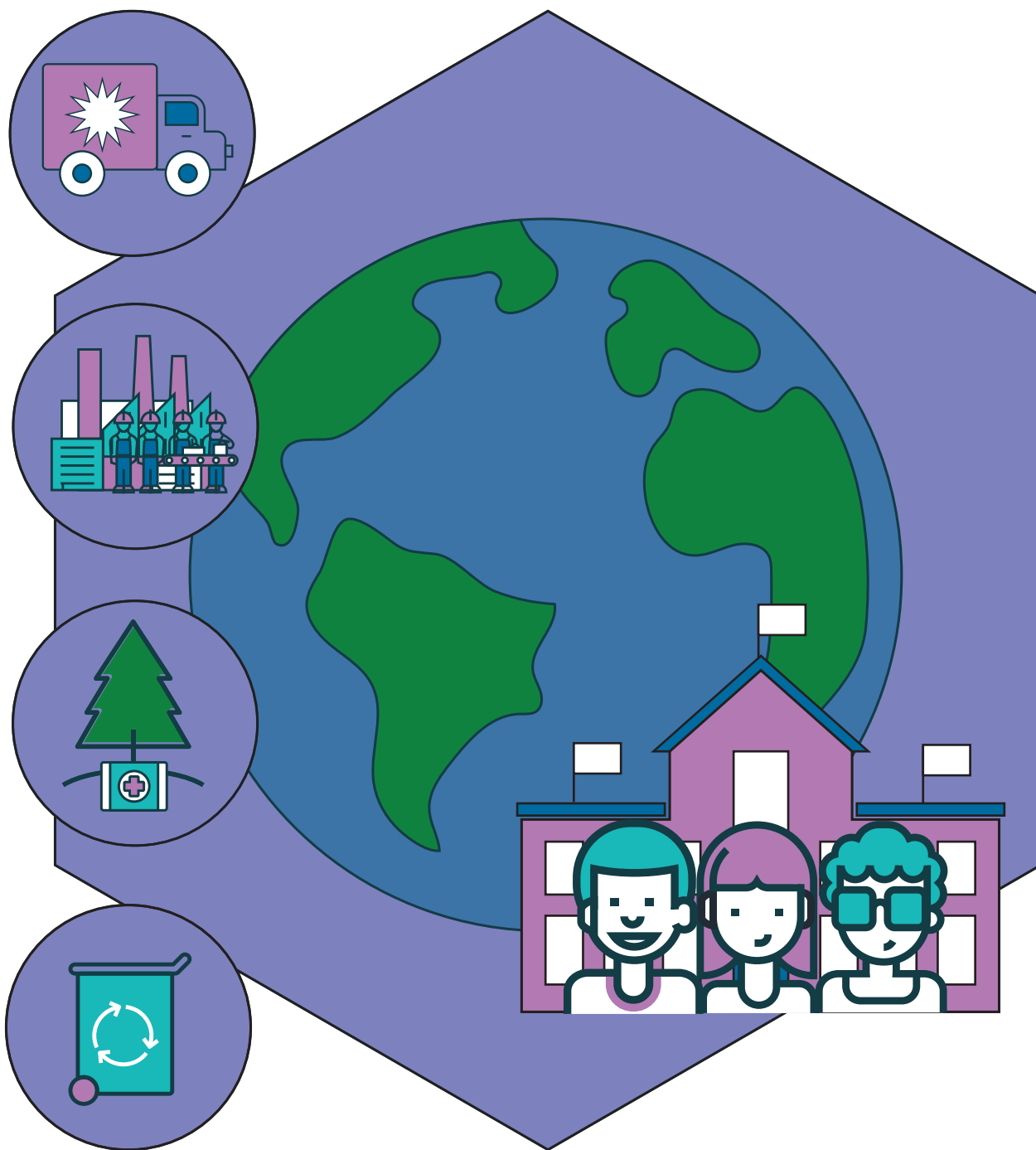


UNEP GUIDANCE

Enforcement of Chemicals Control Legislation



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EXECUTIVE SUMMARY

The establishment and implementation of legal frameworks for industrial and consumer chemicals is an aspect of sound chemicals management still lacking in many countries, especially in developing countries. The term “chemicals control” is used to refer to the regulation of industrial and consumer chemicals before or at the point when they are placed on the market. In most countries, pesticides are covered in separate legislation and are often subject to stringent requirements. Adopting chemicals control legislation and establishing the related institutional capacity, including for enforcement, is a cost-effective way to strengthen national chemicals management systems.

This guidance document builds upon an earlier United Nations Environment Programme (UNEP) publication, *Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for Sound Management of Chemicals* (LIRA Guidance). It provides guidance on how to ensure effective compliance with rules and regulations.

Enforcement mechanisms are key to achieving the sound management of chemicals. This guidance focuses on the enforcement of chemicals control legislation for industrial and consumer chemicals. It offers guidance on how to support national enforcement authorities for chemicals control and how to design national legislation for enforcement activities.

The main compliance and enforcement methods presented in this guidance involve focusing inspections and enforcement on manufacturers and importers of chemicals; ensuring that classification, labelling and Safety Data Sheet (SDS) requirements are enforced; committing to enforcing laws with bans and restrictions, where appropriate; creating an inspection plan; and educating enforcement staff.

The key points include:

- **Adopt best practices for enforcement.** These include clearly defined and comprehensible requirements, a focus on full and continuous compliance, building a culture of compliance, creating a level playing field, ensuring that violations have a high likelihood of being detected, ensuring a fair and predictable government response, providing comparable treatment for all entities, and ensuring transparency and accountability.
- **Focus on upstream actors.** Focus inspections and enforcement on manufacturers and importers of chemicals. Focusing high up the supply chain, rather than on downstream chemical users, makes it possible to assess larger quantities of chemicals with fewer inspections because all chemicals initially pass through the manufacturer/importer. Inspections and enforcement for downstream chemical users should be a lower priority as they are more numerous and less efficient.
- **Focus on classification and labelling.** Ensure that classification, labelling and SDS requirements are enforced. Compliance with these requirements supports sound chemicals management further down the supply chain.
- **Enforce bans and restrictions.** Commit to enforcing any laws that ban or restrict the manufacture, import, sale or use of certain chemicals.
- **Plan and prioritize.** Create an inspection plan, identifying specific priorities for sectors, types of chemicals and product categories of particular concern. Organize, plan and perform enforcement measures, monitor performance and review, and report on enforcement.
- **Educate inspectors and other enforcement personnel.** Educate inspectors and other staff involved in enforcement about the highest priority chemicals placed on the market and the use of chemicals in the country, including in supply chains, product areas and product groups.
- **Develop clear requirements.** The requirements for each regulated manufacturer and importer (or retailer) must be easy to understand and follow so that they (and the government) can readily identify what constitutes compliance. Information about the requirements must be made available to the affected parties, in a form they can fully understand – plain language is most effective.

- **Define the responsibilities.** The legislation should be clear in defining the responsibilities for different actors and determining which actors the enforcement should target.

Ensure an enforcement mandate in the framework legislation

It is important to ensure an enforcement mandate in the framework legislation. The legislation should be clear in defining the responsibilities for different actors and determining which actors the enforcement should target. The requirements of the regulated entities must be clear and easy to understand, so that both the regulated entities and the government can identify what constitutes compliance. It is important that chemicals control legislation also defines the responsibilities and powers of the enforcement authority. Inspectors will need the ability to enter and inspect premises, collect evidence, and issue orders in cases of non-compliance.

Enforcement is a service provided by government and should be financed by fees paid by the regulated entities. This needs to be mandated in the legislation. The financing model should be clear and easy to understand, and be deemed fair by the companies.

Focus chemicals control enforcement on manufacturers and importers

Effective enforcement begins by communicating all requirements to the regulated community so they clearly understand their responsibilities. Offering clarity through help desks, telephone calls or targeted meetings are useful ways of ensuring regulations are understood. The informal sector will also need to be included in communications.

Using the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) allows for the efficient dissemination of information on chemical properties, hazards, risks and safe use procedures. An important role of the enforcement authority is to ensure that manufacturers and importers adhere to classification and labelling regulations. Manufacturers and importers are responsible for implementing GHS and for complying with all international and local bans and restrictions. Ensuring that enforcement efforts focus primarily on upstream chemical manufacturers and importers is cost-effective, as these entities are usually limited in number and affect the whole supply chain. Focusing enforcement near the top of the supply chain will reduce the need for enforcement at the retail level.

It is essential to identify manufacturers and importers that are likely to be subject to enforcement requirements. Useful resources for identifying these businesses include a register of chemical

manufactures and importers, hazardous waste transfer data, pollution registries and transfer systems, and custom control records.

Inspection priorities should include high-risk chemicals or activities, newly regulated hazardous chemicals, widely used chemicals, and issues that have been the subject of specific complaints and problems. Prioritizing target groups can be accomplished through an analysis of the regulated companies, the effect of non-compliance, and legal obligations and requirements.

Define the roles of inspectors or enforcement officers

The inspector, also referred to as an enforcement officer, is generally an employee of a government authority. The inspector interacts directly with manufactures and importers, and is responsible for providing all the relevant information to the authority. The role of the inspector is to ensure compliance with existing legislation. Inspectors must have access to premises and the ability to take samples and access documentation; use police assistance when necessary; impose fines or other sanctions if necessary; and impose measures to remedy non-compliance. Inspectors can also play an important role in gathering information about any difficulties manufacturers and importers may have in understanding or implementing requirements, providing a two-way flow of information between them and the regulator.

Inspectors must be independent from the manufacturers and importers they inspect

The inspector may write a report for the authority to levy fees and fines, but is not responsible for collecting money directly. Using a rotating team of inspectors can reduce the risk of ethically unsound practices.

Different competencies, such as an understanding of legal requirements or the interpretation of test results, may be required for different tasks. Inspectors may use external tools to access information about individual chemicals.

If necessary, an inspector may collect a sample of a product or chemical to be tested in a reference laboratory. Many governments use certified private laboratories. Laboratories must be independent from both the enforcement authority and the regulated industries, and must meet Good Laboratory Practice standards.

Cooperation among authorities can include inter-agency or interministerial collaboration at the national level; collaboration among different levels of government (national, regional, local); and international collaboration. Cooperating with customs control provides an opportunity to check that any imports are in compliance with existing bans, restrictions, classification and labelling requirements, and any other relevant requirements.

Inspectors should conduct compliance checks, monitor performance and track results

Inspections may check for the presence of banned substances; correct labelling and SDSs; compliance with restrictions and authorizations; compliance with reporting, registry requirements and payment of fees (if relevant); and packaging and storage requirements.

Both scheduled and unscheduled inspections can be useful. Scheduled inspections are cost-effective and ensure that personnel with the correct expertise are present during a visit. Unscheduled inspections can address reported non-compliance and reduce the opportunities for companies to hide evidence.

It is important for a government agency to have the necessary infrastructure to make records of inspections, and to keep and maintain them. Some countries have general legislation regarding storage and organization of reports and documents. Checklists can help inspectors determine whether certain required elements are present, identify what items to review before and during an inspection, and allow the inspector to remain objective.

Use administrative and civil means to enforce compliance with chemicals legislation

Inspectors must be given the authority to impose corrective actions, including product recalls, product withdrawal, confiscation and/or fines. If legislation places the responsibility for ensuring that chemicals are classified and labelled correctly on importers and manufacturers, authorities need to have the powers to enforce these actions.

Sanctions need to be based on law, and may include financial penalties; corrective action; limitations on or cessation of the activities of the entity (e.g. through cancellation of permits or through temporary/permanent closure of the facility); and/or criminal penalties in severe cases.



PREFACE

This document is part of a series of guidance documents that aim to complement the information provided in the United Nations Environment Programme's (UNEP) 2015 publication, *Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration* (LIRA Guidance). More specifically, it supplements the suggestions in the LIRA Guidance related to the enforcement of chemicals control legislation.

The approach suggested in the LIRA Guidance is referred to in this series as "chemicals control", and primarily addresses the regulation of industrial and consumer chemicals before or at the point when they are placed on the market.

The series is composed of four documents, one on the benefits of chemicals control and three guidance documents:

- Benefits of Chemicals Control
- National Authority for Chemicals Control: Structure and Funding
- Risk Reduction Tools for Chemicals Control
- Enforcement of Chemicals Control Legislation

By supporting the development of chemicals management frameworks at the national level, the LIRA Guidance and these complementing documents contribute to the priorities developed in the context of the Strategic Approach to International Chemicals Management (SAICM), and the Overall Orientation and Guidance (OOG) document, as well as the implementation of the Basel, Rotterdam, Stockholm and Minamata Conventions, and the Sustainable Development Goals under Agenda 2030.

This publication was developed by UNEP in the context of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC).

The editing and layout were coordinated by UN Publications.

This document has been produced with financial assistance from Sweden through the Swedish International Development Cooperation Agency (Sida), which was arranged by the Swedish Chemicals Agency, Keml. The views herein do not necessarily reflect the official opinions of Sida or Keml.

CONTENTS

Executive Summary	2
Preface	5
Acknowledgements	8
1. Introduction	9
1.1 Background.....	9
1.2 Scope and aim.....	10
1.3 Focus of chemicals control enforcement.....	10
2. Core concepts of enforcement	11
2.1 Facilitating compliance.....	11
2.2 Legal basis for enforcement.....	12
2.2.1 Globally Harmonized System of Classification and Labelling.....	12
2.2.2 Bans and restrictions.....	13
2.3 Mandate of the enforcement authority.....	13
2.4 Communication and information.....	14
2.5 Cost recovery for enforcement costs.....	14
3. Subjects of inspections	15
3.1 Identifying the subjects of enforcement.....	15
3.2 Prioritizing inspections.....	15
4. The inspector or enforcement officer	17
4.1 Role of the inspector.....	17
4.2 Resources and competencies.....	18
4.3 Access to laboratory capacity.....	19
4.4 Cooperation and support among authorities.....	19
4.4.1 Customs control.....	21

5. Conducting the inspection.....	22
5.1 Record keeping.....	22
5.2 Checklists.....	23
5.3 Inspections of manufacturers and importers.....	23
5.4 Inspections of retailers.....	24
6. Addressing violations.....	26
References and further reading.....	28
Annex 1: Example of legal construction.....	29
Annex 2: Enforcement checklists.....	30
Endnotes.....	48

ACKNOWLEDGEMENTS

The development of this UNEP guidance document was coordinated by Maria Delvin and Pierre Quiblier, UNEP Chemicals and Health Branch. Rachel Massey and Lindsey Pollard, Massachusetts Toxics Use Reduction Institute (TURI), and Susan Kaplan (consultant) were contributing writers.

The development of this guidance benefited from input from an expert group that included participants from governments, intergovernmental organizations, private sector organizations, non-governmental organizations and academia.

Participants of this expert group:

Governments

Alison Kennedy, Manager, Department of Environment and Climate Change, Canada; Bojana Djordjevic, Head of Unit, Ministry of Environmental Protection, Serbia; Cayssa Marcondes, Ministry of Environment, Brazil; Elize Lourens, Deputy Director, Health and Hygiene, Department of Labour, South Africa; Fredrick Muyano, Principle Inspector, Environmental Management Agency, Zambia; Helga Schrott, Senior Legal Adviser, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria; Ingela Andersson, Head of International Unit, Swedish Chemicals Agency, Sweden; Juan Simonelli, National Ministry of Environment and Sustainable Development, Argentina; Juergen Helbig, Principal Policy Officer, European Commission; Leticia Carvalho, Chief of Environmental Quality Branch, Department of Environmental Quality in Industry Ministry of Environment Brazil; Mangaka Mahlako, Deputy Director, Mfanuwenkosi Mathebula, Assistant Director, Hazardous Chemicals Management, Department of Environmental Affairs, South Africa; Marthe D. Rahelimalala, Chief of Environmental Pollution, Ministry of Environment, Ecology and Forest, Madagascar; Nguyen Thi Ha, Head of Division, Viet Nam Chemicals Agency, Vietnam; Phengkhamla Phonvisai, Deputy Director General, Ministry of Natural Resources and Environment, Lao PDR; Simone Irsfeld, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety International Chemical Safety, Sustainable Chemistry, Germany; Szymon Domagalski, Senior Specialist, Department for Dangerous Substances and Mixtures, Poland.

Intergovernmental organizations

Abdouraman Bary, Regional Subprogramme Coordinator, UN Environment (UNEP); Baogen Gu, Senior Agricultural Officer, Food and Agriculture Organization (FAO); Carmen Bullon, Legal Officer, FAO; Haddy Guisse, Associate Legal Officer, UNEP Hilda Van Der Veen, Chemicals and Waste Management Expert, United Nations Development Programme (UNDP); Jacob Duer, Chief, Chemicals and Health Branch, UNEP; Jordi Pon, Regional Chemicals and Waste Coordinator, UNEP; Jose de Mesa Programme Officer, UNEP; Juliette Voinov Kohler, Legal and Policy Adviser, Head of the Legal and Governance Unit, Secretariat of the Basel, Rotterdam, and Stockholm Conventions (BRS), UNEP; Kakuko Nagatani-Yoshida, Regional Subprogramme Coordinator for Chemicals and Waste, UNEP; Kei Ohno Woodall, Programme Officer, BRS, UNEP; Kersten Gutschmidt, Technical Officer, Public Health, Environmental and Social Determination of Health, World Health Organization (WHO); Lena Perenius (consultant) Strategic Approach to International Chemicals Management (SAICM); Magaran Monzon Bagayoko, Regional Adviser, WHO; Mijke Hertoghs, Regional Coordinator, UNEP; Nalini Sharma, Programme Officer, Secretariat of the Special Programme, UNEP; Sylvie Poret, Principal Administrator, Organization for Economic Co-operation and Development (OECD); Yvonne Ewang, Legal Officer, BRS, UNEP.

Private sector

Alan P. Kaufman, Senior Vice President, Technical Affairs, The Toy Association, Inc.; Beth Jensen, Senior Director of Sustainable Business Innovation, Outdoor Industry Association; Catherine Lequime, ICCA representative; Véronique Garny, Director, Product Stewardship, European Chemical Industry Council.

Non-governmental organizations, academia and other advisers

Baskut Tuncak, UN Special Rapporteur, OHCHR-UNOG; Beverley Thorpe, Clean Production Action; David Azoulay, Environmental Health Program Director, Center for International Environmental Law, (CIEL); Goh Choo Ta, Associate Professor, National University of Malaysia; Hanna-Andrea Rother, Head Associate Professor, University of Cape Town; Ken Geiser, Professor Emeritus, University of Massachusetts Lowell; Linn Persson, Head of Unit, Stockholm Environment Institute; Mengjiao Wang, Research Scientist, Greenpeace International; Olga Speranskaya, Director, Chemical Safety Program, IPEN; Sabaa A. Khan, Senior Researcher, University Of Eastern Finland; Taelo Letsela, Managing Director, Global Environmental Solutions.

Valuable input on a test version was provided by Xiomara Jiménez Soto, Ministry of Health of Costa Rica; Maria del Mar Solano, Ministry of Environment and Energy, Costa Rica; and staff of the Technical Coordination Secretariat for the Sound Management of Chemicals in Costa Rica.

Chemicals are integral to modern life, and their sound management is a key aspect of sustainable development. Adoption and implementation of chemicals control legislation is one aspect of sound chemicals management that many countries often lack.

In this document, the term “chemicals control” is used to refer to the regulation of industrial and consumer chemicals before or at the point when they are placed on the market. This includes chemicals used in industrial processes; chemicals used in everyday life, such as cleaning products and paints; and chemicals in articles, such as clothing, furniture and electrical appliances (not including pesticides, pharmaceuticals, cosmetic products or food additives). Placing on the market means supplying or making available chemicals, whether in return for payment or free of charge. This includes imports.

Chemicals control can be addressed in freestanding law, or it can be built into a broader chemicals management law or other framework legislation related to the protection of health and the environment.

Chemicals control legislation for industrial and consumer chemicals, as suggested in UNEP’s Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration (LIRA Guidance),ⁱ places a number of responsibilities on chemical manufacturers and importers. It focuses on defining responsibilities for industry in implementing knowledge-based measures as early as possible in the life cycle of chemicals, when there is the greatest opportunity for prevention before adverse effects on human health and the environment occur. When introducing legal requirements, all countries need to consider legal provisions for an inspection system.

A chemical that has several uses may be subject to several different laws. Pesticides are covered in separate legislation in many countries and normally have more stringent requirements than chemicals control for industrial or consumer chemicals. Guidance on pesticides is available from the Food and Agriculture Organization of the United Nations (FAO).ⁱⁱ

Although guidance on pesticides, pharmaceuticals, cosmetic products and food additives is not directly provided in this document, there is overlap in some elements of control regulations for all chemical categories – for example, in basing labelling provisions on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

1.1 Background

Enforcement of chemicals control legislation helps to protect consumers and workers against unsafe products, the environment from pollution, and businesses from unfair competition from those who ignore the rules. Ensuring effective compliance with rules and regulations is key to achieving the intended goals of the regulator.

Under the Strategic Approach to International Chemicals Management (SAICM), the Overall Orientation and Guidance (OOG) document sets out 11 basic elements that are recognized as critical for achieving the sound management of chemicals in a country. These basic elements include legal frameworks; enforcement and compliance mechanisms; strong institutional frameworks and coordination mechanisms; and defined responsibilities for industry across the chemical life cycle.ⁱⁱⁱ

The LIRA Guidance provides options for organizing the legal and institutional infrastructures governing the placement of chemicals on the market. It also provides suggestions for ensuring sustainable financing, including cost recovery measures.

By supporting the development of coherent chemicals control frameworks at the national level, the LIRA Guidance and the present guidance on enforcement contribute to the priorities in the OOG document developed in the context of SAICM,¹ as well as the implementation of the Basel, Rotterdam, Stockholm and Minamata Conventions.

¹ The overall objective of SAICM is the sound management of chemicals throughout their life cycle so that by 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health.

1.2 Scope and aim

This document builds on the approaches to legislation and enforcement described in the LIRA Guidance. Specifically, it provides information and suggestions on concepts and methodologies for the enforcement of chemicals control legislation regarding the production, import and placing on the market of industrial and consumer chemicals. This document aims to complement the available resources identified in the OECD *IOMC Toolbox for Implementing Chemicals Safety*.^{iv}

This guide focuses on the enforcement of the legal obligations for manufactures and importers to classify and label chemical substances or products, as well as the enforcement of bans and restrictions. When this document refers to manufacturers and importers of chemicals, it is understood to include exporters. The focus is on market control, which is usually understood as an assurance that products released onto a country's market are in compliance with legal requirements.

This document is intended for countries that are currently working to develop, update or implement chemicals control legislation for industrial and consumer chemicals, as well as the associated institutional capacity for enforcement. Specifically, it is directed at technical government officials who are working to build government capacity for enforcing the provisions in chemicals control legislation. It is also useful to understand the role of enforcement when designing laws.

The aims of this document include:

- Provide suggestions and information on how legislation can be enforced efficiently
- Describe core concepts of enforcement
- Describe methods for inspections

This document does not address the enforcement of workplace obligations such as accident prevention, control of limit values or chemical exposure; or the environmental effects of chemical use at production sites (e.g. release to air/water/land) or from waste. Guidance material on workplace obligations is provided by the International Labour Organization, including on its website: *Occupational Safety and Health Inspection*.^v

Valuable guidance on enforcement related to pesticides is available from FAO.^{vi}

1.3 Focus of chemicals control enforcement

Legislation should define the responsibilities of enforcement personnel and it should be clear

from the legislation which actors the enforcement should focus on. The main responsibilities for compliance should be placed on manufacturers and importers. Inspection activities should therefore be targeted predominantly at them, and less on retailers or suppliers. Such an emphasis helps to use enforcement resources efficiently, prevent hazards at an early stage, and protect businesses from unfair competition from those who ignore the rules.^{vii}

Inspections should be mandated along the entire supply chain, but enforcement activities should focus on manufacturers and importers - these are relatively few in number compared to the large number of retailers and users. In Sweden, for example, there are about 2,800 manufacturers and importers, while the number of retailers and users is in the hundreds of thousands. The broad categories of retailers range from very large retailers with multiple storefronts, to smaller, privately owned retailers and microscale retailers, including those in the informal sector. Retailers may sell substances and mixtures, formulations, personal care products, and articles containing chemicals. In some cases, larger retailers also operate as importers and sell their own brand labels.

Manufacturers and importers should be responsible for generating and producing product information as they have the best knowledge of the chemicals they produce or import. If the information on hazards and the handling of products is correct from the start, and GHS-compliant information (labels/SDSs) is properly disseminated throughout the supply chain, it is more likely that downstream users will be given accurate information on the chemicals they purchase. When relevant, inspections of downstream users and retailers can focus on ensuring that the information from manufacturers and importers is distributed correctly.

An importer is an entity that imports chemicals (as a product or as part of an article); supplies or makes available a substance, on its own or in a mixture; or engages in cross-border trade of substances for domestic distribution. They should be able to obtain information from their suppliers in other countries. In some cases, the importer may be the business using the chemical domestically. The Rotterdam Convention also creates responsibilities for exporters that relate to chemicals control; to learn more, see the Convention text.^{viii}

To be able to fulfil their obligations, chemical manufacturers, importers and retailers need to create internal compliance structures with clear responsibilities, expertise and routines. They also need to have structures to organize data retrieval and provide safety instructions for employees, among other functions.

2. Core concepts of enforcement

Core concepts of enforcement include a focus on full and continuous compliance; developing a broad culture of compliance; creating clear and comprehensible requirements; and providing for a fair and predictable government response to violations. Enforcement authorities should carry out their duties independently, impartially and without bias.

2.1 Facilitating compliance

The regulated entities of chemicals control legislation should comply to the greatest extent possible without direct intervention by the authorities. A number of factors can facilitate compliance with chemicals control legislation. The following general concepts are adapted from the guidance published by FAO – Guidelines on Compliance and Enforcement of a Pesticide Regulatory Programme:^{ix}

- **Clear and comprehensible requirements.** The legislation should be clear in defining the responsibilities for different actors and determining which actors the enforcement should target. The requirements of each affected manufacturer and importer (or retailer) must be easy to understand and follow, so that both the regulated entities and the government can readily identify what constitutes compliance. Information about the requirements must be made available to the affected parties, in a form they can fully understand – plain language is most effective.
- **A focus on full and continuous compliance.** While almost no system will achieve full compliance, it is important to maintain this as the goal. Full compliance means compliance with all applicable and relevant requirements. Continuous compliance means that regulated entities are expected to comply with the requirements at all times.
- **Culture of compliance and dialogue.** For compliance programmes to succeed, compliance must be seen as a social norm and an integral

part of doing business. When respect for the rule of law is not the prevailing norm, extra effort may be needed to develop a culture of compliance by communicating the benefits of chemicals control, both in terms of the protection of health and the environment, and the positive economic outcomes. Regulated entities should proactively undertake their own compliance efforts. This is more likely to occur when there is ongoing dialogue with manufacturing and importing companies, and sanctions for failure to comply. Measures such as removal from the market may be necessary for those companies that are not in compliance; it is also important to recognize those that perform well. In addition, dialogue between good and poor performers can enhance performance.

- **Level playing field.** If a stakeholder can gain a competitive advantage by choosing not to comply with the adopted measures, others may feel pressure to do the same. Thus, government should act to eliminate competitive advantages from violations. For example, monetary fines or penalties should be sufficient to offset the economic gains from any violation, and non-compliant products should not be allowed on the market. A level playing field is also important for developing a culture of compliance, as manufacturers or importers should be confident that following the law will not put them at a disadvantage.
- **Likelihood of detection of violations.** To create a system in which a potential violator decides that it is better to comply than to wait for government detection, it must be fairly likely that government will detect the violation. This can be done through systematic inspections, unscheduled inspections, tip-offs from observers or mandatory self-reporting mechanisms (which may also have the added benefit of enabling the country to fulfil other, wider reporting obligations). It is also helpful to have a mechanism for collecting and analysing complaints from affected communities or individuals.

- **Fair and predictable government response.** A culture of compliance also requires that all affected stakeholders have confidence in the integrity and competency of the governmental response when violations are detected. Government actions should be consistent and fair, so that they are viewed as legitimate. The severity of the government response should be proportional to the frequency and magnitude of violations.
- **Secure financing.** Enforcement is a service provided by government and should be fully financed by fees paid by the regulated entities. The financing model should ensure long-term financing, be clear and easy to understand, and be considered fair by the regulated companies.
- **Messaging and deterrence.** Government cannot identify and remedy every violation; it must maximize the impact of each action through priority-setting and messaging, including widespread publicity of government responses to violations. Publicity should make use of public media, and targeted outreach to trade publications and industry or sector conferences or meetings.
- **Comparable treatment for public and private sector entities.** Some requirements apply to both public and private entities. In those circumstances, both types of entities should be expected to comply in the same manner and to the same extent, in order to promote a culture of compliance and achieve the desired health, safety and environmental protections.
- **Transparency and accountability.** The successful design and implementation of these programmes depends on the evaluation of results and continuous feedback to enable adjustments and improvements. All of these elements depend on openness and transparency. Government should maximize the availability of information about the design, conduct and results of its compliance and enforcement programmes. Enforcement authorities should carry out their duties independently, impartially and without bias.

2.2 Legal basis for enforcement

Legislation provides the basis for enforcement activities, provides a mandate for the authority, and defines what should be inspected.

All legal requirements should be enforced, including classification, labelling and SDS requirements; bans and restrictions; and other requirements. Enforcement of chemicals control legislation involves monitoring

to promote compliance of the regulated entities and to detect possible problems and violations.

In the chemicals control legislation, the responsibilities of manufacturers and importers of chemicals should include classifying the hazards of all chemicals; generating and distributing SDSs and labels; ensuring that all required information on properties, hazards, risks and handling procedures is provided to downstream customers; keeping applicable records and sharing them with government as prescribed; ensuring that banned products are not sold; complying with all requirements related to restricted products; and paying fees as required.

The European Union's Registration, Evaluation, Authorization and restriction of Chemicals (REACH) regulation includes specific requirements for companies' responsibilities to collect chemical hazard and use information.^x If an authorization system is in place, manufacturers and importers are responsible for keeping unauthorized chemicals off the market. It is important to require that information is provided in the language of the importing country or countries.

The responsibilities of retailers of chemicals include ensuring that banned products are not sold; restricted products are only sold in permissible cases and with appropriate safeguards; products are sold only if they have the required labelling and/or SDSs; any other relevant information concerning public health, packaging and storing products correctly is provided; and all applicable records are kept and shared with government as prescribed. If an authorization system is in place, downstream users and retailers are also responsible for keeping unauthorized chemicals off the market.

2.2.1 Globally Harmonized System of Classification and Labelling

Introducing, implementing, and enforcing the use of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in national legislation is a key element of chemicals control. It enables information on chemical properties, hazards, risks and safe use procedures to be generated and disseminated throughout the supply chain. As proposed in the LIRA Guidance, manufacturers and importers should be responsible for generating and providing GHS-compliant information throughout the supply chain. It is important for enforcement inspectors to know the purpose of the GHS, and how to understand, identify and gather GHS information in order to ensure compliance by manufacturers and importers.

For more information on the GHS and classifying substances and mixtures, see the Risk Reduction Tools for Chemicals Control guidance document and the United Nations Institute for Training and Research (UNITAR) Guidance on GHS.^{xi}

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

GHS is a system for classifying chemicals (substances and mixtures) based on their intrinsic properties, and for communicating this information throughout the supply chain through package labelling and SDSs. The GHS includes classification criteria for physical, health and environmental hazards. The system aims to ensure the generation and dissemination of information, and to build awareness and capacity for chemicals management. An SDS should be produced for substances and mixtures that meet the harmonized criteria for physical, health or environmental hazards under the GHS.

2.2.2 Bans and restrictions

Bans and restrictions are tools that can protect human health and the environment from unacceptable risks posed by certain chemicals. They regulate access to chemicals that are too hazardous to remain widely available, and when dissemination of information on safe handling and subsequent risk reduction is considered insufficient. They may apply to the manufacture, import or use of a chemical. As previously noted, there are also some export restrictions that are relevant to chemicals control. Bans and restrictions may apply to a substance as such, or to a substance in a mixture or in an article; they may apply to all production and/or uses of the substance in question, or to one or more specific uses.

Chemical-specific bans and restrictions may derive from international agreements such as the Stockholm Convention on Persistent Organic Pollutants or the Minamata Convention on Mercury. They may also derive from bans and restrictions adopted through a domestic or regional legislative or rule-making process. In either case, manufacturers and importers are responsible for understanding and complying with existing bans and restrictions. For more information on bans, restrictions, authorization and licensing systems, see the *Risk Reduction Tools for Chemicals Control* guidance document.

Many chemicals are incorporated in finished products or articles during the production phase. An article is defined by the EU REACH regulation as an

object that is given a special shape, surface or design during production, which determines its function to a greater degree than its chemical composition.^{xii} Examples of chemicals in articles include paints and lacquers in furniture, polymers and metals in electric and electronic products, dyes in textiles, and flame retardants in plastics. In some countries, specific substances have been regulated as part of a group of articles but, in general, they are largely unregulated with regards to their chemical content.

2.3 Mandate of the enforcement authority

It is important that chemicals control legislation defines the role of the relevant government authorities in relation to enforcement and determines which authority is responsible for a given category of inspections, in order to avoid confusion and overlapping responsibilities among agencies. This includes defining the enforcement mandates of both national and regional authorities.^{xiii}

Enforcement authority powers should be clearly defined by law, and can be further detailed in secondary legislation, also referred to as regulations. The legislation should ensure that all requirements are covered by mandates for authorities, in order to avoid any enforcement gaps.

Legislation should provide the enforcement authority a mandate to appoint inspectors and to clarify the powers and obligations of inspectors, as well as work procedures. As noted in the LIRA Guidance, legislation should:

- provide authority to appoint inspectors (also known as enforcement officers)
- specify the powers and obligations of inspectors
- ensure consistency with laws that address the powers of public officials
- ensure coverage of all relevant sectors and intervention points

Those responsible for enforcement may be given the authority to issue orders, report criminal actions and impose fees or fines.

Annex 1 provides an example of legal text that addresses relevant areas of chemicals control enforcement.

As elaborated in LIRA, Section 3, it is best to adopt chemicals regulation that includes industrial and consumer chemicals in all sectors of use. Addressing different sectors with different regulations is best avoided as it requires extensive cooperation between the ministries or agencies involved.

2.4 Communication and information

A first step for effective enforcement is to communicate all requirements so that the regulated community clearly understands its responsibilities. It is often advisable to provide a transition period in the legislation. The enforcement authority can use this period to undertake activities to ensure that businesses understand the requirements.

While manufacturers and importers of chemicals are responsible for being aware of, understanding and complying with national legislation, targeted meetings and telephone conversations can be helpful in ensuring communication about all requirements. This can be accomplished by allocating staff time for providing guidance or general information to industries. This function is referred to in some countries as a "help desk", where staff are available to support industries to interpret and implement regulations. Staff other than inspectors should be responsible for providing such a function, as this is a separate function from enforcement related activities. Communication is also important during the development of new or revised legislation, in order to provide information about new or changing requirements to industry and to allow industry to share valuable input on the practicalities of implementation. The LIRA Guidance (Section 5) identifies various approaches for education, training and general awareness. When a banned or restricted hazardous chemical is marketed or used to a large extent in the informal sector, outreach targeted specifically to that sector about the hazards and the responsibility to comply with legal requirements could be considered.

2.5 Cost recovery for enforcement costs

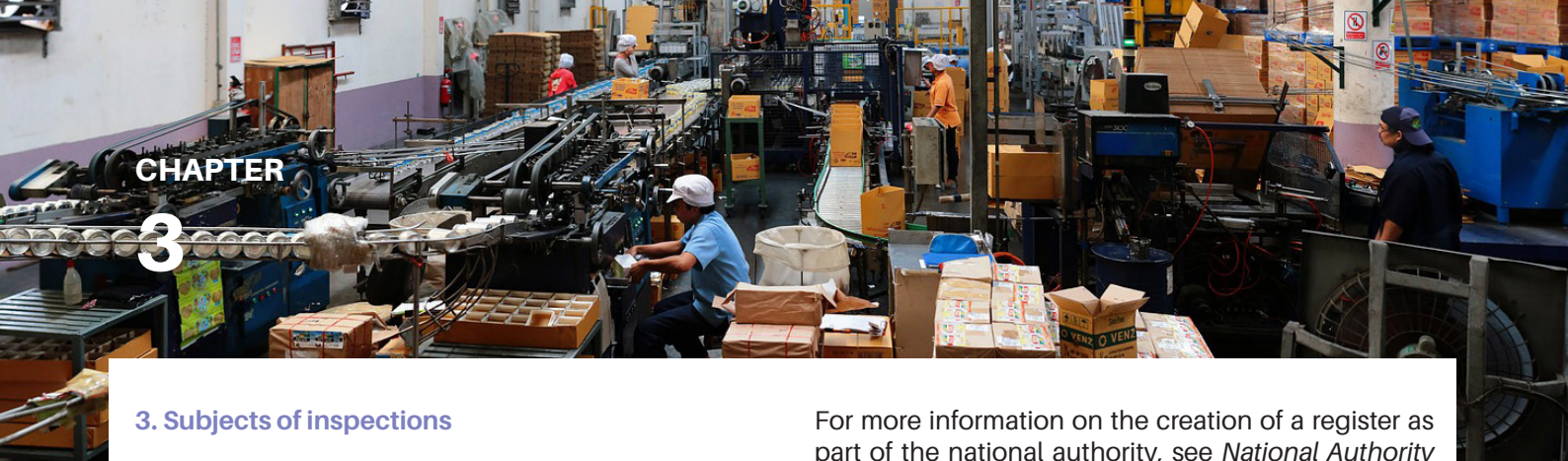
It is important to establish a sustainable funding mechanism to support adequate enforcement activities over time. A variety of approaches are available for funding chemicals control activities.²

Enforcement of legal requirements is necessary to ensure that all manufacturers and importers adhere to the same requirements. It helps to ensure a predictable operating environment for manufacturers and importers by helping to level the playing field. This service is provided by government and should be fully financed by fees paid by the regulated entities. The financing model should be clear and easy to understand, but also deemed to be fair by the regulated companies.

It is also important to ensure that the financing model does not create counterproductive incentives that could lead to an unnecessary number of repeat inspections – for example, frequent visits to the same manufacturer or importer to collect fees.



² For more detail, see LIRA Guidance Section 7 and the companion to this document, National Authority for Chemicals Control: Structure and Funding.



3. Subjects of inspections

As previously noted, the key subjects of inspection related to chemicals control requirements are manufacturers and importers. Ensuring that enforcement efforts focus primarily on chemical manufacturers and importers promotes cost efficiency, as these entities are usually limited in number and affect the whole supply chain. If manufacturers and importers comply, there is less need for enforcement at the retail level. However, if there is reason to believe that retailers are not following existing rules, there should be provisions for enforcement, particularly for larger retailers.

Inspections should include all sizes of companies, from small to large. Inspections related to chemicals control can cover compliance with rules on banned or restricted substances; correct labelling/SDSs; registry requirements (if relevant); reporting; payment of fees (if relevant); and possibly packaging and storage. Ideally, if inspections of manufacturers and/or importers are conducted effectively, inspections of retailers should not reveal large-scale violations of chemicals control standards.

In countries with a large informal sector, there may be many small-scale actors that use and sell chemicals. These actors are often unaware of the legal safety requirements. Due to the informal sector's lack of engineering controls, personal protective equipment and training on best practices, unwanted exposure can be substantial. Examples of non-compliance in this sector include sales without a permit or for uses outside permitted areas. Tailored communication activities can be an important complement to inspections in the informal sector.

3.1 Identifying the subjects of enforcement

In order to carry out enforcement, it is necessary to identify manufacturers and importers that are likely to be subject to the requirements in question. A number of approaches can be taken to compile an initial list. If a register of chemical manufacturers and importers has been established within the responsible authority, this is the natural starting point for identifying subjects for inspections. In some countries, a register of chemical manufacturers and importers may already exist for taxation or other purposes, and can serve as a valuable resource for identifying inspection subjects.

For more information on the creation of a register as part of the national authority, see *National Authority for Chemicals Control*.

Other useful resources include enterprise records, business or trade organizations, hazardous waste transfer records³ and customs control records (licensing systems that have been created for other purposes related to imports). If the country has ratified the Pollutant Release and Transfer Register (PRTR) Protocol,^{xiv} this may be a useful resource for identifying domestic manufacturers of chemicals. Accession to the Protocol is an important step towards identifying and controlling domestic chemical pollution sources.

Some countries may have existing disclosure requirements for businesses manufacturing, processing, or otherwise using chemicals of high concern, and the information submitted under this requirement can serve as a starting point for identifying key sectors relevant to the chemical in question.

Another approach is to use the globally harmonized customs codes, or tariff system, which may identify imports of certain chemicals (for example, raw materials for production). The International Harmonized System is the global system of nomenclature that is used to describe most of the global trade in goods (according to the US International Trade Commission). In the United States, the Harmonized Tariff Schedule of the United States Annotated provides applicable tariff rates and statistical categories for all merchandise imported into the country.^{xv}

3.2 Prioritizing inspections

There are many workplaces relative to the number of inspectors, so the prioritization of enforcement activities is needed. Inspections of high-risk chemicals or activities can be prioritized. Enforcement can also be structured geographically, with identification of industries by region. In the case of newly regulated chemicals, there should be sufficient education and outreach about the requirements among both stakeholders and enforcement officers before enforcement begins.

Prioritization can be determined through an analysis of the regulated companies, the effect of non-compliance, and legal obligations and requirements. Statistics from customs control on chemicals, quantities and importers are useful tools for prioritizing enforcement activities. If this information is confidential, the enforcement authority should be empowered to access information from customs for internal use. The Rotterdam Convention provides information about certain hazardous chemicals being imported that could be useful in prioritizing enforcement subjects.

For chemicals control, inspections can be prioritized based on criteria such as:

- New legal requirements entering into force (bans and restrictions, classification and labelling, SDSs)
- The hazardous properties of regulated chemicals
- The large volume of chemicals
- Use by non-professional consumers or vulnerable groups
- Complaints and information received regarding likely violations (for example, from citizens, non-governmental organizations, or from affected companies)
- Assessment of the compliance of the various target groups (for example, from previous experience)
- Regional focus (for example, there could be a focus on areas with large cities or ports, which may have a high density of importers, particularly during a given time period, which would make it easier for inspectors to organize their activities)

Inspections can be conducted to respond to specific problems – such as non-compliance with labelling requirements for products found on the market – that are reported by the authorities, private companies, individuals or civil society organizations. Compliance with an import licensing system (such as for ozone-depleting substances), where the chemical can be imported only if the importer has a licence, also requires enforcement – predominantly at the border.

The US Occupational Safety and Health Administration (OSHA) regulates safety and health in American workplaces. When OSHA conducts inspections, it prioritizes by focusing on the most hazardous workplaces, giving highest priority to situations of imminent danger and workplaces in which employees have suffered severe injuries or illnesses.^{xvi}

In certain circumstances, checks for the abatement of violations cited during previous inspections are also conducted by the agency.



4. The inspector or enforcement officer

The inspector, also referred to as an enforcement officer, is generally an employee of the government authority/authorities responsible for enforcement. Inspectors are key to successful implementation; they act as representatives of the government authority and are instrumental in gathering information about conditions in the industry sector.

The inspector works in the field, interacting directly with manufacturers and importers. Thus, the inspector has access to on-the-ground information that could be useful to the wider work of the authority. Inspectors should be obliged to provide the authority with all the information collected during inspections.

4.1 Role of the inspector

The role of the chemicals control inspector is to confirm compliance with chemicals control legislation. They also check that the manufacturer or importer has systems in place for ensuring compliance with the requirements for classification and labelling; and when applicable, systems to provide SDSs that enable them to communicate the hazards of chemical products. Inspectors conduct spot checks to ensure that manufacturers, importers and retailers are in compliance with the law.

Inspectors can also play an important role in gathering information about any difficulties manufacturers and importers may have in understanding or implementing requirements, providing a two-way flow of information between them and the regulator.

As stated in the LIRA Guidance, inspectors should have the legal mandate to “enter and inspect premises or storage facilities; search vehicles, persons and containers; take samples for analysis and to seize equipment; take photographs; ask for information, documentation, and to secure evidence; and issue orders and/or apply sanctions in case of non-compliance”.^{xvii} They should also be able to request assistance from the police when needed.

It is essential that the inspector is fully independent from the inspected companies. Following best practices, inspectors should not collect fees or fines directly. Rather, they should provide a report to the authority, which, in turn, will follow up to levy the appropriate fee. Inspectors with secure salaries are normally less vulnerable to corruption. For on-site inspections, an effective and common measure to reduce the risk of dishonesty is for two inspectors to visit together. If possible, the team of inspectors should rotate the companies they inspect. Other techniques include the mandatory use of identity cards for inspectors, displaying their name and unit.

Example: Role of the inspector in Zambia

Zambia’s Environmental Management Act includes the following provisions regarding the establishment of an inspectorate:

“(1) The [Environmental Management] Agency shall establish an inspectorate with the necessary technical staff and facilities required to administer, monitor and enforce measures for the protection of the environment and the prevention of pollution.

(2) An inspector may, at any reasonable time, enter and search any industrial facility or plant, undertaking, business or any other premises, where the inspector has reasonable grounds to believe information or documents which are relevant to the investigation are kept or an activity discharging or likely to discharge a contaminant or pollutant into the environment is being carried out or is likely to be carried out and (i) take samples or materials used in or resulting from the activity; and (ii) inspect any vehicle or other conveyance at the industrial facility or plant, undertaking, business or other premises.”

Additional options provided to the inspector by law include the ability to conduct searches; examine any relevant “document, material, matter, substance or article” found at the facility; require information to be provided; take extracts from, or make copies of, relevant documentation; and obtain information from computers at the facility.

The inspector may take a number of actions, including inspecting a variety of premises, ordering the production of necessary documents, ordering the cessation of a harmful activity, obtain samples, or seize substances, materials or means of transportation.

Summarized from: The Environmental Management Act, Zambia, 2011. Full text provided by Fredrick Muyano, Environmental Management Agency.

4.2 Resources and competencies

Inspectors need to understand the legal requirements and the responsibilities of the businesses they inspect. They should be equipped with checklists and templates to facilitate their work. For some inspection tasks, such as interpretation of test results, technical knowledge of chemicals is essential; for others, an understanding of legal requirements is sufficient. It is not necessary to define specific competencies for inspectors in legislation. Instead, it should be up to the designated government authority.

In order to monitor compliance by manufacturers and importers, inspectors require some technical training on chemical products – for example, regarding labelling and storage requirements. The individual inspector does not necessarily need to possess specialized technical and toxicological knowledge. Access to information on chemicals can often be obtained from international sources. Additional information is available in the *Risk Reduction Tools for Chemicals Control* guidance document.

Most countries with enforcement of legal requirements, such as classification and labelling, utilize inspectors with health and safety training rather than specifically training and certifying chemicals inspectors. In most cases this will be sufficient and effective, if they are familiar with the requirements related to chemicals.^{xviii}

The European Chemicals Agency (ECHA) maintains a Forum for Exchange of Information on Enforcement. This Enforcement Forum is composed of “a network of authorities responsible for the enforcement of the REACH, CLP [Classification, Labelling and Packaging] and PIC [Prior Informed Consent] regulations in the EU, Norway, Iceland and Liechtenstein”.^{xix}

The Forum provides a range of resources, such as checklists for use in a variety of enforcement projects, including monitoring of SDSs.

The Forum also provides annual training for inspectors aimed at ensuring that they have the right tools, training and information to carry out efficient and effective enforcement. These training sessions are attended by inspectors from EU Member States.^{xx} See sample training agenda in Annex 3.

There should be strict requirements for inspectors on how to handle decisions regarding penalties; this can be described in the authority’s work procedures, or in legislation or regulations, depending on what is standard in the country. Decisions would generally be made at the managerial level, with the inspector in charge of co-signing.

If serious violations are discovered, inspectors should have a legal obligation to report this to prosecutors. The prosecutor can then decide whether the violation will lead to a prosecution. The areas for sanction charges must be clearly defined in the legislation.

As the job may involve testing to identify the presence or absence of restricted/banned substances, the inspector should have the necessary training to identify the types of restricted chemicals to look for, depending on the kind of product they are assessing. For example, heavy metals may be present in some paints or parts of electronic toys.

Example: Training of inspectors at the Swedish Chemicals Agency

Enforcement officers at the central level in Sweden have a variety of academic backgrounds. They may be chemists, biologists, public health officers or eco-toxicologists. Common work experiences prior to employment as inspectors range from work within industry – for example, in health, environmental and safety programmes, or quality management – to other positions in local or regional government.

To ensure legal certainty and consistency, new employees are assigned a tutor/mentor who can provide support for daily tasks. Legal training within the field is usually required, depending on the background of the inspector. The curriculum for health and environmental officers includes legal courses, predominantly to ensure knowledge of environmental requirements but also in regards to the role of officers as representatives of the state or municipality. Inspectors with a more scientific background receive legal training in the workplace. It takes between six months and a year before a new inspector can deal with all aspects of the work independently. Inspections are always conducted with two inspectors.

When serious violations are discovered, inspectors have an obligation to report this to the prosecutors, in accordance with the Swedish Environmental Act.

Source: Anna Fransson, KemI, personal communication, August/September 2017.

Example: Inspectors in Costa Rica

In Costa Rica, inspectors usually have a university degree (bachelor's level) in environmental sanitation. Typically, all inspectors have basic knowledge of occupational health.

Source: Jordi Pon and Costa Rica workgroup, personal communication, 2018.

4.3 Access to laboratory capacity

The inspector should have legal authority to obtain a sample of the product from the product manufacturer, importer or retailer, as well as the authority to require the company to cover the cost if testing is deemed necessary. In some countries the cost of analysis is paid by the company if the product is found to be non-compliant.

An inspector may collect a sample of a product or chemical for testing if, for example, they suspect a product contains banned or restricted substances. A reference laboratory may be used to carry out tests to determine the composition of chemical formulations, or to determine the identity and concentration of a chemical. Laboratory analyses can be used to ensure that products are in compliance with existing restrictions, and to prove the presence or absence of certain restricted or banned chemicals.

It is therefore important for the government authority to ensure that the inspector has access to services that can provide an analysis of chemical contents. The responsible authority should establish agreements with laboratories to carry out these services as needed. These laboratories must be neutral in relation to the government and the company. Therefore, analyses should be conducted independently, outside the enforcement authority. In most developed countries governments do this by using private certified laboratories. It may also be possible to make use of regional capacity, which could be a cost-efficient way of ensuring access to laboratories. All the laboratories that are used should meet the Good Laboratory Practices (GLP) standards. GLP inspection could be included as part of the training for enforcement officers.

4.4 Cooperation and support among authorities

Cooperation among inspectors from various authorities can facilitate successful enforcement activities. This can include inter-agency or interministerial collaboration at the national level, collaboration among different levels of government (national, regional, local), and international

collaboration. It will, however, require coordination of the workplans of the involved authorities.

For some sectors, there may be an existing system of inspections related to issues such as environmental pollution, emissions control or worker safety. In these cases, it may be more efficient to add chemical control checklists to the toolbox of inspectors already assigned to a relevant manufacturer or importer. A strategic approach should be used to make best use of the inspection resources available at all the relevant inspection bodies.

Cooperation between customs and chemicals enforcement authorities is important to ensure that both authorities' respective activities are complementary. Statistics from customs control on chemicals, quantities and importers are a useful tool for targeting enforcement activities. Such information may be confidential; if so, the enforcement authority should be empowered to access this information from customs for internal use. The enforcement authority seeking assistance on specific campaigns could provide customs inspectors with training and/or tools (e.g. a checklist) to detect product specific non-compliance. Cooperation between enforcement authorities and customs might be based on written agreements or other arrangements.

Authorities should establish the capacity to inspect manufacturers and importers on-site. On location, the inspector can meet with the company representative responsible for commercializing the chemicals on the market. The inspector can then verify that the company has systems for ensuring correct classification and labelling, and for the compilation and distribution of SDSs.

When possible, it may be useful to seek opportunities for regional cooperation in enforcement.⁴ The Enforcement Forum of the European Chemicals Agency is an example of a regional collaborative effort. It is a network of authorities responsible for the enforcement of the REACH regulation and two other chemicals regulations in the European Union, Norway, Iceland and Liechtenstein. The Rapid Alert System for Dangerous Non-Food Products (RAPEX) is another example of effective international

⁴ The Regional Enforcement Network for Chemicals and Waste (REN) is a project implemented by UN Environment in 25 countries in Asia. It aims to reduce illegal transboundary movement of hazardous chemicals and hazardous waste through improved capacity of front-line enforcement officials, and enhanced regional and national cooperation. REN is focused on border control, not on upstream chemicals control. Information is available at www.projectren.org. Another resource that may be useful for border control is UNEP's Green Customs Initiative (<http://www.greencustoms.org/>). It supports countries in managing issues related to border control for implementation of multilateral environmental agreements.



collaboration to increase the success of enforcement and inspection efforts. RAPEX is used within 31 European countries and the EU Commission to alert government authorities and consumers of dangerous products on the market that are found to be in non-compliance with existing legislation.

Building in a citizen suit provision in relevant national legislation can complement the responsibility for government to monitor compliance. A regulation with a citizen suit provision makes it possible for citizens to take legal actions based on violations of the law.^{xxi} For example, there is a provision for citizen lawsuits in the US air pollution law, the Clean Air Act.^{xxii} The State of California's Proposition 65 law also allows for citizen suits.^{xxiii} In other countries, provisions of this kind may be part of civil rights law rather than environmental legislation.

4.4.1 Customs control

Inspections within a country can be complemented by enforcement at the border to prevent illegal imports of substances. Customs control provides an opportunity to check that any imports are in compliance with existing bans, restrictions, classification and labelling requirements, and any other relevant requirements. Border control contributes to the safe handling of the chemical products used domestically. Illegal activity at the border should be reduced to the extent that domestic enforcement activities are successful in reducing the demand for and use of banned substances.

For ozone-depleting substances, where an import licensing system is used, the chemical can be imported only if the importer has a licence, which is typically checked at the border.

Like manufacturers, importers are responsible for ensuring that labelling requirements are met when they place a chemical on the market. The importer is obliged to label the product and produce SDSs in accordance with the country's requirements, which usually stipulate that information must be in the language(s) of the country.

Products are imported at numerous entry points, seven days a week and around the clock, making it difficult to ensure the presence of border officials trained in chemicals control requirements at all times. Transporters at the border cannot reply to detailed questions related to compliance with chemicals legislation requirements and, in some cases, a transporter may be carrying products designated for several different importing companies. Relying solely on customs control for chemicals control legislation is therefore not sufficient; moreover, it does not cover the control of domestic manufacturers.

Zambia makes use of a customs database - the Automated System for Customs Data (Asycuda World) - that enables the monitoring of all chemicals entering the country. Asycuda was created by the United Nations Conference on Trade and Development (UNCTAD) to help modernize customs systems.

The Regional Enforcement Network for Chemicals and Waste (REN) is an example of a regional cooperation project on border control, implemented by the UN Environment Programme in 25 countries in Asia. It aims to reduce the illegal transboundary movement of hazardous chemicals and hazardous waste through improved capacity of front-line enforcement officials and enhanced regional and national cooperation. Information is available at www.projectren.org.^{xxiv}

Another resource that may be useful for border control is UNEP's Green Customs Initiative (<http://www.greencustoms.org/>).^{xxv} The initiative supports countries in managing issues related to border control for the implementation of multilateral environmental agreements on ozone-depleting substances, toxic chemicals and other areas.

Additional information on border inspections is available in the Basel Convention's Training Manual on Illegal Traffic for Customs and Enforcement Agencies. For example, the manual describes the steps a customs officer can take, from verifying that all documents required by legislation are presented and correctly completed with all the relevant information, to verifying that trucks and containers are appropriately labelled and that the contents of the containers correspond with permitted substances. It describes the benefits of a task force approach - with members that may represent countries, provinces and local jurisdictions - for coordinating activities. It also details the steps to take if an illegal shipment of hazardous wastes is suspected.^{xxvi}

5. Conducting the inspection

The suggestions in this chapter require legislation, as discussed in the LIRA Guidance and in previous sections. Once the legal system is in place and the subjects of inspection have been identified, inspectors should organize and implement compliance checks, and monitor performance and results over time. Inspectors should be legally mandated to conduct both routine inspections and spot checks.

The following are general suggestions for conducting inspection visits:^{xxvii}

- **Prepare by collecting knowledge:** Research the company and its products by, for example, visiting the company's website and using available registers and the experiences from previous inspections by the authority. Contacting the local authorities can also be helpful.
- **Make an appointment:** An appointment ensures that the inspector meets with the appropriate responsible persons at the company. As previously noted, inspections without advance notice can be relevant in some situations, especially when a more serious violation is suspected – for example, based on a tip from an employee.
- **During the inspection:** Upon arrival, it is best to begin with an introduction: inform the company why you are inspecting them, who you are, and provide brief background information on your authority and its tasks. Ask the company about their operations. Background information such as annual turnover and the number of products and suppliers can contribute important information. After the initial discussions, it may be useful to focus on the company's product portfolio. Inspectors may plan for time on their own during the inspection to examine product information and to discuss appropriate measures if they encounter deficiencies. Inspect labels on the product, if applicable. Interviews with employees could also be considered, in order to reveal any hidden problems.
- **Summarize observations:** It is important to explain any observed violations and possible ways to correct deficiencies. This is preferably done both verbally and in a written document provided to the company. If a manager or other responsible person is present at the time, it will

generally lead to better remedial action. In terms of follow-up, it is common to allow the company a certain amount of time after the inspection to prove they have made the necessary corrections. This can then be checked either through a follow-up visit by the inspector or by requesting a submission from the company to prove that any corrections have been carried out. When the company is required to take significant measures, it should be given a clear decision, with the option of a hearing and redress by an independent and impartial body.

- **Back at the office:** Based on the observations in the field, additional actions may be necessary. For example, a decision requesting corrective action may be appropriate. Other actions could include writing up reports or arranging for further enforcement activities. It is important to record the date by which the company is to correct any existing violation, and to follow up to ensure that this has been done. Follow-up could occur through written submission of relevant documentation, or through a follow-up visit.

The inspection agenda used by US OSHA (for worker protection) could, in part, be useful for developing a chemicals control inspection design. OSHA inspections begin with an opening conference, followed by a facility tour. The inspector leads a closing meeting, during which the OSHA officer discusses possible courses of action the employer may take. Employer actions could include an informal conference with OSHA, or contesting citations and proposed penalties.^{xxviii} A manager responsible for these issues is present during the inspector's visit. It is important that the relevant manager or responsible person is present and able to provide information about how the company has addressed past issues.

5.1 Record keeping

It is important for a government agency to have the necessary infrastructure to make records of inspections and findings, and to keep and maintain them. This function should be included in an agency's overall budget.

There should be general requirements for a system for maintaining and organizing documents at the authority, not just for individual inspectors. Many countries have some form of general legislation that stipulates requirements for the storage, organization

and traceability of reports and documents. Recordkeeping requirements generally specify the type of information to be recorded, the format of the record, and the duration of recordkeeping.⁵ For example, the International Standards Organization has a standard for records management that “defines the concepts and principles from which approaches to the creation, capture and management of records are developed”.^{xxix} Quality management systems such as ISO 9001 also include requirements on recordkeeping.

5.2 Checklists

Checklists can be a useful tool for inspectors. They can help them determine whether certain required elements are present (e.g. an SDS), what to review prior to an inspection, and which chemicals, safety elements or hazards are present at a site.

In some cases, inspectors may already be accustomed to using checklists related to emissions control, worker safety or other topics. Checklists related to chemicals control can be added to these inspectors’ toolboxes.

The use of a coordinated and shared checklist for inspectors from different entities may be helpful in making more cost-effective use of authority staff, as well as reducing time spent on inspections by audited entities.^{xxx} There is potential for further development of such joint checklists that could be used in joint inspections.

Some responsibilities related to inspection of retailers may already be covered by existing government employees – for example, if there is an existing cadre of health inspectors. If these inspectors become responsible for chemicals-related inspections, it is important to provide additional training and checklists.

Checklists can help to provide both inspectors and manufacturing/importing/retailing companies with consistent understanding and expectations. The following examples of checklists are included in Annex 2:

- **Background checklist:** Information about the inspected company, substance, etc., including some general questions
- **On-site checklist for SDS creator:** A number of questions about the SDS that an inspector can check on-site
- **On-site checklist for SDS recipient:** This applies if the company being checked is a recipient rather than compiler of the SDS
- **Office-based checklist for SDSs:** To check the contents of sections and subsections of the SDS

- **On-site checklist from Sweden:** For a general on-site inspection
- **Checklist from South Africa:** For occupational health and safety audits in the chemical sector; it does not focus primarily on chemicals control, but could be modified for application to chemicals control

5.3 Inspections of manufacturers and importers

Inspectors or inspection officers should ensure that the manufacturing and or importing company has systems in place for ensuring compliance. Inspections related to the responsibilities of the manufacturer/importer for chemicals control can cover:

- Correct classification, labelling and SDSs
- Compliance with bans, restrictions and, if relevant, authorizations
- Compliance with reporting, registry requirements and payment of fees (if relevant)
- Packaging and storage requirements (if relevant)

Administrative controls – where the manufacturer certifies that the product is in compliance and the inspector checks to ensure this is correct – are often sufficient. This is a cost-effective solution for designing an inspection scheme when resources are limited. If a registry has been established in the country, inspections may include checking compliance with legally defined reporting obligations.

Both scheduled and unscheduled inspections have a role to play. Inspections that take place on a scheduled basis help to ensure that the correct level of expertise/authority will be present at the inspection site; this is the most cost-effective solution for designing an inspection scheme when resources are limited.

Unscheduled inspections are important as well. They can be in response to a specific problem, such as non-compliance with labelling requirements for products found on the market that have been reported by authorities, private companies, individuals or civil society organizations. Unannounced inspections can reduce the opportunities for employers to hide non-compliance before a visit.

Enforcement of classification, labelling and SDSs

If the legislation makes manufacturers and importers responsible for ensuring that chemicals are classified and labelled appropriately, including providing SDSs, then the enforcement authority should check that they are carrying out this function. Products that lack a label, or have labels in a different language from that used in the country, should be corrected.

5 UNEP, LIRA Guidance, p. 49.

There are a number of questions to consider when reviewing chemical product labelling: Is the label consistent with the information contained in the SDS? Is the labelling in a language used in the country? Does the label fulfil the formal requirements (i.e. presence of pictograms, signal words, hazard and safety statements, name of producer, weight/volume, etc.) Is the label easy to read and separated from other text? Are all the label elements located together on the label?

If an importer purchases chemicals that have already been classified and labelled appropriately, the importer is responsible for checking that the information is accurate and complete, and, if necessary, translated into languages used in the country. If they obtain chemicals that have not yet been labelled, the importer must label them correctly.

It is common to find SDSs that are not written in the languages of the country in which the chemical is being used. It is important, especially for those who will be making use of the SDSs, that the information is not only accurate but also in a language they can understand.

Reviewing SDSs involves questions such as:

- Is the SDS in the language(s) of your country?
- Is the SDS in the correct format?
- Is it easy to read and understand?
- Is the SDS distributed correctly to clients of the company and free of charge?

When SDSs include a disclaimer or notice to the reader, such statements do not release the supplier from the legal obligations to provide accurate and useful information.

Annex 2, provides a sample checklist from the EU that can be used with a company that is a recipient of an SDS. ECHA also has a checklist for checking SDSs.^{xxxix}

Enforcement of restricted/banned products

Manufacturers, as well as importers, should be well-acquainted with legislation restricting chemicals in the country. Restrictions may limit or ban the production, placing on the market or use of a substance. A restriction can apply to any substance on its own, in a mixture or in an article, including those that do not require registration.

Controls include restrictions on:

- Substances with specific use restrictions: Ensure a substance is not used in violation of these restrictions (e.g. mercury in certain measuring devices)

- Banned substances (in mixtures or articles): Ensure the mixture/article is not sold and distributed

In certain cases, a company may hold a dispensation that exempts them from the restriction; this should be checked as well. In the event that an inspector finds banned or restricted substances during an inspection, a number of measures should be taken. A follow-up inspection is usually needed as well. When products have a high risk of causing acute damage, confiscation may be the most appropriate action. The costs for handling and destruction (if necessary) of the confiscated product should be covered by the company, when this is a legal requirement.

In general, control should occur upstream, with manufacturers and importers; if this is effective, then the inspection of retailers is less important. However, in some cases, the authority does not become aware of the presence of the chemical until it is found further down the supply chain, either because there is a lack of controls at the manufacturing and import stage, or because importers operate at a very small scale that makes detection particularly difficult. A violation detected at any point along the entire supply chain should be addressed. Local inspectors who identify downstream violations should report them to the central authority that is responsible for inspecting manufacturing and importing companies.

5.4 Inspections of retailers

Inspecting a retailer selling chemical products will focus on a more limited set of rules and differs somewhat from inspecting products at the primary supplier level (manufacturers and/or importers). Retailers often cannot be expected to have detailed knowledge of classification and labelling requirements.

It is more common for inspections of retailers to focus on the product storage, labelling and, when applicable, packaging requirements. The routines and competencies of the retailer may also be systematically checked. Inspecting stores can lead to the discovery of products that are non-compliant and can help to identify the primary supplier.

When inspecting the products of a retailer, it would be more convenient to initially scan the store and check a number of products. The number of products chosen for inspection depends on a number of factors such as the number of products in the store, the amount of time planned for the inspection and the complexity of the inspection. A more systematic assessment would inspect routines at the store and the levels of competence to fulfil legal requirements related to chemicals. This usually means that a discussion

should take place with someone well-acquainted with the operations – for example, purchase routines and product placement in the store. Open questions should be asked so that the person being interviewed has the opportunity to describe the routines as best they can.

Checking for retailers' compliance with restrictions could include asking questions about the following:

- Substances with specific use restrictions – ensure the substance is not sold in violation of these restrictions (e.g. mercury in certain measuring devices)
- Banned substances (in mixtures or articles) – ensure the mixture/article is not sold and distributed
- For products restricted to certain users, check that the store keeps track of its customers and only sells the product in compliance with the legal provisions

asking questions such as: Is the labelling in the languages used within the country? Does the label fulfil the formal requirements (i.e. presence of pictograms, signal words, hazard and safety statements, name of producer, weight/volume etc)? Is the label easy to read and separated from other text? Is the storage of hazardous chemicals carried out in an acceptable way in the store?

Are hazardous chemicals out of reach of children? Are the packages safe and durable for normal use? Do packages resemble food packaging?



CHAPTER 6



In most countries, administrative and civil means are used to ensure compliance with legislation on chemicals, but serious violations of law may be punishable as crimes.^{xxxii} The LIRA Guidance provides information on defining criminal versus administrative offences.⁶

As described in the LIRA Guidance, chemicals control legislation should clearly specify enforcement mechanisms, including clear allocation of enforcement responsibility, as well as providing for the application of sanctions as appropriate. Sanctions should be based on law and can include monetary punishments (fines), imposing the execution of corrective action or, for serious offences, imprisonment.

To change the behaviour of regulated entities, sanctions need to be carefully designed. Penalties that are perceived as less costly than changing behaviour are unlikely to be effective.

Administrative sanctions (corrective measures) are decided by the inspectors themselves and are not imposed through a judicial process. It is therefore more practical and less expensive, in some cases, to implement administrative sanctions rather than criminal sanctions (which involve police reports and prosecutions).

The decision depends on the gravity of the infraction and the impact on the environment or health. The enforcement authority should be empowered to decide on the corrective measures taken by the duty holder to bring products into compliance. It is important to ensure that no substances, mixtures or articles in violation with restrictions or bans can reach the market. This can be done by requesting corrective action such as:

- a recall (any measure aimed at achieving the return of a product that has already been made available to the end user)
- a withdrawal (any measure aimed at preventing a product in the supply chain from being made available on the market, including the cancellation of permits, or through temporary/permanent closure of the facility)
- confiscating banned products
- imposing a fine if a restriction is being violated (i.e., if the inspector suspects that sales will continue)
- obligations to rectify damage or cover the costs for the handling and destruction (if necessary) of confiscated products

Measures taken must be proportionate to the violation. Applicable measures, lawful remedies and deadlines must be explained to the relevant parties.

Example: Penalties under Brazil's draft chemicals control law

Brazil's draft law establishes that the National Registry for Industrial Chemicals will be under the jurisdiction of the federal agency responsible for the environmental sector. Due to the lack of capacity to carry out comprehensive risk assessments for each substance produced or imported, Brazil has decided to focus on the most dangerous substances. The result will be a list of prioritized substances.

The bill provides for the following sanctions: warnings; fines; partial or total suspension of activities; disposal of industrial chemicals, mixtures or finished products; promotion of countervailing actions, such as programmes, projects and studies aimed at improving the management of industrial chemicals; and evaluation and repair of damage to human health and the environment.

The following actions lead to penalties: "not registering information in the national registry; providing false, misleading or omitting information in the national registry; not update information in the national registry when new data become available; presenting a false or misleading study to support the risk assessment process; not following risk management measures; and produce, import, market, give away or use industrial chemicals in violation of the general provisions of the law."

Source: UNEP, Regulation of Industrial Chemicals: Available Schemes, Trends and Case Studies on the Regulation of Industrial Chemicals in Latin America and the Caribbean, April 2017.

Sanctions for non-compliance with environmental law depend on the penal system of the country. They are sometimes included in criminal law, or alternatively may be included in environmental law or law related to the placement of chemicals on the market. Sanctions can also include liability measures that allow the victims of environmental or health damage to be compensated for the effects of this damage.⁷

Legislation can include provisions to facilitate international cooperation among different countries that allows authorities to impose sanctions even if the stakeholder is based in a different jurisdiction.

Inspectors need to be objective when deciding on which sanctions to impose for a violation. When policies identify appropriate actions or sanctions for particular violations, and inspectors use standardized checklists, individual inspectors can remain objective. This also lets businesses know what to expect, provides them with confidence in the system, and reduces the possibility of corruption. Once the inspector identifies a violation, it should be referred to the main agency office, which can then apply the fine. This ensures that the inspector is not personally collecting the fine.

When a serious violation has been identified during an inspection, it is usually preferable to conduct a follow-up inspection after an appropriate amount of time for the violation to be corrected. This is important not only to ensure that the violation has been remedied, but also to ensure that the manufacturer or importer recognizes the importance of adhering to the law in question, and to identify any manufacturers or importers that are incurring repeated violations.

When a product lacks labelling in a local language, this may pose a risk for the user. A relevant measure in such a case would be to ensure the product is not sold, preferably following a voluntary removal by the store owner. In addition, it is useful to ensure that the store contacts their supplier and asks for measures to be taken higher up in the supply chain – for example, by putting a new label on the product. Storage of hazardous chemicals at retailers' premises should prevent risks to health and the environment. Hazardous chemicals must be stored separately from food and in places that are out of the reach of children. Ways to address this issue may not be described in legal text, but could be decided on by the store owner. Recommendations and advice may be provided at an inspection – for example, placing certain products out of reach or in closed cupboards.



REFERENCES AND FURTHER READING

European Commission. "Rapid Alert System for Dangerous Non-Food Products." Web resource accessed at https://ec.europa.eu/consumers/consumers_safety/safety_products/rapex/alerts/repository/content/pages/rapex/index_en.htm, April 20, 2017.

The European Chemical Agency's Forum for Exchange of Information on Enforcement (ECHA FORUM): Checklist for Enforcement related to Safety Data Sheets. Available at <https://echa.europa.eu/regulations/reach/safety-data-sheets/checklist>

Food and Agriculture Organization of the United Nations (FAO). FAO Pesticide Registration Toolkit. Online resource accessible at <http://www.fao.org/pesticide-registration-toolkit/tool/home/>. Also available at <http://www.fao.org/pesticide-registration-toolkit/en/>

Food and Agriculture Organization of the United Nations (FAO). 2006. International Code of Conduct on the Distribution and Use of Pesticides: Guidelines on Compliance and Enforcement of a Pesticide Regulatory Programme. Rome: FAO. Accessed at http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/Compliance.pdf, April 20, 2017.

Inter-Organization Programme for the Sound Management of Chemicals (IOMC). IOMC Toolbox for Decision-Making in Chemicals Management. Online resource accessible at <http://iomctoolbox.oecd.org/default.aspx?idExec=aa99ea8f-df1a-4346-a661-f6f3c7c47952>

OECD. 2012. Guidance on Pesticide Compliance and Enforcement Best Practices. Online report accessible at http://www.oecd.org/env/ehs/pesticides-biocides/Pesticides_Compliance_Guidance.pdf

Swedish Chemicals Agency. 2008. Legislation for Risk Management at Marketing of Chemicals: The First Step of the Supply Chain. Report #PM 4/08. Sundbyberg: KemI.

Swedish Chemicals Agency. 2010. Capacity Building for Sound Management of Chemicals: Organisation, Responsibilities and Tasks of Governmental Institutions and Enterprises. Report #PM 10. Stockholm: KemI.

Swedish Chemicals Agency. 2018. Sustainable financing of institutional capacity for chemicals control. Guidance on national chemicals control, Guidance 1/18. Stockholm: KemI.

Swedish Chemicals Agency. 2018. Risk reduction of chemicals. Guidance on national chemicals control, Guidance 2/18 Stockholm: KemI.

Swedish Chemicals Agency. 2018. Legislation on chemicals placed on the market. Guidance on national chemicals control, Guidance 3/18. Stockholm: KemI.

Swedish Chemicals Agency. 2018. Enforcement of legislation on chemicals placed on the market. Guidance on national chemicals control, Guidance 4/18 Stockholm: KemI.

United Nations Environment Programme (UNEP). 1995. Legislating Chemicals: An Overview. Nairobi and Geneva: UNEP.

United Nations Environment Programme (UNEP). 2015. Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration (LIRA Guidance). Nairobi and Geneva: UNEP.

United Nations Environment Programme (UNEP). "Regional Enforcement Network for Chemicals and Waste (REN)." Web resource accessed at http://www.projectren.org/project_information.php, April 20, 2017. For a recent sample newsletter from REN, see: <http://www.projectren.org/files/newsandevents/REN%20Newsflash-March%202017-ISSUE%200072017.pdf>

United Nations Institute for Training and Research (UNITAR). "Globally Harmonized System of Classification and Labelling of Chemicals." Web resources accessed at <https://www.unitar.org/cwm/portfolio-projects/globally-harmonized-system-classification-and-labelling-chemicals>, November 13, 2018.

World Health Organization (WHO). "International Programme on Chemical Safety." Web resource accessed at <http://www.who.int/ipcs/en/>, April 20, 2017. World Health Organization (WHO). "International Chemical Safety Cards." Web resource accessed at <http://www.who.int/ipcs/publications/icsc/en/>, April 20, 2017.

ANNEX 1:

Example of Legal Construction

Taken from Keml (2018): *Guidance on national chemicals control – Enforcement of legislation on chemicals placed on the market*. Depending on the legal tradition in a country, several options are possible. This annex, building on Swedish law, can serve as an example in considering how to ensure that relevant areas of chemicals control enforcement are covered. It contains some general examples of how to phrase a legal text.

Cover general rights and obligations:

1. The purpose of supervision shall be to ensure compliance with the objectives of this Law and rules issued in pursuance thereof. For this purpose, the supervisory authority shall, to the extent necessary, supervise compliance with the provisions of the Environmental Code and rules, judgements and other decisions issued in pursuance thereof and take any measures that are necessary to ensure that faults are corrected. The supervisory authority shall also contribute to attainment of the objectives of this Code by giving advice and information and similar activities.

2. The supervisory authority shall report infringements of the provisions of this Code or rules issued in pursuance thereof to the police or public prosecution authorities where there are grounds for suspicion that an offence has been committed.

3. Supervision shall be exercised by [names of relevant authorities] and [municipalities, (supervisory authorities)] in accordance with the Government's instructions.

Stipulate the right for enforcement authorities to issue injunctions and prohibitions:

4. A supervisory authority may issue any injunctions and prohibitions that are necessary in individual cases to ensure compliance with the provisions of this Code and rules, judgements and other decisions issued in pursuance thereof. The measures taken must not be more intrusive than necessary in individual cases.

5. Injunctions or prohibitions may be made subject to a penalty of a fine.

Include the right to collect information and conduct investigations:

6. A supervisory authority may order a person who pursues an activity or takes a measure that is governed by the provisions of this Code or rules issued in pursuance thereof to submit any information and documents to the authority that are necessary for the purposes of supervision. The same shall apply to a person who is otherwise required to mitigate any adverse effects of such activities.

7. A supervisory authority may decide that a decision taken by it shall take effect immediately even if it is appealed against.

Enforcement costs can be covered by fees:

8. The Government or the authority appointed by the Government may issue rules imposing charges to cover the authorities' costs in connection with the consideration of matters and supervision pursuant to this Law or to rules issued in pursuance thereof. These charges should correspond to the actual cost for the authorities' supervision.

9. The Government or the authority appointed by the Government may issue rules laying down an obligation to reimburse authorities' costs.

Access to premises for enforcement staff:

10. In order to perform their tasks pursuant to this Code, authorities and persons engaged by authorities to perform a task shall be given access to properties, buildings, other structures and means of transport for the purpose of carrying out investigations and taking other measures. Measures shall be carried out in such a way as to cause the least possible damage and intrusion.

11. The police authorities shall give any assistance that is necessary for the purposes of access and measures.

Guarantee ability to impose penalties:

12. Any person who, whether deliberately or through gross negligence, handles a chemical product or a product that contains or is treated with a chemical product without taking any protective measures, or taking any other precautions that are necessary in view of the product's intrinsic characteristics, in order to prevent or combat damage to human health or the environment shall be liable to a fine or a term of imprisonment not exceeding [include time frame] for the offence.

13. Any person who, whether deliberately or through negligence, starts or pursues an activity or takes some other measure without obtaining a decision concerning permissibility or a permit, approval or consent or without submitting a notification required by this Code or by rules issued in pursuance thereof shall be liable to a fine or a term of imprisonment not exceeding [include time frame] for the offence.

14. Any person who, whether deliberately or through gross negligence, violates requirements regarding product information for chemical products by:

- a. Failing to classify a chemical product with regards to requirements in [GHS implementation legislation]
- b. Failing to label a product or distribute SDS with regards to requirements in [GHS] shall be liable to a fine or imprisonment not exceeding [time frame] for the offence.

ANNEX 2:

Enforcement checklists

The checklists in this annex are generic examples that need to be adapted to national legislation. To be effective, checklists should be modified, as appropriate, for the relevant inspection(s) or inspection project. The types of questions for compilers (suppliers) of SDSs and recipients of SDSs differ, in relation to their different roles.

A checklist for controlling SDSs is available on the European Chemicals Agency's website: <https://echa.europa.eu/regulations/reach/safety-data-sheets/checklist>. This checklist is being made public in order to support improvements to the quality of SDSs in the supply chain.

The checklists 1-4 that follow have been adapted from the checklists on the ECHA website.

The examples in this annex include:

1. **Background Checklist:** information about the inspected company, the substances they produce/import, etc., including some general questions.
2. **On-site Checklist for SDS creators:** questions about the SDS that an inspector can check on-site.
3. **On-site Checklist for SDS recipients:** this applies if the company being checked is a recipient, rather than compiler of the SDS.
4. **Office-based Checklist for SDS:** to check the contents of sections and subsections of the SDS.
5. **On-site Checklist from Sweden:** for general on-site inspection.
6. **Checklist from South Africa:** for occupational health and safety audits in the chemical sector.

1. Background checklist

1. Inspection Information			
Company Name			
Company Address			
Company Size (for example, relevant ranges of the number of employees)			
Inspector/authority personnel			
Date of inspection			
Reference number for inspection (if used)			
Product name			
Product identifier (name, unique identifier – e.g. CAS No.)			
SDS/Supplier Identifier (if not same as inspected company)			
Question	Response	Remarks	Note
What is the role of the company regarding the substance/mixture? (Company can have multiple roles)	<input type="checkbox"/> Manufacturer <input type="checkbox"/> Importer <input type="checkbox"/> Supplier		
Does the SDS describe a substance or mixture?	<input type="checkbox"/> Substance <input type="checkbox"/> Mixture		Choose one option only
Is an SDS required by law?	<input type="checkbox"/> Yes <input type="checkbox"/> No		If NO then do not answer any further questions (legal requirements do not apply even if the format has been followed). If known, provide details (in the remarks column) of why the SDS has been compiled, even though not required.
Is the company the creator or recipient of the SDS?	<input type="checkbox"/> Creator <input type="checkbox"/> Recipient		Choose one option. If the company is a recipient, it is not responsible for the content of the SDS; use Recipient Questions. If 'Creator' is selected then it is not necessary to answer Recipient Questions.

2. On-site checklist for SDS creator

The following questions are items that an inspector can check on-site for companies that have created a chemical SDS (SDS checklist 2B). This checklist should be adapted as appropriate and as required in the national legislation.

In general, answering NO to any question requires some explanation in the "Remarks" column. The "Notes" column describes additional information that may be required.

Question 7 in SDS checklist 2A can be used to indicate particular elements/sections of concern that should be checked in the office-based Checklist.

SDS checklist for SDS creator					
#	Question	Response		Remarks	Notes
1	Is the SDS (or information from the SDS) accessible to the workers?	<input type="checkbox"/> Yes <input type="checkbox"/> No			If Answer is NO for 'Present' or 'Adequate', provide further info in the 'Remarks' column.
		If 'Yes', is the SDS adequate/appropriate?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2	Does the SDS contain information for all 16 sections?	<input type="checkbox"/> Yes <input type="checkbox"/> No			If answer is NO for 'Present', then indicate missing or incorrect sections and subsections. Details about individual sections can be provided in the office-check.
		If 'Yes', is the information adequate/appropriate?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3	Is the SDS available in the national language(s)?	<input type="checkbox"/> Yes <input type="checkbox"/> No			If Answer is 'No' for 'Present' or 'Adequate', provide further info in the 'Remarks' column.
		If 'Yes', is it adequate/appropriate?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4	Does the SDS information match the label information?	<input type="checkbox"/> Yes <input type="checkbox"/> No			If Answer is NO for for 'Present' or 'Adequate', provide further info in the 'Remarks' column. Label information should be consistent with relevant information indicated in Section 1-3 of the SDS (identifiers, hazards and composition).
		If 'Yes', is it adequate/appropriate?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5	Is the date of compilation/revision and version number indicated on the first page?	Date	<input type="checkbox"/> Yes <input type="checkbox"/> No		If revision date is indicated, then check to see if changes have been indicated in Section 16 or elsewhere in the SDS.
		Version #	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		

SDS checklist for SDS creator					
#	Question	Response		Remarks	Notes
6	Is there a page number on every page as well as an indication of the length of the SDS (e.g. page 1 of 17)?	Page # on each page	<input type="checkbox"/> Yes <input type="checkbox"/> No		If Answer is 'NO' for 'Present' or 'Adequate', provide further info in the Remarks column.
		Length of SDS follows page #	<input type="checkbox"/> Yes <input type="checkbox"/> No		
7	Is a more detailed evaluation of the SDS recommended?	<input type="checkbox"/> Yes <input type="checkbox"/> No			<p>If answer is 'YES', an office-based check should be carried out. Indicate particular elements/sections of concern.</p> <p>Request a copy of the SDS, and the label for later detailed evaluation.</p>
8	Additional comments				Any additional comments, e.g. immediate observations, sections of particular concern, etc.

3. On-site checklist for SDS recipient

The following questions are items that an inspector can check on-site for companies who are recipients of the chemical SDS. This checklist should be adapted as appropriate and as required in the national legislation.

In general, answering NO to any question requires some explanation in the 'Remarks' column. The Notes column describes additional information that may be needed.

SDS checklist for SDS recipient				
#	Question	Response	Remarks	Notes
1	Did the recipient receive the SDS automatically?	<input type="checkbox"/> Yes <input type="checkbox"/> No		Answer should be NO if the SDS was requested.
2	Is the SDS available in the national language(s)?	<input type="checkbox"/> Yes <input type="checkbox"/> No		Note available languages in remarks.
3	Are the Risk Management Measures (RMMs) applied on-site consistent with the recommended Risk Management Measures in the SDS?	<input type="checkbox"/> Yes <input type="checkbox"/> No		If NO, note any inconsistencies in remarks. This is a general check; RMMs should be in line with the substance classification, and advice provided in Sections 4-8.
4	Did the recipient find any deficiencies in the SDS?	<input type="checkbox"/> Yes <input type="checkbox"/> No		If YES, note any deficiencies in remarks, and recipient actions in Question 5. If NO, then Question 5 can be left blank.
5	Did the recipient attempt to contact the supplier/ compiler of the SDS to address the deficiencies?	<input type="checkbox"/> Yes <input type="checkbox"/> No		While recipient is not responsible for the SDS content, if recipient receives a deficient SDS, then he should at least have attempted to contact the supplier and documented this.

4. Office-based checklist for SDS

A detailed checklist for the contents of all sections and subsections of the SDS is publicly available on ECHA's website, on the Safety Data Sheet Checklist page: <https://echa.europa.eu/regulations/reach/safety-data-sheets/checklist>.

The example below includes parts of the ECHA checklist. An inspection can focus on some or all of the sections. The checklist should be adapted as appropriate and as required in the national legislation.

Section	Checklist Items	Response							Remarks
		Present			Adequate/ appropriate		Not Checked		
		Yes	No	N/A	Yes	No	Yes	No	
1.1	Product identifier (name, unique identifier e.g. CAS No.)								
1.2	Other means of identification (e.g. other names)								
1.3	Recommended use of the chemical and restrictions on use								
1.4	Details of the supplier of the SDS (full address, tel. etc.)								
1.5	Emergency phone number								
2:	Hazard identification								
2.1	Classification of the substance or mixture								
2.2	Label elements, includes Hazard pictogram(s)								
	Label includes Signal word(s)								
	Label includes Hazard statements								
	Label includes Precautionary statements								
	If only Hazard/Risk codes are given is there a reference to Section 16?								
2.3	Other hazards which do not result in classification (e.g. dust explosion hazard, phototoxic etc.)								
3:	Composition/ information on ingredients								
3.1	Substance – chemical identity of the substance								
3.2	Mixture concentration (ranges)								
	Mixture classification								
4:	First aid measures								
4.1	Description of first aid measures								

Section	Checklist Items	Response						Remarks	
		Present			Adequate/ appropriate		Not Checked		
		Yes	No	N/A	Yes	No	Yes	No	
	Subdivisions for all relevant exposure routes (inhalation, skin contact, eye contact, ingestion)								
	Advice on whether immediate medical attention is required and if delayed effects can be expected after exposure								
	Advice on whether movement of the exposed individual from the area to fresh air is recommended								
	Advice on whether removal and handling of clothing and shoes from the individual is recommended								
	Advice on whether personal protective equipment for first aid responders is recommended.								
4.2	Most important symptoms and effects, both acute and delayed								
4.3	Indication of any immediate medical attention and special treatment needed								
5:	Fire-fighting measures								
5.1	Extinguishing media (suitable and inappropriate)								
5.2	Special hazards arising from the substance or mixture (e.g. exhaust product)								
5.3	Special protective actions for firefighters								
6:	Accidental release measures								
6.1	Personal precautions, protective equipment and emergency procedures for <i>non-emergency personnel</i>								
	Personal precautions, protective equipment and emergency procedures for <i>emergency responders</i>								
6.2	Environmental precautions (precautions against emission)								
6.3	Methods and material for containment and cleaning up. Any other issues relating to spills and releases.								
7:	Handling and storage								
7.1	Precautions for safe handling								

Section	Checklist Items	Response							Remarks
		Present			Adequate/ appropriate		Not Checked		
		Yes	No	N/A	Yes	No	Yes	No	
	Advice on safe handling of the substance or mixture								
	Advice on preventing handling of incompatible substances or mixtures								
	Advice that draws attention to operations and conditions that create new risk by altering the properties of the substance or mixture								
	Advice on minimizing the release of the substance or mixture to the environment								
	Advice on general occupational hygiene								
7.2	Conditions for safe storage, including any incompatibilities								
	Manage risks to avoid								
	Control effects								
	Maintain the integrity of the substance or mixture								
	Other advice								
8:	Exposure controls/personal protection								
8.1	National occupational exposure or biological limit values								
	Information on currently recommended monitoring procedures								
	Recommended monitoring procedures								
	Details of any control banding approach used								
8.2	Appropriate engineering controls								
8.3	Individual protection measures, such as personal protective equipment (PPE)								
9:	Physical and chemical properties and safety characteristics								
9.1	Information on basic physical and chemical properties								
9.2	Further safety characteristics (supplemental)								
10:	Stability and reactivity								
10.1	Reactivity								
10.2	Chemical stability								

Section	Checklist Items	Response							Remarks
		Present			Adequate/ appropriate		Not Checked		
		Yes	No	N/A	Yes	No	Yes	No	
10.3	Possibility of hazardous reactions								
10.4	Conditions to avoid								
10.5	Incompatible materials								
10.6	Hazardous decomposition products								
11:	Toxicological information								
	Information on toxicological effects (see GHS for hazards for which data should be provided)								
	Information on the likely route of exposure								
	Symptoms related to the physical, chemical and toxicological characteristics								
	Delayed and immediate effects, and chronic effects from short- and long-term exposure								
	Numerical measures of toxicity (such as acute toxicity estimates)								
	Interactive effects								
	Where specific chemical data are not available – use of generic data								
	Mixtures – tested or based on ingredients								
	Other information								
12.	Ecological information								
	Toxicity								
	Persistence and degradability								
	Bioaccumulative potential								
	Mobility in soil								
	Other adverse effects								
13.	Disposal considerations								
	Disposal methods								
14.	Transport information								
14.1	UN number								
14.2	UN proper shipping name								
14.3	Transport hazard class(es)								
14.4	Packing group (if applicable)								
14.5	Environmental hazards								
14.6	Special precautions for user								
14.7	Transport in bulk according to IMO instruments								

Section	Checklist Items	Response							Remarks
		Present			Adequate/ appropriate		Not Checked		
		Yes	No	N/A	Yes	No	Yes	No	
15:	Regulatory information								
	Specific safety, health and environmental regulations/ legislation								
16.	Other information								
	Indication of changes from previous versions								
	List of abbreviations/ acronyms								
	List of key references/ sources of Information								

Conclusions from inspection (tick one)	Remarks
SDS is adequate, some minor improvements are suggested:	
SDS is deficient in the following sections:	
Other:	

Actions, comments, follow-up:

5. On-site checklist

The following checklist is currently used by the Swedish Chemicals Agency for general on-site inspections at companies manufacturing or importing chemicals.

BACKGROUND

Company name	VAT no (or similar)
Address	Phone
Contact person	CEO or equivalent
	E-mail
Date	
Personnel attending from company	
Attending from authority	
Inspection within specific project	
Inspection registry no (or similar)	

COMPANY AREA OF OPERATION

When did the company start operations?	
Company classification	Producer Importer Other:
No. of employees within the country/ internationally	
Annual turnover?	
Suppliers? From what countries (if importer)?	
Clients?	
Warehouse?	Yes No

PACKAGING

Child resistant fastening on products sold to general public (when required)?	Yes No N/A
Is it possible to distinguish the package from other products, e.g. food?	Yes No N/A

ROTTERDAM CONVENTION

Do you export hazardous chemical products to other countries?	Yes No
Do you import hazardous chemical products from other countries?	Yes No
Are your exported hazardous products labelled and accompanied by an SDS?	Yes No N/A
Are any of the exported chemicals valid for export notification in accordance with the Rotterdam convention?	Yes No

PESTICIDES

Do you sell pesticides?	Yes No Do not know
If yes, what kind?	Biocides (e.g. rodenticides, disinfectants) Plant protection products
Are the products subject to an approval process?	

CLASSIFICATION / LABELLING AND SDS

Do you have anyone responsible for environment/quality/chemicals at the company?	
What routines do you have for sound chemicals management (policies, goals, substituting hazardous products, etc.)?	
What routines do you have for classification and labelling? Who is responsible? (delegation order)	
Where do you find information? How do you keep up-to-date?	
Who is producing labels?	
Routines for production of SDS? Updating of SDS?	
Do you hire a consultant?	Yes No
How do you distribute SDS to clients? Through e-mail/Web page? On paper?	
How many products have been controlled at the inspection?	

SUMMARY OF THE INSPECTION

Deficiencies observed at the inspection**How should these be corrected?**

Keep note of the deficiencies that will need an injunction and which the company themselves claim they will correct voluntarily

Notify the company that they will receive a formal protocol that will either close the case or impose corrections. Hand out relevant information material. Summarize and conclude the inspection.

6. Occupational health and safety audit checklist, South Africa



labour

Department:
Labour
REPUBLIC OF SOUTH AFRICA

OCCUPATIONAL HEALTH AND SAFETY AUDIT: CHEMICAL INDUSTRY

OHS AUDIT	
Registered name	
Trading name	
Compensation number	
Address	
Chief Executive Officer	
Contact person	
Designation	
Power demand?	
Competent person (GMR 2(1))	
Persons present	
Telephone number	
Fax number	
Collective agreement	
Number of employees	
Audit date	
Members of the team	
Type of industry	

GUIDELINES FOR OCCUPATIONAL SAFETY & HEALTH INSPECTIONS	Conformance	Non-conformance	N/A
1. ADMINISTRATIVE REQUIREMENTS			
i. OHS Policy <ul style="list-style-type: none"> a. Written policy on Occupational Health and Safety relevant to the operations of the enterprise b. Does the policy make reference to chemical risks? 			
ii. Corporate Citizenship <ul style="list-style-type: none"> a. Does the company have a copy of the Occupational Safety and Health Act? b. Does the company have a copy of the Hazardous Chemical Substance regulations? 			
iii. Risk Assessment <ul style="list-style-type: none"> a. Has a HIRA (hazards identification, risk assessment) been conducted in the workplace? b. Are all hazardous chemicals included? c. What are the most prioritized chemical hazards? 			
iv. Occupational Hygiene <ul style="list-style-type: none"> a. Are all health hazards identified? b. Is hygiene monitoring performed on chemical hazards? c. Information dissemination to employees 			
v. Standard Job Procedure <ul style="list-style-type: none"> a. Has the company developed a comprehensive safe work procedures for jobs involving handling of chemicals? b. Are staff familiar with these safe work procedures? c. Is there a system for periodic review of Standard Job Procedures that considers modification and introduction of new chemicals? 			

<p>vi. Reporting and recording of Occupational Accidents, Injuries and Diseases</p> <ol style="list-style-type: none"> a. Is there a programme and operational procedures for the reporting and recording of occupational accidents, injuries and illnesses? b. Does reporting of prescribed incidents and injuries or illnesses including diseases? c. Number of total incidents/ accidents during 2011 d. 2012 e. 2013 f. 2014 g. 2015 h. 2016 i. Dissemination of information to all employees j. Number of chemical injuries during 2011 k. 2012 l. 2013 m. 2014 n. 2015 o. 2016 			
<p>vii. Investigation of Occupational Accidents, Injuries, Illnesses and Diseases</p> <ol style="list-style-type: none"> a. Is a programme for the investigation of accidents, injuries, illnesses and diseases available? b. Are personnel trained on incident investigation? c. Are chemical injuries or incidents properly investigated? 			
<p>ix. Occupational Health Surveillance Programme</p> <ol style="list-style-type: none"> a. Pre-assignment health assessments b. Periodic health assessments c. Are special health assessments for staff exposure to chemicals conducted? d. Exit health assessments e. Information provided to employees f. Do Occupational Health promotion and awareness campaigns focus on chemical safety? 			

<p>x. Chemical Safety</p> <ol style="list-style-type: none"> a. Is there a chemical register listing all chemicals in the organization? b. Does the inventory include all chemicals, including the average quantities acquired, used and stored? c. Availability of all Material Safety Data Sheets or Chemical Safety Data Sheets d. Proper storage facilities with adequate provisions for spill containment e. Is provision made for spill clean-up? f. Proper labelling and symbolic marking of all containers including any decants? <ul style="list-style-type: none"> ➤ Provision of bundling where required for bulk storage of liquid chemicals? ➤ Provision of adequate ventilation to eliminate airborne hazards? ➤ Provision and posting of symbolic signed information on precautions and procedures for working with chemicals? ➤ Relevant emergency preparedness response plans with the provision of appropriate firefighting appliances and antidotes based on the chemicals used? ➤ Training of all employees who work with chemicals on the prevalent hazards? 			
<p>xi. Personal Protection Programme</p> <ol style="list-style-type: none"> a. Are high-risk groups identified for provision of PPE? b. Does the programme address proper acquisition considerations with regard to the following aspects: <ul style="list-style-type: none"> ➤ Proper fit? ➤ Ergonomic suitability regarding the tasks or work activities undertaken? ➤ Effective protection against identified hazards? ➤ Relevance to the identified hazards? c. Are employees trained on elements of the following areas: <ul style="list-style-type: none"> ➤ Proper issue? ➤ Proper usage in terms of fitting? ➤ Proper handling? ➤ Proper maintenance? ➤ Proper cleaning? ➤ Proper storage? d. Do supervisors and management monitor effective use of PPE? e. Does the programme effectively include periodic evaluation and review of the PPE and CS requirements? 			

xii. OHS Committee Meetings <ul style="list-style-type: none"> a. Appointment of health and safety reps b. Establishment of a Safety and Health Committee c. Training of OHS representatives on chemical hazards d. Do meetings address chemical hazards? 			
xiii. Planned Inspections <ul style="list-style-type: none"> a. Do the planned inspections include looking at chemical risks? b. Are exposed staff informed of chemical risks? 			
2. PHYSICAL AUDIT			
xiv. Good Order (House-keeping) <ul style="list-style-type: none"> a. Are chemicals stored safely? b. Is access to chemicals limited? 			
xv. Storage of materials and products: <ul style="list-style-type: none"> a. Proper stacking b. Safe use of pallets c. Clear labelling d. Designation of storage places and provisions 			

MANAGEMENT INTERVIEWED

NAME	Designation	EXPERIENCE

EMPLOYEES INTERVIEWED

EMPLOYEE'S NAME	OCCUPATION	EXPERIENCE

SHOP STEWARD INTERVIEWED

SHOP STEWARD'S NAME	OCCUPATION	EXPERIENCE

ENDNOTES

- i United Nations Environment Programme (UNEP). 2015. UNEP Guidance on the development of legal and institutional infrastructures and measures for recovering costs of national administration. Retrieved from <https://www.unenvironment.org/resources/report/lira-guidance>
- ii Food and Agriculture Organization of the United Nations (FAO). 2006. International code of conduct on the distribution and use of pesticides: Guidelines on compliance and enforcement of a pesticide regulatory programme. Retrieved from http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/Compliance.pdf
- iii Strategic Approach to International Chemicals Management (SAICM). 2015. Overall orientation and guidance for achieving the 2020 goal of sound management of chemicals. Retrieved December 3, 2018, from http://www.saicm.org/Portals/12/Documents/OOG_document_English.pdf
- iv Organisation for Economic Co-operation and Development (OECD). (n.d.). IOMC Online Toolbox for Implementing Chemical Safety. Retrieved December 3, 2018, from <http://www.oecd.org/chemicalsafety/news-iomc-online-toolbox-may-2015.htm>
- v International Labour Organization. (n.d.). Occupational Safety and Health Inspection. Retrieved December 14, 2018, from <https://www.ilo.org/safework/areasofwork/occupational-safety-and-health-inspection/lang-en/index.htm>
- vi Food and Agriculture Organization of the United Nations (FAO). 2006. International code of conduct on the distribution and use of pesticides: Guidelines on compliance and enforcement of a pesticide regulatory programme. Retrieved from http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/Compliance.pdf
- vii Swedish Chemicals Agency (KEMI). 2017. Control of chemicals placed on the market. Sundbyberg.
- viii Rotterdam Convention. (n.d.). Text of the Convention. Retrieved December 14, 2018, from <http://www.pic.int/TheConvention/Overview/TextoftheConvention/tabid/1048/language/en-US/Default.aspx>
- ix Food and Agriculture Organization of the United Nations (FAO). 2006. International code of conduct on the distribution and use of pesticides: Guidelines on compliance and enforcement of a pesticide regulatory programme. Retrieved from http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/Compliance.pdf
- x European Chemicals Agency. (n.d.). Registration. Retrieved December 10, 2018, from <https://echa.europa.eu/regulations/reach/registration>
- xi United Nations Institute for Training and Research (UNITAR). (n.d.). Globally Harmonized System of Classification and Labelling of Chemicals. Retrieved December 14, 2018, from <https://www.unitar.org/cwm/portfolio-projects/globally-harmonized-system-classification-and-labelling-chemicals>
- xii The European Parliament and The Council of the European Union. 2007. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Official Journal of the European Union, (L136/3). Retrieved from <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:136:0003:0280:en:PDF>
- xiii Swedish Chemicals Agency (KEMI). 2017. Control of chemicals placed on the market. Sundbyberg.
- xiv United Nations Economic Commission for Europe (UNECE). 2008. Guidance on implementation of the protocol on pollutant release and transfer registers. Geneva: United Nations. Retrieved from https://www.unece.org/fileadmin/DAM/env/pp/prtr/guidance/PRTR_May_2008_for_CD.pdf
- xv United States International Trade Commission. (n.d.). Official Harmonized Tariff Schedule 2018. Retrieved December 14, 2018, from <https://www.usitc.gov/tata/hts/index.htm>
- xvi Occupational Safety and Health Administration (OSHA). (n.d.). Occupational Safety and Health Administration (OSHA) Inspections. Retrieved December 14, 2018, from https://www.osha.gov/OshDoc/data_General_Facts/factsheet-inspections.pdf

- xvii United Nations Environment Programme (UNEP). 2015. UNEP Guidance on the development of legal and institutional infrastructures and measures for recovering costs of national administration. Retrieved from <https://www.unenvironment.org/resources/report/lira-guidance>
- xviii Swedish Chemicals Agency (KEMI). 2017. Control of chemicals placed on the market. Sundbyberg.
- xix European Chemicals Agency (ECHA). (n.d.). Enforcement Forum. Retrieved December 14, 2018, from <https://echa.europa.eu/about-us/who-we-are/enforcement-forum>
- xx European Chemicals Agency (ECHA). (n.d.). Training for enforcement trainers. Retrieved December 14, 2018, from <https://echa.europa.eu/about-us/who-we-are/enforcement-forum/training-for-enforcement-trainers>
- xxi Yeater, M. D., Environmental Law and Institutions Programme Activity Centre, & International Register of Potentially Toxic Chemicals Programme Activity Centre. 1995. Legislating chemicals: an overview. The first of a series of publications that provide guidance on legislation of chemicals. Nairobi, Kenya: Environmental Law and Institutions Programme Activity Centre. Retrieved from [https://books.google.com/books?id=1C-n57UQdrJwC&pg=PA2&lpg=PA2&dq=United+Nations+Environment+Programme+\(UNEP\).+1995.+Legislating+Chemicals:+An+Overview.+Nairobi&source=bl&ots=Y9P8FCIxp&sig=kSHFfBHXRgfVKIEcpzBfr4G-jU90&hl=en&sa=X&ved=2ahUKEwiJ87TMh4TfAhUDml](https://books.google.com/books?id=1C-n57UQdrJwC&pg=PA2&lpg=PA2&dq=United+Nations+Environment+Programme+(UNEP).+1995.+Legislating+Chemicals:+An+Overview.+Nairobi&source=bl&ots=Y9P8FCIxp&sig=kSHFfBHXRgfVKIEcpzBfr4G-jU90&hl=en&sa=X&ved=2ahUKEwiJ87TMh4TfAhUDml)
- xxii Greenbaum, R. A., & Peterson, A. S. 2011. The Clean Air Act Amendments of 1990 : Citizen Suits and How They Work. *Fordham Environmental Law Review*, 2(2). Retrieved from <https://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1329&context=elr>
- xxiii California Office of Environmental Health Hazard Assessment. 2013. Proposition 65 in Plain Language. Retrieved December 14, 2018, from <https://oehha.ca.gov/proposition-65/general-info/proposition-65-plain-language>
- xxiv United Nations Environment Programme (UNEP). (n.d.). Project REN, Regional Enforcement Network for Chemicals and Waste. Retrieved December 14, 2018, from <http://www.projectren.org/>
- xxv United Nations Environment Programme (UNEP). (n.d.). Green Customs Initiative. Retrieved December 14, 2018, from <http://www.greencustoms.org/>
- xxvi United Nations Environment Programme (UNEP) Basel Convention. 2006. Basel Convention training manual on illegal traffic, for customs and enforcement agencies, 1-23. Retrieved from https://www.env.go.jp/en/recycle/asian_net/Annual_Workshops/2007_PDF/BASEL-verionanglais.pdf
- xxvii Swedish Chemicals Agency (KEMI). 2017. Control of chemicals placed on the market. Sundbyberg.
- xxviii Occupational Safety and Health Administration (OSHA). (n.d.). Occupational Safety and Health Administration (OSHA) Inspections. Retrieved December 14, 2018, from https://www.osha.gov/OshDoc/data_General_Facts/factsheet-inspections.pdf
- xxix International Organization for Standardization (ISO). (n.d.). ISO 15489-1:2016, Information and documentation, Records management, Part 1: Concepts and principles. 2016. Retrieved December 14, 2018, from <https://www.iso.org/standard/62542.html>
- xxx Jordi Pon and Costa Rica workgroup, personal communication. 2018.
- xxxi European Chemicals Agency (ECHA). (n.d.). Safety Data Sheet Checklist. Retrieved December 14, 2018, from <https://echa.europa.eu/regulations/reach/safety-data-sheets/checklist>
- xxxii Yeater, M. D., Environmental Law and Institutions Programme Activity Centre, & International Register of Potentially Toxic Chemicals Programme Activity Centre. 1995. Legislating chemicals: an overview. The first of a series of publications that provide guidance on legislation of chemicals. Nairobi, Kenya: Environmental Law and Institutions Programme Activity Centre. Retrieved from [https://books.google.com/books?id=1C-n57UQdrJwC&pg=PA2&lpg=PA2&dq=United+Nations+Environment+Programme+\(UNEP\).+1995.+Legislating+Chemicals:+An+Overview.+Nairobi&source=bl&ots=Y9P8FCIxp&sig=kSHFfBHXRgfVKIEcpzBfr4G-jU90&hl=en&sa=X&ved=2ahUKEwiJ87TMh4TfAhUDml](https://books.google.com/books?id=1C-n57UQdrJwC&pg=PA2&lpg=PA2&dq=United+Nations+Environment+Programme+(UNEP).+1995.+Legislating+Chemicals:+An+Overview.+Nairobi&source=bl&ots=Y9P8FCIxp&sig=kSHFfBHXRgfVKIEcpzBfr4G-jU90&hl=en&sa=X&ved=2ahUKEwiJ87TMh4TfAhUDml)

