2016 GHS Implementation Progress Reporting Template

Introduction

This template has been designed to provide a practical insight into the progress of GHS implementation in each APEC member economy. It builds on the ideas and information from Annexes 1 and 2 of the Report of the Virtual Working Group on GHS Implementation *"Developing Clarity and Consistency in the Implementation of the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS)"* endorsed at the 7th Chemical Dialogue meeting at Peru in May 2008. This report is intended to complement the UN GHS reporting.

The intent of this template is to identify the progress of GHS implementation in each member economy and each sector, and to identify sector specific and cross-sectoral implementation issues that may be of interest and/or concern to other economies and industry. Once identified, these issues may be addressed through further discussion between member economies, with the assistance of the Chemical Dialogue or referred to the United Nations Sub-Committee of Experts on the Globally Harmonized System of classification and labelling of chemical products (UNSCEGHS).

In order to achieve these objectives, the template is divided into a general section, industrial sector, consumer goods, agricultural chemicals and transport. Detailed and specific answers should be provided for each of the questions. Where a reference is made to documents, information on how to access these documents should follow.

Please answer all sections, even if your economy has a single set of regulations and a single regulatory body working on GHS implementation. This will help to identify any differences in approaches adopted by the different economies.

At the APEC CD 2014, the CD agreed to trial the use of an online based Smart Form to report on the GHS Implementation. Noting that additional work is ongoing on the Smart Form to make it more user friendly, the CD agreed that Members can complete either the Smart Form or this word document template.

If you require any assistance on filling out this template or the Smart Form, please contact the Catherine Oh of the Virtual Working Group on GHS at coh@accord.asn.au.

History

In 2009, nine out of 21 member economies of the APEC Chemical Dialogue (CD) completed the GHS Implementation Progress Reporting Template (Template). This process not only provided invaluable information regarding the progress of GHS implementation in these economies, but the participating member economies also reported that the process of completing the Template enabled articulation of implementation issues for further discussion.

With the finalisation of the 2009 report, APEC CD agreed that the Template should be completed by APEC member economies at regular intervals to provide the opportunity for economies to share the GHS implementation workload and draw on the experiences of others in the implementation of the GHS. Regular reporting will also provide opportunities for industry to work more closely with economies to progress the development of the GHS and identify implementation issues of concern at a practical level.

Six GHS implementation reports have been finalized so far – 2009, 2010/11, then annually from 2012 to 2015. Summary of implementation progress was compiled for APEC Ministers in 2009, then annually from 2011 to 2015 based on these responses. At the APEC CD 2012 a decision was reached to publish the GHS implementation reports on the GHS Reference Exchange and Tool (GREAT) website hosted by the Chinese Taipei to allow sharing of this information

(http://great.osha.gov.tw/ENG/index.aspx). It is expected that the 2016 report will also be made available on the GREAT website.

General

Please provide the Economy for which this Template is completed below.	
Completed on the United States (U.S.) by the American Petroleum Institute (API) in March 2016	
Have you completed a GHS implementation status report in previous years?	
☒ **Yes**	☐ **No**
If yes, please provide the year when the last report was completed.	
2015	
Has there been any changes to the GHS implementation status in your economy since completing the last GHS implementation status report?	
☒ **Yes**	☐ **No**
If yes, go to next question. If no, no further answers are required.	
Does your Economy intend to adopt and implement GHS for any chemical sector in the near future (Starting work within the next 2 years)? The U.S. transportation sector has already adopted and implemented the GHS. OSHA published the final GHS rule for the industrial/workplace sector on March 26, 2012 and implementation has started. The main OSHA compliance date of June 1, 2015 for SDSs/labels has passed and the in-facility compliance date is June 1, 2016.	
☒ **Yes**	☐ **No**
If yes, go to next question. If no, no further answers are required.	
Is there an overall strategic plan for GHS implementation? Each U.S. agency/sector has its own statutory authorities and implementing regulations. Each agency/sector will develop its own GHS implementation plan.	
☐ **Yes**	☒ **No**
If yes, where can it be found? Please list websites, attach documents, etc.	
Do you have a GHS coordinator to facilitate implementation discussions within your economy?	
☒ **Yes**	☐ **No**
If yes, please fill out the following information for the coordinator:	
Organisation / Agency	Environmental Protection Agency (EPA); Occupational Safety and Health Administration (OSHA); Department of Transportation (DOT); Consumer Product Safety Commission (CPSC)
Name	Interagency Coordinating Group on Harmonization Contact: Maureen Ruskin/OSHA
Phone number	1-202-693-1955
E-mail address	Ruskin.Maureen@dol.gov
Website	https://www.osha.gov/dsg/hazcom/index.html
Do you have a hazard classification database?	
☐ **Yes**	☒ **No**
If yes, is it mandatory classification, or for information only? How do you access the database?	
U.S. DOT uses the UN Orange Book classification list as a basis for its Hazardous Materials Table (HMT) table/list.	

Industrial Workplace

Regulator to complete	
Do you intend to implement GHS for this sector?	
☐ **Yes**	☐ **No**
If yes, please provide the following details. If no, no further answers are required for this section.	
Lead Government Agency	
Contact person	
Phone number	
E-mail address	
Website	
When do you plan to implement GHS for this sector?	
How long is the phase in period and what are the transition arrangements?	
Are the main relevant legislations implementing GHS finalized and in operation?	
☐ **Yes**	☐ **No**
If yes, please provide a means of access to the document. E.g. web-link, contact person. If no, when do you expect it to be finalized?	
Do you intend to adopt all hazard classification building blocks GHS as is written in the purple book?	
☐ **Yes**	☐ **No**
If yes, please indicate the cut-off points you will be adopting where the choice is given in the purple book. E.g. sensitisers. If no, please describe the building blocks that will be adopted.	
Do you intend to adopt any non-GHS classification criteria? E.g. classification of flammable/combustible liquids beyond 93 °C.	
☐ **Yes**	☐ **No**
If yes, please provide full details of non-GHS criteria being considered for adoption.	
Will there be a risk assessment element overlayed on top of GHS classification on the label? If yes, how will it work?	
Is there to be a maximum number of the following included on the SDS and the label?	
Pictograms	
Hazard statements	
Precautionary statements	
How is the hierarchy of pictograms, hazard statements and precautionary statements defined?	
Do you have any arrangements in place to deal with imported chemicals / products? i.e. is there a plan to implement alternate compliance provisions or “deemed-to comply” provisions and will you accept additional classification criteria (GHS or otherwise) not adopted by your economy?	
Do you have training and awareness activities planned? If yes, please provide some information.	
Are there any plans to exchange personnel with another economy to improve harmonization of GHS implementation?	

Please list any specific issues of concern you have experienced so far during your GHS implementation efforts.

Industry to complete

Has it been easy to access all necessary information for compliance?

U.S. Issues

OSHA published requirements to implement the GHS on March 26, 2012. OSHA has gradually published HazCom 2012 implementation tools. Recently, OSHA published detailed guidance on hazard classification and weight of evidence determinations. This guidance and the Compliance Directive were not available in time for companies to use in their HazCom 2012 compliance strategies. OSHA has stated that they intend to update HazCom 2012 to align with GHS Revision 6, but has not specified a timeframe. OSHA has not published all their HazCom 2012 letters of interpretation.

OSHA has been holding meetings to obtain stakeholder input prior to UNSCEGHS meetings, which will impact future GHS revisions as well as OSHA Hazard Communication Standard (HCS) revisions. The UNSCEGHS and RCC processes are not transparent. Most UNSCEGHS positions and technical documents are developed/agreed in inter-sessional groups. Unless you are a member of these UNSCEGHS inter-sessional groups, this information is not available to stakeholders until it has been largely agreed upon and posted on the UNSCEGHS website.

Global Issues

It is not always possible to keep up to date and find necessary GHS compliance information from some APEC economies. Some countries/economies have restricted access to regulations, information, and/or websites to domestic companies. This may present potential trade barriers, particularly with respect to the non-discriminatory and national treatment provisions under the WTO. This also is contrary to the objectives of the GHS. As an example of restricted access, South Korea only allows password access to domestic companies.

Even when the regulations/legislation/standards are available, all of the information that is required for compliance is not always specified. For example, the GHS includes several options for mixture cut-off values and some countries include all options without specifying which is appropriate for compliance.

Sometimes implementation dates are published, but the related implementing regulations are not yet finalized, or the regulations are finalized but the transition period and implementation dates are not clear. Only the EU CLP has a clear schedule for implementing updates to the GHS via their ATP process.

Do you see any specific issues that are limiting the progress of GHS implementation?

U.S. Issues

- To achieve the goal of harmonization and reap the associated benefits, OSHA/governments should align with the GHS as negotiated and seek to implement it in a manner that minimizes differences among countries. The OSHA final GHS rule is generally aligned with the GHS, but there are several issues that are not aligned, e.g., mandatory precautionary statements, combustible dusts, Hazards Not Otherwise Classified (HNOCs), and the most current UN GHS aerosol requirements.
- Collaboration is needed among the U.S. Coast Guard, EPA, CPSC, OSHA, and DOT. DOT has essentially implemented the necessary changes to align with the GHS, and OSHA has published the GHS final rule. However, EPA and CPSC are not making progress in implementing the GHS. Although CPSC finalized a revised definition of strong sensitizer, CPSC has stated that GHS implementation is on hold due to other priorities.
- The International Maritime Organization (IMO) activities related to SDSs do not promote global harmonization and a consistent SDS format. Currently, the Coast Guard regulations reference the OSHA HazCom 2012 SDS and the SOLAS MSDS as defined by MSC.286(86). If the US Coast Guard decides to incorporate SDSs format requirements into their regulations, they should consult with OSHA to ensure that the SDS format and content is harmonized with OSHA and the GHS.

- The HazCom 2012 guidance should have been available in time for companies to use in their HazCom 2012 compliance strategies. OSHA has stated that they intend to update HazCom 2012 to align with GHS Revision 6, but has not specified a timeframe. OSHA needs to publish all their HazCom 2012 letters of interpretation as soon as possible.
- To promote globally harmonized classifications, the UNSCEGHS PCI group should address harmonization of interpretations of the GHS classification provisions (e.g., UVCBs) as well as developing classification examples.
- In order to have broad acceptance of a UN global list of classified chemicals, the UNSCEGHS should ensure that the guiding principles are addressed in the pilot program.

Global Issues:

- Companies classifying chemicals for hazard building blocks that have not yet been adopted by the economy should not be penalized. This would allow classification for the maximum number of building blocks and classification of their product in the same way across all economies.
- Economies should accept SDSs and labels based on more than one version of the UN GHS Purple Book for classification. For example, if an economy implements the 3rd edition of GHS, it could also accept the 4th and 5th editions of GHS, provided that the level of protection was the same or stronger with respect to the particular chemical.
- Any list of GHS classifications for chemicals by economies should be non-mandatory and for information. This would enable companies to utilize all the data available to them to classify their products in the same way across all economies as opposed to having to comply with mandatory, and sometimes varied, classifications.
- It might be useful to convene a working group to look at the possibility of harmonizing GHS mixture classification cut-off values/thresholds.
- To promote global harmonization, it might be useful to consider addressing harmonization of interpretations/application of the GHS.

What are the expected costs for industry in the implementation of GHS?

- Significant costs are anticipated for SDS revisions, re-labelling, re-distributing revised SDSs to customers, and employee training. Information Technology (IT) solutions (i.e., software) are available through major vendors offering SDS authoring systems supporting GHS. Although in many cases the software (i.e., algorithm) work is complete, country or regional differences in regulatory provisions may require upgrades.
- API member companies issue tens of thousands of SDSs that needed revision to meet the OSHA GHS final rule. For example, one API member company currently has approximately 4,500 SDSs for the U.S. market, all of which required revision under the OSHA GHS final rule. For this one company, approximately 10,000 U.S. employees would be affected, e.g., require updated training.
- Non-harmonized issues like HNOCs and combustible dusts add to the cost of doing business internationally. Non-harmonized SDS formats, e.g., the IMO format, also add to the cost of doing business internationally.

Costs for industry can be reduced by the following:

- To achieve the goal of harmonization and reap the associated benefits, OSHA/governments should align the HCS with the GHS as negotiated and seek to implement it in a manner that minimizes differences among countries/governments, e.g., SDS formats, combustible dusts, HNOCs, aerosols.
- OSHA/governments should be as consistent as possible with European Union (EU) GHS implementation and the GHS as negotiated at the UN, especially for hazard classes/categories for mixture cut-off values/concentration limits and for the effective dates and transition periods.
- Manufacturers should be allowed to use their own precautionary statements in addition to the precautionary statements in the GHS, which should be non-binding suggestions.

API suggests providing at least the following assistance materials:

- electronic guided learning tools with modules for awareness training, classification of chemicals, and training on pictograms;
- posters with pictograms and explanations (in multiple languages) for workplaces; and
- a reference table with the differing requirements around the globe.

Detailed technical guidance should be provided on cut-off interpretations and classification criteria for

substances and mixtures. Easy to understand guidance should be issued on calculations of acute toxicity estimates, including example calculations.

What are the expected benefits for industry through the implementation of GHS?

Expected benefits for industry through the implementation of the GHS include:

- Internationally harmonized hazard classification and communication will lead to increased worker protection, especially as the new hazard pictograms become recognized.
- Standardization will improve training and understanding of SDSs.
- Consistent information on SDSs will improve downstream hazard assessment activities.

The costs for industry can be reduced by the following:

- GHS must be implemented comprehensively and consistently across industries on a global basis.
- Governments should work closely with each other to ensure alignment to the UN-endorsed version of the GHS and to minimize country-specific deviations, e.g. combustible dusts and SDS formats.
- OSHA/governments need to ensure and set forth a process for U.S. stakeholder input at the earliest possible stage into future GHS technical decisions through negotiations at the UN Sub-Committee of Experts on the GHS (UNSCEGHS).
- OSHA/governments should support sector-specific guidance, including providing web links to relevant documents.
- Manufacturers should be allowed to use their own precautionary statements in addition to the precautionary statements in the GHS, which should be non-binding suggestions.

Important current impediments to harmonization include:

- The differences in GHS mixture classification cutoff values/thresholds between countries; (It might be useful to convene a working group to look at the possibility of providing harmonized GHS mixture classification cutoff values/thresholds.)
- Different interpretations of how to apply the GHS classification criteria to UVCBs;
- The OSHA HazCom 2012 approach to combustible dusts; and
- The IMO SDS format.

Consumer Products

Regulator to complete	
Do you intend to implement GHS for this sector?	
☐ **Yes**	☐ **No**
If yes, please provide the following details. If no, no further answers are required for this sector.	
Lead Government Agency	
Contact person	
Phone number	
E-mail address	
Website	
When do you plan to implement GHS for this sector?	
How long is the phase in period and what are the transition arrangements?	
Are the main relevant legislations finalized?	
☐ **Yes**	☐ **No**
If yes, please provide a means of access to the document. E.g. web-link, contact person. If no, when do you expect it to be finalized?	
Do you intend to adopt all hazard classification building blocks GHS as is written in the purple book?	
☐ **Yes**	☐ **No**
If yes, please indicate the cut-off points you will be adopting where the choice is given in the purple book. E.g. sensitisers. If no, please describe the building blocks that will be adopted.	
Do you intend to adopt any non-GHS classification criteria? E.g. classification of flammable/combustible liquids beyond 93 °C.	
☐ **Yes**	☐ **No**
If yes, please provide full details of non-GHS criteria being considered for adoption.	
Will there be a risk assessment element overlayed on top of GHS classification on the label? If yes, how will it work?	
Is there to be a maximum number of the following included on the SDS and the label?	
Pictograms	
Hazard statements	
Precautionary statements	
How is the hierarchy of pictograms, hazard statements and precautionary statements defined?	
Do you have any arrangements in place to deal with imported chemicals / products? i.e. is there a plan to implement alternate compliance provisions or “deemed-to comply” provisions and will you accept additional classification criteria (GHS or otherwise) not adopted by your economy?	
Do you have training and awareness activities planned? If yes, please provide some information.	
Are there any plans to exchange personnel with another economy to improve harmonization of GHS implementation?	

Please list any specific issues of concern you have experienced so far during your GHS implementation efforts.

Industry to complete

Has it been easy to access all necessary information for compliance?

U.S. Issues

The GHS has not yet been implemented by the CPSC in the U.S. for consumer products. Information on the progress/status is not readily available to stakeholders. CPSC revised their definition of "strong sensitizer," but the accompanying staff guidance document was not easy to access and has not yet been updated to consider comments received.

OSHA published a letter of interpretation stating that OSHA may consider the CPSC or any other agency-required label information as HazCom 2012 supplemental label information and provided clarification on including this type HazCom 2012 supplemental information on labels. CPSC has not made its position on CPSC/FHSA and HazCom 2012 dual labeling readily available.

Global Issues:

It is not always possible to keep up to date and find the necessary GHS compliance information from some APEC economies. Also, it is not always easy to understand which sectors are covered by the implementing regulations/legislation/standards. Some countries/economies have restricted access to regulations, information and/or websites to domestic companies only. This is contrary to the objectives of the GHS.

Even when the regulations/legislation/standards are available, all of the information that is required for compliance is not always specified. For example, the GHS includes several options for mixture cut-off values and some countries include all options without specifying which is appropriate for compliance.

Sometimes implementation dates are published, but the related implementing regulations are not yet finalized, or the regulations are finalized but the transition period and implementation dates are not clear. Only the EU CLP has a clear schedule for implementing updates to the GHS via their ATP process.

Do you see any specific issues that are limiting the progress of GHS implementation?

U.S. Issues

- For consumer products, the use of risk-based labeling for chronic effects could be an implementation issue. CPSC's revised definition of "strong sensitizer" does not use risk in a manner that is consistent with the GHS.
- To achieve the goal of harmonization and reap the associated benefits, governments should align with the GHS as negotiated and seek to implement it in a manner that minimizes differences among countries.
- Collaboration is needed among Coast Guard, EPA, CPSC, OSHA, and DOT. DOT has essentially implemented the necessary changes to align with the GHS, and OSHA has published the final GHS rule. However, EPA and CPSC are not making significant progress in implementing the GHS. Although CPSC finalized a revised definition of strong sensitizer, CPSC has stated that GHS implementation is on hold due to other priorities. The IMO activities related to SDSs do not promote global harmonization and a consistent SDS format. Currently, the Coast Guard regulations reference the OSHA HazCom 2012 SDS and the SOLAS MSDS as defined by MSC.286(86). If the US Coast Guard decides to incorporate SDSs requirements into their regulations, they should consult with OSHA to ensure that the SDS format and content is harmonized with OSHA and the GHS.
- While CPSC revised their definition of "strong sensitizer," the definition, and suggested label elements are not aligned with the GHS/OSHA HazCom 2012. Although the revised "strong sensitizer" definition became effective on March 17, 2014, the "strong sensitizer" staff guidance document has not yet been updated to consider comments received during the rule making.

What are the expected costs for industry in the implementation of GHS?

It is expected that initial implementation costs for industry will be significant. If harmonization is achieved, then cost savings can be realized in the future.

Costs for industry can be reduced by the following:

- To achieve the goal of harmonization and reap the associated benefits, governments should align with the GHS as negotiated and seek to implement it in a manner that minimizes differences among countries.
- Manufacturers should be allowed to use their own precautionary statements in addition to the precautionary statements in the GHS, which should be non-binding suggestions.

What are the expected benefits for industry through the implementation of GHS?

Expected benefits for industry through the implementation of GHS include:

- Internationally harmonized hazard classification and communication will lead to increased protection, especially as the new hazard pictograms become recognized.
- Standardization will improve training and understanding of hazards.
- Consistent information will improve downstream hazard assessment activities.

The following activities are needed to reduce the potential risks of not achieving the benefits:

- Benefits will accrue if the GHS is implemented comprehensively and consistently across industries on a global basis.
- Governments should work closely with each other to ensure alignment to the UN endorsed version of the GHS and to minimize country-specific deviations.
- Manufacturers should be allowed to use their own precautionary statements in addition to the precautionary statements in the GHS, which should be non-binding suggestions.

Important current impediments to harmonization include:

- The differences in GHS mixture classification cutoff values/thresholds between countries; (It might be useful to convene a working group to look at the possibility of providing harmonized GHS mixture classification cutoff values/thresholds.)
- Different interpretations of how to apply the GHS classification criteria to UVCBs;

Agriculture

Regulator to complete	
Do you intend to implement GHS for this sector?	
☐ **Yes**	☐ **No**
If yes, please provide the following details. If no, no further answers are required for this sector.	
Lead Government Agency	
Contact person	
Phone number	
E-mail address	
Website	
When do you plan to implement GHS for this sector?	
How long is the phase in period and what are the transition arrangements?	
Are the main relevant legislations finalized?	
☐ **Yes**	☐ **No**
If yes, please provide a means of access to the document. E.g. web-link, contact person. If no, when do you expect it to be finalized?	
Do you intend to adopt all hazard classification building blocks of GHS as is written in the purple book?	
☐ **Yes**	☐ **No**
If yes, please indicate the cut-off points you will be adopting where the choice is given in the purple book. E.g. sensitisers. If no, please describe the building blocks that will be adopted.	
Do you intend to adopt any non-GHS classification criteria? E.g. classification of flammable/combustible liquids beyond 93 °C.	
☐ **Yes**	☐ **No**
If yes, please provide full details of non-GHS criteria being considered for adoption.	
Will there be a risk assessment element overlayed on top of GHS classification on the label? If yes, how will it work?	
Is there to be a maximum number of the following included on the SDS and the label?	
Pictograms	
Hazard statements	
Precautionary statements	
How is the hierarchy of pictograms, hazard statements and precautionary statements defined?	
Do you have any arrangements in place to deal with imported chemicals / products? i.e. is there a plan to implement alternate compliance provisions or “deemed-to comply” provisions and will you accept additional classification criteria (GHS or otherwise) not adopted by your economy?	
Do you have training and awareness activities planned? If yes, please provide some information.	
Are there any plans to exchange personnel with another economy to improve harmonization of GHS	

implementation?
Please list any specific issues of concern you have experienced so far during your GHS implementation efforts.
Industry to complete
Has it been easy to access all necessary information for compliance?
U.S. Issues The U.S. EPA has not yet implemented the GHS for agricultural chemicals (e.g., pesticides). The GHS information on the U.S. EPA website and in EPA presentations had been informative but has not been updated recently. As EPA starts to incorporate GHS elements into its regulations, it should be clear to stakeholders when EPA is aligning with OSHA HazCom 2012/GHS and when the EPA requirements deviate from OSHA/GHS, e.g., the proposed updates and revisions to the worker protection regulation for pesticides. After OSHA published their final GHS Rule, the EPA published a timely Pesticide Registration Notice to aid in explaining the potential differences in pesticide and industrial sector labeling. Although the main OSHA HazCom 2012 implementation date was June 1, 2015, EPA has not published any information about revising their EPCRA/SARA 311/312 Tier I/Tier II (40 CFR 370.66) reporting requirements to align with the new OSHA HazCom 2012 hazards. **Global Issues:** It is not always possible to keep up to date and find the necessary GHS compliance information from some APEC economies. Also, it is not always easy to understand which sectors are covered by the implementing regulations/legislation/standards. Some countries/economies have limited access to regulations, information, and/or websites to domestic companies only. This is contrary to the objectives of the GHS and may constitute a trade barrier. Even when the regulations/legislation/standards are available, all of the information that is required for compliance is not always specified. For example, the GHS includes several options for mixture cut-off values and some countries include all options without specifying which is appropriate for compliance. Sometimes implementation dates are published, but the related implementing regulations are not yet finalized, or the regulations are finalized but the transition period and implementation dates are not clear. Only the EU CLP has a clear schedule for implementing updates to the GHS via their ATP process. In the case of pesticides, the FAO and WHO pesticide publications should be readily available on-line.
Do you see any specific issues that are limiting the progress of GHS implementation?
• GHS implementation for the labelling of agricultural pesticides is still at an early stage world-wide. For pesticides, the inclusion of GHS information in the *FAO Guidelines on Good Labelling Practice for Pesticides*, the *FAO Guidelines on Pesticide Registration* and *WHO Recommended Classification of Pesticides* publication is a consideration for GHS implementation. The use of risk-based labeling could also be an implementation issue. • To achieve the goal of harmonization and reap the associated benefits, governments should align with the GHS as negotiated and seek to implement it in a manner that minimizes differences among countries. • Collaboration is needed among Coast Guard, EPA, CPSC, OSHA, and DOT. DOT has essentially implemented the necessary changes to align with the GHS, and OSHA has published the GHS final rule. However, EPA and CPSC are not making significant progress in implementing the GHS. Although CPSC finalized a revised definition of strong sensitizer, CPSC has stated that GHS implementation is on hold due to other priorities. Non-harmonized issues like HNOCs and combustible dusts add to the cost of doing business internationally. • As EPA incorporates elements of the GHS into their various regulations ["Protection in the Workplace" (40 CFR 721.63), "Hazard Communication Program" (40 CFR 721.72) and

"Agricultural Worker Protection Standard" (40 CFR Part 170)], it should align with OSHA HazCom 2012/GHS as closely as possible, e.g., criteria, definitions, classification, SDS, etc. In EPA's proposed worker protection rule requiring SDSs, the SDSs should have the same classifications, format and information as OSHA HCS 2012 SDSs. • EPA needs to align their EPCRA/SARA 311/312 Tier I/Tier II (40 CFR 370.66) reporting requirements with the new OSHA HazCom 2012 hazards.
What are the expected costs for industry in the implementation of GHS?
It is expected that initial implementation costs for industry will be significant. If harmonization is achieved, then cost savings can be realized in the future. Costs for industry can be reduced by the following: • To achieve the goal of harmonization and reap the associated benefits, governments should align with the GHS as negotiated and seek to implement it in a manner that minimizes differences among countries. • Manufacturers should be allowed to use their own precautionary statements in addition to the precautionary statements in the GHS, which should be non-binding suggestions. • FAO/WHO information on pesticides that is aligned with the GHS should be developed.
What are the expected benefits for industry through the implementation of GHS?
Expected benefits for industry through the implementation of GHS include: • Internationally harmonized hazard classification and communication will lead to increased protection, especially as the new hazard pictograms become recognized. • Standardization will improve training and understanding of hazards. • Consistent information will improve downstream hazard assessment activities. The following activities are needed to reduce the potential risks of not achieving benefits: • Benefits will accrue if the GHS is implemented comprehensively and consistently across industries on a global basis. • Governments should work together to ensure alignment to the UN endorsed version of the GHS and to minimize country-specific deviations. • Manufacturers should be allowed to use their own precautionary statements in addition to the precautionary statements in the GHS, which should be non-binding suggestions. • FAO/WHO needs to develop information on pesticides that is aligned with the GHS. Important current impediments to harmonization include: • The differences in GHS mixture classification cutoff values/thresholds between countries; (It might be useful to convene a working group to look at the possibility of providing harmonized GHS mixture classification cutoff values/thresholds.) • Different interpretations of how to apply the GHS classification criteria to UVCBs;

The transport section below was not included in the APEC 2016 hard copy template, although it is mentioned in the introduction to the survey. API, as a representative of U.S. industry, offers input on this topic, which is particularly important in light of current divergences in GHS implementation among U.S. regulatory authorities.

Transport

Regulator to complete	
Do you intend to implement GHS for this sector (based on the UN "Purple book"), or implement Dangerous Goods transport regulations based on the UN "Orange Book" or not at all? (Please tick one of the following three boxes)	
☐ **Implement Dangerous Goods (DG) transport regulations based on the UN "Orange Book"**	
☐ **Implement GHS based on the UN "Purple Book"**	
☐ **No, do not intend to implement GHS**	
If implementing DG transport regulations based on the UN "Orange Book", please complete Section 1 and 2. If implementing GHS based on the UN "Purple Book" please complete Section 1 and 3. If not implementing either, no further answers are required for this sector.	
Section 1	
Please fill out the following details of the government agency responsible for the transport of chemicals	
Lead Government Agency	
Contact person	
Phone number	
E-mail address	
Website	
Only	
Section 2	
Do you currently have regulations based on the UN "Orange Book" in operation in your economy?	
☐ **Yes**	☐ **No**
If yes, is this transport sector regulation compatible with GHS? Please explain how the interface between GHS and UN "Orange Book" based regulation works. If no, please provide the details of the implementation plan. Please provide links to relevant legislation, draft legislation and/or other regulatory information.	
Section 3	
When do you plan to implement GHS for this sector?	
How long is the phase in period and what are the transition arrangements?	
Are the main relevant legislations finalized?	
☐ **Yes**	☐ **No**
If yes, please provide a means of access to the document. E.g. web-link, contact person. If no, when do you expect it to be finalized?	
Do you intend to adopt all hazard classification building blocks GHS as is written in the purple book?	
☐ **Yes**	☐ **No**
If yes, please indicate the cut-off points you will be adopting where the choice is given in the purple book. E.g. sensitisers. If no, please describe the building blocks that will be adopted.	
Do you intend to adopt any non-GHS classification criteria? E.g. classification of flammable/combustible liquids beyond 93 °C.	
☐ **Yes**	☐ **No**
If yes, please provide full details of non-GHS criteria being considered for adoption.	

Will there be a risk assessment element overlayed on top of GHS classification on the label? If yes, how will it work?	
Is there to be a maximum number of the following included on the SDS and the label?	
Pictograms	
Hazard statements	
Precautionary statements	
How is the hierarchy of pictograms, hazard statements and precautionary statements defined?	
Do you have any arrangements in place to deal with imported chemicals / products? i.e. is there a plan to implement alternate compliance provisions or "deemed-to comply" provisions and will you accept additional classification criteria (GHS or otherwise) not adopted by your economy?	
Do you have training and awareness activities planned? If yes, please provide some information.	
Are there any plans to exchange personnel with another economy to improve harmonization of GHS implementation?	
Please list any specific issues of concern you have experienced so far during your GHS implementation efforts.	
Industry to complete	
Has it been easy to access all necessary information for compliance?	
U.S. DOT U.S. DOT has implemented the GHS through the 18th Revised Edition of the UN Model Regulations, Amendment 37–14 to the IMDG Code and the 2015-2016 ICAO Technical Instructions. There have been no issues accessing the necessary compliance information from the U.S. DOT. U.S. DOT routinely holds stakeholder meetings prior to the UNSCETDG meetings in Geneva to obtain stakeholder input. DOT routinely amends 49 CFR/Hazardous Materials Regulations to incorporate on-going updates of the UN Model Regulations and the modal requirements of the IMDG Code and ICAO Technical Instructions. **U.S. Coast Guard / IMO SDS** The IMO activities related to SDSs do not promote global harmonization and a consistent SDS format. Currently, the Coast Guard regulations reference the OSHA HazCom 2012 SDS and the SOLAS MSDS as defined by MSC.286(86). If the U.S. Coast Guard decides to incorporate SDSs requirements into their regulations, they should consult with OSHA to ensure that the SDS format and content is harmonized with OSHA and the GHS. Information regarding the implementation of the IMO "Recommendations for Material Safety Data Sheets (MSDS) for MARPOL Annex I Oil Cargo and Oil Fuel" (Resolution MSC.286(86)) has not been readily available from the U.S. Coast Guard. Also, the information on how the IMO SDS resolution is being implemented globally is not readily available.	
Do you see any specific issues that are limiting the progress of GHS implementation / transport regulation?	
• To achieve the goal of harmonization and reap the associated benefits, governments/organizations should align with the GHS as negotiated and seek to implement it in a manner that minimizes differences among countries/organizations. • In the U.S., collaboration is needed among Coast Guard, EPA, CPSC, OSHA, and DOT. DOT has essentially implemented the necessary changes to align with the GHS, and OSHA has	

published the final GHS rule. However, EPA and CPSC are not making significant progress in implementing the GHS

- The International Maritime Organization (IMO) activities related to SDSs do not promote global harmonization and a consistent SDS format. The inconsistent SDS formats for the UN GHS and the IMO SDS format do not promote harmonization.
- Lack of agreement by the IMO and UNSCEGHS about the IMO SDS and how to harmonize IMO Resolution MSC.286(86) with the GHS SDS format is limiting progress. Currently, the Coast Guard regulations reference the OSHA HazCom 2012 SDS and the SOLAS MSDS as defined by MSC.286(86).

What are the expected costs for industry in the implementation of GHS / transport regulations?

IMO SDS

It would be a benefit to industry (and governments) to have the UNSCEGHS and IMO, two UN bodies, agree on a single SDS format. Industry would then avoid having to develop two similar but slightly different SDSs for the same product.

What are the expected benefits for industry through the implementation of GHS / transport regulations?

U.S. DOT

U.S. DOT harmonizes with the international transport regulations, but allows local exceptions as appropriate. This pragmatic approach has been used by U.S. DOT for many years and allows for global harmonization while recognizing local issues and considerations.

IMO SDS

It was anticipated that under the GHS there would be a single SDS format, which would be a benefit and cost savings for industry. There is a risk that a single SDS format will not be recognized by IMO. Currently, the Coast Guard regulations reference the OSHA HazCom 2012 SDS and the SOLAS MSDS as defined by MSC.286(86).