

Report on legal and institutional frameworks for the integrated management of chemicals in Latin America and the Caribbean



Intergovernmental Network on Chemicals and Waste for Latin America and the Caribbean

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EXECUTIVE SUMMARY

Driven to comply with international agreements and the objectives on chemical safety of the 2030 Agenda, the Latin America and the Caribbean (LAC) countries are working on integrating chemicals¹ and waste policies in their environmental legal framework. Given the evident increase in production and use of chemicals in recent decades and the limited institutional capacities to address the associated challenges, countries should develop a regulatory framework with a preventive and integrated approach, considering international experiences and best practices.

This report was developed within the framework of the Intergovernmental Network on Chemicals and Waste for Latin America and the Caribbean (the Network) in response to the need expressed by different countries to identify examples of existing regulatory and institutional frameworks for the sound management of chemicals and waste in the region.

The information presented in this report was collected through a survey to the National Focal Points of the Network. An exhaustive analysis of selected legal instruments and other documents available on official websites is also included in the report. Furthermore, it presents the following case studies to illustrate trends and good regulatory practices that could be useful for other countries during their regulatory development process:

- Case 1: 2015-2020 National Action Plan for improving the sound management of chemicals - Suriname (2014).
- Case 2: Implementation of the Globally Harmonized System of Classification and Labeling of Chemicals - Colombia (2018).
- Case 3: Pollutant Release and Transfer Register (PRTR) - Chile (2018).
- Case 4: Integrated Chemicals Management Draft Bill - Peru (2020).

To present information in a systematic and clear manner, it is classified according to the stage of the life cycle and the type or group of chemicals covered. Main regulatory trends in the region highlighted in the report are:

- **Progress is being made in the development of regulations for the sound management of chemicals.** Several countries in the region have already endorsed or are drafting long-term national strategies or policies that address more than one stage of the chemicals' life cycle.
- **Heterogeneity in the implementation of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).** Although some countries are making progress in its implementation, there is no coordinated approach to implement the GHS in the region. The GHS is usually applied in the industrial sector, but certain countries are taking actions to modify and harmonize current labeling systems for other groups of chemicals with the GHS.
- **Limited implementation of Pollutant Release and Transfer Registers (PRTRs).** Both the Escazú Agreement² and the intentions of some countries to join the Organization for Economic Cooperation and Development (OECD) can promote the adoption of PRTRs

¹ For the purpose of this report “chemicals” includes chemical substances, mixtures and products, and “chemical substances” is used when referring to each component of mixtures and products.

² Official website: <https://www.cepal.org/es/acuerdodeescazu>

in the region. However, very few countries have PRTRs in place and several are still assessing the feasibility of its implementation at the national level.

- **New initiatives to develop national inventories and registers of industrial chemicals.** Some countries in LAC have started the development of regulations to establish inventories/registers of industrial chemicals and mechanisms for risk assessment and risk management. There is no coordination at the regional level on this matter.

The report also highlights the following lessons learned and best practices to consider when moving forward with regulatory developments:

- **Related to the general framework for chemicals:** Promote the exchange of experiences among countries; establish intersectoral coordination mechanisms; foster regional coordination through existing platforms such as trade blocs, networks, or forums.
- **Related to GHS:** Develop tools to facilitate its effective implementation; if no system is in place, adopt the GHS on a voluntary basis through technical standards.
- **Related to Pollutant Release and Transfer Registers (PRTRs):** Identify and benefit from capacity-building opportunities offered by international organizations, LAC countries, and others; develop a regional implementation strategy within the framework of the Escazú Agreement.
- **Related to inventories/registers of industrial chemicals, risk assessment, and risk management mechanisms:** Adapt existing information and risk analysis mechanisms to national and regional conditions; formally establish intergovernmental cooperation at the national level; take advantage of the resources and information available in the region through regulatory cooperation.

Annex 1 presents a list of regulatory instruments for the management of chemicals adopted or drafted in the last decade in 10 countries of the region. It was elaborated thanks to the contributions of the National Focal Points and bibliographical research. It is expected that this list can serve as a baseline for future mapping of regulatory frameworks in the region.

Finally, Annex 2 provides a non-exhaustive list of relevant guidance documents from recognized international sources on the sound management of chemicals throughout their life cycle. The list is focused on guidance to support the development of legislation.



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1. INTRODUCTION

1.1 Chemicals³ in the context of the Latin America and the Caribbean region

Chemicals are fundamental components of the world we live in, from pharmaceuticals and pesticides to the production of cars, computers, and clothing. Products that contain chemical substances contribute to global health, food safety, productivity, and quality of life.

Bibliography indicates a growth trend in the production and consumption of chemicals, which is associated with the increase in global income and the expansion of the middle class. According to the Global Chemicals Outlook II (GCO-II)⁴, in 2018 the substances registered in the Chemical Abstracts Service (CAS) raised to 142 million, although only a fraction is placed on the market. A report from the United Nations Environment Program (UNEP) and the International Council of Chemical Associations (ICCA) estimated a total of 40,000 to 60,000 substances in use -considering industrial chemicals only- of which 6,000 accounts for 99% of the total volume sold.

In the Latin America and the Caribbean region, economies considerably depend on sectors that involve intensive chemical consumption such as agriculture, mining, oil industry, and manufacturing. The GCO-II mentions, for instance, that in recent years there has been an increasing trend in the production and use of pesticides in the region -particularly South America-, mainly due to the growing global demand for food.

Although some countries in the region have primary chemical production (e.g., Argentina, Brazil, Chile, and Mexico), secondary production is more frequent, such as the formulation of pesticide mixtures and the production of household cleaning products, drugs, and cosmetics. In this regard, Argentina, Brazil, Colombia, Chile, and Mexico, among others, are part of the ranking of 21 countries with marked growth in the production of pharmaceuticals⁵.

Most of the companies in the region (99.5%) are small and medium-sized enterprises (SMEs) and are significant generators of employment (60% of formal employment), according to the Organization for Economic Cooperation and Development (OECD) and the Development Bank of Latin America (CAF)⁶. On occasions, expanding into foreign markets encourages these companies to apply the best practices associated with the sound management of chemicals. However, what is most commonly seen is rather that many of these companies do not have sufficient knowledge nor a clear strategy about the adequate handling of chemicals and waste.

In this context, it is necessary to recognize that many chemicals are classified as hazardous and can cause significant adverse impacts on human health and the environment when they

³ For the purpose of this report “chemicals” includes chemical substances, mixtures and products, and “chemical substances” is used when referring to each component of mixtures and products.

⁴ United Nations Environment Programme [UNEP], (2019). Global Chemicals Outlook II. From Legacies to Innovative Solutions: Implementing the 2030 Agenda for Sustainable Development. <https://www.unenvironment.org/resources/report/global-chemicals-outlook-ii-legacies-innovative-solutions>

⁵ European Federation of Pharmaceutical Industries and Associations [EFPIA], (2019). The Pharmaceutical Industry in Figures. <https://www.efpia.eu/media/412931/the-pharmaceutical-industry-in-figures-2019.pdf>

⁶ OECD and CAF, (2019). Latin America and the Caribbean 2019: Policies for Competitive SMEs In the Pacific Alliance and Participating South American Countries. <https://www.oecd-ilibrary.org/docserver/d9e1e5f0-en.pdf?expires=1597935149&id=id&accname=guest&checksum=CB2D3E1ABACA4F1E795FFC49E1489992>

are not properly managed. This situation is complex in countries that have limited resources and deficient institutional capacity for their effective control. Countries of the region should consider a preventive and integrated approach for the management of chemicals during their regulatory development processes and assume this approach as a contribution to national economic development. Risks from chemicals to people and the environment, and economic costs associated with their proper management, are avoided or minimized by applying prevention mechanisms that are based on scientific evidence and agreed upon among stakeholders and trade partners.

1.2 Sound management of chemicals at the international level

Many efforts have been carried out at the international level to promote the sound management of chemicals for the protection of human health and the environment. International agreements usually define the strategies and instruments that countries should adopt to ensure the proper management of these products.

The 1992 Rio Summit (formally the United Nations Conference on Environment and Development, held in June 1992 in Rio de Janeiro) has been the starting point for many of the international efforts to address the sound management of chemicals. At that meeting, heads of government from more than 150 countries adopted Agenda 21, a comprehensive document on sustainable development with explicit responsibilities for the States. Chapter 19 of the Agenda, "Environmentally sound management of toxic chemicals, including prevention of illegal international traffic in toxic and dangerous products" includes a global strategy to achieve the sound management of these products throughout their life cycle.

Agenda 21 addressed the subject considering six pillars: harmonized classification and labeling; exchange of information on products and risks; risks evaluation; risk reduction; capacity building for the management of chemicals; and prevention of illegal international trade.

Later on, the Strategic Approach to International Chemicals Management (SAICM) was agreed at the first International Conference on Chemicals Management (ICCM) in 2006. This policy framework, which aims to promote chemical safety worldwide, comprises the Dubai Declaration (a high-level political commitment) and the Global Policy Strategy (scope, objectives, agreements of implementation, and amendments). The Global Action Plan was added to these instruments as a tool for supporting the implementation of SAICM.

SAICM addresses the management of chemicals from a holistic, comprehensive and integrated perspective. This means that it considers potential risks to health and the environment at all stages of the life cycle of chemicals, proposing appropriate measures to manage and reduce those risks. Several national benefits of applying such an integrated approach are highlighted:

- Overlaps and inconsistencies between agencies and programs are minimized;
- Communication is improved by contributing to the exchange of information among relevant stakeholders and by promoting public awareness;
- The protection of human health and the environment is increased, by guaranteeing that the proper management of chemicals reaches all stages of their life cycle, avoiding transferring problems from one stage to another;



- Increasing chemical safety helps to fight poverty, protect vulnerable groups and human rights, and promote public health and human security.

At the Rio+20 Conference in 2012, the international community launched the development of a set of Sustainable Development Goals (SDGs), based on the Millennium Goals of the year 2000, but with a greater global implication. As a result, more than 150 States adopted in 2015 the 2030 Agenda for Sustainable Development, which includes 17 SDGs⁷. The environmentally sound management of chemicals is linked to one or more dimensions of all the SDGs. For example, chemicals risk assessment and risk management contribute to the environmental protection and safety of workers and users, including children's health protection.

Specifically, the sound management of chemicals is addressed in target 12.4, which is part of SDG 12: Responsible consumption and production. It also contributes to target 3.9 on reducing deaths from pollution, target 6.3 on water quality, target 9.4 on sustainable industries, and target 11.6 on reducing the impacts of cities on the environment.

Likewise, some specific initiatives also contribute to the fulfillment of other objectives and goals, for example:

- The control of agrochemicals and the adoption of sustainable pest control mechanisms is a contribution to target 2.4 on sustainable food production systems and resilient agricultural practices;
- Actions on accident prevention, preparedness, and response contribute to target 11.5 on reducing the number of deaths and people affected, and economic losses due to disasters;
- The Pollutant Release and Transfer Registers (PRTRs), in addition to contributing to the reduction of pollution, facilitate the achievement of goal 12.5, which aims to substantially reduce the generation of waste through prevention, reduction, recycling, and reuse.

1.3 Objectives of the report

The main objective of this document is to describe regulatory trends in Latin America and the Caribbean (LAC) related to the **integrated management of chemicals** and to present some specific case studies. Furthermore, it includes a compendium of policy instruments and regulatory projects and a list of relevant guidance documents from recognized international sources.

Information in the report could serve countries as a consultation tool to enhance their understanding of regional trends and benefits of implementing regulatory frameworks for the integrated management of chemicals, to learn from other experiences, and to obtain useful recommendations for their regulatory development processes. In parallel, it is expected that this report promotes technical cooperation and information exchange within the framework of the Intergovernmental Network on Chemicals and Waste in Latin America and the Caribbean⁸.

⁷ Official website: <https://www.un.org/sustainabledevelopment/>

⁸ The Intergovernmental Network on Chemicals and Waste for Latin America and the Caribbean was established within the framework of the XX Forum of Ministers of Environment of Latin America and the Caribbean (Cartagena, Colombia, 28-31 March 2016), as per Decision 8. The Network is comprised by the governmental focal points nominated by the countries in the region, and by other stakeholders related



1.4 Scope

The report compiles information on some legal instruments that specifically address the management of chemicals in an integrated manner, which means that they address a type or group of chemicals throughout one or more stages of their life cycle. More detail on life cycle stages and types or groups of substances considered in the report is presented in the “Methodology” section.

This document is not an exhaustive analysis of the existing instruments in the region. It rather highlights some examples of national efforts to promote the integrated approach for the management of chemicals. It should be noted that some national policies or regulations may not be fully represented.

From a life cycle perspective, chemicals that are discarded after use or non-intentional by-product chemicals that become waste must be treated in an environmentally sound manner. However, this report only focuses on the stages prior to the final disposal or elimination stage.

Special attention has been given to policies and legal instruments focused on the **regulation of industrial chemicals**⁹, since there are major regulatory gaps in the region for this group of chemicals.

1.5 Methodology

For the development of this report, information on recent regulatory instruments related to the sound management of chemicals was collected through a survey conducted in 2020 among the National Focal Points of the Intergovernmental Network on Chemicals and Waste for Latin America and the Caribbean (the Network). In addition, an exhaustive analysis of legal instruments identified and available through official websites, and of the most relevant guidance documents included in the report, was undertaken.

The following legal instruments were considered: regulations issued by official bodies (executive or legislative); regulatory/normative projects formally presented to the Congress/issuing body; projects that went through public consultation instances; technical or voluntary standards or agreements; and economic instruments such as labels, fees or others.

Case studies were selected considering their representativeness of trends and good regulatory practices suggested by international organizations, and their value to other LAC countries for their regulatory development process.

Chemicals’ life cycle stages studied in this report, and their corresponding regulatory aspects were classified as follows:

with the scope and purpose of the Network. Official website: <https://www.unenvironment.org/es/regiones/america-latina-y-el-caribe/iniciativas-regionales/red-intergubernamental-de-quimicos-y>

⁹ The following categories are usually excluded from regulations: active ingredients in pesticides and pharmaceuticals, waste, non-isolated intermediates, polymers (except monomers and additives), natural substances and other chemicals regulated by specific regulations.

- **Production:** Occupational safety; accident prevention and response; hazard identification, classification, and labeling; contaminated sites; emissions and releases;
- **Placing on the market:** Registers and inventories of chemicals; risk assessment and risk management;
- **Trade:** Import and export regulations; illegal trade;
- **Transportation:** Signals and labels; accident prevention and response;
- **Consumption/Use:** Chemicals in products; restrictions and bans on the use of specific substances and products;
- **End of life¹⁰:** Transportation, treatment, and disposal of obsolete or discarded products.

The classification used for the types or groups of chemicals is:

- **Industrial chemicals** (includes “industrial use”, “professional use”, “work environment”);
- **Chemicals in agriculture** (agrochemicals, pesticides, fertilizers, and other formulations);
- **Pollutants** (based on their transfer to the environment);
- **Specific chemicals** (for example, subject to international agreements);
- **Chemicals for consumption/end use** (includes consumer products).

2. IDENTIFICATION OF LEGAL INSTRUMENTS AND OTHER INFORMATION SOURCES

Annex 1 presents a list of **legal instruments for the management of chemicals** adopted or drafted in the last decade in 10 countries of the region. These instruments were identified through contributions of the Focal Points of the Network and bibliographic research. It is expected that this list can serve as a source for future mappings of regulatory frameworks in the region. Instruments are classified in different categories to facilitate their consultation: by *life cycle stage* (integrated -meaning more than one stage-, production, production and placing on the market, placing on the market, trade, transportation, or consumption/use); by *regulated aspect* (emissions and releases, labeling, comprehensive regulatory instrument, national strategy/policy, accident preparation and response, contaminated sites, transport) and those related to *multilateral environmental agreements* (regulatory framework, projects).

Moreover, a list of relevant **guidance documents** from recognized international sources has been included in **Annex 2**. The list is non-exhaustive due to the enormous quantity of resources that have been published in recent decades on each of the topics addressed by this report. Even though most of the resources are intended for governments and focused on the development of regulations, they provide practical guidelines for the sound management of chemicals for each of the life cycle stages and can be therefore also useful for the private sector, academia, civil society organizations, and the public in general.

¹⁰ This report focuses mainly on policy frameworks related to the stages of the chemicals life cycle prior to their final disposal or elimination.



3. MAJOR TRENDS IN LATIN AMERICA AND THE CARIBBEAN

Based on the collected information, a detailed description of trends in the region on relevant aspects of the sound management of chemicals is provided below.

3.1 Trends on the implementation of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Life cycle stage: Production, placing on the market, trade, transportation and use/consumption.

Type of chemicals: All types of chemicals. There is some recent progress on the agrochemicals' legislation.

The first essential step for the control and risk management of chemicals is to identify the substances involved, as well as to determine and communicate what hazards they pose to human health and the environment. In this sense, the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) was developed in 2003 to contribute to chemical safety by:

- Defining health, physical and environmental hazards of chemicals;
- Establishing harmonized criteria for the classification of chemical hazards, based on their properties and effects; and
- Communicating the information about these hazards through labels and safety data sheets (L&SDS).

Harmonization facilitates the hazard classification process, helps to minimize differences and uncertainties, standardizes and improves hazard communication globally, and facilitates trade. Besides, it promotes much safer work environments and greater profitability, since workers and consumers are better protected when data about the identity and hazards of products they manage is accessible and understandable.

The GHS applies to all chemicals, and its implementation may vary with the type of product or the life cycle phase that is addressed. Its target audience is consumers and users, workers from the transport and production sectors, and those who work in the emergency services. Labeling of pharmaceuticals, food additives, cosmetics, and pesticide residues in food for deliberate consumption is not included in the GHS.

Some countries in the region, such as Argentina, Brazil, Chile, Colombia¹¹, Costa Rica¹², Ecuador, Mexico, Uruguay, and Venezuela, have developed binding regulations for the classification and labeling of chemicals in recent years -mostly for the workplace or professional use. Although the regulations are in force, effective implementation by industry and suppliers is still work in progress due, in part, to the lack of resources of both

¹¹ As detailed in the Case Studies section below, Colombia has made progress in approving a legal framework, while the authorities are reviewing the regulatory instruments for its practical implementation.

¹² Costa Rica is in a transitory regime, where the new and old labeling still coexist, since it includes the following statement in its standard: "For those products that are already marketed in the national market and that are duly registered, a period of five years, from the effective date of this decree, is granted to exhaust the existence of the already printed labels."



governments (concerning control and surveillance) and small and medium-sized enterprises (lack of technical knowledge, obstacles to information access and use, etc.).

Peru, which has implemented The United Nations Recommendations on the Transport of Dangerous Goods (UN-RTDG)¹³, is working on a regulatory project that includes the mandatory implementation of GHS. Countries such as Bolivia, Guatemala, and Honduras, have undertaken training activities and projects with the support of international organizations to strengthen national capacities and draft regulatory projects. However, they still do not have mandatory instruments in force to implement the GHS.

Particular observations

On GHS implementation procedures

It is noticed as a trend in the region that countries start to implement classification and labeling systems at a preliminary stage through the creation of voluntary technical standards within their national standardization and quality assurance systems (for example, in Argentina through the Instituto Argentino de Normalización y Certificación or IRAM, in Brazil through the Associação Brasileira de Normas Técnicas or ABNT, in Ecuador through the Ecuadorian Institute for Standardization or INEN).

These voluntary technical standards help industry -particularly large companies- to adjust to the chemical safety requirements and gradually adapt its production and trade practices according to international standards. In addition, these tools serve governments to raise awareness and to train SMEs and consumers at a preliminary stage of adoption of the GHS.

Regarding mandatory regulations to establish the GHS, most countries have granted between 2 and 4 years for the complete implementation of the system. It is a common practice to first establish the system only for pure substances (that is, those products with a single component), and to expand to mixtures (more than 1 main component) in another 2 to 4 years.

On the industry involvement

It is observed that even in countries that have not implemented the GHS, some companies use it. This is due to diverse factors: market pressures, being part of a multinational corporation, corporate social responsibility, or adherence to global initiatives for environmental protection and/or chemical safety. Among the most relevant initiatives of the industrial sector in the region, the Responsible Care® Program is identified, with more than 20 years of history and representation in 9 LAC countries¹⁴.

Likewise, a large group of chemical industry associations in Latin America have established a Regulatory Cooperation Forum (LARCF) supported by the International Council of Chemical Associations (ICCA), to promote the implementation and establishment of consistent, economically efficient, and scientific-based regulatory systems for chemicals in the countries

¹³ Law N° 28256, on the Terrestrial Transport of Materials and Hazardous Waste and its Regulation by Decree N° 021-2008-MTC.

¹⁴ Responsible Care® is a global initiative of the International Council of Chemical Associations (ICCA) that began in Canada in 1984. It is the responsibility of companies to adhere to the Program's Guiding Principles (Responsible Care® Core Principles). More information available on the official website: <https://icca-chem.org/focus/responsible-care/>



of the region. Among other initiatives, this Forum promotes dialogue and training activities for governments and the private sector in LAC.

While large companies and multinational corporations tend to lead these initiatives, on the other hand, a gap in technical knowledge and resources is found in SMEs. Companies that only place their products on the local market lack awareness of the benefits of the GHS. Many SMEs perceive their resources as limited and prefer to allocate them to other needs over the application of the GHS, which evidences that there is a limited understanding of the benefits of the system beyond compliance and obligations.

It is therefore important that governments in the region have a clear and strategic regulatory framework, which considers a gradual implementation, according to the possibilities and priorities of the different national sectors, thus facilitating that SMEs initially recognize the cost-effectiveness of hazard identification and communication.

A need identified to support more effective implementation of the GHS in the region is for technicians and experts from companies, regardless of their size, to have access to information on chemicals, preferably in their language, for example through harmonized classifications of hazards and access to databases with relevant information to develop labels and SDS.

On the scope of the GHS implementation

Countries can decide to what extent and how they wish to apply the provisions of the GHS to different situations or sectors in their territory. The most representative sectors are:

- **Industrial sector:** The terms “professional field”, “workplace”, “professional use” are included under this sector. It includes chemicals produced in factories and used in workplaces. In this sector, the use of both, labels and SDS, is vital, as well as adopting systems for the management of hazards and risks in the workplace.
- **Agriculture:** The implementation in this sector is focused on the use (production would be covered by the industrial sector) of agrochemicals (for instance: insecticides, fungicides, herbicides, etc.). The target audiences include farmers and their families. The most relevant information is provided on labels, although there may be also brochures or other sources of information. Since repackaging is a common practice in agriculture, labeling must be ensured at all stages.
- **Transportation:** The United Nations Recommendations on the Transport of Dangerous Goods (UN-RTDG) have been made available in the form of model regulations to be adopted by countries, acquiring a mandatory character through international instruments. The recommended classification and labeling are currently based on the GHS¹⁵. Main audiences are workers in charge of transport and emergency services, although, in the event of an accident, they can also be used for the communities and the environment that are in the transport route. In all cases, labels, tags, transport documents, and SDS are essential tools for this sector.
- **Consumer products:** Consumers, including children, are exposed to a wide variety of hazardous chemicals in their daily lives. Hazard communication in this sector aims to

¹⁵ These recommendations also address other hazards outside the scope of the GHS (such as infectious agents, radiation), but do not cover chronic health hazards or less serious hazards such as skin or eye irritation. More information available on the official website: https://www.unece.org/trans/danger/publi/unrec/rev21/21files_e.html



ensure that the consumer is informed about the hazards of the product and how to use it properly. In most cases, the label is likely to be the only source of information readily available to consumers. Therefore, the information displayed must be sufficiently clear and suitable for the use of the product.

The general trend in the region is the application of the GHS in the industrial sector (“workplace” or “professional use”), such is the case in Argentina and Brazil. Regarding the labeling of final consumer products (for instance, cleaning products), in most countries, it is governed by local or regional labeling regulations that do not follow the GHS. There are exceptions, though, in countries such as Costa Rica, Chile, Colombia, and Mexico¹⁶, which have implemented or plan to implement the GHS also for some consumer products.

Concerning transportation, international instruments¹⁷ have been implemented in Latin America and the Caribbean for decades, although considerable differences are observed among countries in terms of the editions and instruments adopted¹⁸. In a large portion of the region, the implementation of international recommendations has been carried out through existing trade blocs. For instance, MERCOSUR (comprised of Argentina, Brazil, Paraguay, and Uruguay) with a first "Agreement for the Facilitation of the Transportation of Dangerous Goods in Mercosur" in 1994, based on the revised 7th edition and its recent update in 2019¹⁹; or the Andean Community (Bolivia, Colombia, Ecuador, and Peru) through its Decision 837 of 2019, which also implemented the UN-RTDG.

In terms of the agrochemicals hazards classification and labeling, the Food and Agriculture Organization (FAO) promotes the implementation of both the GHS and the FAO/WHO (World Health Organization) recommendations for the classification and labeling of these products²⁰. While the FAO/WHO system has been historically implemented in the region, some countries (for example, Central American countries such as Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama and the Andean Community of Nations²¹) have made some progress in shifting to the GHS system²².

On the implemented GHS revised editions

The GHS is periodically under review and its updates are published every two years. The general trend is that the version adopted in a country depends on when that country starts implementing the system. There is no regional consensus to date on how to implement the GHS and this is reflected in the different revised editions that have been adopted in each country (see some examples in Table 1). Some countries choose to update their regulations

¹⁶ Federal Official Gazette of Mexico. Draft Official Mexican Standard PROY-NOM-003-SSA1-2018, Environmental Health. Health requirements to be met by the labeling of paints and related products. Available at:

https://www.dof.gob.mx/nota_detalle.php?codigo=5584840&fecha=27/01/2020

¹⁷ This includes the United Nations Recommendations on the Transport of Dangerous Goods (UN-RTMP) and the following instruments: a) the International Maritime Dangerous Goods Code (IMDG Code); b) ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI); (c) the European Agreement on the International Carriage of Dangerous Goods by Road (ADR); (d) Regulations concerning the international carriage of dangerous goods by rail (RID); (e) the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN);

¹⁸ Use of information obtained from the official UNECE website

(https://www.unece.org/trans/danger/publi/ghs/implementation_e.html) and from CIQUIME Argentina (2018). Latin American Transport Dangerous Goods Regulations available at: https://www.ciquime.org/files/LAC_DG_Regulation_Chart_V3.pdf

¹⁹ Available at: https://normas.mercosur.int/simfiles/normativas/75401_DEC_015-2019_ES_Acuerdo%20Transporte%20Productos%20Peligrosos.pdf

²⁰ For instance: <http://www.fao.org/3/cb0916en/CB0916EN.pdf> y <http://www.fao.org/3/a-i4854e.pdf>

²¹ The Andean Technical Manual for the Registration and Control of Chemical Pesticides for Agricultural Use (Resolution 2075 of 2019)

²² Available at: <http://extwprlegs1.fao.org/docs/pdf/sica180500.pdf>



as the revisions are published (e.g., Brazil), while others have not yet informed their willingness to modify their regulations to adopt new revisions.

Table 1. GHS implementation in some LAC countries (transportation sector not included)

Country	Status of implementation (adopted/under development)	Start of implementation (year)	Scope (workplace, consumer products, others)	Revised edition	Observations
Argentina	Adopted	2015	Workplace (industrial sector)	5	In Argentina, GHS is declared mandatory by Resolution SRT 801/15.
Brazil	Adopted	2017	Workplace (industrial sector)	4	An amendment was published on June 13, 2019. It updates the ABNT NBR 14725-2 standard referring to the GHS. The incorporation of the 7th version to the 14725 standards is under review (in public consultation until November 2020).
Chile	Adopted	2021	1st stage: industrial use. 2nd stage: other uses.	7 Annex IV of the European Regulation (CLP)	The Regulation on the classification, labeling and notification of hazardous chemical substances and mixtures (General law N° 42,876) was published in February 2021.
Colombia	Partially adopted Adopted for agrochemicals (in coexistence with the previous system)	2018	Workplace (industrial sector). Agroindustry. Consumer products	6	Whereas GHS is adopted, its implementation has been delegated to different authorities. More information is available in the section "Case studies".
Costa Rica	Adopted	2018 In a transitional phase until 2022.	Industrial chemicals. Agrochemicals. Some consumer products	6	Decree No. 40.457-S and its Technical Regulation RTCR 481: 2015 requires labeling in the workplace and consumer products according to the 6th revised edition and establishes an implementation period until 2022. Resolution No. 401-2018 (COMIECO-LXXXIII) implements GHS for agrochemicals.
Ecuador	Adopted	2018	Chemicals (not specified)	1	Ecuador has a legal standard for the



					implementation of EMS (RTE INEN 078). This was declared mandatory for pure substances and mixtures as of 2017.
Mexico	Adopted	2018	Workplace (industrial sector)	5	In October 2015, the Ministry of Labor and Social Welfare published the Official Mexican Standard NOM-018-STPS-2015 that implements the 5th revised edition of the GHS in Mexico for the workplace.
Peru	Under development (Legislative project under review)	-	Chemicals and mixtures. It does not include consumer products	Not indicated	A bill on the integrated management of chemicals contemplates the adoption of the GHS. More information is available in the section "Case studies".
Uruguay	Adopted	2011	Workplace	4	Decree 307/009 and its amendment by Decree 346/011 implement the GHS for pure substances and mixtures.

¹ Source: Authors, Focal Points contributions; website <http://ghs.dhigroup.com/GHSImplementation.aspx>, document "GHS 2019 Latin America Update" (L. Cuevas, SILLAC); document "GHS Network of Experts: Overview of GHS implementations 2019" (CEFIC, 2020); website https://www.unece.org/trans/danger/publi/ghs/implementation_e.html and the document [UN/SCEGHS/39/INF.33/Add.2](https://www.unece.org/trans/danger/publi/ghs/implementation_e.html) by the GHS-Subcommittee (available at: <https://unece.org/fileadmin/DAM/trans/doc/2020/dgac10c4/UN-SCEGHS-39-INF33add2e.pdf>).

Variations in the application of the GHS in different countries can lead to the generation of diverse L&SDS for the same product when it is sent to multiple jurisdictions causing difficulties, such as:

- Possible technical obstacles to trade;
- A chain effect: variations in the SDS of raw materials could be carried over into the processes of classification and communication of information of mixtures that contain them;
- Unnecessary additional costs in the same region due to the adjustment of the labels and SDS to each country;
- Differences in classification could significantly change the legal status of a substance and its treatment at the national level or in local jurisdictions.;
- Impacts on the safety of workers or in the emergency services due to confusion generated by non-harmonized information from different international producers in the same facility;
- Confusion among users as a consequence of different labels for the same chemical. For consumer products, user understandability is a particularly relevant issue.



Some previous initiatives of regional trade blocs

From 2009 to 2015, through GMC Resolution No. 41/09, the ECONORMAS project called "Support for the Deepening of the Economic Integration Process and Sustainable Development of MERCOSUR" was implemented as part of the cooperation between the European Union and the MERCOSUR. Its objective was to promote consolidation and integration of the bloc through the convergence of strategies of each State Party into coherent and executable regional strategies, through technical regulations and compliance assessment procedures, taking as reference the provisions of the World Trade Organization.

Among its activities, ECONORMAS promoted the “progress for the implementation of the Globally Harmonized System of Classification and Labeling of Chemical Products (GHS)” and “the convergence of the normative and regulatory framework of products in specific areas (...) and capacity building for regional compliance assessments”. An exhaustive regulatory survey was carried out within the framework of the project to identify existing differences among the regulations of the Parties and the GHS requirements. However, no more initiatives by the bloc have been identified since the project's completion date.

3.2 Trends on the implementation of Pollutant Release and Transfer Registers (PRTRs)

Life cycle stage: Production and end of life.

Type of chemicals: When referring to PRTR it is common to use the term “pollutants”. It is applicable to all chemicals, though the registers are generally established for a specific list of priority chemicals.

A Pollutant Release and Transfer Register (PRTR) is a database that contains information on the releases of pollutants to air, water, and soil from industrial sites and other sources (point and diffuse sources), and transfers of waste. It is an open digital tool with standardized data. Various international agreements promote the implementation of data collection systems on pollutant emissions and the dissemination of this information. Furthermore, these tools are also part of the OECD's recommendations²³ to its member countries and are mentioned in various free trade agreements.

The PRTR represents benefits in terms of compliance with international agreements. For example, it can provide key information for the annual reports required in the framework of the Stockholm and Basel Conventions, in the preparation of Greenhouse Gas Inventories and is an appropriate tool to comply with the Montreal Protocol. It also contributes to initiatives of Extended Producer Responsibility and green taxes, among others.

A national PRTR brings multiple benefits for the different sectors. At the **governmental level**, it makes the collection of information more efficient (for example, through the creation of a single database, unique identification of substances, articulation of governmental bodies) and contributes to the generation of performance indicators and environmental reports for the informed development of public policies and their enforcement. For the **industrial sector**, it

²³ OECD, (2020). Recommendation of the Council on Implementing Pollutant Release and Transfer Registers (PRTRs). Available at: <https://legalinstruments.oecd.org/public/doc/44/44.en.pdf>



allows centralizing the declarations, comparing environmental behavior between similar industries, and, above all, it promotes the reduction of emissions and the adoption of cleaner production. For **civil society**, it is a tool that promotes citizen participation in environmental issues, providing useful information, ensuring transparency and traceability, and representing a useful resource for educational purposes.

There is currently extensive international experience on the subject, with PRTR programs implemented in most OECD countries, such as the Toxic Release Inventory (TRI) of the United States, the National Pollutant Release Inventory (NPRI) of Canada, the National Pollutant Inventory (NPI) of Australia, the European Pollutant Release and Transfer Register (E-PRTR), among others.

In Latin America and the Caribbean, the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters (Escazú Agreement)²⁴ includes specific provisions on PRTRs. In its Article 6 on Generation and Disclosure of Environmental Information, the Agreement establishes that each Party shall take measures to progressively set up and periodically update a register of emissions and transfers of pollutants, materials, and wastes to air, water, soil, and subsoil under its jurisdiction.

A few countries in the region have fully operational registers. The most noteworthy cases are the PRTRs of Chile and Mexico, which are member countries of the OECD. Some countries, such as Honduras already have a regulatory framework that establishes PRTRs, but they are still in the initial phase of implementation. Peru has implemented this kind of register since 2009, but on a voluntary basis, since there is not a PRTR regulatory instrument²⁵.

Other countries in the region are at different stages of development and implementation of this type of register. In most countries, provisions for the establishment of this kind of register by environmental authorities exist in the National Environmental Laws. However, obligations are usually delegated to local authorities and are not coordinated at a national level. Such is the case in Antigua and Barbuda, Belize, and Trinidad and Tobago.²⁶

Under the Free Trade Agreement between the Dominican Republic, Central America, and the United States, and with the technical support of the Central American Commission for Environment and Development (CCAD) and UNITAR, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and The Dominican Republic have carried out assessments for the design of registers at the national level and the establishment of a regional PRTR. The implementation of the system is at different stages in each country.²⁷

²⁴ As of November 2020, the following countries had ratified the Agreement: Antigua and Barbuda, Argentina, Bolivia, Ecuador, Guyana, Mexico, Nicaragua, Panama, Saint Kitts and Nevis, Saint Vincent and the Grenadines, and Uruguay. Official website: <https://www.cepal.org/es/acuerdodeescazu>. The Escazú agreement was based on the Aarhus Convention, which includes it in the Kiev Protocol on PRTR. More information on the official website: <https://www.unece.org/env/pp/prtr.html>

²⁵ The new regulatory project on the integrated chemicals management is expected to include some legal dispositions about the PRTR (more information in "Study cases" section).

²⁶ Economic Commission for Latin America and the Caribbean [ECLAC], (2018). Access to information, participation and justice in environmental matters in Latin America and the Caribbean: towards the achievement of the 2030 Agenda for Sustainable Development (LC / TS.2017 / 83). Available at: https://repositorio.cepal.org/bitstream/handle/11362/43301/4/S1701021_es.pdf

²⁷ (ECLAC, 2018).





Figure 1. PRTR - Status of implementation in Latin America and the Caribbean (December 2020).

Source: <https://prtr.unece.org/prtr-global-map>

Particular observations

On reported substances

Some countries decide to incorporate in their PRTRs those substances that are already regulated by pre-existing regulations (national or from international agreements). On the other hand, the OECD has proposed two lists of substances that can be used in PRTRs, with the intention to promote harmonization and make information comparable in PRTRs worldwide. One list, known as the “short list”, includes 126 substances and the long one includes 1,184. Both consider potentially hazardous substances to human health and the environment²⁸. The OECD suggests that countries should, at least, adopt the Short List.

On available resources for capacity building

To support the implementation of national PRTRs, bodies such as the OECD, through its Working Group on Pollutant Release and Transfer Registers, and the United Nations Economic Commission for Europe (UNECE) have developed valuable material that can be consulted by LAC countries. Some documents are available in Annex 2. More information can be found at the official global website (<https://prtr.unece.org/>) that aims to help countries in the development, implementation, and improvement of PRTR programs.

Moreover, training provided by UNITAR and countries such as Spain has been essential for the design and implementation of these registers in Latin America and the Caribbean. Also Chile, with a consolidated experience in the implementation of the PRTR, has developed material that can be very useful for the region²⁹.

On implementation stages

Following international guidelines, countries such as Chile and Honduras planned the design and implementation of their PRTRs in a series of stages, as illustrated below:

²⁸ Available at: [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono\(2014\)32&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono(2014)32&doclanguage=en)

²⁹ For example, the “Guide to design and implement pollutant release and transfer registers (PRTRs)” of the Ministry of the Environment of Chile (2017). Retrieved from: https://retc.mma.gob.cl/wp-content/uploads/2018/12/Manual_RETc.pdf



Figure 2. Suggested stages for the design of a PRTR

These stages are based on experiences from countries that have implemented PRTRs³⁰. Activities, objectives, and products suggested under each stage are designed flexibly to be adapted in each country. For example, the process preferred by Honduras included:

1. Creation of a National Coordinating Committee, comprised of representatives of the government, private sector, academia, and non-governmental organizations (NGOs).
2. Identification of the goals of the PRTR Honduras.
3. Design of the key characteristics of the Honduras PRTR (list of substances to be reported, sectors that must report, the inclusion of point and diffuse sources, reporting thresholds, possible reporting exceptions, and information to be reported by the industry).
4. Development of regulations for the implementation of the PRTR in Honduras.
5. Pilot Test for the implementation of the Automated System (small-scale test to identify operational challenges).
6. National Proposal of the PRTR Honduras.

To avoid multiple requirements of similar information from registrants, countries are encouraged to establish mechanisms to guarantee the transfer of information among different government areas and entities. This is the case of Chile, where the PRTR registration mechanism involves the participation of different governmental agencies (more information in the “Case Studies” section).

Comparison among existing LAC schemes: Chile, Honduras, and Mexico

Table 2 below shows the main elements of some PRTR systems in Latin America and the Caribbean, although they are at different stages of implementation.

Table 2. PRTRs comparison among Latin America and the Caribbean countries.

Details	Chile PRTR	Honduras PRTR	Mexico PRTR
Register’s name	Registro de Emisiones y Transferencia de Contaminantes (RETC)	Registro de Emisiones y Transferencia de Contaminantes	Registro de Emisiones y Transferencia de contaminantes (RETC)
Specific legislation	YES	YES	YES
Reporting unit	Facility	Facility	Facility
Productive activities	List of industrial activities	List of industrial activities: 1. Agriculture and cattle raising 2. Mining 3. Manufacturing	International Standard Industrial Classification of All Economic Activities (ISIC)

³⁰ Among them, the Guidance Document " Implementing a National PRTR Design Project", UNITAR (1997). Retrieved from: https://cwm.unitar.org/publications/publications/cw/prtr/prtr_sp/prtrgd_sp_nov2003.pdf

		4. Basic Services	
Type of sources	Point and diffuse sources	-	Point and diffuse sources
Total number of pollutants	130	117	200
Other physicochemical and biological parameters	YES	-	YES
Reporting thresholds	Thresholds for categories of economic activities, emissions and transfer of pollutants	Thresholds for categories of economic activities, emissions and transfer of pollutants	Thresholds for categories of economic activities, emissions and transfer of pollutants
Calculation methods	Measuring, calculation, estimation, emission factors	Measuring, calculation, estimation, emission factors	Mass balance, engineering calculation, emission factors
Receptor matrix	YES	YES	YES
Reporting frequency	Annual	Annual	Annual
Nature	Mandatory	-	Mandatory
Electronic reporting	YES	YES	YES
Public information	YES	YES	YES
Confidentiality clauses	YES	YES	YES
Website	Access	Access	Access

Source: Iñigo de Vicente (PRTR – Spain), modified by Marcos Serrano (Ministry of Environment- Chile) – Available at: https://retc.mma.gob.cl/wp-content/uploads/2018/12/Manual_RETc.pdf - and modified by Authors.

3.3 Trends on the development of inventories/registers of industrial chemicals

Stages of the life cycle: Production, trade and place on the market.

Type of chemicals: This section addresses exclusively the development of inventories/registers of industrial chemicals, since some countries have made recent progress on this area. It should be noted, though, that other isolated inventories or registries for specific substances or chemicals can be found in many countries. For example, the registration of chemicals for agro-industrial use has been a common practice in many countries of the region for more than 30 years

With the expansion of certain productive sectors in the region in recent decades (agroindustry, cosmetics, pharmaceuticals) and the creation of specialized governmental agencies, progress on the regulation of chemical products has been made in an uncoordinated manner, with certain groups of chemicals being more regulated over others. This frequent scenario in countries of the region has led to regulatory gaps and inconsistencies.

The groups of chemicals that are most regulated are those related to final consumption such as pharmaceuticals, cosmetics, household cleaning products, agrochemicals, and other specific ones addressed by international regulations or multilateral environmental agreements. Many substances or products are controlled only at some stages of their life cycle or in a single exposure scenario. For example, health agencies regulate some products for direct consumption with a focus on health risks but not on environmental risks, while



competent authorities on labor focus on the risks for workers when exposed to chemicals and not on the risks for consumers.

In this context, the general trend in the region indicates a lack of specific regulations for industrial chemicals in the region. In most countries there is no register or inventory of these substances, nor are they evaluated from a risk perspective. There are no unified databases, or the existing ones are incomplete or disaggregated. This presents various challenges for countries, such as inconsistencies and ambiguity in the reporting of the substance identity; or information that cannot be validated or compared, making it impossible to prioritize substances according to their hazard and scenario exposure. This finally obstructs the implementation of preventive or corrective actions aimed at local communities and ecosystems where they are urgent.

Some countries developed national chemical profiles by the creation of inventories and registers as a method to define a baseline of the chemicals present in their territory. This allowed countries to identify gaps and work on the elimination or reduction of associated risks. Colombia, Costa Rica, and Mexico carried out consultation processes and prepared their first inventories several years ago.

It is appropriate to differentiate between inventories³¹ and registers. An inventory is usually defined as voluntary, while registration implies the obligation and the granting of permission to trade. Hereinafter, inventories and registers are treated indistinctively in the report, provided that their objective is to identify and obtain information on substances present in the territory³².

Several efforts have emerged in the region for the sound management of industrial chemicals³³, such as in Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, and Peru, mostly driven by the motivation to join the OECD. It should be noted that the sound management of industrial chemicals includes not only chemical registration but also risk assessment and management. This section addresses the development of inventories/registers while risk assessment and management mechanisms are presented in the next section.

The task to collect data for a register or inventory is complex as it involves deciding on, among others, the method for obtaining data (voluntary, mandatory); who is responsible for generating and delivering the information (government, private sector); the scope (substances to include/exclude, thresholds to report, data to be collected); and implementation timeframes. The options for implementation are described in greater detail below.

³¹ Sometimes the term “national profile” is also used to refer to inventory. Sometimes the national profile is developed at a specific time as a static view of the current chemical situation in the country.

³² Other documents also address this concept, for example the UNEP’s LIRA GUIDE (see Annex II)

³³ Legislative projects: Costa Rica (valid registry), Argentina and Brazil (presented at the Congresses), Colombia and Peru (in public consultation), Chile and Mexico (under elaboration)



Particular observations

On the use of existing international models

To start the development of a national inventory by assessing existing regulatory models is considered a good regulatory practice. However, the urgency of governments to rapidly design the inventory often results in the replication of other models without having a clear understanding of the national administrative, economic and socio-environmental implications. Furthermore, it is necessary to evaluate how the new legislation would be integrated into the mechanisms previously installed in the country to avoid duplication or gaps between coexisting requirements. In conclusion, it is advisable to study approaches by others, mainly those of commercial partners, but it is essential to adapt the instrument to the local conditions.

The most studied inventory/register models³⁴ by countries of the region, mainly for industrial chemicals, are:

- NICNAS (Australia).
- DSL (Canada).
- TSCA (United States).
- REACH (Europe).
- JECDB (Japan).

It should be noted that many of the definitions included in these models are based on work by the OECD, the European Chemicals Agency (ECHA), the United States Environmental Agency (US EPA), the United Nations GHS Committee, among others.

On the scope of the inventories/registers

With a few exceptions, most inventories/registers require the notification of pure hazardous substances (which means with only one main component), or substances as individual components of mixtures (where each component is notified individually). Mixtures as such are not usually included. Consumer products also fall outside of the scope of these instruments.

Reporting thresholds are usually used to restrict the scope of inventories/registers and thus focus efforts on substances with the most significant volumes. The annual quantity of imported/produced substances is a commonly used threshold because it is not only related to the potential exposure but also related to the size of the companies that import/manufacture them. In general, companies whose production exceeds 1 metric ton per year of imported/manufactured substance should notify the substance. In other cases, some regulations include those that exceed 100 kg/year. Some countries implement the system in stages to ensure a reasonable amount of time for the industry to be able to provide the information.

Regarding the groups of chemicals to be included in inventories/registers, normally only industrial chemicals are included, while other groups of substances regulated by pre-existing

³⁴ Some of them also involve a registration phase.



regulations, such as agrochemicals, are excluded. In some cases, such as Peru, a draft policy for the sound management of chemicals proposes to integrate all substances - even those already regulated by different government agencies– in a single database, intended to achieve harmonized mechanisms.

Approaches in the region concerning substances that are exceptions to the register/inventory are diverse, as shown in Table 3. In general, there is no documentation to explain the inclusion or exclusion of certain substances. It is presumed that decisions in this regard are based on two main criteria: replicating those exceptions found in international regulations and making exceptions on those groups of chemicals that are already regulated in the country.

It is worth noting that although many countries already have regulations to manage risks of certain groups of substances, in some cases, they only do so from the perspective of impacts on human health and do not consider the environment.

Table 3. Groups of exempted chemicals in industrial chemicals inventories/registers in LAC countries' legislation.

Chemicals	Colombia (Bill)	Costa Rica (Current regulation)	Peru (Bill)
Agrochemicals	X	X	
Animal food and food additives			X
Biomedical material and reagents for medical analysis		X	
Chemical weapons/Substances used in the interest of defense	X		X
Chemicals used for tobacco and derivates		X	
Cosmetics	X		X
Explosives	X		
Fertilizers, wood preservers	X	X	
Food, food additives or food flavorings	X	X	X
Gases		X	
Household and professional pesticides		X	
In vitro diagnostic reagents	X	X	
Narcotic and psychotropic substances	X	X	
Non-commercial samples	X		X
Non-isolated intermediates	X		X
Personal hygiene products	X	X	
Pharmaceuticals	X	X	X
Polymers	X		
Radioactive substances	X		X
Substances in development or solely for research			X
Substances in temporary storage under customs supervision	X		X
Substances which occur in nature other if they are not chemically modified, unless they meet the criteria for classification as hazardous	X		X
Substances that result from a chemical reaction that occurs incidental			X
Water treatment products		X	

Source: Authors. Based on published documents and contributions from Focal Points.

On deadlines, implementation schemes, and support for SMEs



The implementation schemes of inventories/registers in the region are defined with the understanding that the information requirements can imply imbalances in the economic scheme of a country, translating into disadvantages for SMEs that do not have the appropriate administrative structures. Usually, a period of 2 to 3 years from the entry into force of the regulation is given for the notification of substances.³⁵ Thus, the date from which a notified substance will be considered "new" or "pre-existing" is established³⁶.

In some cases, governments do a gradual implementation at the regulatory stage, which could be based on quantities, company size, or the hazard or exposure level of the substance.

On the minimum information requirement

Countries agree that maintaining an inventory/register is relatively expensive for government agencies. Therefore, these are designed with only the most essential information to achieve its objectives and to make it sustainable in time. In general, the minimum information required in the inventory/register includes:

- **Identity of the producer/importer.** Contact data to link the substance with the subject bound by the regulation;
- **Substance identity.** This includes, among other possible identifiers, CAS number, CAS name, or IUPAC (particular confidentiality considerations are addressed in the next paragraph);
- **Volume of the substance.** Usually requested as a range and not a precise figure (to facilitate notification and avoid confidentiality issues). Some instruments validate the use of statistical data (real and projected);
- **Patterns of use.** It is commonly referred to as "recommended uses", "suggested uses", "expected uses". This data provides useful information on possible exposure scenarios;
- **Properties (physicochemical, toxicological, ecotoxicological, hazards).** It is worth noting that the inventory/register is sometimes used to make the implementation of GHS mandatory.

On the protection of confidential information

To favor the protection of intellectual property, special notification mechanisms can be established for foreign manufacturers, or their exclusive representatives, to avoid the transfer of confidential information on chemicals to importers. Information usually not confidential is that directly related to the protection of health and the environment: patterns of use (or "recommended uses"); hazard classification; precautionary statements and danger phrases; special considerations related to the impact on health and the environment.

On the Designated Authorities

The development of these instruments is normally assigned to governmental agencies in charge of environment, health, production, and labor. Subsequent implementation and

³⁶ In this context, new chemicals are understood to be: i. chemical substances new to the country (that is, not pre-existing in inventories or records); ii. pre-existing substances with unreported uses. For new substances, the notification in the inventory/register is usually a prerequisite for their placing on the market and, in addition, the presentation of the risk analysis is required in said notification.



management of the inventories/registers are usually done by environmental agencies or ministries (as a Competent Authority) due to their responsibility towards international treaties and before organizations such as the OECD, and the delegation of powers through national regulations aimed at protecting human health and the environment.

In Colombia's project³⁷, the inventory is led by the environmental ministry, but different responsibilities are assigned to the Ministries of Commerce, Industry and Tourism; Health and Social Protection; and Environment and Sustainable Development, without defining a Competent Authority. In the Peruvian proposal (see "Case Studies" section), the administration of the National Register is overseen by the Ministry of the Environment, and, in the case of Costa Rica, the Ministry of Health regulates the registration of hazardous chemicals.

On the creation of intergovernmental committees

The need for coordination among all relevant authorities for the management of chemicals throughout their life cycle is highlighted. Most of the draft regulations perceive the creation of intergovernmental committees to: cooperate in the exchange of information, promote the systematic review of pre-existing substances, coordinate decision-making on risk management, among others. This aspect is crucial when adopting national plans for the management of chemicals that are based on an integrated and comprehensive strategy.

3.4 Trends on the implementation of risk assessment and risk management of industrial chemicals

Life cycle stage: Place on the market, trade.

Type of chemicals: Risk assessment usually applies to chemical substances, while risk management is also applied to products that contain chemical substances. The focus of this section is placed on industrial chemicals, for which there are still no regulatory risk approach mechanisms in the region.

The objective of a risk assessment is to identify and analyze the possible risks of chemical substances to human health and the environment throughout their life cycle, considering hazards and exposure. It is key that assessments are done with reliable data, validated by experts, under clear and transparent instructions, and using internationally accepted protocols, if possible. Furthermore, risks of exposure to a substance and its socio-economic benefits must be contrasted. This usually entails a complex process of consensus among all stakeholders.

Governments must anticipate that even if a risk assessment is conducted, there is a likelihood that adverse effects of the chemical will still occur under certain defined exposure conditions.

³⁷ Ministry of Environment and Sustainable Development of Colombia, (2020). Draft Decree "By which the integral management of chemical substances for industrial use is regulated and other determinations are made." Retrieved from: https://www.minambiente.gov.co/images/Atencion_y_participacion_al_ciudadano/consultas_publicas_2020/2020_07_13_Proyecto_Sustancias_Quimicas_Consulta_Nacional_2020.zip



Some basic aspects related to risk assessment and management of industrial chemicals are addressed below. A list of available resources on risk assessment and management mechanisms is included in Annex 2.

Particular observations

On “new” substances vs “pre-existing” substances

As previously mentioned, there is usually a differentiated approach for new and pre-existing substances. Concerning risk assessments, for new substances the assessment is requested prior to their placing on the market, while in the case of pre-existing ones, the assessment shall be done systematically.

On prioritization and systematic review of prioritized substances

Carrying out risk assessments involves intense and specialized work. The further risk characterization is taken, the greater the economic and technical requirements (more sophisticated tests and data). Considering this fact and the thousands of chemicals that are placed on the market, efforts and resources are usually focused on undertaking assessments of only high-priority chemicals (or chemicals of concern), based on their hazards and exposure potential.

When defining a work plan to conduct or analyze risk assessments of pre-existing substances and/or new substances, it is common to undertake a previous stage of prioritization of chemicals. Prioritization is normally done once the inventories/registers have been established and minimum information is available to have an initial screening of what is present in the territory. This prioritization is based on criteria such as: the hazard classification, the potential level of exposure and the relationship with international instruments (for example, the Stockholm, Rotterdam and Minamata Conventions). Sometimes more specific criteria are used, such as children exposure, detection in monitoring records (such as PRTR), persistent, bioaccumulative or carcinogenic properties, among others.

On the responsibility for the development of risk assessments

Some countries propose schemes where the State is responsible for the development of risk assessments. In other cases, the responsibility falls on the importer/producer. Some countries adopt a blended approach, where responsibility is assigned to the regulated entity that places on the market a new substance, while responsibilities of pre-existing substances are assigned to the governmental bodies.

Schemes on how risk assessments can be presented by the regulated entity also vary in the region: some countries request that industries using the same substance conduct a joint assessment of the substance for a specific use, while others request individual assessments by registrant. It is worth highlighting the need to evaluate the implications of each approach at the socioeconomic level.



*On regulatory cooperation and Mutual Acceptance of Data (MAD)*³⁸

As previously mentioned, differences in approaches and regulatory requirements in each country can not only generate significant costs for the chemical industry and governments, but can also create trade barriers. Different tools have been established to collaborate in the harmonization of national regulatory approaches to the management of chemicals, avoiding for industry several contradictory or duplicated requirements, permitting governments to have a common basis to work together and reducing non-tariff barriers to trade.

A very relevant tool for harmonization is a set of OECD Council Decisions that constitute the OECD Mutual Acceptance of Data (MAD) system, including its OECD Guidelines for the Testing of Chemicals and OECD Principles of Good Laboratory Practice (GLP). The MAD system ensures that test study data generated in any country adherent to the decision (regardless if they are OECD members or not) in accordance with OECD GLP shall be accepted in other adherent countries for assessment purposes and other uses relating to the protection of human health and the environment. It is worth mentioning that countries must consider whether the uses and exposure conditions of the substance in their territory are comparable to those used in the studies by others. In the region, countries like Colombia have included the application of the MAD system in their legislation on industrial chemicals.

On risk management

A risk assessment should inform decision-makers so they can compare and select the most appropriate management option for the risk posed by a substance under local conditions. Some management options observed in the region range from informational measures (e.g., special labeling), administrative (e.g., traceability), operational (e.g., production/emissions/releases control), to prescriptive measures (e.g., prohibition or maximum contents of a substance).

On enforcement

It is noteworthy that these systems are at a draft stage in the region, so it will be necessary to monitor and evaluate effective risk management once they come into force. This aspect should be considered by countries at the regulatory development phase in order to provide the necessary authorities and resources to monitor, control and apply sanctions.

4. CASE STUDIES

As to provide the main trends on certain relevant aspects of the integrated management of chemicals in the region, the following four case studies are presented:

- Case 1: 2015-2020 Five Year National Action Plan for Sound management of Chemicals - Suriname (2014)
- Case 2: Implementation of the Globally Harmonized System of Classification and Labeling of Chemicals - Colombia (2018)
- Case 3: Pollutant Release and Transfer Register (PRTR) - Chile (2018)
- Case 4: Integrated Chemicals Management Draft Bill - Peru (2020)

³⁸ Extracted from OECD's official website: <https://www.oecd.org/env/ehs/mutualacceptanceofdatamad.htm>. More information is available in the website.



4.1 Case 1: 2015-2020 Five Year National Action Plan for Sound management of Chemicals (NAP) - Suriname (2014)

Life cycle stage: All.

Type of chemicals: All.

As result of the joint efforts of UNEP and the United Nations Development Program (UNDP) to support countries in the implementation of SAICM, the National Plan of Action of Suriname (NAP) was developed as part of the projects on Guidance on Integrating the Sound Management of Chemicals into Development Planning and the Supplemental Cost-Benefit Economic Analysis Guide.³⁹

This case represents a practical and replicable guide for the application of international recommendations to establish mechanisms for institutional strengthening and integration of all the chemicals' life cycle stages. The NAP describes the required steps to establish a "baseline" of the country, up to the long-term planning of national policies on chemical safety:

Step 1. Development of a **Situation Analysis Report** on the management of chemicals in Suriname, including:

- **Descriptions of key elements and concepts** of the integrated management of chemicals to inform non-expert readers;
- **An analysis of trends** related to the country's industrial and economic profile to identify priorities based on those sectors of greater interest. It includes an evaluation of environmental trends and major gaps in Suriname's current chemicals management regime and the definition of priorities for addressing those gaps;
- **Consultations with relevant stakeholders** to identify national priorities for improvement;
- **A practical demonstration of cost-benefit analysis** to highlight the need of the sound management of chemicals, and demonstrate how actions generated by a National Action Plan can maximize the returns on investment.

Step 2. Development of the **5-years plan** to achieve SAICM's objectives that are consistent with the needs of the country:

The plan focuses on the construction of legal, institutional and physical infrastructure, addressing three levels: political (preparation of legislative and executive regulations, international cooperation); management (tools for the development of regulations such as technical and scientific resources, and coordination between different ministerial portfolios); implementation and enforcement (control, monitoring, articulation and supervision)⁴⁰.

³⁹ Both developed under the UNDP-UNEP Cooperation Initiative on Mainstreaming the Sound Management of Chemicals into Development Planning Processes: Maximizing Return on Investment

⁴⁰ It should be noted that this NAP did not in itself constitute an implementation plan, which would be an instrument to be submitted for discussion by a large number of relevant stakeholders from the government and other sectors, including elements such as schedules and budget. This process was delegated to the formal stage of adoption of a NAP, and in this instance issues such as roles and responsibilities were taken as preliminary proposals.



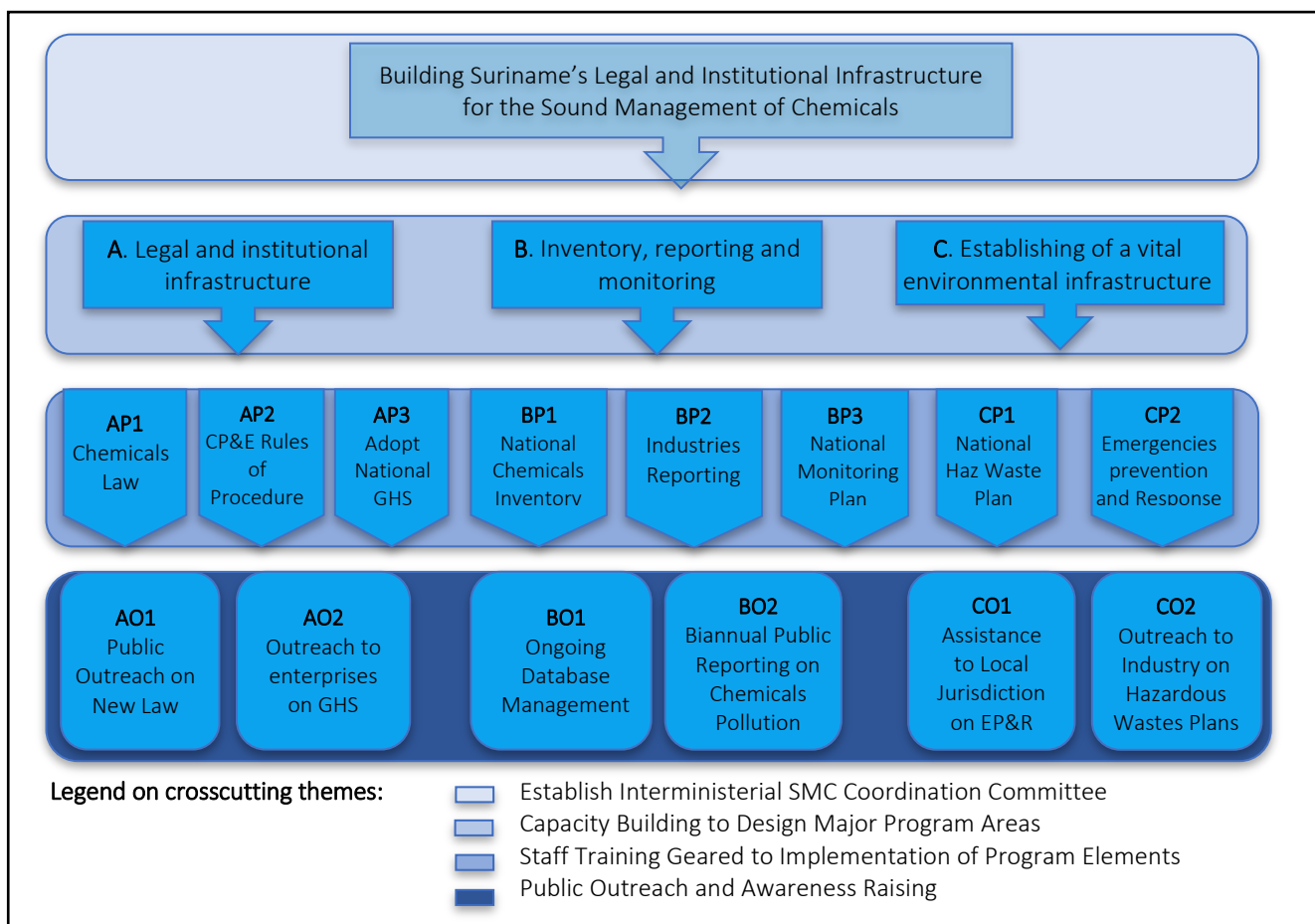


Figure 3. Suriname 5-Year Chemicals Management Plan Additional to Administration of Current Policies and Programs. Source: Dr. Thomas Conway, Official Suriname NAP document.

Cross-cutting themes

The PNA relies on 4 cross-cutting themes to achieve the objectives of the integrated management of chemicals at the national level:

1. The establishment of an inter-ministerial coordination mechanism. The Plan suggests that it should not replace the mandates or authorities of pre-existing agencies, which could generate resistance. It points out instead the need to generate an articulation mechanism in the country to ensure fluid communication, delegating the role of coordination to at least one authority. At least, officials with recognized experience should participate in this mechanism. The Committee should establish its rules of procedure, terms of reference, work plan, and a process of consultation with other relevant stakeholders on the implementation of the NAP through a formal agreement. Based on international experiences, the document indicates that a high-level committee should meet 2 and 3 times a year to establish the general guidelines of the NAP and that a technical working group should meet more frequently to advance in the implementation and report on progress.

2. Institutional strengthening to develop programs in priority areas. Most aspects of any chemical management program involve difficulties at the technical level. Proper planning from the beginning means better use of resources and greater effectiveness in achieving results. Some processes where specific knowledge is required are: design of regulations;

identification of stakeholders and promotion of participation; generation, access and use of information (for example, knowledge on chemicals information databases); management and implementation of the systems and resources created; systematic review and improvements (monitoring and evaluation of activities); and resource mobilization.

3. Training of personnel appointed to the implementation of the action plan. Although it is part of institutional strengthening, this aspect is mainly related to ensuring the continuing of the proposed activities over time, through the ongoing support to staff involved in the program in order to identify needs and adopt improvements.

4. Public awareness-raising and outreach activities. To ensure the effectiveness of the measures adopted, activities such as institutional reports by different government areas, the incorporation of related content in study plans and the support for specific programs based on toxicology and ecotoxicology areas are proposed.

Priority themes of the NAP and its elements

A. Legal and institutional infrastructure

With the aim to develop essential regulations for the improvement of the entire life cycle of chemicals, especially toxic and hazardous ones which are present in local trade or entry into the country, three key aspects are proposed in the plan:

A.1. Develop a law on chemicals management. Given the absence of a general environmental protection law, the development of an integrated and balanced legal framework would be the best mechanism to promote chemical safety in Suriname. The development of the law should specifically define principles, concepts, definitions and responsibilities and delegate for the subsequent development of other regulations and standards that may be subject to amendments by national authorities, without requiring a complete revision of the law. The document also states that governments must be careful when defining their responsibilities because many of the necessary resources are generally beyond their possibilities. The government should take into account that industries must play a primary role in eliminating or reducing daily risks associated with chemicals. Establishing clear responsibilities and allocating resources to priority areas is also a key factor when developing regulations. The government must focus primarily on the most dangerous substances. Costs that would fall on industries would be outweighed by the benefits associated with proper management: fewer accidents, illnesses and adverse effects on the environment, fewer expenses in health services and the need for remediation, as well as high competitiveness in the international market. It is noteworthy that the proposed outcomes include the development of a regulatory impact assessment and consultation processes for the involvement of other non-governmental actors.

A.2. Establish clear processes for regulatory compliance and enforcement. The document highlights the importance of considering monitoring and surveillance mechanisms, prioritizing inspections, and maintaining a regular and constructive dialogue with the private sector to ensure compliance. The need to detail roles and tasks to delegate clear instructions to the inspection body is identified as a priority for Suriname to promote compliance and strengthen control systems. The lack of emphasis on this aspect is common in many developing countries, leading to inactivity, lack of



standardized processes and sufficient budgets, corruption and other forms of obstacles to regulatory compliance. Enforcement must be overseen by a consolidated inspection body, authorized by formal means and with adequate knowledge and technical capabilities for the tasks assigned to it. In addition, many countries are trying to strengthen control of their borders, recognizing them as a key point for the management of chemicals. However, the capacity of customs authorities is often overestimated as their activities require highly qualified personnel and take considerable time. In most cases, the control of labelling, classification, and content must be carried out through arbitrary inspections of companies, as indicated in the NAP. In conclusion, a regulatory compliance and enforcement program should include: roles and tasks of the inspection body; development of operational guidelines to make the regulatory provisions operational; communication mechanisms between companies and governments; institutionalization of arbitrary inspections; mandates and authorities for inspectors; necessary procedures and documentation during inspections; confidentiality provisions; clarification of the different types of sanctions.

A.3. Adopt the GHS at the national level. The implementation of GHS at the national level is proposed to contribute to reduce trade barriers, facilitate notification requirements and promote the flow of essential information on hazards and safe handling of chemicals. The document emphasizes that keep using the current national system or adopting multiple classification and labelling systems will be extremely expensive and ineffective. Even though adopting the GHS requires certain technical knowledge and use of resources, the system is a standardized model that can be adopted without further modifications. The country requires, though, important training and outreach measures for workers, emergency personnel, border officials, and those responsible for generating L&SDS.

B. Inventory, reporting and monitoring.

The objective here is to improve the mechanisms to collect information on hazardous chemicals throughout their life cycle, either pre-existing chemicals in the Suriname market or those that will enter the territory. The national situation analysis evidenced the lack of adequate mechanisms to collect information on substances in the market, as well as the absence of reporting mechanisms by industry and surveillance requirements to adequately monitor the environmental status. Subsequently, the national government cannot monitor if its chemicals management measures are effective and if the use of existing resources is adequate. Three fundamental actions were proposed to address these concerns:

B.1. Develop a Chemicals National Inventory/Database. The establishment of an inventory was proposed to identify the flows of chemicals and their uses, to design more appropriate measures according to national priorities, and to make an efficient use of resources. Sources of information available to create this instrument include pre-existing registration systems, foreign trade systems, and notifications from companies. More basic information on less hazardous substances could be also collected to supplement the database. At an initial stage, it is advisable to use existing information available in governmental systems, information from foreign trade systems and surveys. At a later stage, when the inventory is operational, information of the pre-existing systems and the actual reporting system can be improved.



B.2. Establish industry reporting mechanisms. Annual reporting by industry on their production, use and emissions of prioritized hazardous substances is proposed in order to identify and adequately manage the associated risks. This is related to the development of inventories, but the reporting system would improve data. The document points out that there must be different reporting requirements for different companies, depending on their size, their production volume or the relevance of the substances they produce or use. Reporting requirements are usually described in regulations and should not be voluntary, as risks could be significant or severe. Defining a priority substances list is suggested, which can include all hazardous substances. Arbitrary verifications should be done in relevant areas. In addition, governments must ensure that there is sufficient technical knowledge and laboratories in the country to enable companies to meet the requirements. It should be noted that since the design stage, there should be a reporting platform and trained personnel that verifies the data.

B.3. Implement a National Monitoring Plan. Governments often stipulate monitoring requirements in laws or regulations, but it is uncommon to find plans that actually address monitoring responsibilities in an integrated manner. In Suriname, priorities are: to identify and list all the monitoring requirements existing at different scales in the country; analyse the content and requirements of current monitoring systems; identify gaps and areas for improvement; decide on procedures that could be eliminated or created to maximize the effectiveness. Monitoring implies the adoption of emission factors, indicators, measurement techniques, sampling protocols, analytical capacity, among other factors. It is important to bear in mind that monitoring is not simply collecting data but compiling essential information for decision-making and setting priorities. It also helps to engage companies into more sustainable practices.

C. Establishment of key environmental infrastructure

The plan in Suriname also envisions the development of a National Hazardous Waste Management Plan to prevent or minimize the production of hazardous waste; to encourage and support safe recovery; to ensure safe disposal of those that cannot be recovered; to make mandatory the polluter pays principle in relation to hazardous waste disposal, and to include cost recovery for hazardous waste disposal facilities. In addition, the government must ensure the implementation of plans to respond to chemical accidents related to transportation and point sources at all levels, ensuring also any equipment needed in this regard.

4.2 Case 2: Implementation of the Globally Harmonized System of Classification and Labeling of Chemicals - Colombia (2018)

Life cycle stage: Production, place on the market, trade, transport and use/consumption.

Type of chemicals: All.

In many cases, regulatory segmentation leads to overlapping or inconsistencies in the implementation of hazard and risk communication mechanisms. The urgency to implement the Globally Harmonized System of Classification and Labeling of Chemicals in certain sectors, in particular in the workplace, leads governments to establish new mechanisms without



considering previous initiatives in other sectors, thus generating unclear instructions for those regulated and consumers in general.

Colombia is part of the case studies section due to the integrated way in which the implementation of hazard classification and communication systems has been addressed clearly establishing under one unique legislation the pre-existing national mechanisms, those created by the legislation and those that will be implemented in a future. Although GHS application is not stipulated unanimously, the text includes considerations regarding all groups of chemicals, providing clarity in terms of the instruments that regulate their classification, labeling and other elements of hazard communication. Additionally, the case study of Colombia illustrates how the Community of Andean Nations promotes decision-making on the management of chemicals of its member countries, as well as the regulatory impact assessment mechanisms in Colombia.

As a result of its environmental performance evaluation through the OECD adhesion process, the implementation of the GHS has been prioritized by Colombia since 2013. The Ministry of Environment and Sustainable Development was the entity that led the process of formulating the national strategy through the Chemical Safety Committee of the National Intersectoral Commission for Environmental Health (CONASA), which acted as an inter-agency coordinating mechanism. A situation and gap analysis document was prepared in 2014, which considered existing activities and capacities of governmental entities, companies, industry and civil society in the sectors involved in the implementation of GHS⁴¹. As a result of this process, the Globally Harmonized System of Classification and Labeling of Chemicals was finally adopted in 2018 by Decree No. 1496. This instrument also enforced other provisions on chemical safety. Although the focus was placed on implementing the GHS in workplaces, the Decree formally installed a process of adaptation of some pre-existing systems to the provisions of the GHS. The most relevant sections of the regulation are discussed in detail below.

Scope

According to Article 2, the Decree in Colombia applies to all economic activities related to the extraction, production, import, storage, transport, distribution, trade and different uses of chemicals that involve at least one of the hazardous properties according to the GHS criteria, whether they are pure chemicals, dilute solutions or mixtures of these. These include: 1) chemicals used in workplaces; 2) pesticides for agricultural use (PQUA); 3) chemicals in the transport stage; and 4) consumer chemical products.

It is worth highlighting some particular aspects of certain groups of chemicals that are described in CHAPTER IV:

- *Consumer chemical products*. Domestic hygiene products⁴², absorbents, and pesticides⁴³ for domestic use and public health, covered by pre-existing regulations, are excluded⁴⁴;

⁴¹ More information available at:

https://www.minambiente.gov.co/images/AsuntosambientalesySectorialyUrbana/pdf/sustancias_qu%C3%ADmicas_y_residuos_peligrosos/A4_-_Estrategia_nacional_SGA_2017_ultima_vs.pdf

⁴²a) Soaps and detergents; b) Dishwashing and kitchen polishing products; c) Fabric softeners and products for pre-washing and pre-ironing clothes; d) Air fresheners; e) Bleaches and stain removers; f) Domestic hygiene products with disinfectant properties; g) Surface cleaners; h) Absorbent personal hygiene products (sanitary napkins, diapers; disposable, tampons, intimate flow protectors, wet wipes) as



- *Pesticides for agricultural use.* Within the framework of Decision 804/2015 of the Andean Community of Nations, it is established that the GHS should be gradually adopted for these products in Colombia. Until then, the provisions of the pre-existing regulations will be followed⁴⁵;
- *Products in automotive land transportation.* It is established that the automotive land transportation of chemicals will be subject to the provisions established at the current regulations on the transportation of dangerous goods by road⁴⁶.

The instrument exempts pharmaceutical products, food additives, cosmetics and pesticide residues in food. It also exempts hazardous wastes which are identified, classified and labeled in accordance with current regulations on that subject.

Definitions and revised edition adopted

Article 1 stipulates that the edition adopted by Colombia is the sixth revised edition (2015). Definitions used for the national regulation are based on that edition.

Implementation period

The Decree delegates to the Ministries of Labor, Agriculture and Rural Development, Transportation, and Health and Social Protection, the definition of implementation deadlines for the substances that each entity regulates.

Technical aspects

- **Hazard classification:** Hazard classification of chemicals will be based on the guidelines of the Globally Harmonized System of Classification and Labeling of Chemicals.
- **Data sources for hazard classification. Tests:** The instrument establishes that data must be generated through tests conducted in accordance with the methods and techniques referenced in the GHS or to come from reliable sources of information. These sources must meet certain requirements (to be recommended by the Ministries of Health and Social Protection, and Labor; to be generated by a testing entity under the principles of the Good Laboratory Practice (GLP) of the OECD or by laboratories accredited under the ISO/IEC 17025 standard). They must be subject to an inspection regime by the National Accreditation Body of Colombia (ONAC), a National GLP Compliance Monitoring Authority of the OECD party to the Mutual Data Acceptance Agreement, the National Accreditation Body of Colombia (ONAC), or other accreditation bodies that are part of the multilateral recognition agreements signed by the ONAC.
- **Hazard communication:** The country adopts the L&SDS from the GHS, but allows for those to be complemented with other communication mechanisms, as long as the information is consistent among the mechanisms used. The Ministries of Labor, Health

long as they do not declare cosmetic properties or therapeutic indications; i) Others determined by the General Secretariat of the Andean Community through Resolution, by request and consensus of the Health Authorities of the Member Countries.

⁴³ According to Decree 1843, a pesticide is considered to be "any agent of a chemical, physical or biological nature that only in a mixture or in combination is used for the prevention, repression, attraction, or control of insects, mites, pathogens, nematodes, weeds, rodents or other organisms harmful to animals or plants, their derived products, health or beneficial fauna. The definition also includes products used as defoliants, physiological regulators, pheromones and any other product that in the opinion of the Ministries of Health or Agriculture are considered as such"

⁴⁴ Decision 706 of 2008 of the Andean Community of Nations and Decree 1843 of 1991 and complementary regulations.

⁴⁵ Andean Community, Technical Manual for the Registration and Control of Chemical Pesticides for Agricultural Use regulated by Resolution 630 of 2002.

⁴⁶ Decree 1079 of 2015 and amendments

and Social Protection, Agriculture and Development and Rural and Transport are allowed to define particular guidelines for the elaboration of L&SDS within their competencies.

- **Review and update:** When applicable, the review and update of L&SDS are mandatory for manufacturers and importers every five (5) years. During this period, if there is new and significant information on the hazards of a chemical (i.e., modifying the hazard classification), they are also required to update the corresponding L&SDS.

Responsibilities

As regards the classification, labelling and SDS, it should be noted that the standard establishes that manufacturers and importers are responsible for preparing them and guaranteeing the competent authority access to the scientific and technical support used for their preparation. Regarding disclosure, manufacturers, importers, and sellers are delegated to supply the SDS, being responsible for the quality of the information contained therein.

The Decree also assigns to marketers and end-users of chemical products the duty to require manufacturers and importers to supply chemical products classified and labeled in accordance with the GHS. It also calls on employers to ensure compliance in the workplace in terms of the identification of chemicals, exposure assessment, operational controls and training of workers according to regulations in force.

Concerning the Occupational Risk Administrators, they are assigned the duty to ensure that their affiliated companies are aware and comply with the requirements of the GHS, provide advice and technical assistance to employers regarding its application and carry out promotion and prevention actions aimed at the use and handling chemicals in the workplace.

With respect to government agencies, responsibilities are distributed among different portfolios:

- **Ministry of Labor:** In coordination with the Ministry of Health and Social Protection, it is required to define the recommended sources of information for the classification of the hazards of chemicals, the actions that must be taken by employers for the application of the GHS in workplaces and those aimed at worker's safety and health protection with respect to the use and handling of such products. Additionally, it must carry out awareness-raising and training campaigns on the application of the GHS aimed at employers.
- **Ministry of Health and Social Protection:** With the support of the Ministry of Trade, Industry and Tourism, it is required to establish the actions aimed at the application of the GHS for chemicals for consumption (includes consumer products) and its dissemination. Together with the Ministry of Labor, both should indicate the recommended sources of data.
- **Ministry of Transport:** According to the standard, dissemination activities among different actors that are part of the dangerous goods transport chain must be conducted.
- **Ministry of Agriculture:** In coordination with other competent authorities, it must participate in the process of inclusion of the GHS for the labeling of agrochemicals as part of the updating of the current regulation on that area.

Confidentiality



Although the Decree does not make particular references to any section of the SDS or label that may be considered confidential it specifies that, in case of urgency or emergency, emergency attention agencies may request access to confidential information of a product. Manufacturers, importers and/or sellers are responsible for delivering the specific and necessary information immediately and competent entities must maintain the confidentiality of such information.

Good regulatory practices and regulatory impact assessment

As provided by Decree 1595/2015, regulatory entities in Colombia must adopt good regulation practices, so that it does not create unnecessary obstacles to trade. Following the terms stipulated in the aforementioned instrument, which are based on the Agreement on Technical Barriers to Trade of the World Trade Organization (WTO), the official bodies must request a prior concept from the Department of Regulation of the Ministry of Trade, Industry and Tourism, to comply with the National Quality Subsystem. That request shall be accompanied by a list of problematic issues and an Annual Regulatory Impact Analysis Program (PAAIN). Additionally, in accordance with article 5 of Decree 2897/2010, the authorities that intend to issue an administrative act for regulatory purposes must evaluate its potential impacts on free competition and trade, based on a questionnaire adopted by the Superintendency of Industry and Trade, previous consideration of the draft regulatory act.

Following the procedures illustrated above, it was determined that the adoption of the Globally Harmonized System in Colombia does not create an unnecessary obstacle to international trade of chemicals. The project was notified to the World Trade Organization and the Andean Community of Nations (CAN), among other trade partners.

Draft regulations

In March 2020, the Draft Resolution "by which the actions that must be developed by employers for the application of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) in the workplace and other provisions on chemical safety are regulated" was opened for public consultation by the Ministry of Labor⁴⁷.

It includes, among other issues:

- Sources of information on individual chemicals or groups of chemicals that should be consulted when there is no experimental data or GHS hazard classification data issued by the supplier;
- Clarifications regarding health hazards, particularly regarding the "carcinogenicity" class. The proposal establishes the classification by the International Agency for Research on Cancer - IARC as a reference;
- Minimum label content, arrangement of hazard communication elements, size and other labeling considerations;
- Clarifications on the classification of mixtures;
- Specific requirements for the preparation of SDS, its content and publication;
- Considerations regarding confidential business information;

⁴⁷ Ministry of Labor and Ministry of Health and Social Protection of Colombia, (2020). Retrieved from: <https://www.mintrabajo.gov.co/documentos/20147/0/Norma+SGA+Lugares+de+Trabajo+V.2+27+03+2020.pdf/182ee43d-8e85-ad8d-5167-6f800e659d62? T = 1585680609793>



- Requirements for containers for hazardous products;
- Obligations for employers, workers and Occupational Risk Administrators;
- Implementation deadlines.

Regarding the agricultural sector, the recently published Resolution 2075 of the Andean Community⁴⁸ has established a maximum period of 60 months from the day following its entry into force⁴⁹, for the countries to adopt the GHS in the terms established in the Andean Technical Manual for the Registration and Control of Chemical Pesticides for Agricultural Use. During the transition period, two types of labels may coexist (those made based on Resolution No. 630 and those that respond to GHS). With the entry into force of the regulation, the Colombian Agricultural Institute, the National Institute of Health and the National Environmental Licensing Authority informed the producers and registrants of these products, through a Joint External Circular, the necessary mechanisms to migrate from the pre-existing system to the requirements of Resolution 2075⁵⁰.

4.3 Case 3: Pollutant Release and Transfer Register (PRTR) - Chile (2018)

Stage of the life cycle: Production and end of life.

Type of chemicals: Though it could apply to all chemicals, it only addresses a specific list, which is updated according to national and international provisions.

Chile started the design of its national PRTR since 2002. The process was led by the Ministry of the Environment and its predecessor, the National Environment Commission (Conama), together with representatives of the public, private and academic sectors, non-governmental organizations, and with the support of the Commission for Environmental Cooperation Chile-Canada, Environment Canada and UNITAR. The OECD recommendations and the commitments acquired by Chile in the international arena through the signing and approval of different agreements, such as the Free Trade Agreement with the United States, the Memorandum of Agreement with Canada in the framework of the Free Trade Agreement, and the Stockholm Convention on Persistent Organic Pollutants (POPs) were key contributors in the process.

The PRTR was adopted by Supreme Decree No. 1/2013 MMA, and together with other various environmental instruments, it implements the reporting of information associated with emissions to air, water and the generation of hazardous and non-hazardous waste from the facilities located in the national territory. The Ministry of the Environment administers this register, as provided in the amendment of Law 19,300 in 2010. At the end of 2018, relevant modifications were made to the PRTR through Supreme Decree No. 31/2018 MMA,

⁴⁸ Andean Community. Official Gazette of the Cartagena Agreement, (2019). Resolution No. 2075 "Andean Technical Manual for the Registration and Control of Chemical Pesticides for Agricultural Use". Recovered from: <http://www.comunidadandina.org/DocOficialesFiles/Gacetatas/Gaceta%203709.pdf>

⁴⁹ This is, according to the Second Transitory Provision, 6 (six) months after the date of its publication in the Official Gazette of the Cartagena Agreement (August 2, 2019)

⁵⁰ Instituto Colombiano Agropecuario, (2020). Joint External Circular No. 3. Recovered from: <https://www.ica.gov.co/areas/agricola/servicios/regulacion-y-control-de-plaguicidas-quimicos/circular-no-3-adopcion-sga-28-feb-2020.aspx>



especially concerning Extended Producer Responsibility (REP) and Green Tax initiatives that record CO₂, MP, NO_x and SO_x emissions.

At present, several improvements are being made to the web platform to facilitate navigation: the Unique Register of Atmospheric Emissions/F138 was created to manage all information on air emissions and production, investments for environmental protection and annual affidavit. A new system to have monthly declarations of non-hazardous waste is under development and will be fully implemented in a near future, enhancing the traceability of waste from its generation to its disposal or recovery.

In addition, the register now works with a Unique Code, an identification number that provides users access to more than 900 procedures, including declarations to the PRTR's single window system.

It is noteworthy that Chile has made significant progress in the implementation of its PRTR, and has been a permanent member of the Task Force (currently the “Working Group” and from next year “Working Party”) of the OECD for PRTRs since 2010, contributing to and taking part in the different discussions on global emissions registers, as well as the guidelines of countries that have fully operational registers⁵¹.

Content

The PRTR in Chile compiles information on emissions, waste, pollutant transfers and priority products (the latter included in the 2018 amendment). Data comes from:

- Reports and information from inspections of emissions, waste, transfer of pollutants and priority products resulting from enforcement of the obligations to report provisioned in emission standards, prevention and/or decontamination plans, environmental instruments and other standards or regulations. This information is submitted by competent bodies of the State Administration for its control;
- Official information provided by different governmental agencies used to make estimations of non-regulated emissions from diffuse and point sources. The estimations from diffuse sources are made by the Ministry of the Environment;
- Reports of emissions, residues and/or transfers of pollutants included in international agreements ratified by Chile and in force;
- Registers of boilers, turbines and establishments subject to the emissions tax;
- Information on producers of priority products; the authorized management systems and their management plan, their updating or renewal; distributors or marketers of priority products, when appropriate; reception or storage facilities; authorized managers; industrial consumers; the fulfillment of collection and recovery goals; and the transboundary movement of waste (in accordance with the provisions of Law 20,920).

⁵¹ Ministry of the Environment of Chile, (2019) Consolidated report on pollutant releases and transfers. 2005-2017, RETC. Retrieved from: <https://retc.mma.gob.cl/wp-content/uploads/2019/12/REPORTE-RETC-2005-2017.pdf>



Pollutants, substances, residues and prioritized products included in the Register

These depend on the existing regulations and their amendments, new regulations, the international agreements ratified by Chile, and the decisions taken by the National Coordinating Group.

Concept of facility

The definition used for “facility” in the regulation is:

“Establishment or site in which one or more economic activities are carried out where a transformation of the raw material or materials used occurs or that do not produce a transformation in its essence but give rise to new products, and that in this process originate emissions, residues and/or transfers of pollutants; as well as any other activities directly related to those that have a technical relationship with the activities carried out in the same location and may have repercussions on the generation of emissions, waste and/or pollutant transfers.”

This concept requires the registration of all facilities, avoiding that only the parent company is declared, or a single headquarter for the entire company, or that the declaration procedures are delegated to the transport company.

Obligations and responsibilities

- **PRTR focal points:** They are members of the National Coordinating Group and are responsible for signing in the system node on an annual basis and submitting all the relevant information to the PRTR (of the previous year);
- **Point sources representatives (Head of facility):** The regulation specifies that the Head of Facility is the one who has the responsibility of ensuring the adequacy of the information. This person must not falsify or omit data intentionally. The different regulatory bodies establish what sectoral criteria and reporting thresholds for each product, activity or source must be included in the system;
- **Facilities subject to emissions tax;**
- **Importers, producers, distributors, sellers:** Those who market products that contain substances subject of reporting as per international regulations and/or agreements;
- **Producers of priority products; management systems, waste managers, sellers, distributors and industrial consumers** (as provided in Law 20,920).
- **Waste generators:** They are required to declare on an annual basis the amount of waste generated the previous year, if greater than 12 tons;
- **Municipalities:** each year they must declare the waste they collected during the previous year or that was collected by third parties hired by them;
- **Waste recipients:** When they receive more than 12 tons per year, they must declare on an annual basis the waste received the previous year.

Reporting any changes

Facilities must inform about any change related to: the company’s name; representatives; transformation, merging, absorption and division of the companies, as well as the appointment of the person in charge. Information evidencing the change must be submitted within six months of occurrence.



National Coordinating Group (NCG)

In accordance with the provisions of Law 19,300, the Ministry of the Environment created the National Coordinating Group, which is an operative committee formed by representatives of different public institutions and that oversees the coordination, collaboration, analysis and management of the operation of the PRTR. This group may invite representatives of civil society to participate in the sessions.

Single Window System

In order to avoid the duplication of notification by the private sector and to facilitate the voluntary transfer of information among governmental bodies, and following recommendation C(96)41/Final of the OECD⁵², the Chilean State created a Single Window System (SWS) installed on a Web Portal. At the SWS, the regulated entities must report their emissions, waste and/or transfers of pollutants by issuing a Declaration to comply with their obligations as emitters or generators.

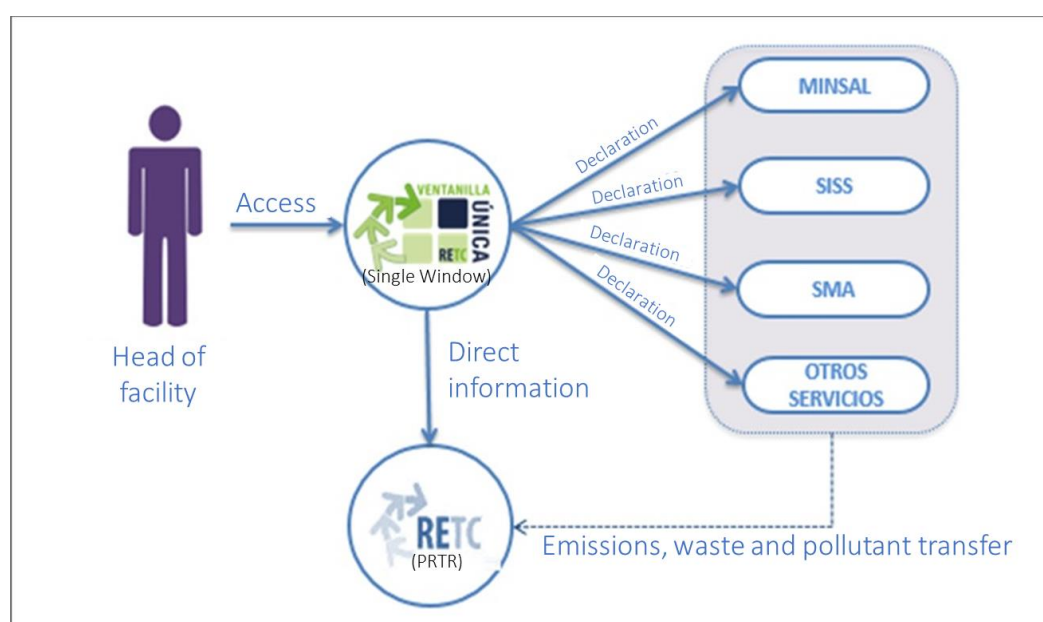


Figure 4. Diagram of the Single Window System approach of the Chilean PRTR. Source: M.J. Serrano Ulloa, Ministry of Environment of Chile (2014)

Submission of the information

The information contained in the PRTR is presented in an aggregated and disaggregated manner, so that data on emissions, generation and destination of waste, and pollutant transfers can be consulted on the electronic portal of the PRTR as established in Supreme Decree No. 1/2013 of the MMA. The information can be reviewed under the following categories:

- a) Facility and emission or discharge unit;
- b) Geographical location;

⁵² Amended by C (2003) 87. Among its principles, it establishes that "In order to reduce the duplication of reports, PRTR systems should be integrated, as far as possible, with existing information sources, such as licenses or operating permits."

- c) Political-administrative division of the country;
- d) Productive sectors and products;
- e) Type of sources, point or diffuse;
- f) Owners or holders of companies that declare in the PRTR Single Window System, as appropriate;
- g) Contaminant, substance or residue;
- h) Environmental matrix receiving the pollutant, substance or waste;
- i) Destination of waste and transfers;
- j) Environmental performance indicators by productive sector;
- k) Producers of priority products;
- l) Management systems;
- m) Waste managers;
- n) Waste generators, including industrial consumers;
- o) Distributors and sellers of priority products, when appropriate;
- p) Transboundary movements of waste;
- q) Waste reception and storage facilities.

Knowledge transfer and Help Desk

When the Single Window was initially established in 2014, an email was set in order to respond to inquiries in the most efficient manner. However, the demand far exceeded the response capacity of the PRTR team. Therefore, a Help Desk was implemented in November 2015 to serve more than 40,000 registered users. This space guides, informs and gives technical assistance through telephone service and the Contact Form. Additionally, other instruments are used such as manuals, workshops, tutorial videos, instructions, associated regulations and frequently asked questions. It also includes satisfaction surveys to learn about the degree of satisfaction of users.

The Help Desk has reached a high demand from the public in general reaching in 2016 the figure of 30,852 inquiries. In 2017, there were a total of 24,173 telephone inquiries and 4,702 inquiries through the Contact Form.

Achievements and challenges ahead⁵³

Between 2014 and 2017, Chile has managed to: make the Single Window System and the systems managed by the Department of Environmental Information fully operational; incorporate 10 sectoral systems to the PRTR Single Window; implement and manage the PRTR Help Desk; establish the PRTR as an Information System of the EPR Law; develop and manage the Register of Boilers and Turbines for green taxes; constitute the data mining area of the PRTR and prepare a Manual for the Design and Implementation of the PRTR as a tool for other countries.

Among the challenges to be faced in 2021, the country intends to: decentralize PRTR Management; incorporate higher security standards; develop a new version of the Single Window; design, develop and implement the Report of Greenhouse Gases from Point Sources under standards; develop a dashboard for the environmental management with the

⁵³ Based on a presentation by M. J. Serrano Ulloa, Ministry of Environment of Chile, (2018). "Casos de estudio de Chile y lecciones aprendidas en el proceso de implementación del RETC". Available at: <https://docplayer.es/84939639-Casos-de-estudio-de-chile-y-lecciones-aprendidas-en-el-proceso-de-implementacion-del-retc.html> (in Spanish).



declared information; generate a platform for accessing to information through social networks, and support countries in the region in the development of their PRTRs.

4.4 Case 4: Integrated Chemicals Management Draft Bill - Peru (2020)

Stage of the life cycle: Production and place on the market. However, all the life cycle is addressed by the risk management measures.

Type of chemicals: All. This proposal integrates existing registers (including pesticides registers and others) and new mechanisms for industrial chemicals.

Through this draft Bill, Peru intends to gather in a single database the information related to all hazardous chemicals placed on the domestic market. It is intended to include both, those substances currently regulated by specific regulations and those that do not yet have a formal registration and risk assessment process.

It should be noted that Peru's normative project is at the moment a working document in the process of consultation by the private sector and stakeholders.

Scope

The proposed scope includes chemicals that are understood as “pure chemical substances and mixtures”. Definitions are based on the UN-GHS with some editorial modifications, as well as on the definition of mono-constituent and multi-constituent of the European Chemicals Agency (ECHA).

Peru proceeded to establish a restrictive list of exclusions, mainly seen in international instruments (Europe -REACH-, USA -TSCA-, Canada, Japan and draft projects from other countries in the region such as Argentina, Brazil, Colombia, Costa Rica and Mexico). Two groups of chemicals are differentiated: on the one hand, substances and mixtures as such, and on the other, substances and mixtures in the form of final products, that is, intended for consumers. Regarding substances existing in nature, those that are not classified as hazardous are excluded. The approach proposed in Peru does not specify substances or products as such (as seen in the REACH model)⁵⁴.

Responsibilities and Requirements

Provisions are proposed to be mandatory for users of chemicals, including those who manufacture, import, distribute, pack, store and use chemicals.

Regarding the obligations proposed in the Bill, the following should be highlighted:

- The implementation of the GHS for the classification, labeling and elaboration of SDS is mandatory for *importers and manufacturers*. Compliance with the instructions in

⁵⁴ More information available in the Guidance document for the identification and naming of substances in REACH and CLP, of the European Chemicals Agency (2017). Available at: https://echa.europa.eu/documents/10162/23036412/substance_id_es.pdf/0da9325d-0366-4605-9399-670665f79fa5



labels and SDS is mandatory for *users*. Specific regulations for the classification and labeling will be subsequently approved.

- *Manufacturers and importers* must register substances in the National Chemicals Register (RENASQ, in Spanish), whose implementation details will be addressed by subsequent specific regulation. In addition, a risk assessment must be developed for substances prioritized by the Ministry of the Environment or when substances are registered for the first time 4 years after the adoption of the regulations on classification and labeling⁵⁵.
- Regarding *users of chemicals* identified as carcinogenic, mutagenic, toxic for the reproductive system or hazardous for the environment, they must include specific measures to reduce and soundly manage health or environmental risks in their Environmental Management Strategies under their Environmental Management Instruments. The latter would be evaluated by the *competent authorities on environmental impact assessments*.
- *Distributors* are responsible for distributing only chemicals purchased from a manufacturer or importer registered in RENASQ (in case they are directly purchased); verify and ensure that the chemicals they purchase are labeled and have their SDS; label chemicals based on the information provided by the importer or manufacturer in the SDS when packaging or transferring the substances; establish measures for risks reduction and management in their Environmental Management Instruments.
- *Authorities* that administer chemicals data must annually report the information they have on manufacturers and importers of hazardous substances. In the absence of such information, they should implement measures to gradually adapt their existing systems.
- The *Ministry of the Environment* is responsible for approving the guidelines for the presentation of health or environmental risk assessments, in coordination with the Ministry of Health, as well as making the selection of prioritized substances. Moreover, this body must approve the guidelines for the formulation of risk reduction and management measures, in coordination with the relevant sectors.
- The *authorities responsible for monitoring the international agreements, conventions, and other instruments* on chemicals approved by Peru, will be responsible for managing the necessary measures to implement the provisions on the sound management, reduction, progressive elimination and/or prohibition of the use of the substances involved in those international instruments.
- The *Ministry of Production*, with prior intervention from the *Ministry of the Environment and the Ministry of Economy and Finance*, must issue technical legislation aimed at regulating hazardous chemicals in manufactured products.

Authorization of third-parties

The Bill allows registrants to use third-party information to fulfill obligations. To do this, they must demonstrate their right to use such information and its origin, which must be from reliable sources.

⁵⁵ This instrument includes the minimum information to be contained in the Risk Assessment: determination of the physical and chemical properties of the chemical substance, its effects on biotic systems, its mobility and behavior in the environment, and its effects on human health.

Prioritization criteria for risk assessment development and review

Although other possible considerations are delegated to a later regulation, the following are identified as criteria for prioritization: hazard classification, potential level of exposure or potential to cause major accidents.

Competent Authority and enforcement authorities

The Ministry of Environment will administer the National Register. Enforcement will be done as part of the National System of Environmental Assessment and Inspection that is already in force in Peru. Furthermore, measures regarding the classification and labeling of chemicals will be implemented in a modular approach, so that consumer products correspond to the Ministry of Health; chemicals used in the workplace to the Ministry of Labor and Employment Promotion; and agrochemicals to the Ministry of Agriculture and Irrigation.

Confidentiality and regulatory cooperation

In the case of the Peruvian Bill, the identification of the substance and its recommended uses, the identification of the manufacturer/importer, the annual volume (which may be reported generally or by using historical averages or ranges of values) and the content of the SDS of the substance are not considered confidential information.

Based on reciprocity and under certain considerations, the possibility of creating conditions for the exchange of confidential information on chemicals with other countries after consultation with the owner of the data is delegated to the State.

Complementary measures

- **Pollutant Release and Transfer Register (PRTR):** The project makes mandatory the report to the PRTR, leaving its administration in charge of the Ministry of the Environment, who will establish the operational aspects thereof.
- **Permanent Multisectoral Commission for the Sound Management of Chemicals:** The Bill promotes the creation of a committee through a regulatory Decree, which will include representatives from the public sector, private sector, business associations, academia and non-profit institutions involved in the management of chemicals. The objective of the committee will be to guarantee the sound management of chemicals, to apply the provisions of the agreements, conventions and other international instruments on chemicals approved by the country; as well as coordinating other actions associated with risk management and reduction. The committee shall have the competence to produce technical reports to support measures for the prohibition or restriction of the manufacture, import or use of hazardous chemicals to protect human health and the environment, taking into consideration the information provided to the RENASQ as well as the risk assessments and/or scientific evidence or updated information available.
- **Public purchases:** This instrument establishes that governmental bodies must promote the acquisition of goods and services that involve chemicals with a lower hazard to health and/or the environment, according to their classification and the information contained in the RENASQ.
- **Transport of dangerous goods:** It is explicitly stated that the transport of dangerous goods is carried out in accordance with the provisions of the current national regulations on the transport of dangerous materials (Law No. 28256 and its Regulation approved by



Supreme Decree No. 021-2008- MTC), applying the provisions of the United Nations Recommendations.

5. CONCLUSIONS AND OPPORTUNITIES

While most countries in Latin American and the Caribbean have legislation on different aspects of chemicals management, the lack of an integrated approach is a common challenge. The main conclusions and trends from the report are presented here, along with some opportunities identified for the region. Although the present study does not include a detailed analysis of the situation in each country, it is expected that these conclusions can be considered when designing coordinated activities in LAC.

- **Progress in the development of regulations for the sound management of chemicals.** Several countries in the region already have long-term National Policies or Plans that cover more than one stage of the chemicals' life cycle. Most include key elements such as the adoption of labeling and classification systems (mainly through GHS), the development of inventories and registers, the strengthening of monitoring and enforcement systems, and the compliance with international agreements.
- **Heterogeneity in the implementation of GHS.** Very few countries have fully implemented the system and others are at a legal drafting stage. The heterogeneity in the region is also observed in the different GHS revisions that have been adopted and the sectors where the GHS is implemented. The general trend in LAC is to implement GHS in the industrial sector ("workplace", "professional use"). Some countries have adopted or are in the process of adopting the GHS for agrochemicals. Most have regulations for the transport sector based on the United Nations Recommendations on the Transport of Dangerous Goods. Fewer countries require GHS labeling on consumer products. These differences can lead to technical barriers to trade, generate unnecessary additional costs in the same region, create confusion for workers and users, or lead to inappropriate classifications of subproducts. Furthermore, there is a remarkable knowledge gap between large companies and small and medium-sized enterprises. Companies that only place their products on the local market rarely understand the benefits of applying the GHS. One of the biggest obstacles to the effective implementation of the system is the lack of resources for SMEs, such as technical knowledge, and obstacles in the access to chemicals data. The lack of resources also affects the governmental sector, especially in terms of deficiencies in control and enforcement.
- **Limited implementation of PRTR.** Both the Escazú agreement and the intentions to join the OECD can promote the adoption of PRTRs by countries of the region. However, very few countries have PRTRs in place. Only one country has an operational PRTR, while others are in the stages of feasibility analysis, regulation development, or pilot trials. It is worth noting that the existing pollutant and waste monitoring and reporting schemes are generally implemented in an isolated and disjointed manner, both at the national and local levels. This represents a special challenge for the adoption of a PRTR.
- **Initiatives for the development of inventories and registers of industrial chemicals.** In many LAC countries, certain groups of substances and consumer products are subject to rigorous controls prior to their placing on the market - even though these schemes do not perceive processes to systematically review and update information on substances and products in the market-. In contrast, there are generally no control mechanisms for industrial chemicals, unlike other regions. In recent years, some



countries are drafting regulations to establish industrial chemicals inventories/registers and risk assessment and management procedures.

Opportunities

Applicable to the general legal framework of chemicals

1. Promote the exchange of experiences among countries. Countries that have established chemical frameworks can share their experience with countries that are still in a development phase. Countries can share their motivations, the benefits of having such systems, and lessons learned throughout the process that can be useful for other countries.

2. Establish intersectoral coordination. The creation of cooperation and coordination mechanisms among the various sectors involved (government, private sector, academia, civil society) is recommended from the regulatory design phase, in order to identify potential synergies, favor the exchange of experiences and achieve the effective implementation of sound chemicals management.

3. Channel regional coordination through existing platforms such as trade blocs, networks and forums. Countries are encouraged to participate in international cooperation platforms, to promote legal frameworks within subregional commercial blocs, and to coordinate actions with their main commercial partners. These platforms are also valid for the transfer of knowledge and lessons learned. At the regional level, the design of information and lessons learned exchange actions within the framework of the Intergovernmental Network on Chemicals and Waste for Latin America and the Caribbean is suggested. Furthermore, the LARCF initiative⁵⁶ is highlighted as an opportunity to promote public-private dialogue at the regional level.

Applicable to GHS

1. Develop tools to facilitate its effective implementation. It is essential for governments of the region to have a clear and strategic regulatory framework that considers a gradual implementation according to the possibilities and priorities of the different sectors at the national level and to include an awareness-raising and training plan.

The development of practical tools to access chemicals data at the global or regional level, such as databases with information on harmonized classifications for labels and SDS, would be very beneficial for companies. Once the regulatory framework on GHS is adopted, technical guides for its implementation are also essential for companies, particularly SMEs.

2. When no system is in place, As a first step, consider the adoption the GHS on a voluntary basis through technical standards. The development of voluntary technical standards has been the first step to adopt GHS in some countries. Those countries that find difficulties in approving a mandatory instrument are encouraged to evaluate starting with voluntary technical standards or other types of instruments that permit the GHS implementation in a multisectoral and coordinated manner.

⁵⁶ See section Trends on the implementation of the Globally Harmonized System of classification and labeling of chemicals (GHS)



Applicable to Pollutant Release and Transfer Registers (PRTRs)

1. Identify and take advantage of capacity-building opportunities offered by international organizations, LAC countries and others. In order to support the implementation of PRTRs, organizations such as the OECD, UNECE and UNITAR, and some countries, such as Spain, have published valuable material, and provide training on the design and implementation of this type of register. Countries that are at preliminary stages of PRTR design can benefit from exchanging with countries that have already operative registers.

2. Develop a regional implementation strategy, within the framework of the Escazú Agreement. Both the Escazú Agreement and the initiatives to join the OECD can be promoters of the adoption of PRTR systems in the region. The recently adopted Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement) includes specific provisions on PRTRs. The adoption of this agreement could kickstart initiatives in countries to adopt PRTRs. In addition, the regional scope of the agreement provides the opportunity to implement a PRTR with a regional approach. It could allow the coordinated –definition of methodologies, list of pollutants and harmonized reporting formats, among others - and thus favor the efficient use of resources.

Applicable to inventories/registers of industrial chemicals, risk assessment and risk management mechanisms

1. Adapt existing information and risk approach systems to national and regional conditions.

The general practice in the region is to assess and follow existing international models. However, the urgency of governments to rapidly design their legislation often results in the replication of foreign projects without conducting an impacts analysis at the national level. Countries should assess the various models, with emphasis on models from main trading partners, always considering the necessary measures to adapt those regulations to the local context. It is recommended that this kind of instrument, as in the case of GHS implementation, is implemented gradually in different stages, especially to ensure that SMEs can comply with them.

2. Formally establish intergovernmental cooperation at the national level. In most of the cases that were studied, intergovernmental committees have been created to promote cooperation in the exchange of information, the systematic review of pre-existing substances, and articulating decision-making on risk management, among others. Intergovernmental coordination is essential when consolidating national plans that address chemicals management based on an integrated and comprehensive strategy.

3. Take advantage of the resources and information available in the region through regulatory cooperation. Countries are encouraged to share information both during the regulatory development process and the implementation phase, through informal mechanisms or formal agreements such as Memorandums of Understanding. There are tools that ensure harmonization among chemicals management national regulatory schemes, avoiding contradictory or duplicate requirements for industry, providing governments with a common



basis to work jointly and reducing non-tariff barriers to trade. One very relevant tool for harmonization is the OECD Mutual Acceptance of Data (MAD) system.



LIST OF ABBREVIATIONS AND ACRONYMS

AP	Action Plan of the Intergovernmental Network of Chemicals and Waste
BPL	Best Laboratory Practices
CAF	Development Bank of Latin America
CAS	Chemical Abstracts Service
EPR	Extended Producer Responsibility
FAO	Food and Agriculture Organization
GCOII	Global Chemical Outlook II
GHS	Global Harmonized System of Classification and Labeling of Chemicals
GPA	Global Plan of Action
IARC	International Agency for Research on Cancer
ICCA	International Council of Chemical Associations
ICCM	International Conference on Chemicals Management
IOMC	Inter-Organization Programme for the Sound Management of Chemicals
ISIC	International Standard Industrial Classification of All Economic Activities
L&SDS	Labels and Safety Data Sheets
LAC	Latin America and The Caribbean
LARCF	Latin America Regulatory Cooperation Forum
MAD	Mutual Acceptance of Data
MERCOSUR	Common Market of South America
NAP	National Action Plan
NGO	Non-governmental Organization
OECD	Organization for Economic Co-operation and Development
OPS	Overall Policy Strategy
POPs	Persistent Organic Pollutants
PRTR	Pollutant Release and Transfer Register
SAICM	Strategic Approach for International Chemicals Management
SDG	Sustainable Development Goals
SDS	Safety Data Sheet
SMEs	Small and Medium Enterprises
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environmental Programme
UNITAR	United Nations Institute for Training and Research
WHO	World Health Organization
WTO	World Trade Organization



ANNEXES

Annex 1. Compendium of regulatory instruments, plans and strategies in LAC

The list below presents a number of instruments adopted or draft bills for the management of chemicals over the last decade in **10 countries of the region**. It was prepared thanks to the contributions of the National Focal Points of the Network and literature research. It is hoped that this database can be used for future **mapping of regulatory frameworks in the region**.

Classification by life cycle stages

Stage of the life cycle: All stages							
Nature	Country	Type of instrument NA: Not Applicable	Legal Instrument number NA: Not Available	Year of publication	Type of chemical	Brief description	Access NA: Not Available
Sound Management - Integrated instrument	Peru	Ministry Regulation	DL No. 1059, DS No. 018-2008-AG y DS No. 001-2015-MINAGRI	2015	Agrochemicals	It regulates pesticides for agricultural use. Ministry of Agriculture and Irrigation.	Spanish
	Dominican Republic	Technical Regulation	NA	2016	All	Technical Environmental Standard for the Management of Chemicals and Hazardous Waste. Ministry of Environment and Natural Resources.	Spanish
National Strategy/Policy	Colombia	National Management Policy	Document CONPES 3868	2018	All	Risk Management Policy associated with the use of Chemicals. National Planning Department, other ministries and official entities.	Spanish
	Costa Rica	Decree, National Policy	40148/2016	2016	All	Declaration of Public Interest and Promulgation of the National Policy on Chemical Safety.	Spanish



	Costa Rica	National Program	NA	Under development	All	Program for the Management of Chemical Products, in the process of joining the OECD.	NA
	Honduras	National Policy	NA	2013	All	Policy for the Environmentally Sound Management of Chemicals.	NA
	Mexico	Project	NA	Under development	All	Strengthening Institutional Capacities for the sound management of chemicals and hazardous waste by the establishment of the structure for the implementation of Basel, Stockholm, Rotterdam and Minamata Conventions and SAICM	NA
	Dominican Republic	Law	1-12	2012	All	Law 1-12 on the National Development Strategy 2010-2030. Department of Agriculture.	Spanish
	Dominican Republic	National Profile	NA	NA	All	National Profile of Chemicals and Hazardous Waste.	NA
	Suriname	National Profile	S.B. 2020 No. 97	2020	All	Environmental Framework (S.B. 2020 no 97)	NA
	Suriname	National Action Plan	NA	2014	All	Suriname Five-year National Action Plan for Sound Management of Chemicals	NA
Draft bill	Honduras	Draft bill	NA	Under development	All	Regulation for the Environmentally Sound Management of Hazardous Chemicals in Honduras. Prepared, reviewed and in the approval process.	NA
	Peru	Draft bill	NA	Under development	All	Bill on the Integrated Management of Chemicals (Status: final validation by the public-private sector). Ministry of the Environment.	NA
Stage of the life cycle: Production							
Emissions and releases	Chile	Decree	D.S. No. 31/2018	2013 (1 st version) 2018 (2 nd)	All	Approves the Pollutant Release and Transfer Register (PRTR)	Spanish
	Honduras	Regulation	No. 1070-	2015	All	Pollutant Release and Transfer of	Spanish



	2014					Register (PRTR)	
Accident prevention and response	Colombia	Draft bill	NA	Under development	All	Draft Decree on the Major Accident Prevention Program (aimed at facilities where certain dangerous chemicals are stored, manufactured or used). Ministry of Labor, Ministry of Health and Social Protection, Ministry of Environment and Sustainable Development, and National Unit for Disaster Risk Management.	NA
Contaminated sites	Honduras	Bill	NA	Under development	All	Regulation for the Management of Contaminated Sites with Chemicals. In the process of validation.	NA
	Perú	Supreme Decree	No 012-2017-MINAM	2017	All	Adopts criteria for the management of contaminated sites (with an approach of soil contamination or of other environmental components)	Spanish
Stage of the life cycle: Production and place on the market							
Labeling	Colombia	Decree	Decree 1496	2018	All	Adopts the Globally Harmonized System of Classification and Labeling of Chemicals and other provisions on chemical safety. Ministry of Labor.	Spanish
	Costa Rica	Technical regulation	RTCR 481:2015	2017	Industrial chemicals	Technical regulation RTCR 481: 2015 Chemical Products. Hazardous Chemicals. Labeling	Spanish
	Venezuela	Bill	NA	Under development (public consultation)	NA	Technical Standards: - Chemicals. Part 1. Criteria for their classification according to its physical hazards. - Chemical. Part 2. Design and Labeling. SDS	NA
Register, import, enforcement, labeling	Costa Rica	Technical Regulation	RTCR 478:2015	2017	Industrial chemicals	Technical Regulation RTCR 478: 2015 Chemicals. Hazardous Chemicals Registration, Import and Control. It establishes the requirements and	Spanish



						procedures for the registration, import and control of dangerous chemical products in order to protect public health and the environment. EMS implementation	
Stage of the life cycle: Place on the market							
Registers, inventories, previous requirements, risk assessment and risk management	Colombia	Bill	NA	Under development	Industrial chemicals	Program for the management of industrial chemicals - PGSQUI. Ministry of Trade, Industry and Tourism, Ministry of Labor, Ministry of Health and Social Protection and Ministry of Environment and Sustainable Development.	Spanish
Stage of the life cycle: Transport							
Transport	Honduras	Bill	NA	Under development	All	Regulations for the transport of hazardous substances merchandise and waste by road. Prepared, revised and in the process of officialization.	NA
	Peru	Law	Law No. 28256 Supreme Decree No. 021-2008-MTC	2019	All	Land transportation of hazardous materials and waste. Ministry of Transport and Communications.	Spanish
	Dominican Republic	Technical instrument	NA	2019	All	Technical Environmental Regulation for Land Transportation and Hazardous Materials. Ministry of Public Health.	Spanish
Stage of the life cycle: Consumption/ Use							
Regulation of products	Peru	Ministerial Resolution	No. 439-2020-MINSA	2020	Domestic, industrial,	Regulation and Control of Hazardous Substances for Domestic, Industrial and/or	Spanish



	public health use	Public Health Use. Ministry of Health.
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Classification by regulated aspects

Nature	Country	Type of instrument NA: Not Applicable	Identification number NA: Not Available	Year	Type of chemical	Brief description	Access NA: Not Available
Emissions and releases	Chile	Decree	D.S. No. 31/2018	2013 (1 st version) 2018 (2 nd)	All	Approves the Pollutant Release and Transfer Register (PRTR)	Spanish
	Honduras	Ministerial Regulation	No. 1070-2014	2015	All	Pollutant Release and Transfer of Register (PRTR)	Spanish
Labeling	Colombia	Decree	Decree 1496	2018	All	Adopts the Globally Harmonized System of Classification and Labeling of Chemicals and other provisions on chemical safety. Ministry of Labor.	Spanish
	Costa Rica	Technical instrument	RTCR 481:2015	2017	Industrial chemicals	Technical regulation RTCR 481: 2015 Chemical Products. Hazardous Chemicals. Labeling	Spanish
	Venezuela	Bill	NA	Under development (public consultation)	NA	Technical Standards: - Chemicals. Part 1. Criteria for their classification according to its physical hazards. - Chemical. Part 2. Design and Labeling. SDS	NA
Registers, inventories, previous requirements, risk assessment and risk management	Costa Rica	Technical instrument	RTCR 478:2015	2017	Industrial chemicals	Technical Regulation RTCR 478: 2015 Chemicals. Hazardous Chemicals Registration Import and Control. It establishes the requirements and procedures for the registration, import and control of dangerous chemical products in order to protect public health and the environment. EMS implementation	Spanish
	Colombia	Bill	NA	Under	Industrial	Program for the management of industrial	Spanish



				development	chemicals	chemicals - PGSQUI. Ministry of Commerce, Industry and Tourism, Ministry of Labor, Ministry of Health and Social Protection and Ministry of Environment and Sustainable Development	
	Honduras	Bill	NA	Under development	All	Regulation for the Environmentally Sound Management of Hazardous Chemicals in Honduras. Prepared, reviewed and in the approval process.	NA
	Peru	Bill	NA	Under development	All	Bill on the Integrated Management of Chemicals (Status: final validation by the public-private sector). Ministry of the Environment.	NA
	Dominican Republic	Technical instrument	Na	2016	All	Technical Environmental Standard for the Management of Chemicals and Hazardous Waste. Ministry of Environment and Natural Resources.	Spanish
National Policy/Plan/Strategy/Framework/Profile	Colombia	National Policy	Document CONPES 3868	2018	All	Risk Management Policy associated with the use of Chemicals. National Planning Department, other ministries and official entities.	Spanish
	Costa Rica	Decree-National Policy	40148/2016	2016	All	Declaration of Public Interest and Promulgation of the National Policy on Chemical Safety.	Spanish
	Costa Rica	National Program	NA	Under development	All	Program for the Management of Chemical Products, in the process of joining the OECD.	NA
	Honduras	National Policy	NA	2013	All	Environmentally sound management of chemicals.	NA
	México	Project	NA	Under development	All	Strengthening Institutional Capacities for the sound management of chemicals and hazardous waste by the establishment of the structure for the implementation of Basel, Stockholm, Rotterdam and Minamata Conventions and SAICM	NA



	Dominican Republic	Technical instrument	NA	2016	All	Technical Environmental Standard for the Management of Chemicals and Hazardous Waste. Ministry of Environment and Natural Resources.	Spanish
	Dominican Republic	National Profile	NA	NA	All	National Profile of Chemicals and Hazardous Waste.	NA
	Suriname	National Profile	S.B. 2020 no 97	2020	All	Environmental Framework (S.B. 2020 no 97)	NA
	Suriname	National Action Plan	NA	2014	All	Suriname Five-year National Action Plan for Sound Management of Chemicals	NA
Accident prevention and response	Colombia	Bill	NA	Under development	All	Draft Decree on the Major Accident Prevention Program (aimed at facilities where certain dangerous chemicals are stored, manufactured or used). Ministry of Labor, Ministry of Health and Social Protection, Ministry of Environment and Sustainable Development, and National Unit for Disaster Risk Management.	NA
Regulation of products	Peru	Ministerial Resolution	No. 439-2020-MINSA	2020	Household and industrial use, public health	Regulation and Control of Hazardous Substances for Domestic, Industrial and/or Public Health Use. Ministry of Health.	Spanish
Contaminated sites	Honduras	Bill	NA	Under development	All	Regulation for the Management of Contaminated Sites with Chemicals. In the process of validation.	NA
Transport	Honduras	Bill	NA	Under development	All	Regulations for the transport of hazardous substances merchandise and waste by road. Prepared, revised and in the process of officialization.	NA
	Peru	Law	Law No. 28256 and Supreme Decree No. 021-2008-MTC	2019	All	Land transportation of hazardous materials and waste. Ministry of Transport and Communications.	Spanish
	Dominican Republic	Technical instrument	NA	2019	All	Technical Environmental Regulation for Land Transportation and Hazardous	Spanish



Multilateral Environmental Agreements

Nature	Country	Type of instrument NA: Not Applicable	Identification number NA: Not Available	Year	Type of chemical	Brief description	Access NA: Not Available
National Policy/Plan/Strategy/Framework/Profile	Guatemala	Regulation	NA	NA	POPs	Integrated Management of Polychlorinated Biphenyls (PCB) and equipment. National Policy for Environmentally Sound Management of Chemicals and Hazardous Waste.	Spanish
	Honduras	Strategic framework	NA	2015	POPs	Strategic Framework for Pesticide Management COP 2015-2025.	Spanish
	Honduras	National Plan 2015-2025	NA	2015	POPs	National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) in Honduras (PNI 2015-2025)	Spanish
	Peru	Decree	Supreme Decree No. 004-2019-MINAM	2019	Mercury	National Plan for the Implementation of the Minamata Convention on Mercury	Spanish
	Peru	Ministerial Resolution	Resolución Ministerial No. 390-2019-MINAM	2019	POPs	National Plan for the Implementation of the Stockholm Convention on Persistent Organic Pollutants. Ministry of the Environment.	Spanish
	Dominican Republic	National Plan	NA	2015	SAICM (all)	Application of The Strategic Approach to International Chemicals Management	Spanish
Bill	Honduras	Bill	NA	Under develop	Mercury	Environmentally Sound Management of Mercury. Pending for approval.	NA



Annex 2. Information resources and guidance documents

This section includes some relevant guidance documents, from recognized international sources on the sound management of chemicals for each of the stages of their life cycle, with a focus on the development of related regulations.

Country profile, needs assessment, implementation of SAICM and institutional coordination

Document	Brief description	Access
IOMC: IOMC Toolbox - “Toolbox” for decision making in the management of chemicals.	This platform is designed for those countries that wish to address problems related to the management of chemical products, providing tools to identify the most appropriate, efficient and cost-effective actions at the national level. It also provides access to relevant IOMC resources on this matter.	English, Spanish
UNEP: National Chemicals Control Authority: Structure and Financing (2019)	This document emphasizes the establishment of clear legal responsibilities of manufacturers and importers, as an essential factor to properly control chemicals.	Spanish English
UNEP: Benefits of Chemical Control (2019)	This information document presents arguments in favor of the adoption and application of the legislation related to the control of chemicals.	Spanish English
UNEP: Risk Reduction Tools for Chemicals Control (2019)	Provides support to technical civil servants working to improve government capacity to reduce the risks that chemicals can pose to human health and the environment.	Spanish English
UNEP: Mechanisms to ensure compliance with legislation on the control of chemicals (2019)	Provides fundamental methods and mechanisms for complying and enforcing the law.	English, Spanish
UNEP: Guide on the development of legal and institutional infrastructures and measures to recover the costs of national administration in the sound management of chemicals (2015)	Provides instructions for decision makers from countries in the process of developing national plans to strengthen legal and institutional infrastructures on the introduction of chemical products on the market.	Spanish



SAICM: Guidance and general guidelines for the achievement of the goal of the sound management of chemicals by 2020 (2015)	Guidance guide for achieving the SAICM 2020 Goals.	Spanish
UNITAR / IOMC: Preparation of a National Profile to Determine Infrastructure Needs and Capacities for the Management of Chemicals (2012)	Provides guidelines for conducting a needs analysis, identifying problems, and setting priorities.	Spanish
UNITAR / SAICM and IOMC: SAICM National Implementation: A Resource Guide, Guidance and Materials for Training of IOMC Participating Organizations (2008)	Supports carrying out a needs analysis, identifying problems, and setting priorities. It highlights possible activities and concrete suggestions for implementing SAICM at the national level.	Spanish
UNITAR: Interministerial Coordination for the Rational Management of Chemicals (2003)	Recommendations to promote and / or consolidate interministerial coordination for the management of chemicals.	Spanish
UNITAR: Guide for the Development of an Action Plan for the Sound Management of Chemicals- draft (2009)	This tool offers support to develop action plans that aim to strengthen national capacities in the rational management of chemicals.	Spanish
UNITAR: Resource mobilization for the sound management of chemicals and wastes (2011)	Provides an overview of the challenges, key concepts, relevant information and initiatives for the development of a Resource Mobilization strategy.	Spanish

Chemicals database and information sources

Portal	Brief description	Access
eChemPortal: Global Portal to Information on Chemicals	Free access information on physicochemical properties, transport and environmental behavior, ecotoxicity, toxicity, GHS classification. eChemPortal allows searching in databases and provides details on sources and their quality.	English
International Programme on Chemical Safety (IPCS) INCHEM: Chemical Safety Information from Intergovernmental Organizations	Access to internationally recognized information on the most used substances in the world. Consolidates information from government organizations to assist in the management of chemicals.	English
OECD (Q)SAR Toolbox	Free software that contains transparent and reproducible information	English



	on chemical hazard analysis. It offers functionalities to access experimental data, simulation and properties of substances. It can be used to find structurally analogous chemical categories, and serve as a source for trend analysis and extrapolation in cases of missing information.	
WHO/ILO: International chemical safety cards (ICSC)	They provide essential health and safety information on chemicals in a clear and concise manner. Its primary objective is to promote the safe use of substances in the workplace. They were developed jointly by the International Labor Organization (ILO) and the World Health Organization (WHO) with the cooperation of the European Commission.	English Spanish

Hazard identification and communication

Document	Brief description	Access
Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	Official website of the United Nations GHS.	English
UNECE. "UN Recommendations on the Transport of Dangerous Goods – Model Regulations"	Internationally recognized document that details the regulatory requirements to apply the United Nations Recommendations on the Transport of Dangerous Goods.	English
UNITAR and IOMC: Assisting Countries with the Transition Phase for GHS Implementation (tools and resources of the IOMC to support implementation of the GHS), November 2008 Edition, (UNITAR, Geneva)	IOMC tools and resources to help countries prepare for GHS implementation.	English
UNITAR, "Comprehensibility Testing: An assessment tool for targeted GHS capacity building"	Recommendations for conducting surveys to gain information on public understanding of the elements of GHS.	English
UNITAR, ILO and IOMC: Understanding the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) (2010)	Provides a description of the GHS based on its 3rd version, with background information, explanations and how it relates to the rational management of chemicals.	Spanish
UNITAR, ILO and IOMC: Development of a National GHS Implementation Strategy (2010)	Provides a description of the GHS based on its 3rd version, with background information, explanations and how it relates to the rational management of chemicals.	Spanish



Inventories and risk assessment

Document	Brief description	Access
FAO: Pesticide Registration Toolkit	Decision support system for pesticide registrants in developing countries. The toolkit also links to many sources of information on specific pesticides, such as registrations from other countries, scientific reviews, hazard classification, labels, and pesticide properties.	Spanish
IUCLID Website	IUCLID (International Database of Information on Chemicals) is a software for capturing, storing, maintaining and transferring data on the intrinsic properties of chemicals.	English
OECD Series on Testing and Assessment	Guidelines for conducting an exposure analysis for human health and the environment, based on monitoring data. It contains information on environmental levels, distribution of pollutants, ways of collecting data and experiences of member countries.	English
OECD: Harmonised Templates	The harmonized OECD sheets contain standard formats for reporting data on chemicals to determine their properties or effects. They are intended for database developers.	English
OECD: Manual for the Assessment of Chemicals:	The OECD Manual for the Analysis of Chemicals is part of the initiatives of the Cooperative Chemical Analysis Program (CoCAP), based on the Large Volume Chemicals Program. The focus is to orient efforts towards consensus-based hazard analysis among OECD countries.	English
OECD: Procedures for Notification of New Chemicals	The OECD Clearing House on New Chemicals (CHNC) brings together representatives of interested governments and the chemical industry working cooperatively to reduce overall burdens associated with new chemical notification reviews, while maintaining the high quality of health and safety decisions for new chemicals.	English
UNITAR: Strengthening National Information Systems and Information Exchange for the SCM: (1998)	This report presents the observations and conclusions of the International Meeting of Experts on Strengthening Information Systems and Information Exchange for the Rational Management of Chemicals (Geneva, 1998) with the participation of 30 government representatives	English



and various organizations.

Pollutant Release and Transfer Register

Document	Brief description	Access
UNITAR: Collection of International Guidance Materials on Pollutant Release and Transfer Registers	Collection of documents related to the Development of PRTRs, which provide support to national governments, the industrial sector, NGOs, academia and other sectors. It gathers relevant documents at the international level, protocols, conventions and practical experiences of PRTRs existing around the world.	English

