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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:

possible development of a list of chemicals classified in accordance with the GHS

Status update on the ongoing work of the global list informal correspondence group

**Transmitted by the experts from Canada and the United States of
America on behalf of the informal correspondence group**

THE ROLE OF NATIONAL SUBSTANCE CLASSIFICATION LISTS IN THE IMPLEMENTATION OF GHS RESULTS FROM A WORLD-WIDE SURVEY

2021-03-10



THE ROLE OF NATIONAL SUBSTANCE CLASSIFICATION LISTS IN THE IMPLEMENTATION OF GHS

Results from a world-wide survey

CLIENT

Swedish Chemicals Agency

CONSULTANT

WSP Advisory

121 88 Stockholm-Globen
Besök: Arenavägen 7
Tel: +46 10-722 50 00
WSP Sverige AB
Org nr: 556057-4880
wsp.com

CONTACTS

Maria Noring
MARIA.NORING@WSP.COM

10306847

AUTHOR
Maria Noring

DATE
2021-03-10

REVIEWED BY
Helen Andréasson

FOREWORD

The Swedish Chemicals Agency (KemI) has commissioned the consulting firm WSP to perform a study with the overall aim to analyse to what extent substance classification lists play a role in the implementation of GHS in national legislation.

WSP has sent a survey to countries of interest for KemI to collect responses on a number of questions regarding the overall aim. Efforts to contact representatives in the countries were done during the summer 2020. For some countries, it has been challenging to find the right individuals to respond. For others, the response has been delayed for different reasons. For one country, China, the effort to find the right individuals to respond has been fruitless. There can be many reasons for the varying success in finding the right individuals, and in receiving a response which is detailed enough. In 2020 the world has been struck by a pandemic which has had a great impact, not only on the inhabitants in the world, but also on many governments and civil servants. In some countries, other challenges, such as conflicts or political disturbances, most likely have affected the ability to focus on surveys on chemicals management negatively.

From WSP, Maria Noring (environmental economist and PhD) has been the project manager, and Agneta Stålheden (specialist in chemicals issues) and Marie Holmlund (senior environmental consultant with special knowledge in developing countries) have participated in the project. To find the right individuals in the different countries, WSP has provided a service which includes consultants in different countries with special knowledge on national environmental laws. Helen Andréasson has contributed with a quality check.

This report is accompanied by a sub-report containing more detailed responses from the country representatives. That report also includes the surveys as appendices.

WSP is responsible for all errors occurring in these reports. The responses from the surveys have to some extent been interpreted and processed which might have caused changes to what the respondent originally intended.

TABLE OF CONTENTS

FOREWORD	3
SAMMANFATTNING	5
SUMMARY	6
1 BACKGROUND AND PURPOSE	7
1.1 HOW THE TASK HAS BEEN IMPLEMENTED	7
1.2 THE STRUCTURE OF THE REPORT	8
2 RESULTS	10
2.1 OVERARCHING RESULTS	10
2.2. COUNTRIES AND JURISDICTIONS THAT HAVE IMPLEMENTED GHS AND USE CLASSIFICATION LISTS	11
2.3. COUNTRIES THAT HAVE IMPLEMENTED GHS BUT DO NOT USE CLASSIFICATION LISTS	12
2.4. COUNTRIES THAT HAVE NOT IMPLEMENTED GHS AND DO NOT USE CLASSIFICATION LISTS	13
2.5. PROS AND CONS	13
2.6. IMPACT ON THE IMPLEMENTATION OF GHS	16
2.7. ENHANCING THE IMPLEMENTATION PROCESS	16
3 DISCUSSION	18
4 CONCLUSIONS	ERROR! BOOKMARK NOT DEFINED.

SAMMANFATTNING

Kemikalier med farliga egenskaper som påverkar människa och miljö negativt finns spridda världen runt. FN:s globalt harmoniserade system för klassificering och märkning (GHS) syftar till att harmonisera kommunikationen kring kemikalier.

Systemet är inte juridiskt bindande utan syftar till att skapa en gemensam plattform för att harmonisera lagar och regler kring kemikalier på nationell och regional nivå. Inte bara risker för människa och miljö har beaktats i utformningen av systemet utan även underlättandet av internationell handel. Vid Johannesburgskonferensen, 2002, (the World Summit on Sustainable Development, WSSD) uppmuntrades länderna att implementera GHS så snart som möjligt. Trots det är det idag fortfarande många länder som inte har implementerat GHS.

Kemalieinspektionen (KemI) har gett konsultföretaget WSP i uppdrag att analysera användandet av existerande eller planerat av att införa klassificeringslistor (såsom ECHA:s C&L Inventory eller japanska nite¹) i samband med implementeringen av GHS i ett urval av länder och jurisdiktioner. Syftet med analysen är att ta reda på i vilken utsträckning klassificeringslistor påverkar implementeringen av GHS i nationell lagstiftning.

En enkät har skickats till kontakter inom de olika förvaltningarna i de aktuella länderna. Samtliga utvalda länder har svarat förutom Kina.

Slutsatserna listas nedan:

- Klassificeringslistor anses ha en hävstångseffekt på implementeringen av GHS.
- Klassificeringslistor anses underlätta internationell handel då företagen i de olika länderna skulle ges sammaförutsättningar och ha tillgång till samma information.
- Samtliga studerade länder som inte har implementerat GHS planerar att göra det.

¹ https://www.nite.go.jp/chem/english/ghs/ghs_index.html

SUMMARY

Substances with hazardous properties are present all over the globe and affect human health and the environment. One way to approach these hazards is the internationally harmonised system called Globally Harmonized System of Classification and Labelling of Chemicals (GHS) which addresses classification of chemicals by type and severity of hazards and proposes harmonised hazard communication elements, including labels and safety data sheets.

GHS is not legally binding but provides a basis for harmonisation of rules and regulations on chemicals at the national and regional levels. It considers not only risk to humans and the environment but facilitates international trade as well. In 2002, the World Summit on Sustainable Development (WSSD) encouraged countries to implement the GHS as soon as possible. Still today, many countries have not done so.

The Swedish Chemicals Agency (KemI) has commissioned the consultancy firm WSP to analyse the use of available or planned substance classification lists in relation to GHS implementation, i.e. to what extent substance classification lists play a role in the implementation of the GHS in a national legislation.

A survey has been sent to contacts within the administrations in the different countries. All countries but China have responded to the survey.

The conclusions of and recommendations by WSP from the work are summarised in the following bullet points:

- Classification lists are considered as a way to enhance the implementation of the GHS.
- Classification lists are considered to simplify trade as the companies in the different countries would have access to the same information and a common understanding.
- Of the countries studied, which have not implemented GHS, all are planning to do so.

1 BACKGROUND AND PURPOSE

Chemical substances and mixtures are present in everybody's daily life. Many of the substances are non-toxic, but some have intrinsic hazardous properties and impose a risk to human health and to the environment. All phases in a life cycle of products containing chemical substances includes a risk, production, handling, transport, use and final disposal. Thus, humans and the nature are exposed in different settings and contexts. Humans are, on a daily basis, confronted with hazardous chemical products.

An internationally harmonised approach to face these hazards focusing on the global trade in chemicals has been adopted by the UN. The system, called Globally Harmonized System of Classification and Labelling of Chemicals (GHS), addresses classification of chemicals by type and severity of hazards and proposes harmonised hazard communication elements, including labels and safety data sheets.

The system is not legally binding but provides a basis for harmonisation of rules and regulations on chemicals at national and regional levels. It considers not only the risk to humans and the environment, but facilitates international trade as well. The first edition of GHS was adopted in December 2002. Since then, GHS has been updated, revised and improved every second year. The most recent edition (GHS Rev.8) was adopted in December 2018.

The World Summit on Sustainable Development (WSSD) meeting in Johannesburg 4 September 2002 encouraged countries to implement the GHS as soon as possible. Still today, many countries have not done so. A study from 2017 showed that most developing countries lack a legal system for classification and labelling based on GHS. Also, legislation implementing GHS is sometimes only applied in some sectors, such as e.g. the workplace. An overview from 2019 confirmed these findings and showed that some jurisdictions and authorities have issued lists of substances with mandatory or guiding classifications according to the GHS criteria².

The purpose of this study is to analyse the use of available or planned substance classification lists (such as ECHA's C&L Inventory or nite³ in Japan) in relation to GHS implementation, i.e. to what extent substance classification lists play a role in the implementation of the GHS in a national legislation. Information has been gathered from three groups of countries;

- a) where GHS has been implemented and classification lists are used;
- b) where GHS has been implemented but lack national classification lists;
- c) where GHS has not been implemented.

1.1 HOW THE TASK HAS BEEN IMPLEMENTED

The international consulting firm WSP, was commissioned by the Swedish Chemicals Agency (KemI), to collect information and analyse the results from a sample of countries around the globe.

From the three groups of countries mentioned above, KemI chose eleven countries or jurisdictions from the first group, six countries or jurisdictions

² Cefic (2020) Global Emerging Regulations 2019 Public Report. June 2020.

³ National Institute of Technology and Evaluation
https://www.nite.go.jp/chem/english/ghs/ghs_index.html

from the second group, and four countries or jurisdictions from the third group. The task was performed by WSP's consultants in various countries with the permanent task of screening changes in the environmental legislations. The consultants contacted relevant persons in the administrations in the different countries or jurisdictions, either via their own network or via contacts provided by the Swedish Chemicals Agency. An online survey was sent to the different stakeholders in the countries. In some cases, the respondents preferred to answer the questions in an interview. In those cases, the consultants asked the same questions as in the online survey. Three surveys were developed adjusted for the three groups. The basis was similar, but some follow-up questions differed depending on the status of the GHS in each country. The survey was ongoing between July and October 2020 and the final analysis was made during the autumn the same year. The table below describes the status of the legislation initially assumed by the Swedish Chemicals Agency.

Table 1. The three groups of countries and jurisdictions with the assumed status regarding GHS implementation, as made by the Swedish Chemicals Agency.

Group 1: Implemented GHS and use of classification list	Group 2: Implemented GHS but no classification list	Group 3: No implementation of GHS
Argentina	Brazil	Kenya
Australia	Canada	Laos
China	Russia	Tanzania
EU	USA	Uganda
Indonesia	Vietnam	
Japan	Zambia	
Malaysia		
New Zealand		
South Korea		
Taiwan		
Thailand		

1.2 THE STRUCTURE OF THE REPORT

Chapter 2 presents the results of the analysis. First the overarching results on the status of the different countries and jurisdictions are presented.

Then follows the responses from the countries which have implemented GHS and use classification lists, the results focus on the development and use of classification lists.

The second part focuses on the countries that have implemented GHS but not are using classification lists. For these countries, the situation is being described whether they are about to implement lists or not, and their reasons for this.

In the third part, the results from the responses from the group that have not yet implemented GHS are described. As for the earlier section, this part focuses on the potential implementation of GHS and classification lists.

The three final sections present results on pros and cons with classification lists, whether classification lists are considered as a way to enhance the implementation of GHS, and what is needed for the countries that have not yet implemented GHS to speed up the process

2 RESULTS

2.1 OVERARCHING RESULTS

The division of countries and legislations initially assumed by the Swedish Chemicals Agency has, after the survey, been adjusted. According to the survey responses, Canada belongs to the first group with full implementation of GHS with classification lists, rather than implementation of GHS but with no classification list. Argentina and Indonesia are most likely in the second group which has implemented GHS but has no classification list. No response has been received from China despite repeated attempts at contact.

Table 2. The table presents the status of the countries or jurisdiction according to the respondents. China has not responded to the survey.

Country/ jurisdiction	Full implementation of GHS with classification list	Implementation of GHS but no classification list	No implementation of GHS
Australia	X		
Argentina		X	
Brazil		X	
Canada	X		
China	-	-	-
EU	X		
Indonesia		X	
Japan	X		
Kenya			X
Laos			X
Malaysia	X		
New Zealand	X		
Russia		X	
South Korea	X		
Taiwan		X	
Tanzania			X
Thailand		X	
Uganda			X
USA		X	
Vietnam	X		
Zambia		X	

2.2. COUNTRIES AND JURISDICTIONS THAT HAVE IMPLEMENTED GHS AND USE CLASSIFICATION LISTS

According to the replies from the respondents the countries which have implemented GHS and use a classification list includes:

- Australia
- Canada
- China
- EU
- Japan
- Malaysia
- New Zealand
- South Korea
- Vietnam

These countries were asked what the intended purpose of the classification list was. Three of the countries stated that the list was primarily developed as part of the GHS implementation, while the rest responded that there were other reasons. One example of other reasons is that the list was intended as a tool for authorities to verify compliance of Safety Data Sheets (SDS) and labels, and another reason is to harmonise classification, labelling and SDSs for hazardous chemicals supplied for use at the workplace. Another reason is that the list was intended to be used for restricted substances, conditional substances, and declarable substances. The lists are in general available to the public, except in Canada where it is only available to the federal institution Health Canada⁴. In Canada, Japan, Korea, and Malaysia, the lists are available in both the native languages and English. In the EU, the list is available in 23 European languages, including English. In Australia and New Zealand, the list is only available in English, and in Vietnam, the list is only available in Vietnamese.

During the development of the lists, several of the countries considered other lists from countries or jurisdictions as well as information from the industry. Role models for the development of lists have been Annex VI of the European Union's directive on Classification, Labelling and Packaging (CLP) or the Japanese GHS Classification Guidance. In addition, scientific studies and literatures as well as company data have been used to classify the substances. Neither Canada, nor Japan, nor the EU has considered any other lists. The EU-list precedes GHS.

In all countries, the government, or governmental bodies were responsible for the development of the lists. In Australia, Safe Work Australia implemented. In Canada, Health Canada was responsible, and in Malaysia, Department of Occupational Safety and Health was responsible. In New Zealand, the Environmental Protection Authority and its predecessor Environmental Risk Management Authority of New Zealand were responsible for developing the list. In Korea it was the Ministry of Environment, and in Vietnam it was the Vietnam Chemicals Agency and the Ministry of industry

⁴ <https://www.canada.ca/en/health-canada.html>

and trade. In the EU, the European Commission, the European Chemicals Agency, and the EU member states developed the list.

2.3. COUNTRIES THAT HAVE IMPLEMENTED GHS BUT DO NOT USE CLASSIFICATION LISTS

The countries included in this group according to the answers from the respondents are:

- Argentina
- Brazil
- Russia
- Indonesia
- Taiwan
- USA
- Thailand
- Zambia

There are many reasons for why the countries in this group have chosen not to have classification lists despite implementation of GHS. In Argentina, Indonesia and Russia the work is in progress with draft laws being developed. In Argentina, the Ministry of Environment and Sustainable Development has published a list of chemical substances present in the country and the restrictions affecting these substances. The list is a work in progress and is being updated. At present, it lacks hazard classification. The national government has presented a bill to the Congress on the comprehensive management of the risk of chemicals and chemical products for classification in accordance with GHS. This bill is now being reviewed and improved.

Brazil lacks political will in this area. There is no supervisory authority and the chemical substance control is decentralised. It is, however, allowed to use international lists. In the US, the responsibility is left to the industry which is considered the most competent actor with most knowledge on the composition on imported or produced chemicals. Like the US, the respondent from Thailand states that the business sector is responsible for conducting classification of hazardous substances while competent authorities control the results of the classifications.

Among the countries that are on its way to implement classification lists, some are considering other existing lists. The respondents from Brazil and Zambia mentioned the EU Annex VI CLP. Indonesia mentioned both the Japanese list of GHS Globally Harmonised System of Classification and Labelling of Chemicals, and the Malaysian ICOP Part I List of Classified Chemicals.

All the countries that have responded in this group also enforce labelling in accordance with the implementation of the GHS. Brazil enforces labelling in workplaces.

2.4. COUNTRIES THAT HAVE NOT IMPLEMENTED GHS AND DO NOT USE CLASSIFICATION LISTS

This group contains a divergent set of countries where some have a comprehensive plan to implement GHS including classification lists while others have not yet come to that point. In all countries included in this group, the responses indicate that the coming implementation of GHS will include the development of a national substance classification list. All countries but Kenya state that they will implement an existing list in accordance with GHS as part of the national GHS-legislation. No country has stated which existing list will be used, though.

The expected role of classification lists varies somewhat among these countries. In Uganda, the purpose is to register chemicals, and implement control measures which would also apply if the chemicals become waste.

In Tanzania, the purpose of a list would be to manage and control illegal imports, use and transportation of industrial and consumer chemicals.

Laos will use the classification list to help manufacturers, importers of chemicals, and government officials to find the relevant regulations regarding hazardous chemicals. The purpose is to deliver a message to everyone that chemicals are hazardous, but that most of them can be used safely if one understands the potential hazard effects chemicals could have. The classification lists are deemed to be very important by these countries. One respondent says:

“Classification is fundamental to safe chemical management. It’s about delivering right information needed for decisions about risk control to be made and actions to be taken, so that chemicals can be produced, transported, used and disposed of safely.

Chemicals are classified so that people using them can better understand any hazardous effects they could have on human health or the environment and to protect against that potential harm.” (Laos)

Lists are, by these countries, deemed to be important as they enable a proper regulatory framework to be put in place. This would, in turn, enable sharing of information, management, and use of chemicals.

2.5. PROS AND CONS

The countries that have implemented GHS and use classification lists are in general positive to classification lists. Arguments put forward are that international agreements simplify trade between countries and simplify matters for trading companies. Standardisation, or same-for-all, makes the market more predictable. It is possible to determine applied legislative control and clarify what is subject to enforcement. Some negative aspects for stakeholders are highlighted by the respondents in the first group, such as:

- Since international agreements are non-binding, they are difficult to implement.
- When countries use different lists, tensions can occur if a manufacturer or importer of a chemical uses a different classification

list than the producer. Also, companies may not agree to the risk classes assigned to substances in which they have an interest.

- There can also be disagreements on the classification results within the lists.

Regular updates of the classifications are needed to maintain confidence in the system. Stated advantages and disadvantages mentioned by the respondents are presented in Table 3.

Table 3. Advantages and disadvantages of classification lists as stated by the respondents.

Advantages	Disadvantages
Easy-to-access source to assist in developing hazardous chemical classification.	Can create tension where manufacturers or importers of chemicals use different classifications than those published in the lists.
Classifications published by a government source give business confidence that they are meeting their legal obligations.	Stakeholders may not agree with particular entries which have been assigned to substances in which they have an interest.
It is a useful source of information for other stakeholders, such as researchers, risk managers, and members of the general public.	There could be discrepancies of classification results between countries.
Harmonised classification results are available.	Disagreements on classification results.
Stakeholders know what classification should be applied to their substances and mixtures containing these substances throughout the EU.	Mandatory classifications remain the legal classifications even if found to be technically incorrect. This applies either from the original assignment or when new information becomes available. If there is no mechanism or ability to regularly update legal classifications, then this can become a real problem.
Communication regarding chemicals substances is standardised.	
Standardised communication simplifies international trade of chemical products.	
Stakeholders can determine what legislative controls apply	

Most countries included in the survey have responded to whether chemicals intended for export are subject to classification or not. The question was not specific to GHS, so other agreements, such as the Rotterdam convention, might have been subject to the respondents' responses. In Argentina, Canada, Indonesia and Taiwan, chemicals intended for export are not subject to classification. In Brazil and Indonesia, exporters are obliged to obtain the consent of the country of destination to export certain chemical substances. In Australia, the EU, Japan, Malaysia, New Zealand, South Korea, Thailand, the US, Vietnam, and Zambia, chemicals intended for export are subject to classification. Neither China nor Russia have answered this question. Kenya, Laos, Tanzania, and Uganda did not receive this question (see Table 4).

Tabell 4. Countries and jurisdictions in which chemicals intended for export are subject to classification. The question was not specific to GHS. China has not responded to the survey, Russia has not responded to this question, and Kenya, Laos, Tanzania and Uganda did not receive the question since they responded that the status of the country is that GHS has not been implemented. Y – yes, N – no, (-) – did not receive the question.

Country/ jurisdiction	Are chemicals intended for export subject to classification?
Australia	Y
Argentina	N
Brazil	N
Canada	N
China	No response
EU	Y
Indonesia	N
Japan	Y
Kenya	-
Laos	-
Malaysia	Y
New Zealand	Y
Russia	-
South Korea	Y
Taiwan	N
Tanzania	-
Thailand	Y
Uganda	-
USA	Y
Vietnam	Y
Zambia	Y

2.6. IMPACT ON THE IMPLEMENTATION OF GHS

Most of the respondents agree that a classification list is considered as a way to enhance the implementation of GHS, no matter what the status of the country is. One respondent states that it is not easy for companies to classify chemicals. Another respondent argues that the presence of a free and publicly available classification list helps responsible parties to prepare compliant GHS classifications. Classification lists help to support new or small businesses to classify their products in accordance with GHS. In Australia this has eased GHS transition. It also helps determine the appropriate national controls to apply to substances.

Already developed and available classification lists help smaller or developing countries, who lack resources to implement GHS on their own. In for example Brazil, the Annex VI CLP has been used, which is considered as a way to enhance the implementation of GHS in Brazil. In Indonesia, all industries are obliged to implement GHS. However, as there is no national classification list issued by the government, companies can use different lists which has made it difficult for the relevant ministry to control and manage the implementation of GHS. This is clearly illustrated by one respondent stating that without classification lists there can be no effective implementation of GHS.

Canada states that classification lists are not considered as a way to enhance the implementation of GHS. The reason is that Canada since 1998 has a national system for information on hazardous products in the workplace. When implementing GHS, a classification list was thus not necessary. The system is, among other things, used for compliance and enforcement activities to verify regulatory compliance of SDS's and labels.

2.7. ENHANCING THE IMPLEMENTATION PROCESS

The countries that have not yet implemented GHS have been asked what is lacking today and what would be needed to speed up the process of implementing GHS. In east Africa, Kenya, Tanzania, and Uganda together with the Republics of Burundi, Rwanda, and South Sudan are members of the East African Community, a regional intergovernmental organisation with the aim to ensure economic, social and political integration in the region (EAC 2020a). The respondent from Uganda states that a harmonised system is used within the EAC, but that it does not provide much help in the identification of specific chemicals. The East African Customs Management Act (EAC 2009) lists 17 agricultural and six industrial chemicals as prohibited goods within the region. Chemicals and reagents that are imported or purchased by the national museums are exempted from clearance through customs. Several Product Identification Bulletins are available for different types of products. These do not include any information on hazards or chemical properties though (EAC 2020b). According to the respondent, Uganda is in the need for specific codes for the different chemicals. She also sees a need for including other authorities, such as the Uganda Revenue Authority, which would to all intents and purposes implement GHS, and provide knowledge and support to the Customs Department to properly identify chemicals.

Kenya is in the process of drafting a law based on GHS. The respondent identifies a lack of understanding among decision-makers in the government on GHS and awareness of the importance of implementing GHS in chemicals regulations laws. He also sees a need for improved understanding for chemicals management in general and guidelines on how to set the scope of application of GHS. There is a need for guidance on how to practically establish a chemicals database.

The respondent from Tanzania states that the process of implementing GHS is in progress in Tanzania. For industrial chemicals, draft regulations have been developed. A process to develop national GHS standards has been initiated including both industrial chemicals and pesticides. The next step is to update and conclude the draft regulations. To facilitate and finalise that process, Tanzania is searching for financial support from different funds. They are also exchanging experiences with the neighbouring country Zambia, which has already implemented GHS.

In Southeast Asia, Laos⁵ is working on implementing classification lists. To accelerate the process of implementing GHS, the respondent has identified three crucial needs to be fulfilled. Affected stakeholders, in both public and private sectors, need to participate to a greater extent. They need to understand why implementing GHS would be important to the economy, to human health, and to the environment. Second, an understanding within the authorities on the various elements of GHS and the implementation is needed to meet the needs of the affected stakeholders. Further, financial as well as human resources are needed in the development, implementation and maintenance of a national legislation based on GHS. Except for sufficient financial resources, technical support from the international collaborators is crucial as Laos lacks the competence itself. Finally, responsible ministries and agencies will need help to prepare on what is to come regarding workload. Even in this case external input may be required when it comes to technical advice.

⁵ Officially Lao People's Democratic Republic (PDR).

3 DISCUSSION AND CONCLUSIONS

It should be noted that the responses in the survey are limited and are only valid for those particular countries and jurisdictions. Conclusions made are based on this limited number of responses and should not be considered as true for the whole international collective. Not only has a limited number of countries been studied, for most of the countries, only one or at the most three respondents have answered the survey. The results should thus be taken with some degree of reservation. A person in another part of the government or in another authority would perhaps have responded differently. Additionally, the responses might include an aspect of bias. It could be argued that some respondents might have stated more positive replies than reflect the actual situation, and thus giving the country, or the respondent's work, a better appearance. Hence, the results should be regarded as examples and the conclusions are uncertain. Despite this, some overall tendencies have been identified and are discussed below.

The main question in this analysis is to what extent substance classification lists play a role in the implementation of the GHS in the national legislations. A general conclusion is that classification lists are crucial for a sound chemicals management. Countries with no classification lists have less control of import, production, use and waste. Classification lists are a precondition for a structured approach of implementing GHS. In the countries studied that lack an implementation of GHS, lists would enhance implementation. Existing lists would provide a useful basis for the implementation. A major reason for why countries has not implemented GHS is that they have not had the capacity to do so. In some cases, the political will or awareness is lacking, but in other cases support and increased knowledge would enhance the implementation. Practical knowledge on how to construct an efficient chemicals management is often sought for. Increased international collaboration would provide support to these countries. Usually, not only knowledge on chemicals management is needed, but also knowledge on how to structure the government administration regarding policy implementation, legal compliance, control, and enforcement in general. A confidence for authorities among the inhabitants, and trust in the system is also needed to improve the existing chemicals management.

The countries that have implemented GHS and use classification lists have in some cases used existing lists. The Annex VI CLP and the Japanese list are the most common. Some countries have their own standard regarding SDS, sometimes with a limited amount of entries. Among the countries that have not yet implemented classification lists, some lack data on import or use of chemicals. They lack a systematic approach to monitoring and control. Classification lists would in such situations be of no help.

Another group of countries lacks political will to use classification lists or does not prioritise such a use. There may be several reasons for this. In some countries the administration is spread across several authorities with no supervisory mandate. The political steering of a high priority strategy is thus low. Another reason can be that the political view is the belief that the market itself solves environmental problems, and that the main knowledge

and expertise on the composition and hence the hazards of chemicals lies at the door of the manufacturers and importers of chemicals.

The countries that have not yet implemented GHS are in general more positive to lists than the countries that have implemented GHS but do not use classification lists. This is not surprising since some of the countries have consciously chosen not to implement classification lists.

To further increase the speed of implementing GHS in several countries, a proper chemicals management system is crucial. Not only is the legislation itself needed, but also reliable and independent authorities. Politicians, stakeholders, and the public need to have confidence in these structures. Finally, financial stability and budgeting is a precondition for anything to happen.

The conclusions of the work are summarised in the following bullet points:

- Classification lists are considered as a way to enhance the implementation of GHS.
- Classification lists are considered as simplifying trade as the actors will have access to the same information and a common understanding.
- All studied countries which have not implemented GHS are planning to do so.

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WSP Sverige AB

121 88 Stockholm-Globen
Visit: Arenavägen 7
T: +46 10-722 50 00

wsp.com

