to reach a full operational state by 2008. Implementation has already started with pilot countries introducing the system in their national legislation in different regions of the world. To encourage all key parties' involvement - and allow flexibility and adaptability to national and regional needs - the adoption of GHS is voluntary.

For those countries that have well established systems or have used the systems of other jurisdictions, as well as those countries without existing classification and labelling systems, GHS implementation may require them to introduce new laws, rules, principles and criteria for the classification and labelling of substances and mixtures according to the GHS.

## **2.2 The GHS Document – the “Purple Book”**

The development of the GHS was coordinated by three focal points - the Organisation for Economic Co-operation and Development (OECD) for the harmonization of classification criteria for health and environmental hazards, the UN Committee of Experts on the Transport of Dangerous Goods (UNCETDG) for physical hazards, and the ILO for the harmonization of chemical hazard communication (labelling and chemical safety data sheets). This work was overseen by an IOMC coordinating and drafting group. Once the focal points had completed

their work, the draft GHS document was forwarded to the United Nations Economic and Social Council (ECOSOC) to take it forward to adoption and implementation globally. This task was given to the “Committee of Experts on the Transport of Dangerous Goods (TDG) and on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)” and to its two sub-committees of experts (on the TDG (transport of dangerous goods) and on the GHS. The Committee (initially named “Committee on Experts on the Transport of Dangerous Goods”) was reconfigured in 1999 when its mandate was extended to cover not only the transport of dangerous goods but also the implementation and updating of the GHS. To this aim the Sub-Committee of Experts on the GHS (SCEGHS) was created in 2001 as part of the reconfiguration process.

The first edition of the GHS, which was intended to serve as the initial basis for the global implementation of the system, was approved by the newly established UN Committee of Experts (covering transport and GHS) at its first session (December 2002) and published in 2003. The first revised edition of the GHS (GHS Rev.1) was published in 2005 and included the amendments to the first edition adopted by the Committee of Experts at its second session (December 2004). At its third session (December 2006), the Committee of Experts adopted a set of amendments to the first revised edition of the GHS, which are included in the second revised edition of the GHS (published in July 2007) which can be found at

[http://www.unece.org/trans/danger/publi/ghs/ghs\\_rev02/02files\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_rev02/02files_e.html).

Other general information on the GHS can be found at

[http://www.unece.org/trans/danger/publi/ghs/ghs\\_welcome\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html).

The second revised edition of GHS contains (with indication of size of the relevant part of the document for downloading purposes):

**Foreword and table of contents (121KB)**

- Part 1** Introduction (615KB)
- Part 2** Physical Hazards (466KB)
- Part 3** Health Hazards (763KB)
- Part 4** Environmental Hazards (265KB)

**Annexes**

- Annex 1** Allocation of label elements (403KB)
- Annex 2** Classification and labelling summary tables (624KB)
- Annex 3** Codification of hazard statements, codification and use of precautionary statements and examples of precautionary pictograms (522KB)
- Annex 4** Guidance on the preparation of Safety Data Sheets (162KB)
- Annex 5** Consumer product labelling based on the likelihood of injury (115KB)
- Annex 6** Comprehensibility testing methodology (155KB)
- Annex 7** Examples of arrangements of the GHS label elements (164KB)
- Annex 8** An example of classification in the Globally Harmonized Systems (130KB)
- Annex 9** Guidance on hazards to the aquatic environment (509KB)
- Annex 10** Guidance on transformation/dissolution of metals and metal compounds (191KB)

The *United Nations Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (UNSCEGHS)*, a subsidiary body of the United Nations Economic and Social Council and serviced by the UNECE secretariat, has the responsibility to:

- act as custodian of the system, managing and giving direction to the harmonization process,
- keep the system up-to-date, as necessary, considering the need to introduce changes or updates to ensure its continued relevance,
- promote understanding and use of the system and encourage feedback,
- make the system available for worldwide use,
- make guidance available on the application of the system, and on the interpretation and use of technical criteria to support consistency of application, and
- prepare work programmes and submit recommendations to the UNCETDG/GHS.

### 2.3 Summary of the GHS

The GHS hazard classification and communication elements are the foundation of programmes to ensure the safe use of chemicals. The first two steps in any programme to ensure the safe use of chemicals are to, first, identify and classify for intrinsic hazards and, second, to communicate that information. The design of the GHS communication elements reflects the different needs of various target audiences, such as workers and consumers. To enhance chemical safety, many existing national programmes also include risk management systems as part of an overall programme on the sound management of chemicals. The general goal of these systems is to minimize hazard and/or exposure, resulting in reduced risk. The systems vary in focus and include activities such as establishing exposure limits, recommending exposure monitoring methods, creating engineering controls and limiting or banning use where risk is considered unacceptable. With or without formal risk management systems, the GHS is designed to promote the safe use of chemicals.

The GHS covers all hazardous chemicals. There are no complete exemptions from the scope of the GHS for a particular type of chemical or chemical product. The term "chemical" is used broadly to include substances, chemical products, mixtures, preparations, or any other terms that may be used by existing systems. The goal of the GHS is to use information on intrinsic hazards to classify chemical substances and mixtures and to communicate information on these hazards.

### 3. OVERVIEW OF IOMC, OBSERVER AND OTHER RELEVANT ORGANIZATIONS

#### Inter-Organization Programme for the Sound Management of Chemicals (IOMC)

The Inter-Organization Programme for the Sound Management of Chemicals (IOMC) was established in 1995 in response to the ‘Rio Earth Summit’ (UNCED, United Nations Conference on the Environment and Development, 1992), to achieve the sound management of chemicals in relation to human health and the environment:

- by strengthening international cooperation in the field of chemicals
- by increasing the effectiveness of the programmes of the participating organizations
- by promoting coordination of policies and activities, pursued jointly or separately.

In June 2004, the IOMC set out its vision to be the pre-eminent mechanism for initiating, facilitating and coordinating international action to achieve the 2002 Johannesburg World Summit on Sustainable Development (WSSD) goal that by 2020 chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment. The World Health Organization (WHO) is the administering organization for the IOMC and provides secretariat services to the Inter-Organization Coordinating Committee (IOCC), the main decision-making body for the Participating Organizations.

Further information can be found at <http://www.who.int/iomc/en/> and <http://www2.oecd.org/iomc/>

The Participating Organizations (POs) of the IOMC are:

- the Food and Agriculture Organization of the United Nations (FAO)
- the International Labour Organization (ILO)
- the United Nations Environment Programme (UNEP)
- the World Health Organization (WHO)
- the United Nations Industrial Development Organization (UNIDO)
- the United Nations Institute for Training and Research (UNITAR)
- the Organisation for Economic Co-operation and Development (OECD)

In addition, two **observer organizations** are also participating in the IOMC:

- United Nations Development Programme (UNDP)
- World Bank

Other **relevant agencies** focusing particularly on GHS and transport include:

United Nations Economic Commission for Europe (UNECE)

Secretariat of:

UN/ECOSOC Sub-Committee of experts on the GHS;

UN/ECOSOC Sub-Committee of experts on the Transport of Dangerous Goods;

Application of the GHS to inland transport in UNECE region

International Maritime Organization (IMO)

International Civil Aviation Organization (ICAO)

## 4. RESOURCE MATERIAL AVAILABLE TO SUPPORT GHS IMPLEMENTATION

This section of the document provides the information and links to various tools and resources available from the IOMC organizations related to various GHS topics.

### 4.1 Hazard Identification and Classification

#### 4.1.1 General

The adopted GHS text can be found on the UNECE website:

[http://www.unece.org/trans/danger/publi/ghs/ghs\\_rev02/02files\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_rev02/02files_e.html).

Other general information on the GHS can be found at:

[http://www.unece.org/trans/danger/publi/ghs/ghs\\_welcome\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html);

<http://www.unece.org/trans/main/dgdb/dgsubc4/activities.html>

Information on GHS and the IOMC programme can be found at:

<http://www.ilo.org/public/english/protection/safework/ghs/index.htm>

Publicly available documents used in developing the GHS can be accessed via:

<http://www.ilo.org/public/english/protection/safework/ghs/ghsdocs/index.htm> . However, some of the information on ILO pages refers to working drafts of GHS.

Specific information on classification and labelling of chemicals can be found at:

<http://www.oecd.org/env/classify>

The International Occupational Safety and Health Information Centre (CIS) is the knowledge management arm of the ILO Programme on Safety and Health at Work and the Environment (SafeWork) and its databases and publications can be accessed via:

<http://www.ilo.org/public/english/protection/safework/cis/index.htm>

In particular, free public access to a global portal to information on chemical properties and effects is now available on line, the e-Chem Portal (see

[http://www.oecd.org/document/9/0,3343,en\\_2649\\_34365\\_35211849\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/9/0,3343,en_2649_34365_35211849_1_1_1_1,00.html)).

#### 4.1.2 Test Methods

The manual of test and criteria for physico-chemical properties can be found at:

[http://www.unece.org/trans/danger/publi/manual/manual\\_e.html](http://www.unece.org/trans/danger/publi/manual/manual_e.html).

OECD Test Guidelines are a set of internationally agreed test methods, the use of which produce results often used as the basis for human health and environmental hazards classification. The OECD Test Guidelines are available free of charge on the OECD public website; see

[http://miranda.sourceoecd.org/vl=5163561/cl=12/nw=1/rpsv/periodical/p15\\_about.htm?jnlissn=1607310x](http://miranda.sourceoecd.org/vl=5163561/cl=12/nw=1/rpsv/periodical/p15_about.htm?jnlissn=1607310x).

### 4.1.3 Classification Criteria

Specific information on classification of chemicals can be found at:

<http://www.oecd.org/env/classify>, where there are links to recent developments such as:

- proposals for classification and labelling of ozone depleting chemicals
- report on the July 2007 Bern Workshop on the ‘Application of the GHS Classification Criteria to HPV Chemicals’
- report on ‘Preparation of GHS Implementation by the OECD Countries: Series on Testing and Assessment Number 70’.

The OECD is developing proposals for classification criteria and labelling in the area of health and environmental hazards, at the request of the UN Sub-Committee of Experts on the GHS. A Task Force on Harmonization of Classification and Labelling has been established to coordinate the technical work carried out by the experts.

Proposals developed by the OECD are submitted to the GHS Sub-Committee for consideration, and only after adoption by the GHS Sub-Committee and endorsement by the Committee of Experts on TDG & GHS they become part of the official text of the GHS. The consolidated list of amendments to the GHS adopted by the Committee of experts after each biennial period of work is circulated as an addendum to the report of the Committee and can be found at: <http://www.unece.org/trans/main/dgdb/dgcomm/ac10rep.html>.

### 4.1.4 Hazard/Risk Assessment

A tool based on structure-activity relationships, the (Q)SAR Toolbox, is now available to fill data gaps and it may be used for classification of some hazards; see

[http://www.oecd.org/document/23/0,3343,en\\_2649\\_34365\\_33957015\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/23/0,3343,en_2649_34365_33957015_1_1_1_1,00.html)

Risks to human health and the environment posed by chemicals are determined by chemical-specific hazard properties and the amount of exposure to chemicals. OECD assists member countries developing in and harmonising methods for assessing such risks. See:

[http://www.oecd.org/departement/0,3355,en\\_2649\\_34373\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/departement/0,3355,en_2649_34373_1_1_1_1,00.html)

Information on the use of generally acceptable, scientifically sound methodologies for the evaluation of risks to human health and the environment from exposure to chemicals can be found at:

<http://www.who.int/ipcs/assessment/en/>

<http://www.who.int/ipcs/methods/en/>

<http://www.oecd.org/env/testguidelines>

There are developments in the WHO Classification of Pesticides by Hazard which provides a simple ranking system for acute toxicity. The next edition will align the classification to that of the GHS for acute toxicity.

## 4.2 Hazard Communication

### 4.2.1 General

Information on chemical hazard communication can be found at:

[http://www.unitar.org/cwm/ghs\\_partnership/programme\\_areas/index.htm](http://www.unitar.org/cwm/ghs_partnership/programme_areas/index.htm).

International Chemical Safety Cards (ICSC) (prepared under the auspices of the International Programme on Chemical Safety (IPCS), a collaborative effort between the ILO and WHO with the support of the European Commission and a global network of participating institutions) provide essential health and safety information, including:

- hazard information
- information on signs and symptoms to help in the recognition of cases of inadvertent exposure
- precautionary information in cases of fire, explosion, or spillage
- emergency response, storage, and environmental data.

They are prepared using as system of standard phrases and classification criteria published in a "Compilers Guide", [http://www.who.int/entity/ipcs/publications/icsc/comp\\_guide.pdf](http://www.who.int/entity/ipcs/publications/icsc/comp_guide.pdf).

The cards themselves are available free-of-charge in 24 languages at:

<http://www.ilo.org/public/english/protection/safework/cis/products/icsc/index.htm>.

WHO is reviewing and identifying possible inconsistencies between the standard phrases and criteria used for compiling the ICSC and the GHS. Work is in progress to finalize changes to these criteria. New and significant database development work has been initiated which will also facilitate translation of the ICSC by providing compilers and translators with a library of standard sentences, rather than sentence phrases.

### 4.2.2 Labels

Information on UN safety symbols (pictograms), a key component of the GHS, can be found at:

<http://www.unece.org/trans/danger/publi/ghs/pictograms.html>

FAO Guidelines on good labelling practice for pesticides - containing implementation guidelines on pesticide registration - was published in 1995 and can be found at:

<http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/label.pdf> (an update is planned).

### 4.2.3 Safety Data Sheets

Forms with safety information are published or made available under many different names. For example:

- safety data sheet (SDS)
- material safety data sheet (MSDS)
- chemical information sheet
- product safety data sheet
- health and safety data.

Guidance for the preparation of Safety Data Sheets according to the GHS can be found in Chapter 1.5 and Annex 4 of the GHS:

[http://www.unece.org/trans/danger/publi/ghs/ghs\\_rev02/02files\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_rev02/02files_e.html)

There are chemical safety data sheets prepared by working groups of experts containing information based on laboratory tests and checked knowledge, and chemical safety data sheets prepared by the manufacturer or retailer. Validated data sheets on pure substances are available in the form of International Chemical Safety Cards (see above). Training material on safety data sheets developed by the International Programme on Chemical Safety (IPCS) can be found at:

<http://www.ilo.org/public/english/protection/safework/cis/products/safetytm/msds.htm>.

## 5. TRAINING AND CAPACITY BUILDING

### 5.1 General

A GHS capacity building library can be found at:

<http://www.unitar.org/cwm/publications/cbl/ghs/index.htm>.

An FAO position paper on the “Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals – FAO's past and present activities”, was published in 2007 and can be found at:

<http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/GHS%20paper06.pdf>

Free public access to a global portal to information on chemical properties and effects is now available on line, the e-Chem Portal at:

[http://www.oecd.org/document/9/0,3343,en\\_2649\\_34365\\_35211849\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/9/0,3343,en_2649_34365_35211849_1_1_1_1,00.html).

### 5.2 Training

Extensive information is available at <http://www.unitar.org/cwm/ghs/index.html> and linked pages. It is anticipated that comprehensive and extensive training materials will be able to be accessed through this site in the near future and subsequently updated and extended.

‘Guidance, Awareness Raising and Training Documents’ are available from many countries and in several languages at:

<http://www.unitar.org/cwm/publications/cbl/ghs/topic6.aspx>; and

<http://www.unitar.org/cwm/publications/ghs.aspx>.

Useful presentation material, as a training resource, can also be found at:

[http://www.unece.org/trans/danger/publi/ghs/presentation\\_e.html](http://www.unece.org/trans/danger/publi/ghs/presentation_e.html)

### 5.3 Capacity Building

A UNITAR/ILO Global GHS Capacity Building Programme provides guidance documents, training materials, expert training, educational, awareness-raising and resource materials regarding the GHS. UNITAR/ILO are the designated focal point for capacity building in the UN ECOSOC Subcommittee of Experts on the GHS (SCEGHS). UNITAR, along with ILO and OECD, also initiated at the WSSD the *Global Partnership for Capacity Building to Implement the GHS* ([http://www.unitar.org/cwm/ghs\\_partnership/index.htm](http://www.unitar.org/cwm/ghs_partnership/index.htm)).

UNITAR also provides extensive assistance to countries in specific areas of chemicals management. They include:

- SAICM implementation and enabling activities
- Persistent Organic Pollutants, including planning and implementation support for the Stockholm Convention –with UNDP, UNEP, UNIDO and GEF
- Establishment of Pollutant Release and Transfer Registers (PRTRs) – with UNEP and UNECE

- Risk management decision-making for priority chemicals – with UNEP
- Planning and implementation support for the Rotterdam Convention – with FAO/UNEP

Further information is available at <http://www.unitar.org/cwm>.

IPCS is undertaking a series of capacity-building activities in support of GHS linked to the promotion of utilization of IPCS risk assessment products at country level, such as the *WHO Classification of Pesticides by Hazard* and the *International Chemical Safety Cards*. For specific programmes that support the development and implementation of GHS see:

[http://www.who.int/ipcs/capacity\\_building/ghs\\_statement/en/index.html](http://www.who.int/ipcs/capacity_building/ghs_statement/en/index.html)

<http://www.who.int/ipcs/publications/icsc/en/index.html>

[http://www.who.int/ipcs/publications/pesticides\\_hazard/en/index.html](http://www.who.int/ipcs/publications/pesticides_hazard/en/index.html)

<http://www.who.int/ipcs/methods/harmonization/en/index.html>

#### 5.4 Awareness Raising

Awareness raising tools currently available can be found at:

<http://www.unitar.org/cwm/ghs/index.html>

<http://www.unitar.org/cwm/publications/cbl/ghs/index.htm>

[http://www.unece.org/trans/danger/publi/ghs/presentation\\_e.html](http://www.unece.org/trans/danger/publi/ghs/presentation_e.html)

#### 5.5 Comprehensibility testing

This website [http://www.unitar.org/cwm/ghs\\_partnership/ct.htm](http://www.unitar.org/cwm/ghs_partnership/ct.htm) contains information and resources on ‘Comprehensibility Testing for the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)’. Comprehensibility testing is a survey based method for obtaining information on the understanding of GHS hazard communication elements among the public and other identified groups.

#### 5.6 National profile/situation and gap analysis

Information on the national situations for preparation of GHS implementation is available at:

[http://www.unece.org/trans/danger/publi/ghs/implementation\\_e.html](http://www.unece.org/trans/danger/publi/ghs/implementation_e.html)

<http://www.unitar.org/cwm/np/index.html>

<http://www.oecd.org/dataoecd/37/29/38735710.pdf>

These sites are updated regularly as more countries implement the GHS.

## **6. SUMMARY OF SOURCES OF KEY BACKGROUND INFORMATION ON LEGISLATION AND IMPLEMENTATION**

### **6.1 UNECE**

Information about the status of implementation of the GHS by country and through different international recommendations, legal instruments, guidelines and codes regarding transport of dangerous goods, pesticide management, prevention and treatment of poisoning and protection of the environment is available at:

[http://www.unece.org/trans/danger/publi/ghs/implementation\\_e.html](http://www.unece.org/trans/danger/publi/ghs/implementation_e.html)

The second revised edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS Rev.2, 2008) can be found at:

[http://www.unece.org/trans/danger/publi/ghs/ghs\\_rev02/02files\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_rev02/02files_e.html)

Information about the work of the GHS Sub-Committee (agendas, working and information documents and reports) can be found at:

<http://www.unece.org/trans/main/dgdb/dgsubc4/c4age.html>

### **6.2 UNITAR**

Many important guidance documents on GHS and its implementation can be found at

<http://www.unitar.org/cwm/publications/cbl/ghs/topic1.aspx>

Information on international instruments can be found at

<http://www.unitar.org/cwm/publications/cbl/ghs/topic2.aspx>

National documents and legislation can be found at

<http://www.unitar.org/cwm/publications/cbl/ghs/topic4.aspx>

Information on the national situations for preparation of GHS implementation is available at:

<http://www.unitar.org/cwm/np/index.html>

<http://www.oecd.org/dataoecd/37/29/38735710.pdf>

These sites are updated regularly as more countries implement the GHS.

### **6.3 OECD**

A huge amount of information on chemicals management is accessible via the Chemicals Safety page of the OECD website at: <http://www.oecd.org/ehs>.

In particular the OECD develops useful tools that will assist both OECD and non-OECD countries in implementing the GHS. For example, OECD Test Guidelines are a set of internationally agreed test methods, the use of which produce results often used as the basis for human health and environmental hazards classification. The OECD Test Guidelines are available free of charge on the OECD public website:

[http://puck.sourceoecd.org/vl=1932524/cl=17/nw=1/rpsv/periodical/p15\\_about.htm?jnlissn=1607310x](http://puck.sourceoecd.org/vl=1932524/cl=17/nw=1/rpsv/periodical/p15_about.htm?jnlissn=1607310x)

Free public access to a global portal to information on chemical properties and effects is now available on line, the e-Chem Portal (see [http://www.oecd.org/document/9/0,3343,en\\_2649\\_34365\\_35211849\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/9/0,3343,en_2649_34365_35211849_1_1_1_1,00.html)).

A tool based on structure-activity relationships, the (Q)SAR Toolbox, is also now available to fill data gaps and it may be used for classification for some hazards (see [http://www.oecd.org/document/23/0,3343,en\\_2649\\_34365\\_33957015\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/23/0,3343,en_2649_34365_33957015_1_1_1_1,00.html)).

Information on directories and databases can be found at:  
[http://www.oecd.org/linklist/0,3435,en\\_2649\\_34365\\_2734144\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/linklist/0,3435,en_2649_34365_2734144_1_1_1_1,00.html)

Specific information on classification and labelling of chemicals can be found at:  
<http://www.oecd.org/env/classify>

## **6.4 WHO**

General guidance on the GHS can be found at:  
[http://www.who.int/ipcs/capacity\\_building/ghs\\_statement/en/index.html](http://www.who.int/ipcs/capacity_building/ghs_statement/en/index.html)

## **6.5 ILO**

All publicly available documents can be accessed via:  
<http://www.ilo.org/public/english/protection/safework/ghs/ghsdocs/index.htm>

**ANNEX 1: CONTACTS FOR ORGANIZATIONS**

<p><b>Food and Agriculture Organization (FAO)</b>  Dr Mark Davis  Senior Officer <i>a/i</i>  Pesticide Management Group  Plant Protection Service (AGPP)  Food and Agriculture Organization  Via delle Terme de Caracalla  I-00100 Rome  Italy  Tel: +39 6 5705 51 92  Fax: +39 6 5705 63 47 / 32 24  E-mail: <a href="mailto:mark.davis@fao.org">mark.davis@fao.org</a></p>	<p><b>International Labour Organization (ILO)</b>  Mr Pavan Baichoo  Technical Officer  Occupational Safety  International Programme for Safety and Health at Work and the Environment (SafeWork)  Labour Protection Department  International Labour Office  4, route des Morillons  CH-1211 Geneva 22  Switzerland  Tel: +41 22 799 67 22  Fax: +41 22 799 68 78  E-mail: <a href="mailto:baichoo@ilo.org">baichoo@ilo.org</a></p>
<p><b>Organisation for Economic Cooperation and Development (OECD)</b>  Dr Rob Visser  Head  Environmental Health and Safety Division  Environment Directorate  Organisation for Economic Cooperation and Development (OECD)  2, rue André-Pascal  F-75775 Paris Cedex 16  France  Tel: +33 1 45 24 93 15  Fax: +33 1 45 24 16 75  E-mail: <a href="mailto:robert.visser@oecd.org">robert.visser@oecd.org</a></p>	<p><b>United Nations Environment Programme (UNEP)</b>  Mr Per Bakken  Head  Chemicals Branch, DTIE  International Environment House  11-13 Chemin des Anémones  CH-1219 Châtelaine, Geneva  Switzerland  Tel: +41 22 917 81 83  Fax: +41 22 797 34 60  E-mail: <a href="mailto:chemicals@unep.ch">chemicals@unep.ch</a></p>

<p><b>United Nations Industrial Development Organization (UNIDO)</b>  Mr Heinz Leuenberger  Director  Energy and Cleaner Production Branch  Programme Development and Technical  Cooperation Division  United Nations Industrial Development  Organization  Wagramer Str. 5  P.O. Box 300  A-1220 Vienna  Austria  Tel: +43 1 260 26 5611  Fax: +43 1 260 26 6855  E-mail: <a href="mailto:H.Leuenberger@unido.org">H.Leuenberger@unido.org</a></p>	<p><b>United Nations Institute for Training and Research (UNITAR)</b>  Mr Craig Boljkovac  Manager  Chemicals and Waste Management  Programme  United Nations Institute for Training and  Research (UNITAR)  Palais des Nations  CH-1211 Geneva 10  Switzerland  Tel: +41 22 917 8471  Fax: +41 22 917 8047  E-mail: <a href="mailto:craig.boljkovac@unitar.org">craig.boljkovac@unitar.org</a></p>
<p><b>World Health Organization (WHO)</b>  Dr Tim Meredith  Senior Adviser  Public Health and Environment  World Health Organization  Avenue Appia, 20  CH-1211 Geneva 27  Switzerland  Tel: +41 22 791 4348  Fax: +41 22 791 4127  E-mail: <a href="mailto:mereditht@who.int">mereditht@who.int</a></p>	<p><b>United Nations Development Programme (UNDP)</b>  Dr Suely Carvalho  Chief Montreal Protocol Unit and  Principal Technical Advisor Chemicals  Energy and Environment Group, BDP  United Nations Development Programme  304 East 45th St. Room No 970  New York, NY 10017  USA  Tel: +1 212 906 5112  Fax: + 1 212 906 6947  E-mail: <a href="mailto:suely.carvalho@undp.org">suely.carvalho@undp.org</a></p>
<p><b>World Bank</b>  Ms Mary-Ellen Foley  World Bank  Montreal Protocol/POPs Operations  Environment Department  1818 H Street, NW  Washington, DC 20433, USA  Tel: +1 202 458 0445  Fax: +1 202 522 3258  Email: <a href="mailto:Mfoley1@worldbank.org">Mfoley1@worldbank.org</a></p>	<p><b>UNECE</b>  Ms Rosa Garcia Couto  Secretary of the Sub-Committee of Experts  on the GHS  United Nations  Economic Commission for Europe  Transport Division  Dangerous Goods and Special Cargoes  Section  Palais des Nations  1211 Geneva 10  Fax. +41 22 917 0039  Email: <a href="mailto:rosa.garcia.couto@unece.org">rosa.garcia.couto@unece.org</a></p>

## ANNEX 2: LIST OF ACRONYMS

AGPP	Plant Protection Service (FAO)
ASP	African Stockpiles Programme
BAT	Best Available Techniques
BEP	Best Environmental Practices
BOT	Board of Trustees
CIEN	Chemical Information Exchange Network
CIS	International Occupational Safety and Health Information Centre
COCI	Committee on Chemistry and Industry
CWM	Chemicals and Waste Management Programme (UNITAR)
DNA	Designated National Authority
DTIE	Division of Technology, Industry and Economics (UNEP)
ECOSOC	United Nations Economic and Social Council
EHS OECD	OECD Environmental Health and Safety Programme
FAO	Food and Agriculture Organization
GEF	Global Environment Facility
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
GLP	Good Laboratory Practice
GMP	Global Mercury Project
GPA	Global Plan of Action
HPV	High Production Volume
IBLF	International Business Leaders Forum
ICCM	International Conference on Chemicals Management
ICSC	International Chemical Safety Card
IFCS	Intergovernmental Forum on Chemical Safety
IGO	Intergovernmental Organization
ILO	International Labour Organization
IMS	Integrated Management System
IOMC	Inter-Organization Programme for the Sound Management of Chemicals
IPCS	International Programme on Chemical Safety
IUCLID	International Uniform Chemical Information Database
IUPAC	International Union of Pure and Applied Chemistry
JMPR	Joint FAO/WHO Meeting on Pesticide Residues
JMPS	Joint FAO/WHO Meeting on Pesticide Specifications
MAD	Mutual Acceptance of Data
MDG	Millennium Development Goals
MFMP	Multilateral Fund for the Implementation of the Montreal Protocol
MLF	Multilateral Fund
NCPC	National Cleaner Production Centre
NCPP	National Cleaner Production Programme
NGO	Non-governmental Organization
NOU	National Ozone Unit
ODS	Ozone-Depleting Substances
OECD	Organisation for Economic Co-operation and Development
OPS	Overarching Policy Strategy
PBBs	Polybrominated Biphenyls

PCBs	Polychlorinated Biphenyls
PCTs	Polychlorinated Terphenyls
PIC	Prior Informed Consent
PMG	Pesticide Management Group
PO	Participating Organization
POP	Persistent Organic Pollutant
PRTR	Pollutant Release and Transfer Register
(Q)SARs	(Quantitative) Structure-Activity Relationships
SAICM	Strategic Approach to International Chemicals Management
SCEGHS	Subcommittee of Experts on the GHS
SHE&Q	Safety, Health, Environment and Quality
SMC	Sound Management of Chemicals
TCP	Technical Cooperation Department
TG	Test Guidelines
UNCED	United Nations Conference on Environment and Development
UNCT	UN Country Team
UNDP	United Nations Development Programme
UNDP BDP	UNDP Bureau of Development Policy (see UNDP Development Policy and Practice)
UNDP CDG	UNDP Capacity Development Group
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute for Training and Research
WHO	World Health Organization
WHOPES	WHO Pesticide Evaluation Scheme
WSSD	World Summit on Sustainable Development