

South American Sub-regional Workshop on Chemical Hazard Communication and GHS Implementation

For countries of Mercosur and the
Andean Community

São Paulo, Brazil
29 November – 2 December 2004

Final Report



The South American subregional GHS workshop was the second in a series of regional and sub-regional GHS workshops which are coordinated and supported through the *UNITAR/ILO Global GHS Capacity Building Programme*, subject to availability of extra-budgetary resources. The event was also a contribution to the *WSSD Global Partnership for Capacity Building to Implement the GHS* which was initiated at the World Summit on Sustainable Development in 2002.

Special thanks are extended to the Government of Brazil and their partners, GTZ, the US Department of State and the Society for Chemical Hazard Communication for their financial contributions to the workshop. The first workshop was held for the countries of the Southern African Development Community (SADC) region in September 2003. Countries and organizations interested in supporting GHS workshops in other regions are encouraged to contact UNITAR at the address below.

For additional information please contact:

Training and Capacity Building Programmes
in Chemicals and Waste Management
UNITAR
Palais des Nations
CH-1211 GENEVE 10
Switzerland

TEL	+41 22 917 85 25
FAX	+41 22 917 80 47
E-mail	gpghs@unitar.org
Website:	www.unitar.org/cwm

Table of Contents

Executive Summary	i
1. Introduction	1
1.1 The GHS: An Important Tool for Protecting Human Health and the Environment.....	1
1.2 Workshop Objectives.....	3
1.3 Opening Statements	3
1.4 Working Groups and Development of Workshop Recommendations	6
2. International Initiatives and Programmes for GHS Development, Implementation and Capacity Building	7
2.1 Overview of the GHS.....	7
2.2 Existing Capacity Building Initiatives	7
3. Challenges and Opportunities of GHS Implementation in Mercosur and Andean Community Countries	9
3.1 Status of GHS Implementation in Brazil	9
3.2 Experiences of Other Countries	9
3.3 Emergency Response in South America.....	12
4. Summary of Working Group Discussions	13
4.1 National GHS Implementation	13
4.2 Regional GHS Implementation.....	15
5. Workshop Conclusions and Recommendations	17
5.1 National Follow-up Activities.....	17
5.2 Regional Follow-up Activities	19
Annex A: Workshop Agenda	21
Annex B: List of Participants	25
Annex C: List of Acronyms	31

Executive Summary

The *South American Sub-regional Workshop on Chemical Hazard Communication and GHS Implementation* took place in São Paulo, Brazil, from 29 November to 2 December 2004. The workshop brought together representatives from the countries of Mercosur and the Andean Community, as well as representatives of international organizations and non-governmental organizations including industry, public interest groups and labour unions¹. The event represents the second in a series of regional and sub-regional GHS workshops that are coordinated and supported through the UNITAR/ILO GHS Capacity Building Programme.² It also contributed to the *WSSD Global Partnership for Capacity Building to Implement the GHS*, which was initiated at the World Summit on Sustainable Development in 2002. The workshop was organised by UNITAR with financial support from the Government of Brazil, the German Agency for Technical Cooperation (GTZ), the US Department of State, and the Society for Chemical Hazard Communication (SCHC).

The workshop was opened by Rosiver Pavan, President of Fundacentro, Brazil, after which participants heard a number of presentations from representatives of governments and GHS resource persons. During the four days, participants exchanged country experiences, examined existing regional structures relevant to GHS implementation, discussed challenges and opportunities regarding GHS implementation at the regional and national levels, and developed practical recommendations for GHS implementation for the four main sectors affected by the GHS of industrial workplace, agriculture, transport and consumer product chemicals.

Existing Infrastructure for GHS Implementation in Mercosur and Andean Community Countries

While noting that implementation of the GHS in South America remains at the planning stage in many countries, participants at the workshop identified some existing legal and administrative infrastructure in most countries of Mercosur and the Andean Community. In planning for GHS implementation in South America, participants recommended avoiding duplication of these activities and instead favoured building on existing structures and initiatives, such as emergency response systems. Participants identified the existence of some form of chemical labelling system in the majority of countries, generally for the transport and agricultural sectors. They recommended that these systems be adapted to conform with the GHS and stressed the need to ensure consistency across the region. Participants recognised the importance of involving a range of government ministries, as well as other interested groups and stakeholders, in planning and executing the implementation of the GHS, and identified Mercosur and the Andean Community of Nations (CAN) as possible umbrella institutions.

Challenges and Opportunities of GHS Implementation in South America

Workshop participants supported the implementation of the GHS at the national level in Mercosur and Andean Community countries. They identified reduced risk to public health

¹ Mercosur includes Argentina, Brazil, Paraguay, Uruguay and Chile (as a candidate country). The Andean Community includes Bolivia, Colombia, Ecuador, Peru, and Venezuela.

² The first UNITAR/ILO Subregional GHS workshop was held for countries of SADC (Southern African Development Community) in September 2003.

and the need for the harmonization of existing systems as key drivers for implementation of the system. In terms of benefits, participants anticipated that the GHS would serve to reduce costs, increase access to accurate information, and improve market access and the competitiveness of companies. At the regional level, participants specifically highlighted simplified customs procedures and improved control of illegal traffic as potential benefits of GHS implementation. Language, a lack of information, weak or conflicting institutional frameworks and low technical capacity were identified as obstacles to implementation at the national and regional levels.

Recommended Follow-Up Activities

The workshop recommended, *inter alia*, the following national follow-up activities:

- Countries should raise awareness about the GHS and its importance within all relevant government agencies and civil society.
- Those who undertake GHS implementation at the national level should ensure harmonisation to the greatest extent possible between and among all public and private sectors involved in the GHS.
- Countries should analyze the legislation, regulations, administrative procedures and resources needed to implement the GHS in all relevant sectors (first, by conducting a situation and gap analysis).
- Countries should ensure the incorporation of chemicals management into national sustainable development strategies.

The workshop recommended, *inter alia*, the following regional follow-up activities:

- Use of corresponding national mechanisms to inform high-level regional bodies of the importance and need for GHS implementation activities (*e.g.* Joint Parliamentary Commission in Mercosur, technical committees of CAN, Ministerial meetings, etc.).
- Include GHS implementation on the agenda of CAN, Mercosur and other relevant international organisations and relevant regional committees/commissions and national committees/commissions convened under regional bodies.
- Identify and contact relevant international agencies (*e.g.* UN SCEGHS, UNITAR, ILO, IPCS, PAHO) and cooperation agencies (*e.g.* GTZ, USAID) to support regional GHS implementation.

In summary, participants concluded that the workshop provided a valuable opportunity to reflect on experiences, discuss key issues and suggest concrete next steps in the area of chemical hazard communication and GHS implementation. UNITAR and the other workshop organizers were encouraged to widely distribute the report of the workshop, both electronically and on paper, to all interested parties, including national decision makers at all levels and the Secretariats of Mercosur and CAN.

1. Introduction

An important aspect of protecting human health and the environment from potentially toxic chemicals is the development of national systems that ensure that chemicals are properly classified and labelled and that safety data sheets are made available, in particular in the workplace. These communication tools provide workers, consumers and the public with important information about the hazards of chemicals (hazard communication) and thus help to trigger precautionary protective behaviour. For this to be effective messages must be comprehensible and accompanied by appropriate supporting measures. The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) is a new internationally-agreed tool for chemical hazard communication.

As part of the UNITAR/ILO series of regional and subregional GHS awareness raising workshops, countries of Mercosur and the Andean Community (CAN) met in Sao Paulo, Brazil, from 29 November to 2 December 2004, to discuss their experiences with chemical hazard communication and consider concrete measures related to GHS implementation in the region.

1.1 The GHS: An Important Tool for Protecting Human Health and the Environment

The GHS provides a comprehensive and universal tool for chemical hazard communication, and countries around the world are taking an interest in developing national implementation strategies for implementing the GHS and building capacities for effective chemical hazard communication. Responsibility for the maintenance, updating and promotion of the system, adopted in 2002, rests with the UN Economic and Social Council (ECOSOC) Subcommittee of Experts on the GHS (SCEGHS).

Countries can draw upon the GHS to develop national chemical hazard communication systems where those infrastructures are weak or lacking, and will need to align existing regulations and procedures with the GHS. Additionally, implementation of the GHS may require strengthening, updating or establishing appropriate national legislation compatible with other international instruments such as the ILO Chemicals Convention 170 and Rotterdam Convention. Global implementation of the non-binding GHS will be undertaken through a strategic yet flexible approach in Member States, through collaboration between government and other interested and affected parties including industry, labour, consumer and public interest groups across the agricultural, industrial production, transport and consumer sectors.³ The GHS therefore represents an important step in harmonizing national chemical hazard communication systems worldwide and has a great

³ Use of the terms “multistakeholder” and “multisectoral” in subsequent sections of this report denote inclusion of the above mentioned stakeholders and sectors.

potential to improve chemical safety across all relevant sectors.

Specifically, the System is expected to:

- enhance the protection of people and the environment;
- provide a recognised framework for those countries without an existing system;
- reduce the need for duplicative testing and evaluation of chemicals; and
- facilitate international trade in chemicals whose hazards have been properly assessed and identified on an international basis.

According to the report of the IFCS Forum III meeting held in October 2000 in Brazil, the GHS will become a practical and coherent global standard for chemical hazard communication in the workplace, for those involved in work-related activities, for the transportation system, and for consumers. Forum III specifically recommended that “all countries, subject to their capacities and capabilities, should take account of the development of the GHS in any proposed changes to existing systems for classification and labelling, and in the implementation and enforcement of their chemicals legislation”. The IFCS also recommended that guidance and other tools necessary for the implementation of the GHS be made available by 2003 and that all countries should implement the GHS as soon as possible with a view to have the system fully operational by 2008, a target endorsed at the 2002 WSSD held in Johannesburg, South Africa (WSSD Plan of Implementation, paragraph 23(c), A/CONF.199/20).

IFCS Forum IV in Bangkok, Thailand, in November 2003, adopted a GHS Action Plan – based on the workplan of the UNITAR/ILO/OECD Global Partnership for Capacity Building to Implement the GHS – that encouraged, *inter alia*, “at least two regional GHS workshops held and implementation strategies prepared by the end of 2005, taking into consideration regional economic integration arrangements”.

Challenges for Capacity Building in Developing Countries

One of the key factors that will ultimately determine the success of the GHS worldwide is the extent to which countries both recognise the potential benefits of chemical hazard communication and develop capacities to establish the necessary infrastructures to implement and operate the System. Developing countries and countries with economies in transition face particular challenges with regard to trying to limit and reduce the negative effects of chemical use in various sectors through appropriate hazard communication. Frequent mis-labelling of chemicals, a lack of understanding of labels on chemicals in use, and infrequent training in chemical safety are only some of the challenges specifically faced by countries with limited or non-existent national hazard communication infrastructures.

Widespread adoption of the GHS and effective chemical hazard communication is therefore only likely to occur if countries demonstrate a strong commitment to its implementation and if adequate support and technical assistance is made available to countries needing to build appropriate legal and technical infrastructures. Suitable training and education will be required to ensure the proper use of GHS tools in different national contexts. This will be of particular importance to those developing countries and countries with economies in transition that did not directly take part in the technical work of harmonization. Moreover, lessons learned from ongoing GHS pilot projects indicate the practical value of GHS capacity building activities for chemical safety at all levels and more than 65 countries have already indicated to UNITAR their interest in participating in a GHS capacity development project.

1.2 Workshop Objectives

The main goal of the workshop was to raise awareness about the GHS amongst South American countries and to develop practical recommendations for national and regional GHS implementation activities, consistent with national circumstances and priorities. Experiences to-date, existing regional structures relevant to GHS implementation, current capacity building activities and existing guidance and other resources were discussed. Gaps and weaknesses were identified and solutions suggested.

Other objectives of the workshop included to, *inter alia*:

- reflect on the importance of GHS implementation in South America in relation to economic and social impacts and benefits, including the possible development of a regional GHS needs assessment and implementation report;
- explore possible partnerships with other regional countries and beyond;
- explore capacity building needs for implementation of GHS across the industrial chemicals, agricultural and transport sectors, as well as among consumers;
- examine and develop possible approaches to GHS implementation and identify practical ways and means regarding implementation within South America; and
- formulate an agenda for implementation.

1.3 Opening Statements

Ms. Rosiver Pavan, President of Fundacentro, welcomed participants to the workshop and stressed the importance for Brazil to be the host country of this important activity for implementation of the GHS in Mercosur and Andean Community countries. She also pointed out that

Brazil ratified the ILO Convention 170 and highlighted the important link between the Convention and the GHS. She noted that Fundacentro is a health and safety research and education institution with a team of specialists in the field of chemical safety and hazard communication working for the implementation of the GHS in Brazil. In conclusion, she emphasised that the four days of the Workshop would be an important step for implementation of the GHS, one of the most important commitments of Chapter 19 of Agenda 21.

Mr. Julio Baena, Coordinator of Brazil's National GHS Workgroup, Ministry of Development, Industry and Commerce, welcomed participants to the workshop and provided an overview of GHS implementation in Brazil. He concluded by thanking the workshop co-organizers and sponsors.

Mr. Guilherme Franco Netto, General Coordinator of Environmental Health Surveillance of the Ministry of Health emphasised the importance of the South American Sub-regional Workshop on Chemical Hazard Communication and GHS Implementation for the health sector. The workshop was organized jointly with the public and private sector. Finally, one of the most important outcomes would be the identification of the region's needs, plans for co-operation, commitment to a multisectoral approach, designation of multisectoral focal points for GHS implementation, and future actions with respect to the GHS implementation.

Mr. Viktor Dohms, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), explained how the international community has created a number of instruments to regulate the handling and use of substances dangerous to the environment and human health. He explained the potential danger posed by chemicals, in particular highlighting the vulnerability of children and the elderly, the least educated and illiterate people to harm through chemical exposure. In response to recognition of these dangers, governments decided to harmonize existing communication systems on chemicals in order to develop one single global system. He noted that participants at the World Summit for Sustainable Development, held in Johannesburg 2002, had endorsed the target that all countries should have implemented the GHS by 2008. Mr. Dohms noted that the GTZ had joined the UNITAR/ILO/OECD Global Partnership for capacity building to implement the GHS. He stressed the need for international cooperation to implement precautionary protective measures such as the GHS, which represents an effective internationally-agreed tool for chemical hazard communication.

Consul General Mr. Patrick Duddy provided opening remarks on behalf of the United States emphasizing their long support of GHS development. He described the importance of the chemical industry in the US where chemicals cover some 650,000 products, generating more

than \$450 billion in revenue, with exports exceeding \$80 billion per year. Mr. Duddy asserted that the US has one of the most sophisticated and comprehensive chemical regulatory programs in the world. He noted that while many government agencies work together to protect workers, consumers and the environment from hazards posed by chemicals, chemical safety programs in the US are not always compatible with other countries. Given the number of countries, agencies and stakeholders involved globally, international chemicals management is very complicated. He highlighted the major benefits of GHS and noted that each country will have its own experience in implementing the GHS. Mr. Duddy expressed the pleasure of the US to support GHS capacity building and broad implementation of the GHS by the 2008 WSSD goal.

Mr. Jonathan Krueger, UNITAR, emphasised the importance of providing workers, consumers and the public with information concerning the hazards of chemicals, through national systems of labelling and classifying chemicals. He noted that the adoption of an internationally harmonised system for chemical classification and labelling represents a win-win scenario, in that it can facilitate trade and protect human health and the environment. He stressed the need to provide adequate training and technical support to developing countries and countries with economies in transition to enable them to adopt and implement GHS. He urged participants to consider the costs, benefits, implications and concrete measures required to implement GHS in the region. He concluded by thanking all workshop co-organizers, sponsors and the participants for their efforts to ensure a successful meeting.

Ms. Kim Headrick, Chair of the UN SCEGHS, stressed that the GHS provides the basis for comprehensive chemical safety programmes. She said that the first step in safe chemicals management is to understand the hazards involved in the use of chemicals and the risks that may occur throughout the life cycle. The GHS covers all hazardous chemicals and provides for the systematic use of labels and safety data sheets, providing a basis for training and health promotion. Ms. Headrick noted that the GHS was endorsed by the UN Economic and Social Council in 2003, with responsibility for maintaining the system given to the UN SCEGHS. She recognised the diverse challenges faced by countries with different levels of national infrastructure to support hazard communication systems, and highlighted global capacity building efforts underway to provide expertise at the national and regional level, including those supported by Health Canada.

1.4 Working Groups and Development of Workshop Recommendations

In the second part of the workshop, after a number of presentations, important themes and challenges that emerged were further addressed through working groups focusing on issues relating to national and regional implementation of GHS. Working groups discussed these issues on consecutive days across four key sectors (industrial workplace, agriculture, transport and consumer products) and prepared two summary reports for examination in Plenary on Tuesday and Wednesday. On both days a Brazil “side group” discussed the issues with specific reference to the Brazilian context. Summaries of the working group results are found in section 4 and the recommendations of the workshop in section 5.

2. International Initiatives and Programmes for GHS Development, Implementation and Capacity Building

This section of the report provides more detail regarding existing international initiatives and programmes for GHS development, implementation and capacity building.

2.1 Overview of the GHS

Ms. Kim Headrick (UN SCEGHS) presented the GHS to workshop participants, beginning with its structure and importance. She explained how the GHS employs a classification and communication system to provide information on the hazards associated with specific chemicals, as well as on protective measures, with the aim of allowing users to protect themselves and the environment. She highlighted that no single country can effectively manage chemical hazards without international co-operation due to the global nature of trade and identified the need for the GHS, which covers all chemicals. Countries, international organizations and chemical producers and users will all benefit from the GHS as it will enhance the protection of human health and the environment, facilitate trade, and reduce the need for duplicative testing and evaluation. She outlined the key elements of the GHS, including its classification criteria and hazard communication provisions, in particular the use of labels and safety data sheets (SDS).

Mr. Reiner Arndt (Germany) discussed the benefits of the GHS and its role in national chemical safety programmes, emphasizing that the system effectively transfers practical and reliable information about chemical hazards to users. He noted that the GHS provides a modular system of “building blocks” for the target audiences (*e.g.* consumers, workers, transport) and can assist with the provision of information for the entire chemical supply chain. The GHS can therefore provide all countries with a consistent means of classifying and labelling hazardous chemicals, and can help to ensure that coherent information is provided on all imported and exported chemicals worldwide.

2.2 Existing Capacity Building Initiatives

Mr. Jonathan Krueger (UNITAR) provided an overview of the *UNITAR/ILO Global GHS Capacity Building Programme*, noting that it was initiated in 2001 and entailed country level activities including GHS awareness raising workshops, national situation/gap analyses, and development of national GHS implementation strategies. He outlined the stages of the GHS pilot projects, noting that they are designed to assist countries in developing and implementing chemical hazard communication systems that contribute to the legal and institutional measures needed to implement the GHS. He highlighted the ongoing development of awareness raising, guidance and training materials, as well as supporting activities and services. Mr. Krueger also highlighted

the regional component of the GHS Capacity Building Programme, such as co-ordinating and supporting regional workshops, conducting needs assessment and developing regional implementation strategies.

Mr. Krueger described the *WSSD Global Partnership for Capacity Building to Implement the GHS*, initiated by UNITAR, ILO and OECD in 2002. The goal of the Partnership is to mobilize support and catalyze partnerships for concrete activities at the global, regional and national levels to strengthen capacities in developing countries and countries in transition towards effective implementation of the GHS for industrial chemicals, agricultural chemicals, chemicals in transport and consumer chemicals.⁴

⁴ More information about the Partnership can be found at <www.unitar.org/cwm/ghs_partnership/index.htm>

3. Challenges and Opportunities of GHS Implementation in Mercosur and Andean Community Countries

To provide a starting point for discussions, countries presented their experience to date regarding GHS implementation.

3.1 Status of GHS Implementation in Brazil

Mr. André Fenner, Ministry of Health, explained how Brazil's National Chemical Safety Commission included a wide number of government, private and public organisations. He outlined the Commission's responsibilities in implementing the National Programme for Chemical Safety, noting that it was the body responsible for implementing the GHS in Brazil. He described GHS related activities undertaken to date, including: the establishment of multi-stakeholder GHS working groups for Brazil and Latin America; a national GHS workshop; an assessment of challenges to implementing state of the art techniques; implementing a questionnaire on GHS; and the development of a GHS webpage on the website of the Ministry of Development, Industry and Commerce. He noted that the webpage includes legislation, relevant documents, and current information.⁵

Mr. Fenner concluded by outlining future activities towards implementation of GHS in Brazil, including:

- engagement with the producers of agricultural chemical sector;
- completion of the first GHS pilot course;
- achieving agreement between the diverse range of stakeholders to be involved in GHS implementation;
- development of communication materials and distributing the assessment of national legislation related to GHS;
- consolidation of laboratory capacity; and
- education and mobilization of diverse actors: unions, industry, government, university and consumers.

3.2 Experiences of Other Countries

A participant from Argentina indicated that Argentina's current objective is to carry out a situation analysis to determine how GHS implementation can be implemented, through the identification of suitable regulatory and administrative mechanisms. He noted that existing systems are more developed for the transport sectors. He explained how Argentina was participating in the UN SCEGHS, as well as in Mercosur working groups on the GHS.

A representative from Bolivia noted that the GHS had not yet been implemented in Bolivia, although a legal framework and supporting

⁵ <http://www.desenvolvimento.gov.br/sitio/secex/negInternacionais/claRotSubQuimicas/oquee.php/>. Workshop presentations and photos are also available on this page.

regulations were in place. He noted that Bolivia is a Party to the Basel, Rotterdam and Stockholm Conventions, and has completed a National Profile and a National Implementation Plan under the Stockholm Convention. He explained that Bolivia is currently developing a strategy for managing chemicals and hazardous wastes. Noting that the government is working with the private sector and NGOs to draft materials on packaging and labelling, he said that institutions are being established with the competence to implement the GHS, with the involvement of the Ministry of Health. On implementation, the process of certifying laboratories has begun, and training would be required for farmers, workers in warehouses and for firefighters.

A representative from Chile outlined activities undertaken to implement the GHS to date. He explained that a sub-committee had been established within the Ministry of Health, with the participation of the Ministries of Labour, Agriculture, Transport, Environment and Economics, as well as representation from civil society and trade unions. He indicated that they were in the process of reviewing the existing system for chemicals labelling and identifying the gaps that need to be addressed in order to implement the GHS. He noted a lack of consistency in the existing systems for labelling agricultural chemicals and for the transport sector, and highlighted the need to conduct an assessment of existing systems. He noted that implementation of the GHS was supported by industry due to the benefits to trade.

One of the participants from Ecuador drew attention to the establishment of their National Programme for the Management of Hazardous Chemicals in 1998. It contains technical norms enacted in 2000 that include classification procedures and standards for the transport, storage and handling of hazardous chemicals. It was noted that Ecuador lacked an integrated legal regime and technical infrastructure for the management of chemicals throughout their life cycle, as well as low accessibility of information and insufficient financial resources. She identified a need for an effective information exchange system for information on chemical products, indicating that the GHS could provide this. Another participant from Ecuador outlined some related activities undertaken by the Ministry of Health, including the registration of pesticides and pharmaceuticals, and awareness raising on risks related to pesticides. He stressed the need for training in risk awareness in the mining sector, and for training in basic toxicology. He noted that the workshop provided a valuable opportunity to learn about the GHS.

A representative of Colombia outlined existing technical standards applying to the classification of hazardous goods, the labelling of pesticides for agricultural use, the use of safety data sheets, and emergency procedures for transporting hazardous goods. Colombia's technical standards for the handling and transport of hazardous goods are based on UN standards, and pesticide labelling on Croplife's

standards. He noted that the implementation of the GHS would require the participation of many different actors, including the Ministry of Environment, Housing and Territorial Development, the Ministry of Agriculture, the Ministry of Transport, the Ministry of Commerce, Industry and Tourism, and the Ministry of Social Welfare, as well as the private sector. He identified the need for further information regarding the scope and potential benefits of the GHS, among both government and industrial actors.

A representative from Paraguay explained how a National Commission for Chemical Safety had been designed, but had not yet been implemented. He expressed the hope that Paraguay would be able to implement the GHS, noting the particular benefits that this would bring in the management of agrochemicals.

A participant from Peru indicated that while the GHS has not yet been implemented in Peru, some initiatives related to the registration of pesticides have been undertaken in the agricultural sector. He stressed the importance of labelling and the provision and use of safety data sheets in the health sector, civil defence and by firefighters. Peru is considering adoption of the UN standards for the transport of hazardous goods. He noted that implementation of the GHS in Peru will promote national harmonization of systems.

A participant from Uruguay explained that Uruguay had not yet implemented the GHS due to the lack of a legal framework for classifying and labelling chemicals outside the transport sector. He outlined actions undertaken to promote dissemination of the GHS system, including awareness raising activities at the University of Uruguay and the adaptation of one private company's hazard communication system to GHS standards. He stressed the need for greater government engagement with GHS, noted a lack of resources and knowledge and urged a sharing of experience between countries on GHS implementation.

A representative from Venezuela highlighted a lack of knowledge regarding GHS in all sectors, as well as a weak organizational structure and a lack of financial and technical resources for implementation. He identified Venezuela's legal framework as a strength, noting national standards for the regulation and control of pesticides based on AC Standard (436), as well as national standards for the classification and labeling, transport and handling of pesticides. He drew attention to the recent establishment of the inter-ministerial Presidential Commission for Chemical Safety, which will serve to develop policies and strategies for the management of dangerous and hazardous materials under the competence of each ministry.

3.3 Emergency Response in South America

Diego Gotelli, Chemical Information Centre for Emergencies, Argentina, outlined the conditions surrounding chemical emergency response in South America, noting that 70% of South America's chemical production was located in Argentina, Mexico and Brazil. He drew attention to a 2004 Emergency Response Guidebook, noting the intention to distribute the guide around South America and make it available on the internet.

4. Summary of Working Group Discussions

As a key component of the workshop, participants were asked to identify and discuss national and regional GHS implementation issues in working groups for the four key sectors (industrial workplace, agriculture, transport, and consumer products). The outcome was a summary of the issues and observations for presentation to and examination in Plenary in order to inform the development of national GHS implementation strategies and provide a basis for workshop recommendations. This section provides a brief summary of the working groups' deliberations.

Jonathan Krueger (UNITAR) presented a brief summary of the preliminary results of a "Survey of GHS Implementation and Capacity Needs in Mercosur and the Andean Community". He indicated that the results revealed the existence of some relevant legislation, usually for specific sectors, such as agricultural, workplace or transport. Similarly, both existing chemical classification systems and hazard communication systems tended to be in the agricultural and industrial chemicals sectors. All respondents indicated their intention to introduce the GHS into their national chemical management schemes. Most had either not begun consideration of implementation, with some having initiated a situation/gap analysis. In response to a question on obstacles to the implementation of the GHS, respondents identified low awareness and the lack of capacity and resources.

4.1 National GHS Implementation Issues

Working groups on the industrial, agricultural, transport and consumer sectors met to consider national GHS implementation and to identify driving forces, benefits of the GHS, legislation and infrastructure requirements, and steps towards implementation. Two side groups also met to consider the same issues related to agricultural and industrial chemicals and to transport and consumer chemicals in Brazil.

As driving forces for implementation of the GHS, the groups highlighted improved safety in the transport and storage of chemicals, the need for the harmonization of legislation across sectors, occupational safety, and pressure from consumer interest groups. In particular, the industrial working group highlighted pressure from common markets, and trade and export needs, as well as the need to facilitate emergency response and to increase the security of small firms.

All working groups noted that the benefits of GHS implementation would include the increased availability and accuracy of information. The working group on industry indicated that the GHS could serve to reduce costs through the establishment of a coherent system, noting that

it should involve multiple sectors and stakeholders and emphasize the responsibility of manufactures and importers. They stressed that industry should be assisted in making the required adjustment to the GHS system. The agriculture working group noted that the GHS could provide a useful instrument for preventing the smuggling of pesticides. The Brazil side group on agricultural and industrial chemicals identified facilitated access to markets for Brazilian exports as a possible benefit, as well as risk reduction.

On legal and infrastructural frameworks, all groups stressed that GHS implementation should build on existing frameworks. They highlighted inconsistencies in the complexity of existing legislation across sectors. The industrial working group noted potential difficulties in enforcing labelling standards and with the level of technical infrastructure. They stressed the need to improve social standards, explaining that in some countries workers receive higher wages for working with hazardous materials. The Brazil side group stressed the need for multi-sectoral and multi-stakeholder approaches.

The sectoral working groups also identified a number of obstacles to implementing GHS, including: lack of awareness; language barriers; conflicting legislation; and the lack of strategic capacity for information dissemination. They also highlighted the weak harmonization of consumer protection systems and the absence of collaborative platforms between key actors.

In discussing implementation, working groups identified the need to create greater awareness among all stakeholders through the provision of information and training. They stressed the need for the development of technical regulations in all countries of the region, and for the creation of strategic partnerships between workers, industry and international programmes. The working groups on industry and on agriculture proposed the establishment of national commissions or agencies to coordinate GHS implementation, using a multi-stakeholder and multi-sectoral approach. The working group on transport and consumer chemicals of the Brazil side group stressed the need to include all transport modes when implementing GHS in the transport sector, and to update databases. The working group on consumer chemicals suggested that implementation could be facilitated through the creation of an international network and the strengthening of consumer associations regarding risks from chemical products. They proposed the use of media as a communication tool, and suggested that plans of action for implementation be developed, including compliance deadlines. The working group on agriculture indicated that implementation should be undertaken through a regional agreement on a legal framework. However, they stressed that labelling should be in national and indigenous languages.

4.2 Regional GHS Implementation Issues

After a brief presentation on the “International Chemical Control Kit: a practical application of the GHS” by Berenice Goelzer (WHO/IPCS), the sectoral working groups on regional GHS implementation issues examined existing regional structures for chemical classification and hazard communication, obstacles, and key activities required for regional implementation of the GHS.

All working groups agreed that there would be significant regional benefits of GHS implementation, including cost reductions, increased information and knowledge resulting in more effective control and safety, simplified customs procedures with improved control of illegal traffic. In particular, the working group on agriculture highlighted the benefits of a regional strategy for pesticides, and, together with the consumer group, of developing a regional level communication strategy. The working groups noted that implementation could catalyze greater interaction between national and regional institutions and provide for an exchange of experiences. They also raised the possibility of accessing international support and of increasing the competitiveness of companies. Finally, they identified benefits in terms of decreased risks to public health and the strengthening of consumer protection associations.

The working groups identified Mercosur and CAN as existing institutions that could engage in the implementation of GHS, and considered how responsibilities may be distributed amongst them. They suggested that established groups, such as National Profile committees, ministerial committees and professional groups include GHS in their agendas. They noted the need to consider the ongoing activities of international agencies and regional cooperation agencies.

The working groups also considered obstacles to implementing the GHS, including the existence of different labeling systems for transport and different data systems, the need to harmonize legal terms and processes, language differences and a lack of information, technical capacity and awareness. They expressed concern that a lack of coordination in implementing the GHS may negatively affect trade, and noted structural differences between Mercosur and CAN. They stressed the need for a high level of political support to catalyze implementation and for development of a regional strategy.

In discussing specific activities to be undertaken in implementing GHS, the working groups proposed convening a regional working group on the GHS, with the identification of a GHS focal point in each country. They suggested incorporating GHS into the agenda’s of Mercosur and CAN, and establishing a web-based discussion forum for information exchange. They also proposed the development of specialized training courses to be given by regional GHS experts, and regional workshops

on the GHS. The working groups also proposed the integration of existing databases and the compilation of information referring to chemical substances. Specifically, the agricultural working group indicated that the national commissions for pesticides and chemical safety should urge the CAN to implement GHS.

5. Workshop Conclusions and Recommendations

Based on the deliberations in the working groups and further discussion in the Plenary, participants agreed to a number of recommendations, subject to the availability of financial resources, including national and regional follow-up activities to work towards the GHS implementation target of 2008.

The general agreements reached at the workshop are summarised below, while the national and regional follow-up activities are listed in sections 5.1 and 5.2.

Workshop participants agreed on the following general conclusions and recommendations:

- Reaffirmation of the commitment to the WSSD target of GHS implementation by 2008, provided that the obstacles noted below can be overcome.
- Agreement on the benefits of appropriate GHS implementation to facilitate trade and improve the protection of human health (including occupational aspects) and the environment.
- Agreement that national development of mechanisms for multi-sectoral approaches, with relevant civil society organisations, is essential for GHS implementation.
- Agreement that the main obstacles to implementation include: lack of awareness; lack of knowledge and information about the GHS; non-existing or fragmented/conflicting national regulations/legislation; differing regional structures; lack of resources; and lack of training.
- Agreement to undertake activities (and improve upon existing activities) to overcome these obstacles at the national and regional levels.

5.1 National Follow-up Activities

The workshop recommended the following national follow-up activities:

- Countries should raise awareness about the GHS and its importance within all relevant government agencies and among civil society, and encourage other stakeholders to do so.
- Countries that have not commenced national-level GHS implementation projects should do so. Countries interested in participating in capacity building programmes should contact

relevant international organizations (*e.g.* UNITAR, ILO).

- Countries should assign the responsibility and mandate for GHS implementation to relevant national chemical commissions/committees or GHS-specific multi-stakeholder and multi-sector working groups.
- Those who undertake GHS implementation at the national level should ensure harmonisation to the greatest extent possible between and among all public and private sectors involved in the GHS.
- Countries should analyze the legislation, regulations, administrative procedures and resources needed to implement the GHS in all relevant sectors (first, by conducting a situation and gap analysis).
- Countries should use the GHS as the basis for drafting missing legislation in relevant sectors. Existing national regulations and standards should be aligned with the GHS. Alignment of any existing transport standards should conform to the latest UN RTDG (UN Recommendations on the Transport of Dangerous Goods) and the transport sector should be made aware of the relationship between the UN RTDG and the GHS.
- Countries should ensure the incorporation of chemicals management into national sustainable development strategies (where they exist), or similar tools such as the Millennium Development Goals (MDGs).
- Participants should ensure that the workshop report and recommendations are disseminated and communicated to the highest national levels and to all relevant institutions and stakeholders in their country.
- Participants should raise awareness and greater interest in their governments to obtain high level political support needed to undertake GHS implementation activities.
- To assist with GHS implementation, those engaged in related activities should consider possible synergies and partnerships with other initiatives/agreements (*e.g.* Stockholm, Rotterdam and Basel Conventions – and Basel Regional Centres - and Montreal Protocol).
- Countries should identify funding opportunities related to chemical management in public and private sectors and also submit applications for GHS awareness raising and other implementation projects to potential donors and technical cooperation agencies.

- Countries should facilitate training to all stakeholders involved in the implementation process.
- Countries should share experiences in developing national GHS implementation strategies.
- Countries should consider membership on the UN Sub-Committee of Experts on the GHS (SCEGHS).⁶
- If the country is involved in the development or updating of a National Profile, it should review and analyse GHS implementation activities.

5.2 Regional Follow-up Activities

The workshop recommended that the following regional follow-up activities be carried out:

- Identify a national GHS focal point, and/or sectoral focal points as appropriate, responsible for regional communication and interaction. The name and contact details of the focal points should be communicated to UNITAR by 1 March 2005.
- Use corresponding national mechanisms to inform high-level regional bodies of the importance and need for GHS implementation activities (*e.g.* Joint Parliamentary Commission in Mercosur, technical committees of CAN, Ministerial meetings, etc.).
- Include GHS implementation on the agenda of CAN, Mercosur and other relevant international organisations and relevant regional committees/commissions and national committees/commissions convened under regional bodies.
- Consider convening distinct GHS groups in relevant regional agreements (*e.g.* CAN, Mercosur). These working groups could work by existing means, including by email and web-based discussion forums.
- Report workshop results to the Secretariats of Mercosur and CAN.
- Identify and contact relevant international agencies (*e.g.* UN SCEGHS, UNITAR, ILO, IPCS, PAHO) and cooperation agencies (*e.g.* GTZ, USAID) to support regional GHS implementation.

⁶ Interested parties should contact the GHS Secretariat at: United Nations Economic Commission for Europe, Transport Division, Dangerous Goods and Special Cargoes Section, Palais des Nations, 1211 Geneva 10, Switzerland. Fax. +41 22 917 0039.

- Make use of international structures, such as IFCS and APEC, to promote regional and national GHS implementation.
- Promote, through international and regional organizations, identification and training of regional GHS experts to provide support regionally and nationally, as appropriate, to various implementation committees in different countries and in different sectors.

Annex A: Workshop Agenda**Monday, 29 November 2004****Opening Session**

- 09.00 Welcome remarks by Host Government
09.10 Statement by the Representative of the UN Subcommittee of Experts on the GHS
09.15 Statement by Representative of Germany
09.20 Statement by Representative of United States
09.25 Statement by Representative of UNITAR

09.30 *Coffee break*

Session 1: International Initiatives and Programmes for GHS Development, Implementation and Capacity Building

- 10.00 The GHS: Overview Presentation, Kim Headrick, Chair of UN SCEGHS
11.00 Benefits of the GHS and its Role in National Chemical Safety Programmes, Reiner Arndt, Germany
11.30 Discussion
12.15 UNITAR/ILO GHS Capacity Building Programme and WSSD Global GHS Partnership, Jonathan Krueger, UNITAR

12.30 Discussion

12.45 *Lunch*

Session 2: Challenges and Opportunities for Implementation of GHS Capacity Building Programs in Mercosur and Andean Community Countries

- 14.00 Brazil GHS implementation status
14.30 Other Country presentations (10 minutes per country)

15.45 *Break*

16.15 Country presentations continued

17.00 Emergency Response in South America: Integration of GHS Elements, Diego Gotelli, Chemistry Information Center for Emergencies (CIQUIME), Argentina

17.15 Discussion

18.00 Close of Day 1

19.00 *Reception*

Tuesday, 30 November 2004

Session 3: National GHS Implementation Issues

08.00 Results of GHS Survey of National Situations, UNITAR

08.10 Introduction to Session and Working Groups

08.20 Session 3 Working Groups (Part I):

- (A) Industrial Chemicals
- (B) Agricultural Chemicals

[Working Groups to take breaks as needed]

10.00 Presentation of Working Groups A & B in Plenary

10.30 Session 3 Working Groups (Part II):

- (C) Chemicals in Transport
- (D) Consumer Product Chemicals

11.45 Presentation of Working Groups C & D in Plenary

12.15 Lunch

13.00 Field Visit

Wednesday, 1 December 2004

Session 4: Regional GHS Implementation Issues

09.00 International Chemical Control Toolkit: a practical application of the GHS, Berenice Goelzer, WHO/IPCS

09.20 Regional Institutional Background

09.45 Introduction to Session and Working Groups

10.00 Session 4 Working Groups (Part I):

- (A) Industrial Chemicals
- (B) Agricultural Chemicals

10.30 Coffee Break

10.45 Working Groups continue

12.00 Presentation of Working Groups A & B in Plenary

-
- 12.30 *Lunch*
- 13.30 Session 4 Working Groups (Part II):
- (C) Chemicals in Transport
 - (D) Consumer Product Chemicals
- 14.45 *Break*
- 15.00 Working Groups continue
- 16.00 Presentation of Working Groups C & D in Plenary
- 17.30 Close of Day 3

Thursday, 2 December 2004

Session 5: Workshop Conclusions and Follow -up Activities

- 09:00 Summary of Brazilian and Industry Side-meeting
- 09.15 Summary of Workshop Results
- 09.30 Agreement on National Follow-up Activities
- 10.15 *Coffee Break*
- 10.30 Development of a Strategy for Regional Harmonization of GHS Implementation – Discussion
- 12:00 Close of the Workshop

Annex B: List of Participants

1. Country Representatives

ARGENTINA

Arnaldo Juan Caldirola

Asesor en Salud y Seguridad Ocupacional
Ministerio de Trabajo y Seguridad Social
Leandro N. Alem 650 – 2 o. Piso
Buenos Aires – Argentina
Tel: + 54 11 43106055
Fax: + 54 11 43106061
Email: acaldir@trabajo.gov.ar

Eduardo Ramundo

Jefe de Sección Mercancías Peligrosas
Prefectura Naval Argentina
Av. Madero, 235 – 4to. Piso, Of. 436
Buenos Aires - Argentina
Tel: + 54 11 43187669
Fax: + 54 11 43187664
Email: eduramundo@hotmail.com

Pablo Sergio Issaly

Asesor Científico/Técnico
Secretaría Ambiente y Desarrollo Sostenible
San Martín 451
Buenos Aires - Argentina
Tel: + 54 11 43488216
Fax: + 54 11 43488624
Email: pissaly@medioambiente.gov.ar

BOLIVIA

Claudia Colomo

Área Industrial COP's
Ministerio de Desarrollo Sostenible
Calle Landaeta esq. Plaza Del Estudiante
La Paz – Bolivia
Tel: + 591 2 2148946
Fax: + 591 2 2148926
Email: claudiacolomo@yahoo.es

Maria Luisa Correa

Ministerio de la Salud y Deportes
Calle Capitan Ravelo, 2199
La Paz – Bolivia
Tel: + 591 2 2440122
Fax: + 591 2 2440122
Email: malu_correa@yahoo.es

Mario Derisk Aguirre Saavedra

Profesional para Registro de Insumos
SENASAG
Av. José Natusch V. S/N
Trainidad-Beni-Bolivia
Tel: + 591 3 4628107
Fax: + 591 3 4628107
Email: asalas@senasag.gov.bo
Registro-plaguicidas@yahoo.com

BRAZIL

André Fenner

Assessor de Acordos Internacionais e Cooperação
Técnica
Coordenação Geral de Vigilância Ambiental em
Saúde
Ministério da Saúde
SAS Q. 4 Bloco N Sala 1001
Brasília – DF – Brasil
Tel: + 55 61 3146441
Fax: + 55 61 314 6403
Email: andre.fenner@funasa.gov.br

André Santos Junqueira

Assessor Técnico
Ministério do Meio Ambiente
Espalanada dos Ministérios Bloco B Sala 818
Brasília – DF – Brasil
Tel: + 55 61 3171144
Fax: + 55 61 3171944
Email: andre.junqueira@mma.gov.br

Arline Sidneia Arcuri

Diretora Técnica
FUNDACENTRO
Rua Capote Valente, 710
São Paulo – SP – Brasil
Tel: + 55 11 30 66 60 00
Fax: + 55 11 30 62 40 27
Email: arline@fundacentro.gov.br

Guilherme Franco Netto

Coordenador Geral de Vigilância Ambiental em
Saúde
Ministério da Saúde
SAS Q. 4 Bloco N Sala 1001
Brasília – DF – Brasil
Tel: + 55 61 3146404
Fax: + 55 61 314 6403
Email: Guilherme.netto@funasa.gov.br

Hearle Vieira Calvão

Analista de Comércio Exterior
Ministério do Desenvolvimento, Indústria e
Comércio Exterior
Esplanada dos Ministérios Bloco I, sala 713
Brasília – DF - Brasil
Tel: + 55 61 21097620
Fax: + 55 61 21097305
Email: hearle.calvao@desenvolvimento.gov.br

Julio César Baena

Analista de Comércio Exterior
Departamento de Comércio Exterior - DEINT
Ministério do Desenvolvimento, Indústria e
Comércio Exterior
Esplanada dos Ministérios Bloco I, sala 713
Brasília – DF - Brasil
Tel: + 55 61 21097620
Fax: + 55 61 21097385
Email: julio.baena@desenvolvimento.gov.br

Julio Sérgio de Britto

Coordenador de Fiscalização de Agrotóxicos
Ministério da Agricultura, Pecuária e
Abastecimento
Esplanada dos Ministérios Bloco D, Anexo A, Sala
340, Brasília – DF – Brasil
Tel: + 55 61 2182445
Fax: + 55 61 2255341
Email: jsbritto@agricultura.gov.br

Lílian Martins

Analista Ambiental
IBAMA
SCEN – Trecho 2 – Edifício Sedo IBAMA
Brasília – DF - Brasil
Tel: + 55 61 3161310
Fax: + 55 61 2250445
Email: lilian.martins@ibama.gov.br

Luzeni Rego

Analista de Comércio Exterior
Ministério do Desenvolvimento, Indústria e
Comércio
Esplanada dos Ministérios Bloco J sala 105
Brasília – DF - Brasil
Tel: + 55 61 21097407
Fax: + 55 61 21097286
Email: luzeni.souza@desenvolvimento.gov.br

Maria Isabel d'Ascensão

Regulador
Agência Nacional de Transportes Terrestres
SBN Quadra 2 Bloco C
Brasília – DF - Brasil
Tel: + 55 61 4121202
Fax: + 55 61 4101189
Email: maria.dascensao@antt.gov.br

Maria Selma Macedo

Analista de Regulação
Agência Nacional de Transporte Terrestres - ANTT
SBN Quadra 2 Bloco C
Brasília - DF
Tel: + 55 61 4121205
Fax: + 55 61 4101189
Email: maria.macedo@antt.gov.br

Railson Oliveira Motta

Assessor Técnico Especializado
Ministério do Meio Ambiente - MMA
Esplanada dos Ministérios, Bloco B
Brasília – DF - Brasil
Tel: + 55 61 3171144
Fax: + 55 61 3171944
Email: railson.motta@mma.gov.br

Rogério de Oliveira Corrêa

Engenheiro Químico – Especialista
Instituto Nacional de Metrologia, Normalização e
Qualidade Industrial - INMETRO
Rua Santa Alexandrina, 416 - 5º andar
Rio de Janeiro – RJ - Brasil
Tel: + 55 21 25632824
Fax: + 55 21 25026542
Email: rocorrea@inmetro.gov.br

Rosiver Pavan

Presidente
FUNDACENTRO
Rua Capate Valente, 710
São Paulo – SP – Brasil
Tel: + 55 11 30 66 60 00
Fax: + 55 51 30 62 40 27
Email: rosiver.pavan@fundacentro.gov.br

Roque Mion Puiatti

Coordenador-Geral de Normatização e Programas -
DSST
Ministério do Trabalho e Emprego
Esplanada dos Ministérios Bloco F, Anexo 1º andar
- Sala 147
Brasília – DF – Brasil
Tel: + 55 61 3176689
Fax: + 55 61 2243538
Email: roque.puiatti@mte.gov.br
rpuiatti@via-rs.net

CHILE

Ingrid Soto

Dirección Nacional del Trabajo
Ministerio del Trabajo
Agustinas 1253 – 5to. Piso Of. 501
Santiago de Chile - Chile
Tel: + 56 2 6749340
Fax: + 56 2 6749325
Email: isotoa@dt.gob.cl

Julio Monreal

Jefe de Departamento de Salud Ambiental
 Ministerio de Salud
 Mac. Iver - 459, 8.Piso
 Santiago de Chile - Chile
 0056 2 6300575, 6300625
 0056 2 6649150
 Email: jmonreal@netline.cl
 jmonreal@minsal.gov.cl
 jmonreal@minsal.cl

Jorge Troncoso

Comisión Nacional del Medio Ambiente
 Rua Teatinos, 254
 Santiago de Chile – Chile
 Tel: + 56 2 2405686
 Email: troncoso@conama.cl

COLOMBIA**Edgar Orlando Moreno González**

Químico Industrial - División Arancel TECN ING.
 PUB III
 DIAN
 CRA 7er No. 6 – 54 Piso II
 Bogotá, D.C. - Colombia
 Tel: + 57 1 6079801
 Fax: + 57 1 6079694
 Email: emorenog@dian.gov.co

Magdalena Galindo

Asesora Comité de Importaciones
 Ministerio de Comercio, Industria y Turismo
 Calle # 28 13A -15 Piso 16
 Bogotá - D.C. - Colombia
 Tel: + 57 1 3239904
 Fax: + 57 1 3368806
 Email: magdalenag@mincomercio.gov.co

Jorge Enrique Bejarano Jiménez

Coordinador Centro de Información de Seguridad
 sobre Productos Químicos - CISPROQUIM
 Consejo Colombiano de Seguridad
 Carrera 20 No. 39-62
 Bogotá - D.C. – Colombia
 Tel: + 57 1 2886355 Ext. 142
 Fax: + 57 1 2884367
 Email: jebejaranoj@laseguridad.ws

ECUADOR**Milton Logroño Barrionuevo**

Ministerio de Salud Pública
 Comité Nacional para la Gestión de las Sustancias
 Químicas
 Buenos Aires 340 y Manuel Larrea - Edif.
 Equinoccio - 4. Piso
 Quito - Ecuador
 Tel: + 593 2 2507762
 Fax: + 593 2 2507762
 Email: mlogronio@msp.gov.ec
 melogroniob@hotmail.com

Paulina Villamar Espín

Técnico Control Productos Químicos
 Ministerio del Ambiente
 Av. Eloy Alfaro y Amazonas, Edif. MAG, P7
 Quito – Ecuador
 Tel: + 593 2 253269
 Fax: + 593 2 3227902
 Email: pavies@hotmail.com
 pvillamar@ambiente.gov.ec

PARAGUAY**Guillermo Ale Pineda Atet**

Director de Evaluación de Impacto Ambiental
 Secretaría del Ambiente SEAM
 Punto Focal del Convenio de Estocolmo
 Avda. Madame Lynch 3500 Campo Grande
 Asunción – Paraguay
 Tel: + 595 21 615813
 Fax: + 595 21 615806
 Email: camells06@yahoo.es
 dioxifuranparaguay@webmail.com.py

Gustavo Evelio González Chávez

Técnico Evaluador
 Secretaría del Ambiente SEAM
 Avda. Madame Lynch 3500 Campo Grande
 Asunción – Paraguay
 Tel: + 595 21 615813
 Fax: + 595 21 615806
 Email: gabinete@seam.gov.py

Susana Cabrera

Técnica del Departamento de Normalización
 Instituto Nacional de Tecnología y Normalización
 INTN
 Avda. Artigas 3973 y Gral. Roa
 Asunción – Paraguay
 Tel: + 595 21 290160
 Fax: + 595 21 290873
 Email: normas@intn.gov.py

PERU**Francisco Guevara Robles**

Especialista en Sustancias Químicas Peligrosas
 Dirección General de Salud Ambiental - DIGESA
 Av. Las Águilas No. 376 - Santa Anita
 Lima - Peru
 Tel: + 00511 4428353, 4400399
 00511 4428353
 Email: fguevara@digesa.sld.pe
 fraquero100@yahoo.com
 eporras@produce.gob.pe

URUGUAY**Fabián Benzo**

Consultor
 American Chemical Industry
 Av. General Flores 2124
 Montevideo - Uruguay
 Tel: + 598 2 9291308
 Fax: + 598 2 9241906
 Email: fbenzo@fq.edu.uy

VENEZUELA**Carmen Marín Quijada**

Coordinadora de Normalización
 FONDONORMA
 Avda. Andrés Bello, Torre Fondo Común, Piso 11,
 Caracas - Venezuela
 Tel: + 58 212 5754111 ext. 209
 Fax: + 58 212 5765004
 Email: cmarin@fondonorma.org.ve

Natacha Mujica de García

Directora General de Higiene y Ergonomía
 Ministerio del Trabajo - INPSASEL
 Av. Principal de Cumbres de Curumo Res. Oliflor
 Apt. 14
 Caracas - Venezuela
 Tel: + 58 0212 565 8479 / + 58 0212 977 4985
 Fax: + 58 0212 565 0957 / + 58 0212 5650957
 Email: mujican@hotmail.com

Whitman Machado

Director de Evaluación Ambiental
 Ministerio del Ambiente y Recursos Naturales -
 MARN
 Centro Simón Bolívar, Torre sur, piso 28, El
 Silencio
 Caracas - Venezuela
 Tel: + 58 0212 4081150
 Fax: + 58 0212 4084885
 Email: wmachado@marn.gov.ve

2. International Organizations**UNITAR****Jonathan Krueger**

Programme Officer, Chemical and Waste
 Management
 United Nations Institute for Training and Research
 (UNITAR)
 Palais des Nations
 CH-1211 Geneva 10 - Switzerland
 Tel: + 41 22 917 8166
 Fax: + 41 22 917 8047
 Email: jonathan.krueger@unitar.org

WORLD HEALTH ORGANIZATION**Berenice Goelzer**

Consultant (representing WHO), WHO
 Rua Pedro Chaves Barcellos, 745/801
 Porto Alegre - RS - Brasil
 Tel: + 55 51 33335010
 Email: berenice@goelzer.net

3. Resource Persons**David Meron**

Political/Economic Section
 US Consulate - São Paulo
 Rua Henry Dunant, 700,
 Chácara Santo Antônio,
 São Paulo- SP, 04709-110
 Tel: + 55 11 5186-7000
 Fax: + 55 11 5186-7199
 E-mail: contact@embaixadaamericana.org.br

Diego Gotelli

Director
 Chemistry Information Center for Emergencies
 (CIQUIME)
 Juan Bautista Alberdi 2986
 Buenos Aires - Argentina
 Tel: + 54 11 46131100
 Fax: + 54 11 46133707
 Email: dgotelli@ciquime.org.ar

Kim Headrick

Senior International Harmonization and Policy
 Advisor
 Health Canada
 A.L. 3508D. 123 Slater St
 Ottawa, Ontario KIA OK9 - Canada
 Tel: + 1 613 9529597
 Fax: + 1 613 9461100
 Email: kim_headrick@hc-sc.gc.ca

Patrick Duddy

Consul General
 US Consulate – São Paulo
 Rua Henry Dunant, 700,
 Chácara Santo Antônio,
 São Paulo- SP, 04709-110
 Tel: + 55 11 5186-7000
 Fax: + 55 11 5186-7199
 E-mail: contact@embaixadaamericana.org.br

Reiner Arndt

Head of Division
 Institute for Occupational Safety and Health
 Friedrich Henkel Weg 1-25
 44149 Dortmund – Germany
 Tel: + 49 231 9071 2279
 Fax: + 49 231 9071 2611
 Email: arndt.reiner@baua.bund.de

Viktor U. Dohms

GTZ Agency Brazil
 SCN Quadra 1 Bloco C Sala 1.501
 Ed. Brasília Trade Center
 70.711-902 Brasília - DF - Brasil
 Tel.: +55 61 2101 2162
 Fax: +55 61 2101 2166
 E-mail: viktor.dohms@gtz.de

4. Other Participants**Clóvis Sanches Silvestre**

Assessor Técnico Especialista Higiene – SSMA
 Associação Brasileira da Indústria Química -
 ABIQUIM
 Rua Santo Antonio, 184 - 18º andar
 São Paulo – SP – Brasil
 Tel: + 55 11 32421144
 Fax: + 55 11 32423818
 Email: clovis@abiquim.org.br

Fernandes José dos Santos

Assessor Técnico
 ASSOCIQUIM - Associação Brasileira de
 Distribuidores de Produtos Químicos e
 Petroquímicos
 Rua Maranhão, 598 - 4o. Andar
 São Paulo – SP - Brasil
 Tel: + 55 11 38253211
 Fax: + 55 1138258870
 Email: sincoquim@associquim.org.br
 prodir@associquim.org.br

Geraldo André Thurler Fontoura

Bayer S.A.
 Bayer Material Science Latin América
 Estrada Boa Esperança, 650
 Belford Roxo – RJ – Brasil
 Tel: + 55 21 27625600
 Fax: + 55 21 27612951
 Email: Geraldo.fontoura@bayer.com.br

Gilmar da Cunha Trivelato

Pesquisador Titular
 FUNDACENTRO
 Rua Guajajaras, 40 - 14o. Andar
 Belo Horizonte – MG - Brasil
 Tel: + 55 31 32733766
 Fax: + 55 31 32735313
 Email: gilmar.trivelato@uol.com.br

Gisette Nogueira

Assessora Técnica
 Associação Brasileira da Indústria Química –
 ABIQUIM
 Rua Santo Antonio, 184 - 18º andar
 São Paulo – SP - Brasil
 Tel: + 55 11 32421144
 Fax: + 55 11 32423818
 Email: mkos@abiquim.org.br

Glória Benazzi

ASSOCIQUIM - Associação Brasileira de
 Distribuidores de Produtos Químicos e
 Petroquímicos
 Rua Maranhão, 598 -4o. Andar
 São Paulo – SP - Brasil
 Tel: + 55 11 38253211
 Fax: + 55 11 38258870
 Email: sincoquim@associquim.org.br

Iride Maria Lago

Registros de Segurança e Meio Ambiente
 Oxiteno S.A.
 Av. Brigadeiro Luiz Antonio, 1343
 São Paulo – SP – Brasil
 Tel: + 55 11 31776933
 Fax: + 55 11 31776633
 Email: imalago@estadao.com.br

Jose Antonio Galves

Representante do SITIVESP
 Av. Santo Amaro, 6227
 São Paulo – SP – Brasil
 Tel: + 55 11 55213185 ou 56864003
 Fax: + 55 11 56862678 ou 56868945
 Email: jagalves@uol.com.br
 jagalves@sti.com.br

Lígia Fruchtengarten

Médica Toxicologista
Poison Control Centre of São Paulo
Av. Francisco de Paula Quintanilha Ribeiro, 860
São Paulo – SP - Brasil
Tel: + 55 11 50125311
Fax: + 55 11 50122399
Email: lfruchtengarten@uol.com.br

Lígia Maria Sendas Rocha

Assessora Técnica de Fiscalização
Conselho Regional de Química – IV Região
Rua Oscar Freire, 2039
São Paulo – SP – Brasil
Tel: + 55 11 30616024
Fax: + 55 11 30616015
Email: ligia.rocha@crq4.org.br

Marcelo Kós Silveira Campos

Diretor Técnico
Associação ABIQUIM - Brasileira da Indústria
Química
Rua Santo Antonio, 184 - 18º andar
São Paulo – SP - Brasil
Tel: + 55 11 32421144
Fax: + 55 11 32423818
Email: mkos@abiquim.org.br

Marcos Baptistucci

Gerente de Saúde, Segurança e Meio Ambiente
Associação Brasileira da Indústria de Higiene
Pessoal, Perfumaria e Cosméticos - ABIHPEC
Av. Paulista 1313 Conjunto 1080
São Paulo – SP – Brasil
Tel: + 55 41 3817065
Fax: + 55 41 3817288
Email: marcosvb@boticario.com.br

Neli Pires Magnanelli

Tecnologista
FUNDACENTRO
Rua Capote Valente, 710
São Paulo – SP – Brasil
Tel: + 55 11 38137350
Fax: + 55 11 38628017
Email: nelimagna@yahoo.com.br

Nelson Luiz Gimenez

Laboratório AKZONOBEL - Akzo Nobel
Repintura Automática Ltda
Associação Brasileira da Indústria Química -
ABIQUIM
Rua Assunta Sabattini Rossi
São Paulo – SP – Brasil
Tel: + 55 11 43461885
Fax: + 55 11 43479393
Email: nelson.gimenez@sbc.akzonobel.com

Rose Hernandes

Diretora de Meio Ambiente
Associação Brasileira da Indústria de Higiene
Pessoal, Perfumaria e Cosméticos – ABIHPEC
Av. Paulista, 1313 Conjunto 1080
São Paulo – SP – Brasil
Tel: + 55 11 33729885
Fax: + 55 11 32665387
Email: rose.hernandes@abihpec.org.br

Sérgia de Souza Oliveira

Universidade de São Paulo – USP
Rua Dr. Antonio A.B. Penteado, 239 ap. 114
Jardim Elite
Piracicaba – SP - Brasil
Tel: + 55 19 34269119
Email: sergia@uol.com.br

Sidney Curty Machado

Engenheiro
Instituto Nacional de Metrologia, Normalização e
Qualidade Industrial - INMETRO
Avenida Nossa Senhora das Graças, 50
Xerém – RJ - Brasil
Tel: + 55 21 26799098
Fax: + 55 21 26791529
Email: scmachado@inmetro.gov.br

Tais Pitta Cotta

Professora
Universidade de Brasília – Instituto de Química
Caixa Postal 4478.
Brasília – DF - Brasil
Tel: + 55 61 81339000
Fax: + 55 61 2734149
Email: pittgc@unb.br

Vanessa Nunes da Silva

Analista de Registro
VIGNABRASIL
Rua Dr. Bacelar, 173 Sala 72
São Paulo – SP – Brasil
Tel: + 55 11 33711120
Fax: + 55 11 50842662
Email: vanessa@vignabrasil.com.br

Annex C: List of Acronyms

APEC	Asia Pacific Economic Cooperation
CAN	Andean Community of Nations
ECOSOC	United Nations Economic and Social Council
FAO	Food and Agriculture Organization of the United Nations
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
GTZ	German Agency for Technical Cooperation
ICSC	international chemical safety card
IFCS	Intergovernmental Forum on Chemical Safety
ILO	International Labour Organization
IOMC	Inter-Organization Programme for the Sound Management of Chemicals
IPCS	International Programme on Chemical Safety
ISO	International Organization for Standardization
Mercosur	Common Market of the South
NGO	Non-governmental organization
PAHO	Pan American Health Organization
PIC	Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
POPs	Persistent Organic Pollutants
SCEGHS	United Nations Sub-committee of Experts on the GHS
SCETDG	United Nations Sub-committee of Experts on the Transport of Dangerous Goods
SDS	safety data sheet
SME	Small and medium sized enterprise
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
UNITAR	United Nations Institute for Training and Research
UNRTDG	United Nations Recommendations on the Transport of Dangerous Goods
USAID	United States Agency for International Development
WHO	World Health Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization



The United Nations Institute for Training and Research (UNITAR) was established in 1965 as an autonomous body within the United Nations with the purpose of enhancing the effectiveness of the United Nations through appropriate training and research. UNITAR is governed by a Board of Trustees and is headed by an Executive Director. The Institute is supported by voluntary contributions from governments, intergovernmental organizations, foundations and other non-governmental sources.

Since 1 July 1993, pursuant to General Assembly Resolution 47/227, UNITAR Headquarters have been transferred to Geneva. UNITAR has the following functions:

- To ensure liaison with organizations and agencies of the United Nations and with permanent missions accredited in Geneva, New York and other cities hosting United Nations Institutions and to establish and strengthen cooperation with faculties and academic institutions.
- To conduct training programmes in multilateral diplomacy and international cooperation for diplomats accredited in Geneva and the national officials, involved in work related to United Nations activities.
- To carry out a wide range of training programmes in the field of social and economic development which include:
 - a. Training Programme in Multilateral Diplomacy, Negotiations and Conflict Resolution;
 - b. Environmental and Natural Resource Management Training Programmes;
 - c. Training Programme on Debt and Financial Management with special emphasis on the Legal Aspects;
 - d. Training Programme on Disaster Control;
 - e. Training Programme on Peace-Keeping, Peace-Making, and Peace-Building.

Street Address:
11-13 chemin des
Anémones
1219 Châtelaine
Geneva
SWITZERLAND

Postal Address:
UNITAR
Palais des Nations
CH-1211 GENEVA 10
SWITZERLAND

Tel.: +41 22 917 1234
Fax: +41 22 917 8047
Website: www.unitar.org