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About this document: *This document presents the Building Blocks approach for developing and strengthening national systems for the sound management of chemicals in line with the Global Framework on Chemicals. It provides a non-binding strategic framework that identifies the core functions of an effective national chemicals management system, organised into four interlinked areas: governance and enabling conditions; information and transparency; risk management and control; and legacy management and market transformation.*

The approach is designed to support countries with different legal, institutional and economic contexts, capacities and starting points. It does not prescribe a single institutional model, legal structure or implementation sequence. Instead, it supports countries in assessing existing systems, identifying priority gaps and defining realistic and proportionate pathways for strengthening national capacity over time, while maintaining a high level of protection for human health and the environment.

The Building Blocks provide the strategic architecture for national chemicals management. Detailed technical methodologies and implementation guidance are available through the IOMC Toolbox and other relevant international resources. A complementary self-assessment tool supports countries in assessing progress across the Building Blocks, identifying priorities and navigating available guidance and technical resources.



**Inter-Organization Programme for the
Sound Management of Chemicals**

**A cooperative agreement among FAO, ILO,
UNDP, UNEP, UNIDO, UNITAR, WHO, WORLD
BANK, OECD, and BRS Conventions**

Building Blocks for National Systems for the Sound Management of Chemicals

**Supporting the Development and Strengthening of Legal Frameworks and Institutional
Capacity for the Sound Management of Chemicals**

September 2026

Executive Summary

This guidance presents a Building Blocks approach to developing national systems for the sound management of chemicals (SMC). It is designed to support countries in establishing or strengthening national systems in line with the Global Framework on Chemicals (GFC) and to help translate GFC objectives and targets into coherent national action across laws, institutions and policy instruments.

The Building Blocks approach is a non-binding, strategic guide for developing national chemicals management systems. It does not prescribe a single institutional model, legal structure or reform sequence. Rather, it identifies the main functions that a credible and effective national chemicals management system should be able to perform, while recognising that countries differ in their legal traditions, institutional arrangements, economic structures, risk profiles and available capacities, among other factors. It is intended to help countries identify priorities, define realistic pathways for reform and avoid unnecessary complexity or regulatory designs that may be difficult to sustain or enforce over time.

The guidance responds to a common challenge faced by many countries: the need to build effective, enforceable and sustainable chemicals management systems incrementally, considering conditions of constrained resources, fragmented mandates and competing priorities. It therefore organises the core functions of national chemicals management systems into four interlinked Building Blocks:

- Building Block 1: Governance and enabling conditions;
- Building Block 2: Information and transparency;
- Building Block 3: Risk management and control; and
- Building Block 4: Legacy management and market transformation.

Each Building Block includes a set of components that together describe complementary elements of a comprehensive national system. The Building Blocks are not intended to represent a hierarchy of importance or a fixed sequence of implementation. Countries may act across one or more Building Blocks in parallel, depending on national circumstances, priorities and opportunities for early impact.

At its core, the Building Blocks approach recognises that developing a national chemicals management system is not only a technical exercise, but also a foundational element of public governance. Effective national systems help protect human health and the environment, strengthen worker safety and health, support prevention of occupational exposures and safer workplaces, support regulatory predictability and economic competitiveness and promote coordinated decision-making across ministries and authorities with responsibilities related to environment, health, labour, agriculture, trade, customs and industry, including labour inspectorates and occupational health institutions. They can also support more sustainable and innovative production systems, resource efficiency, safer value chains, circular economy approaches and the progressive reduction of chemical risks and chemical footprints across the life cycle.

A central feature of the Building Blocks approach is its emphasis on proportionality,¹ prevention and effectiveness. Regulatory ambition and complexity should be aligned with the level of risk and available institutional capacity, while maintaining a high level of protection for human health and the environment. Countries are encouraged to prioritise preventive action and early risk reduction, make effective use of internationally agreed tools, data and assessments and avoid unnecessary duplication where reliable information or decisions from internationally recognised authorities and assessment bodies can be used appropriately. Proportionality should not be understood as lowering levels of protection, particularly in relation to substances of concern, significant risks or vulnerable populations.

The guidance also clarifies its relationship with existing international guidance. It is intended to help countries identify which system functions need to be developed and why. In this sense, the Building Blocks approach provides the strategic architecture, while detailed technical methodologies and implementation guidance are made available through specialised resources, including the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) Toolbox and other relevant guidance instruments which can support implementation in practice.

To further support countries in applying this guidance, a self-assessment tool is available, supporting the tracking of progress over time and comparison against a common reference structure. That tool is intended to help countries assess their current level of development across the different Building Blocks and components, identify priority gaps and opportunities and navigate through relevant IOMC Toolbox modules and other guidance resources in line with national objectives and capacities.

Recognising that countries have different starting points and differing access to technical, institutional and financial resources, the Building Blocks approach is intended to support realistic and context-appropriate progress. Used as a strategic guide, it can help countries develop national chemicals management systems that are coherent, credible, enforceable and sustainable over time.

¹ Proportionality means that regulatory measures are aligned with the level of risk and national capacity, while maintaining a high level of protection for human health and the environment.

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Acronyms

- BAT – Best Available Techniques
- EPR - Extended Producer Responsibility
- CAPPR - Chemical Accident Prevention, Preparedness and Response
- CBI – Confidential Business Information
- CiP – Chemicals in Products
- GFC – Global Framework on Chemicals
- GHS – Globally Harmonised System of Classification and Labelling of Chemicals
- GLP – Good Laboratory Practices
- IHR - International Health Regulations
- IOMC – Inter-Organization Programme for the SMC
- IPPC - Integrated Pollution Prevention and Control
- MAD – Mutual Acceptance of Data
- MEAs - Multilateral Environmental Agreements
- OOG – Overall Orientation and Guidance
- OSH – Occupational Safety and Health
- PRTR – Pollutant Release and Transfer Register
- QSAR – Quantitative Structure-Activity Relationship
- SDGs - Sustainable Development Goals

- SDS – Safety Data Sheets
- SIDS - Small Island Developing States
- SMC – Sound Management of Chemicals

1. Introduction

The SMC is essential for protecting human health and the environment, supporting safe workplaces, enabling sustainable industrial development and strengthening public confidence in chemical safety. Effective national chemicals management systems are therefore a key component of modern public governance and a central element of the GFC.

Many countries are in the process of establishing or strengthening their national systems for chemicals management. However, experience shows that designing such systems and establishing effective legislation and institutions can be challenging. Countries often face fragmented institutional responsibilities, limited technical and financial resources, incomplete information on chemicals in use and uncertainty regarding which regulatory approaches or implementation priorities should be addressed first.

The Building Blocks approach has been developed to support countries in addressing these challenges. It identifies the core functions that national chemicals management systems should be able to perform in order to manage risks effectively across the life cycle of chemicals, while recognising that countries differ in their legal traditions, institutional arrangements, risk profiles and available capacities, including in the distribution of responsibilities across national and subnational authorities.

The Building Blocks approach does not prescribe a single institutional or regulatory model. Rather, it identifies key system functions that may be implemented through different legal, institutional and policy arrangements according to national circumstances and priorities. It aims to support coherent and practical strengthening of national chemicals management systems by helping countries identify priorities, support informed decision-making and strengthen national capacities over time.

The document is intended to be used alongside existing international guidance and technical resources. It also builds on earlier international efforts aimed at strengthening national chemicals management systems, including the Overall Orientation and Guidance (OOG) developed under SAICM.² While this document focuses on the key regulatory, institutional and information functions supporting national chemicals management systems, detailed technical methodologies and implementation guidance are available through specialised tools and guidance materials, including the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) Toolbox.

² 2015, Strategic Approach to International Chemicals Management (SAICM), *Overall Orientation and Guidance for Achieving the 2020 Goal of Sound Management of Chemicals*

2. Objectives

Informed by the vision of the GFC of a planet free of harm from chemicals and waste for a safe, healthy and sustainable future, the Building Blocks approach aims to:

- Support implementation of the GFC, in particular Strategic Objective 1, which calls for legal frameworks, institutional mechanisms and capacities to be in place to achieve the safe and sustainable management of chemicals throughout their life cycle and, in particular to achieve Target A1, which calls for Governments to adopt, implement and enforce legal frameworks and establish appropriate institutional capacity to prevent or, where prevention is not feasible, minimise adverse effects from chemicals and waste as appropriate for their national circumstances.
- Support the implementation of Resolution V/8 and Implementation Programme 1 “Developing a GFC Implementation Programme on Strengthening National Chemicals Legislation and Institutional Capacities”.
- Organise the core functions of national chemicals management systems into interlinked Building Blocks and components that support coherent national action across the life cycle of chemicals.
- Support strategic prioritisation and informed decision-making, recognising that early choices on scope, data requirements, regulatory approaches and institutional arrangements can shape long-term effectiveness, enforceability and sustainability.
- Support diverse implementation pathways, recognising that countries may prioritise different building blocks depending on national risks, capacities, existing frameworks and opportunities for early impact, including through strengthening institutional, technical and public health capacities related to risk assessment, surveillance, prevention and response.
- Clarify the relationship with existing international guidance, including the IOMC Toolbox and other specialised resources that can support implementation in practice.

3. GFC target coverage and scope

The Building Blocks approach is intended primarily to support implementation of GFC Strategic Objective 1 on strengthening national legal and institutional frameworks for the sound management of chemicals and waste. Annex A provides an indicative mapping between the Building Blocks and components, relevant GFC targets and supporting international guidance.

The relationship between the Building Blocks approach and the GFC targets can be understood in three complementary dimensions.

First, several GFC targets are addressed directly through Building Blocks and components that translate GFC commitments into national systems functions. These include, for example, legal and institutional frameworks, implementation of the Globally Harmonised System (GHS), risk-based regulation of chemicals, regulatory and customs controls related to illegal trade, poison centre functions and sustainable financing mechanisms.

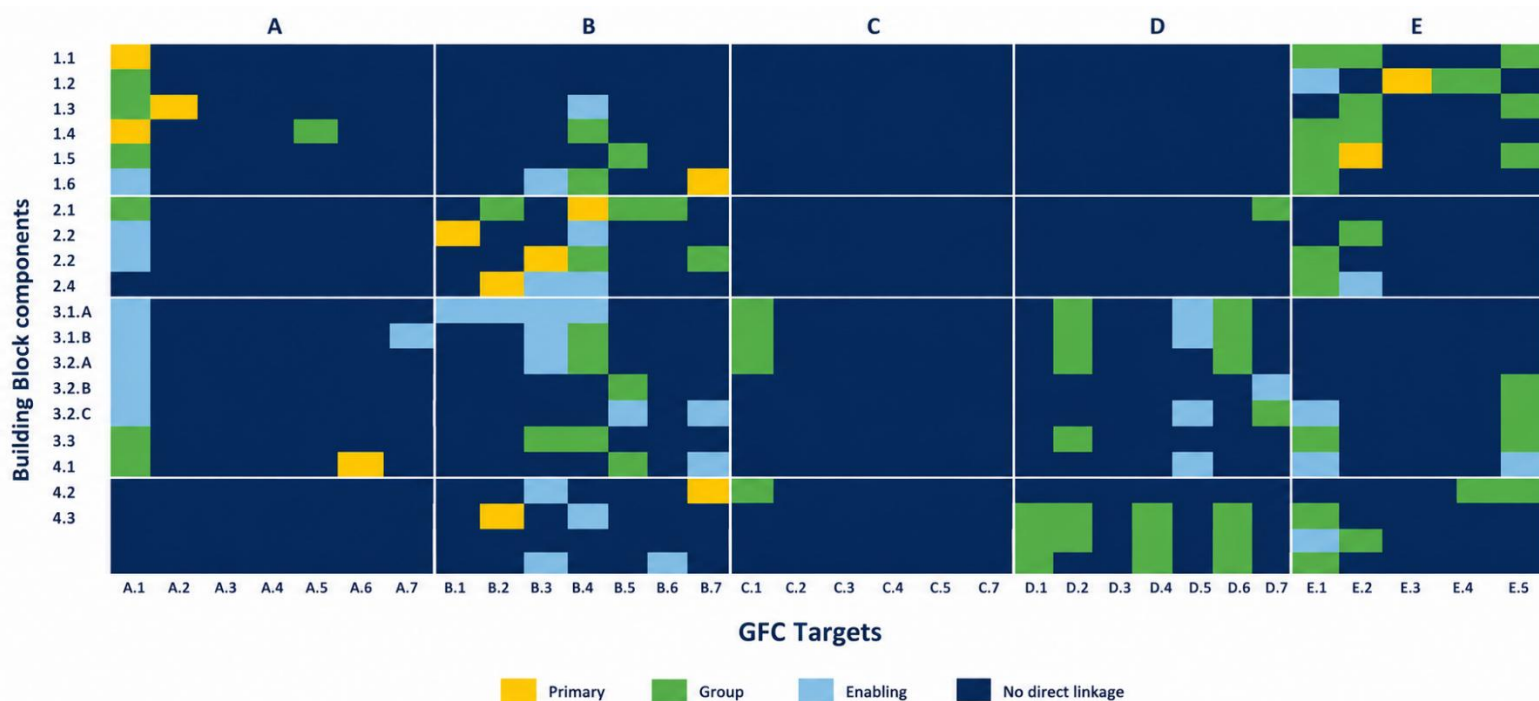
Second, some GFC targets are enabled by the systems and governance functions established through the Building Blocks approach, but are expected to be implemented through complementary

sectoral instruments or policies. These include areas such as chemicals in products, education and training, safer alternatives, sustainable production and innovation.

Third, certain GFC targets fall outside the scope of this document and are therefore not addressed as standalone measures. These include, for example, detailed criminal law provisions related to illegal traffic, transportation of hazardous products or design of waste management systems and infrastructure. While the Building Blocks approach recognises the close relationship between chemicals management and waste management, these areas are expected to be addressed through complementary national and international frameworks.

Figure 1 provides an indicative overview of the relationship between the Building Blocks, components and GFC targets, including direct, strong and enabling linkages. The absence of a direct linkage should not be interpreted as a gap, but rather as a reflection of the distribution of functions across different policy domains.

Figure 1. Indicative mapping of Building Block components against GFC targets by type of interlinkage



Source: own elaboration

4. How to read and use the Building Blocks Approach

The Building Blocks approach is intended to support countries in translating relevant objectives and targets of the GFC into coherent and context-appropriate national action. It focuses on the core regulatory, institutional and information functions that support the sound management of chemicals across their life cycle.

The Building Blocks approach is organised around four interlinked Building Blocks, each containing a number of components that together describe the main functions of a comprehensive national chemicals management system.

Building Block 1 – Governance and enabling conditions

Building Block 2 – Information and transparency

Building Block 3 – Risk management and control

Building Block 4 – Legacy management and market transformation

The Building Blocks and their components are intended to be complementary and mutually reinforcing. They are not designed to represent a hierarchy of importance or a fixed sequence of implementation. Countries may act across one or more Building Blocks in parallel, depending on priorities, obligations, risk profiles and opportunities for impact.

Implementation pathways may therefore differ significantly between countries. Progress towards the objectives and targets of the GFC may occur through different entry points, including sectoral measures, convention-driven actions, supply-chain initiatives, occupational safety systems, product regulations, public health measures or targeted controls addressing priority risks.

In many countries, implementation of the Basel, Rotterdam and Stockholm Conventions has provided an important entry point for broader national chemicals management systems. Existing measures related to transparency, information exchange, import controls or substances of concern may therefore provide a foundation for broader system development under the GFC.

Guiding considerations for implementation

The Building Blocks approach is guided by a set of considerations intended to support the development of effective, credible and sustainable national chemicals management systems.

- **Flexibility and adaptability:** Countries differ widely in legal traditions, constitutional and institutional arrangements, economic structures and capacity constraints, including in the distribution of responsibilities across national and subnational authorities. Particular challenges may arise in countries with limited technical, institutional and financial capacities, including Small Island Developing States (SIDS). The Building Blocks approach is therefore intended to support diverse implementation pathways.
- **Gender-responsive and inclusive implementation:** Countries are encouraged to consider gender, age and other factors that may influence exposure, vulnerability, participation and access to information when designing, implementing and reviewing national chemicals management systems. This includes, where feasible, using sex-disaggregated and gender-relevant data, supporting participation of women and at-risk groups in decision-making processes, and ensuring that risk reduction, training, communication and enforcement measures address differentiated exposure pathways, including in occupational, household, informal and community settings.

- **Non-linear, results-oriented progression:** the Building Blocks and their components are designed to be implemented in parallel or selectively, allowing countries to prioritise actions according to national risks, obligations, capacities and opportunities for impact.
- **Proportionality and cost-effectiveness:** Regulatory approaches should support a high level of protection for human health and the environment, while also supporting sustainable production and consumption patterns, innovation for safer products and processes and resource efficiency where appropriate and taking account of national contexts and capacities. Countries are encouraged to use internationally agreed tools, existing data and assessments where available, avoid unnecessary duplication and prioritise actions that deliver the greatest protection with available resources. Proportionality should not be interpreted as lowering levels of protection in cases involving substances of high concern or irreversible harm.
- **Supporting early action and risk reduction:** The Building Blocks approach supports national measures aimed at preventing adverse effects on human health and the environment. Preventive action, including substitution of substances of concern, safer design and risk reduction at source, should be prioritised where credible evidence indicates significant or irreversible harm, particularly for vulnerable populations.
- **Integrated governance:** Effective chemicals management depends not only on technical regulations, but also on governance arrangements, sustainable financing, coordination across institutions and levels of government as well as compliance mechanisms, enforcement capacity and constructive engagement with industry and other stakeholders across the value chain. The effectiveness of national systems may also be supported by responsible business conduct, voluntary industry initiatives, innovation for safer products and processes and improved communication of safety information across supply chains.
- **Confidential business information (CBI) and transparency:** Data collection and disclosure systems should include appropriate protections for CBI and proprietary information, while maximising transparency through non-confidential summaries, aggregated data and other mechanisms that support public trust and informed decision-making. Such provisions should be implemented in accordance with applicable national legal frameworks and, where appropriate, informed by relevant international instruments and guidance. Provisions for CBI should not compromise the health and safety of workers or consumers, or the protection of the environment.

5. Operationalising the Building Blocks approach

The Building Blocks approach is intended to support practical strengthening of national chemicals management systems. Implementation pathways may differ depending on existing legal frameworks, risk profiles, institutional capacities and available resources.

Implementation may also benefit from regional and international cooperation, technical exchange and sustainable financing arrangements that support long-term capacity development and voluntary implementation of the GFC.

Countries may initiate implementation through different entry points depending on existing obligations, priorities and available institutional foundations. In some cases, implementation of internationally agreed instruments and obligations — including the GHS, multilateral environmental agreements and related institutional responsibilities — may provide an important starting point for broader system development, including in parallel with baseline assessment and prioritisation activities.

To translate the Building Blocks approach into practical action, countries may follow an iterative and phased process.

1. Baseline assessment

Develop, update or consolidate available national information on existing laws, institutions, enforcement arrangements, technical infrastructure and chemicals produced, imported, stored, used and released. This provides an evidence base on current capacities, gaps and priority risks. This process may include, where appropriate, the preparation or updating of a national chemicals profile.

A self-assessment tool is available to support countries in assessing progress across the different Building Blocks and components, identifying priority gaps and opportunities and navigating relevant guidance resources in line with national objectives and capacities.

2. Prioritisation informed by available data

Use available information sources — including inventories, PRTs where available, trade data, health surveillance systems and international assessments — to identify priority substances, sectors, uses or exposure pathways. Where information is limited, initial prioritisation may rely on qualitative screening approaches, including inventory establishment, international information and risk indicators, with refinement over time as national information systems evolve.

Countries may choose to prioritise actions that address:

- significant or urgent risks;
- existing international obligations;
- high-exposure sectors;
- substances of concern; or
- measures capable of delivering substantial benefits with available resources.

3. Phased implementation and institutional development

Implementation may occur incrementally and through different entry points. Countries may initially rely on targeted sectoral measures, convention-related obligations, customs controls, occupational safety systems, product regulations or public health surveillance mechanisms as foundations for broader system development.

In practice, this may include:

- phased implementation of regulatory requirements;

- reliance on internationally agreed tools, classifications and assessments;
- use of regional cooperation mechanisms and shared technical resources;
- targeted information collection approaches;
- simplified notification or reporting systems; and
- prioritisation mechanisms focused on higher-risk substances, uses or exposure scenarios.

4. Sustainable financing and long-term system viability

Long-term implementation depends on sustainable institutional and financial capacity. Countries are encouraged to integrate chemicals management into national planning and budgeting processes, while exploring sustainable financing approaches such as fees, levies, cost-recovery mechanisms or extended producer responsibility schemes.

Financing considerations should be integrated into prioritisation processes alongside risk, feasibility and potential impact in order to support realistic and sustainable sequencing of actions. Governments may also support initiatives aimed at promoting safer production processes, innovation and the development of safer chemical products, including through technical assistance, incentives or cooperative approaches where appropriate.

5. Monitoring, review and continuous improvement

Countries are encouraged to establish practical monitoring and review mechanisms, including indicators appropriate to national priorities and available capacities. Monitoring and evaluation support transparency, accountability, learning and continuous improvement as capacities develop and new risks emerge.

This process is intended to support continuous improvement and long-term development of national systems, aligned with national priorities and the objectives of the GFC.

6. Structure of the Building Blocks approach

This section presents the four Building Blocks and their associated components that together form the structure of the approach. The framework is intended to describe the main functions of a coherent national system for the sound management of chemicals, while recognising that countries may develop these functions progressively and through different implementation pathways.

Table 1 provides an overview of the four Building Blocks, their associated components and the main functions they support within a national chemicals management system.

Table 1. Structure of the Building Blocks approach

Building Block	Primary objective	Building Block Components	Expected impact on the SMC
1 – Governance and Enabling Conditions	Establish durable institutional and systemic foundations	1.1 Framework legislation/policy and institutional setup 1.2 Sustainable financing and economic viability 1.3 International integration 1.4 Enforcement, compliance assurance and trade control 1.5 Governance and stakeholder coordination 1.6 Monitoring, evaluation and learning	Establishes the legal authority, institutional responsibilities, financing mechanisms and enforcement capacity required to operate a national chemicals management system. It enables coordinated decision-making across competent authorities, ensures that regulatory obligations can be implemented and enforced and provides mechanisms to monitor performance and adjust policies over time.
2 – Information and Transparency	Enable reliable and internationally accepted chemical safety information and studies for regulatory use as well as information on the emission of chemicals as well as in the presence of chemicals in the value chains.	2.1 Hazard classification and labelling: The GHS 2.2 Harmonised data quality and mutual acceptance of data (Good Laboratory Practices (GLP), Mutual Acceptance of Data (MAD)) 2.3 Pollutant release and transfer register (PRTR) 2.4 Transparency, disclosure and information systems	GHS standardises hazard classification criteria and communication through labels and Safety Data Sheets (SDS), while GLP and the OECD Mutual Acceptance of Data ensure that safety studies are conducted according to recognised scientific standards and accepted across jurisdictions without duplication of testing. PRTRs provide systematic information on chemical releases and transfers, supporting transparency and regulatory oversight. Additional tools and approaches, including emerging transparency, disclosure and information systems, foster greater availability, traceability and sharing of information across value chains. Together, these mechanisms strengthen the reliability, comparability and cross-border usability of information on chemical hazards, uses and

			releases, supporting evidence-based decision-making and more effective chemicals management.
3 – Risk management and Control	Reduce and control risks to health and environment	3.1 Regulation of chemical products and industrial and consumer substances 3.1.A. Regulation for specific uses 3.1.B. Regulation for industrial and consumer chemical substances 3.2 Occupational Safety and Health (OSH) 3.3 Chemical Accident Prevention and Preparedness (CAPPR) 3.4 Integrated Pollution Prevention and Control (IPPC) 3.5 Public health management of chemicals	Establishes enforceable regulatory and operational mechanisms to identify, assess and control chemical risks across their life cycle. Through product and substance regulation, workplace and facility-level safeguards and public health functions, it reduces exposures, prevents accidents and pollution and protects workers, communities and the environment from adverse effects.
4 – Legacy Management and Market Transformation	Address legacy risks and drive systemic change towards safer chemicals and products	4.1 Environmental and legacy management 4.2 Product and supply chain measures (Product standards, circular economy) 4.3 Green and sustainable chemistry innovation	Addresses legacy contamination and long-term exposure risks while driving the transition to safer chemicals, products and production systems. Through prevention, substitution and innovation, it reduces future risks, supports sustainable production and consumption patterns and limits the circulation of substances of concern in the economy.

6.1. Building Block 1 – Governance and enabling conditions

The effectiveness of a national chemicals management system depends not only on legal and technical instruments, but also on the legal, institutional and governance arrangements that enable regulatory functions to operate effectively over time. Building Block 1 focuses on these enabling conditions and system-design functions, which provide the foundation for implementation, coordination, prioritisation and enforcement across the national chemicals management system.

Unlike the other Building Blocks, which focus more directly on operational regulatory functions and control measures, Building Block 1 addresses the overarching governance, institutional and policy arrangements needed to support coherent, credible and sustainable implementation over time.

The components included under this building block should therefore be understood as cross-cutting system functions that interact with all other Building Blocks, including information systems, risk management measures, occupational safety and health requirements, implementation of the GHS and enforcement activities.

Effective implementation also requires appropriate coordination among authorities responsible for areas such as environment, health, labour, customs, agriculture and industry, including, where relevant, labour inspectorates and occupational health institutions.

Component 1.1: Framework legislation/policy and institutional setup

This component aims to establish a coherent policy and institutional foundation for the SMC. It is a critical system-design function that shapes the effectiveness, efficiency and credibility of all subsequent regulatory measures.

International guidance has highlighted that fragmented mandates, unclear authority and weak coordination mechanisms can contribute to inefficiencies and limited implementation impact in national chemicals management systems.³

This component may be implemented through multiple pathways, ranging from a single overarching legislative framework to an overarching national chemicals policy or strategy that is subsequently translated into legislation and implementing regulations over time.

As a first step, countries are encouraged to assess their starting point, recognising that national contexts differ widely. Some countries may already have sectoral legislation covering chemicals across environment, labour, health or agriculture; others may rely on general environmental or OSH frameworks; while some may have policy strategies without a comprehensive legal basis. Understanding these existing instruments, institutional mandates, coordination mechanisms and available evidence on national risks, exposures and implementation capacities is essential to identifying a pathway that strengthens protection outcomes while remaining workable and sustainable.

³ See, for example: UNEP (2019), National Authority for Chemicals Control: Structure and Funding. See also: UNEP (2015), Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for the Sound Management of Chemicals (LIRA Guidance).

Where appropriate, countries may also benefit from aligning chemicals management frameworks with related national strategies and policy frameworks, including those related to health, industry, labour, environment, waste management and biodiversity, in order to strengthen policy coherence and support coordinated implementation. This may also include coordination with national occupational safety and health frameworks and workplace exposure prevention strategies. In some regions, cooperation through regional frameworks or common regulatory approaches may also support greater coherence, efficiency and harmonisation across jurisdictions.

A well-designed framework policy or legislative instrument sets the overall scope of control, assigns responsibilities across competent authorities, establishes coordination mechanisms and sets out obligations for industry. It provides the basis for effective prioritisation and progressive regulatory development, avoiding rigid or poorly adapted structures at early stages.

Component 1.2: Sustainable financing and economic viability

The objective of this component is to ensure the long-term financial sustainability of the national chemicals management system, including its capacity to be implemented, maintained and enforced over time without exclusive reliance on short-term external funding.

In practice, this objective is typically articulated at the policy or framework level and then translated into legal and administrative provisions that secure predictable financing mechanisms.

This may be achieved by integrating chemical safety into national public finance through dedicated budget lines, as well as cost-recovery mechanisms, such as registration fees or levies, pollution charges or Extended Producer Responsibility (EPR) schemes, fines, where appropriate. These instruments help ensure that those who manufacture, import, distribute or use chemicals commercially, or generate pollution, contribute to the costs of oversight and implementation.

International cooperation and financing mechanisms may also support capacity-building and implementation, particularly in resource-constrained settings. Financial institutions and responsible financing initiatives may also contribute to promoting safer production practices and improved chemicals management across supply chains. Countries may benefit from engagement with relevant international support mechanisms and financing approaches, including those developed under the Integrated Approach to Financing of the Sound Management of Chemicals and Waste.⁴

Component 1.3: International integration

This component aims to accelerate implementation, strengthen legal robustness and facilitate trade by aligning national systems with relevant international and regional instruments.

These may include binding and non-binding frameworks such as the GFC, relevant multilateral environmental agreements such as the Basel, Rotterdam, Stockholm and Minamata Conventions, Intergovernmental Science-Policy Panel on Chemicals, Waste and Pollution (ISP-CWP) and

⁴ The Integrated Approach to Financing of the Sound Management of Chemicals and Waste was endorsed by the United Nations Environment Assembly (UNEA) in resolution 1/5 and subsequently referenced in later UNEA and ICCM resolutions.

instruments developed under international and regional bodies such as ILO, UNEP, WHO and UNECE.

Countries are also encouraged, where scientifically appropriate, to make use of hazard data, risk assessments and regulatory decisions from internationally recognised authorities. This can reduce costs, avoid duplication and accelerate protective action, while preserving national decision-making authority.

Component 1.4: Enforcement, compliance assurance and trade control

A system without enforcement lacks credibility. This component focuses on establishing or upgrading a clear legal mandate for inspection and enforcement, supported by risk-based inspection programmes and proportionate, transparent compliance measures.

Enforcement functions may be exercised by sectoral and labour inspectorates and by border authorities, including customs, within their respective mandates. Compliance assurance also includes guidance, outreach and training, particularly for small and medium-sized enterprises (SMEs), to progressively drive behaviour towards safer practices.

Enforcement approaches should support credible and continuously improving compliance systems over time, including through risk-based prioritisation of higher-risk activities and the combination of inspections with compliance promotion measures.

Trade and customs control is a specialised enforcement function that supports the monitoring and regulation of chemicals and related products moving across borders, including imports, exports and transit movements.

This may involve linking import and export licensing systems to customs classifications, including Harmonized System (HS) codes and using trade data to identify higher-risk shipments. Alignment between chemical nomenclature and customs classification is important to reduce regulatory gaps and support implementation of relevant Multilateral Environmental Agreements (MEAs), including controls related to illegal traffic and hazardous chemicals and wastes.

Customs authorities may also rely on hazard information derived from the GHS, including labelling, safety data sheets and hazard statements, to support risk profiling and enforcement actions.

Effective implementation depends on information sharing and operational coordination between customs authorities and other competent authorities, as well as access to relevant regulatory and hazard information. Coordination between customs authorities, environmental regulators, labour inspectorates and other competent authorities may also support more effective identification of non-compliant products, hazardous shipments and workplace chemical risks.

Component 1.5: Governance and stakeholder coordination

This component addresses coordination across government and engagement with stakeholders, reflecting a whole-of-government and whole-of-society approach.

Responsibilities for chemicals management are typically distributed across multiple sectors, including environment, health, labour, agriculture, trade, customs and industry. Effective coordination requires alignment of priorities, shared decision-making and clear accountability.

This may involve designation of a lead authority or coordinating body and the establishment of coordination mechanisms adapted to national contexts. These may range from formal interministerial bodies to more flexible arrangements such as technical working groups or task-specific committees.

Structured engagement with stakeholders, including industry, workers, trade unions, civil society, academia and populations potentially disproportionately affected by chemical risks, supports improved regulatory design, implementation and information exchange across sectors and supply chains. Stakeholder engagement should also seek to support gender-responsive participation, including the meaningful involvement of women, workers and populations that may face disproportionate chemical exposures or barriers to accessing information and decision-making processes. Such dialogue complements formal public consultation processes and can reduce compliance challenges, particularly where administrative capacity is limited. Coordination and consultation processes may also support the development, review and implementation of national strategies, action plans and regulatory measures related to chemicals management, including sector-specific implementation approaches where appropriate.

Component 1.6: Monitoring, evaluation and learning

This component aims to ensure that national systems are able to assess their performance and improve continuously.

In practice, this involves defining an initial set of measurable indicators, establishing regular review processes and using results to inform regulatory priorities, inspection planning and resource allocation.

Monitoring and evaluation systems do not need to be highly complex at early stages. Where appropriate, countries may align national monitoring approaches with relevant indicators and reporting frameworks under the GFC and other relevant international processes. Even basic tracking of activities and outcomes can support transparency, accountability and evidence-based decision-making, with indicators and review mechanisms expanded and refined as the system matures.

These processes can be progressively strengthened to respond to emerging risks, new chemicals and evolving exposure patterns, ensuring that the system remains adaptive and effective. Monitoring and evaluation systems may also benefit from integrating information related to occupational exposures, workplace incidents and implementation challenges identified through labour inspection and occupational health systems.

6.2. Building Block 2 – Information and transparency

This building block establishes the information foundations required for effective chemicals management. It focuses on the generation, communication, acceptance, accessibility and use of reliable information on chemical hazards, uses, releases and risks, including through internationally recognised frameworks and other relevant national or regional systems.

Key components include the GHS, which provides common criteria and formats for hazard classification and communication; internationally recognised systems for ensuring data quality,

reliability and acceptance of chemical safety data, including laboratory quality assurance systems and internationally recognised approaches such as ISO/IEC 17025, the OECD Principles of Good Laboratory Practice (GLP) and the Mutual Acceptance of Data (MAD) system; and transparency and disclosure systems that support access to information across supply chains, products and environmental releases. Together, these frameworks improve the comparability, transparency and usability of chemical information across national systems and international supply chains. In practice, countries may progressively develop these systems, including through national laboratory quality assurance arrangements, reporting systems and information-sharing mechanisms, before participating in broader international data acceptance frameworks.

This building block enables countries to access and use reliable information without the need to generate all data domestically. By using internationally agreed standards and reliable data from internationally recognised sources, while strengthening national capacities to interpret and apply such information in local contexts, countries can support effective and proportionate regulatory action, particularly where technical and institutional capacity is still developing.

Where feasible, information systems, monitoring and reporting approaches should support the collection and use of sex-disaggregated and gender-relevant data to better identify differentiated exposure pathways and inform targeted risk management measures.

Component 2.1: Hazard classification and labelling: The GHS

The objective of this component is to ensure that relevant actors, including workers, emergency responders, regulators, enforcement authorities and consumers, can understand and act upon information on chemical hazards through the adoption of a harmonised system of classification, labelling and information provision, in line with national circumstances and sectoral priorities.

Adopting the UN GHS provides a common language with recognisable pictograms and consistent SDS. It introduces standardised classification criteria, consistent labelling elements and structured SDS, enabling clear and comparable communication of chemical hazards.

When applied in relevant sectors, GHS supports worker protection, emergency response, regulatory oversight and international trade by aligning hazard communication with internationally recognised standards.

Implementation does not require comprehensive or uniform application across all sectors at the outset. Countries may adopt the GHS selectively and incrementally, focusing on priority sectors, uses or exposure contexts and expanding coverage over time as institutional, technical and enforcement systems mature. The modular implementation approach within the GHS allows countries to select and implement elements that are most relevant to their regulatory needs at a given stage.

GHS implementation supports OSH requirements by providing the hazard classification and labelling foundation for workplace risk assessment and exposure control, where such requirements are in place.

Hazard information supporting GHS classification and labelling is available from multiple, trusted international sources, such as the OECD eChemPortal. Reliance on existing, internationally

recognised data can significantly reduce the technical and administrative burden associated with GHS implementation, particularly in the early stages of system development.

IOMC toolbox

Classification and labelling system scheme

The classification and labelling scheme in the IOMC toolbox supports countries in implementing the GHS using a building-block approach. It provides guidance on legal transposition, scope selection, transitional arrangements and coordination between labour, health, environment and customs authorities. The materials also explain how GHS underpins downstream risk management, worker protection and emergency response and how alignment with international practice can reduce costs and facilitate trade.

Component 2.2: Harmonised data quality and mutual acceptance of data (GLP, MAD)

This component focuses on ensuring that regulatory decisions are informed by reliable and scientifically credible data, through the use of internationally recognised standards for generating and accepting test data.

Good Laboratory Practice (GLP) ensures quality, consistency and reproducibility, while OECD's Mutual Acceptance of Data (MAD) system provides a framework under which data generated in accordance with agreed international standards are accepted by participating countries, eliminating duplication of testing and facilitating regulatory cooperation. Under MAD, safety data generated according to OECD Test Guidelines and OECD Principles of GLP in one participating country must be accepted in all other participating countries for assessment purposes.

There are different ways in which countries may engage with GLP and the MAD system:

1. Recognition and use of internationally generated data without MAD participation: Countries may rely on GLP-compliant data from other jurisdictions for regulatory decision-making without seeking reciprocal acceptance of their own data and without becoming formal adherents to the MAD system. This approach allows regulators to strengthen confidence in scientific evidence without establishing a national GLP compliance monitoring programme or undertaking formal MAD adherence procedures.
2. Provisional adherence to the MAD system: Countries may choose to establish a national GLP compliance monitoring programme provisionally adhere to OECD Council decisions on MAD without immediately seeking full adherence. This enables a gradual build-up of quality control systems over time and prepares the institutional basis for eventual full participation.
3. Full adherence to the MAD system: Following provisional adherence, countries can pursue full adherence to the OECD MAD framework by developing a national GLP compliance monitoring programme and undergoing OECD evaluation. Full adherents participate in the mutual acceptance agreement on the same terms as OECD members, including acceptance of data from other adherent countries. Importantly, participation in the MAD system does not

require OECD membership and non-OECD economies can become adherents following successful evaluation of their GLP compliance monitoring programme.

These forms of engagement allow countries flexibility in how they apply GLP and MAD principles, depending on national circumstances and regulatory priorities. Together, these approaches provide a flexible and scalable scientific basis for risk-informed regulation, allowing countries to improve the quality of regulatory decisions while avoiding unnecessary technical, institutional or financial barriers.

Component 2.3: Pollutant release and transfer registers (PRTR)

This component focuses on the systematic collection and public dissemination of information on releases and transfers of chemicals from industrial facilities to air, water and land. PRTRs provide a transparent and comparable evidence base to support environmental monitoring, priority setting, regulatory decision-making and land-use and environmental planning, as well as public access to information.

While PRTRs perform a foundational function in strengthening transparency, accountability and informed participation, their effective operation typically depends on mandatory facility-level reporting obligations, data verification and compliance mechanisms. Although positioned within Building Block 2 due to their information and transparency functions, PRTRs also support operational regulatory activities related to compliance, environmental oversight and permitting.

IOMC toolbox

Pollutant release and transfer registers

The PRTR scheme in the IOMC toolbox supports countries in establishing and operating PRTRs as a transparency and risk management instrument. It explains key design choices, reporting thresholds, data quality considerations and institutional arrangements. The guidance highlights how PRTRs can support regulatory oversight, inform the public, strengthen accountability and complement permitting, inspection and chemical risk management systems.

Component 2.4: Transparency, disclosure and information systems

Transparency and access to reliable chemical information are essential foundations for the sound management of chemicals and waste. Effective disclosure systems enable governments, industry, workers, consumers, investors and communities to better understand the presence, use and management of substances of concern across their life cycle. Such systems support informed decision-making, strengthen accountability, facilitate regulatory compliance, promote safer substitution and innovation and build public trust.

This component focuses on systems and approaches that improve the availability, accessibility, traceability and communication of information on chemicals across supply chains and product life cycles. Such systems can support regulatory oversight, informed decision-making, safer substitution, supply-chain management and public transparency.

Relevant approaches under this component may include, where appropriate, **systems for providing information on chemicals in products along value chains**.⁵ These systems can cover information relevant to risk management, safe use or end-of-life handling; supply-chain due diligence to promote safer sourcing and production; and tools such as digital product information systems or product passports where appropriate. These approaches improve transparency across value chains, support access to information relevant to risk management and safer use and facilitate more informed decision-making by regulators, businesses and consumers.

This component may also include approaches used to identify, measure and communicate information related to chemical risks and impacts across products, facilities or supply chains. Emerging **chemical footprint** methodologies and approaches may, where used voluntarily or incorporated into relevant policy frameworks, support prioritisation, performance tracking, disclosure initiatives and risk reduction efforts by providing structured information on the presence and management of substances of concern.

This component may also encompass disclosure approaches integrated into **sustainability or corporate reporting systems**. Some reporting approaches increasingly include information on the presence, use, management or reduction of substances of concern, supporting transparency, comparability of information and informed decision-making by regulators, investors, businesses and consumers.

Although these approaches are not yet fully embedded in legislation in many countries, elements of them are increasingly reflected in regulatory, standard-setting and voluntary initiatives related to chemicals management, sustainability and supply-chain governance.

6.3. Building Block 3 – Risk management and control

This building block brings together the regulatory and operational measures through which chemical risks are actively managed and controlled. These include risk-based regulatory approaches, workplace and facility-level controls, transport and storage safety measures, public health response functions and compliance mechanisms. They translate information, standards and governance arrangements into concrete obligations, procedures and safeguards aimed at reducing exposure and preventing harm to workers, communities and the environment across the manufacture, storage, transport, use and disposal stages of the chemical life cycle.

While many of these measures require a higher degree of institutional capacity, coordination and enforcement than those focused primarily on information and transparency, they are important to the functioning of a national chemicals management system and may be developed incrementally in line with national priorities, risk profiles and available resources.

Component 3.1: Regulation of chemical products and industrial and consumer substances

This component focuses on the establishment of regulatory systems for the management of chemical risks arising from the manufacture, import, export, placing on the market, use and disposal

⁵ Including approaches developed under the Chemicals in Products (CiP) Programme of SAICM and related guidance materials.

of chemical products and industrial and consumer substances. Its objective is to enable countries to identify, prioritise and manage chemical risks through proportionate, enforceable and risk-based regulatory approaches adapted to national circumstances and capacities.

Countries regulate chemical risks through different legal and regulatory approaches, depending on national legal frameworks, priorities and capacities. This component does not prescribe a single regulatory model. For clarity, it describes two commonly used and complementary approaches that are widely observed in national systems.

One approach is **chemical product-based licensing or authorisation**, typically applied to specific groups of chemical products that are placed on the market for defined uses (e.g. pesticides or biocides and, in some countries, certain industrial substances). Under this approach, a product may only be marketed or used once it has been authorised by competent authorities, usually based on an assessment of the hazards, conditions of use and risks. In some countries, such systems may also support implementation of obligations arising from relevant multilateral environmental agreements related to chemicals and waste.

A second approach is **chemical substance-based risk management**, which focuses on regulating individual chemicals across uses not covered under product-based licensing or authorisation regimes in place in the country. These are typically referred to as “industrial and consumer chemicals”. The scope of what constitutes such chemicals may vary across countries and should be interpreted in accordance with domestic legal definitions and sectoral coverage. This typically includes chemicals used as raw materials, intermediates or additives in manufacturing, as well as substances present in consumer products such as cleaning agents, paints, plastics, electronics, textiles or articles. Under this approach, competent authorities may impose proportionate risk management measures — including information requirements, conditions of use, restrictions, emission controls or other controls — to address risks identified through assessment processes and not otherwise managed through product-based systems.

These approaches differ in regulatory logic and legal effect. Chemical product-based systems typically operate through pre-market approvals issued by a designated authority, while substance-based systems rely on regulatory measures that apply across multiple products, sectors and supply chains. Many countries use one approach more strongly than the other, while others apply both in parallel or through mixed regulatory approaches, depending on national circumstances.

Regulatory decision-making under both product-based and substance-based approaches may rely on information and assessments developed internationally. Countries are encouraged to make effective use of existing international data, assessment tools, guidance and information systems⁶, adapting them to national conditions where appropriate, rather than duplicating work. Such approaches can support more efficient and proportionate regulatory development, particularly where technical and institutional capacities are still evolving.

This document explicitly supports both approaches as important and complementary tools for managing chemical risks. In particular, substance-based regulation of industrial and consumer

⁶ Examples include the [WHO INCHEM portal](#), [SAICM E-learning Course on Industrial Chemicals Databases and Information Sharing](#), the [OECD eChemPortal](#)

chemicals is recognised as a core component of comprehensive chemicals management systems and is essential for addressing risks that cut across multiple products, uses and exposure pathways.

Risk-based regulation under this component also provides the scientific and regulatory basis for the development of sector-specific exposure limits and standards (for example for drinking water, environmental media or consumer products), which are typically established and enforced through dedicated sectoral legislation and authorities.

3.1.A: Regulation for chemical products for specific uses (Registration and licensing/authorisation)

This sub-component establishes or strengthens regulatory systems for products that contain or are made of chemicals— such as pesticides, biocides or some industrial substances; in some national frameworks, regulation of veterinary products or food additives may also be administered through comparable product-based systems. These systems are typically based on risk assessment and aim to ensure that only products that meet national safety standards for their intended use are authorised for market entry.

Authorisation is based on the submission of relevant data by applicants, including toxicological and environmental assessments, efficacy information and proposed use conditions. Competent authorities evaluate the data against risk criteria and decide whether to approve, restrict, or reject the product.

These licensing/authorization systems are typically governed by sector-specific legislation and are administered by ministries of health, agriculture, or other competent authorities. They give effect to the principle that chemical products should not be placed on the market unless the risks associated with their intended uses are demonstrated to be acceptable under national criteria, taking into account both hazard properties and exposure conditions.

These systems are implemented by competent national authorities in accordance with domestic legal frameworks and regulatory criteria.

IOMC toolbox – Pesticides management scheme

The pesticides management scheme provides comprehensive guidance on product-based regulatory systems for pesticides, including registration, authorisation, re-evaluation and post-market controls. It addresses data requirements, risk assessment for human health and the environment, risk management measures and enforcement. The toolbox resources support competent authorities in designing robust yet proportionate licensing systems that protect health and ecosystems while remaining administratively feasible.

3.1.B: Regulation for industrial and consumer chemical substances (prioritisation, risk assessment, risk management).

This sub-component applies to uses of substances that are not subject to product- or use-specific authorisation regimes under sub-component 3.1.A, typically substances used for industrial and consumer purposes. It follows a substance-based regulatory approach and establishes a structured and proportionate set of procedures through which authorities identify priority substances, assess potential risks under national conditions and apply appropriate risk management measures.

Inventory. National inventories or registers aim to establish a fit-for-purpose picture of which chemical substances are manufactured, imported or used within the country, sufficient to support prioritisation and regulatory decision-making. Depending on national capacity, this may range from a basic notification or declaration system for selected substances or sectors, to more comprehensive inventories over time. Information typically includes chemical identity, volumes, uses and available hazard classifications. Countries are encouraged to design inventories in a phased and proportionate manner, recognising that simpler systems may deliver greater practical value in resource-constrained contexts and can be expanded over time. Countries may also benefit from drawing on experience, methodologies and existing information systems developed in other jurisdictions when establishing national inventories.

Substance Prioritisation. The objective is to establish a transparent and science-based process for identifying which substances require further assessment or management action. Because regulatory resources are finite, prioritisation enables authorities to focus on substances with the greatest potential for harm, based on criteria such as hazard profile, exposure potential, volume, use pattern and relevance to national concerns or substances of global concern and available information from international assessments, GLP/MAD-compatible data, or regulatory actions in other jurisdictions. At this stage, prioritisation is based on hazard and exposure indicators rather than full risk characterisation.

Note: Use of GHS information to support substance prioritisation

Where the GHS is implemented, hazard classifications submitted by manufacturers and importers can serve as an important input to substance prioritisation. GHS classifications provide a structured summary of intrinsic hazards and allow authorities to screen substances using agreed categories, without requiring the upfront submission of detailed (eco)toxicological study reports. This enables authorities to target more detailed data requests and assessments only to substances identified as priorities, helping focus limited regulatory resources on substances more likely to require further review.

Risk Assessment. For substances that proceed beyond prioritisation, risk assessment aims to determine whether exposures under national conditions pose an unacceptable risk to workers, consumers or the environment. This involves evaluating hazard information alongside exposure scenarios relevant to domestic uses. Where appropriate and scientifically justified, authorities may also make use of alternative assessment approaches and non-testing methodologies, such as QSARs and read-across methods, including as a means to minimise unnecessary animal testing.

Risk Management. Risk management measures are applied where risks are identified as unacceptable, with the objective of reducing or eliminating those risks in a proportionate and enforceable manner. Measures may include information requirements, updated SDS, codes of practice, emission or use restrictions, conditions of use, substitution requirements, authorisation schemes or bans. Decisions should take into account available scientific evidence, risk assessments, exposure scenarios, intended conditions of use and national regulatory frameworks. Risk management measures should be commensurate with the level

of risk identified. Countries are encouraged to design and sequence risk management measures in a manner that is practical and capable of effective enforcement, while maintaining a high level of protection for human health and the environment.

IOMC toolbox

[Industrial and consumer chemicals management scheme](#)

This management scheme provides structured guidance on substance-based approaches to the regulation of industrial and consumer chemicals. It covers prioritisation methodologies, risk assessment principles and a range of proportionate risk management options, from information and codes of practice to restrictions and bans. The toolbox emphasises the use of existing international data and assessments to avoid duplication, reduce regulatory burden and support evidence-based decision-making tailored to national circumstances.

3.2: Occupational Safety and Health (OSH) Requirements

This component focuses on the protection of workers, who are often among the first and most highly exposed populations. Its objective is to ensure that national occupational safety and health laws and systems address chemical risks through clear duties on employers to assess workplace risks, implement the hierarchy of controls, provide access to hazard information and ensure appropriate worker training.

Occupational safety and health measures may include workplace risk assessment, substitution where feasible, engineering and organisational controls, safe handling procedures, personal protective equipment, worker information, training and awareness-raising and arrangements for monitoring and enforcement.

Although presented under this Building Block, occupational safety and health requirements often represent one of the earliest and most established entry points for chemical risk control in many national contexts. They are positioned here because they function as duty-bearing and enforceable risk management measures, closely linked to hazard communication, exposure prevention and inspection-based enforcement.

IOMC toolbox

[Occupational safety and health management of chemicals](#)

This scheme consolidates international guidance on protecting workers from chemical risks across their life cycle. It covers employer duties, workplace risk assessment, application of the hierarchy of controls, worker information and training and the integration of GHS into occupational safety systems. The toolbox materials help countries align OSH legislation with international standards and ensure coherence between labour, health and chemicals authorities.

3.3: Chemical accident prevention and preparedness (CAPPR)

This component focuses on the prevention of, preparedness for and response to major chemical accidents at industrial installations. Chemical Accident Prevention, Preparedness and Response (CAPPR) frameworks typically apply to high-hazard facilities and require operators to implement

safety management systems, accident prevention measures and on-site and off-site emergency plans.

These frameworks are supported by coordination with emergency services, land-use planning authorities and other relevant institutions, as well as effective hazard communication and information-sharing mechanisms,⁷ with the objective of reducing the likelihood and consequences of chemical accidents affecting workers, communities and the environment, including through alignment with existing disaster risk management and civil protection arrangements.

IOMC toolbox

Chemical accident prevention, preparedness and response

This management scheme brings together international guidance on preventing, preparing for and responding to major chemical accidents. It covers safety management systems for hazardous installations, emergency planning at facility and community level, public information and coordination between operators and competent authorities. The toolbox resources help countries design proportionate accident-prevention regimes and strengthen preparedness and response capabilities, even where inspection and enforcement capacity is limited.

3.4: Industrial emissions control and permitting (IPPC / BAT)

This component addresses the control of routine industrial emissions and releases of chemicals through integrated permitting and regulatory oversight. Instruments such as Integrated Pollution Prevention and Control (IPPC) systems establish legally binding operating conditions for industrial facilities, typically based on Best Available Techniques (BAT), to prevent or minimise emissions to air, water and land. These permitting systems provide a mechanism for continuous risk management, compliance monitoring and enforcement and play a central role in reducing chronic chemical pollution and associated environmental and health impacts.

Integrated permitting systems of this type typically require significant institutional capacity, including trained permitting authorities and operational compliance monitoring. Countries may develop these functions progressively, beginning with targeted or sector-specific permitting arrangements before expanding to comprehensive integrated systems.

IOMC toolbox

Best available techniques

The IOMC toolbox provides practical guidance on the application of best available techniques (BAT) as a risk-reduction and pollution-prevention tool for industrial installations. Resources under this scheme explain how BAT concepts can be adapted to national capacity, how they are used within integrated permitting systems and how performance-based standards can be set without

⁷ Where GHS implementation is in place, classification, labelling and SDS may provide important information to support chemical accident prevention, emergency planning and response measures at facilities handling hazardous chemicals.

prescribing specific technologies. The materials support authorities in linking chemical safety objectives with environmental protection, energy efficiency and emissions control in a cost-effective manner.

3.5: Public health management of chemicals

This component aims to enhance chemical safety by integrating public health functions within the national chemicals management system, in line with the WHO Chemicals Road Map and relevant international obligations. It focuses on building national capacity to detect, assess, respond to and learn from chemical exposures and incidents affecting human health and to ensure that health data informs regulatory prioritisation and risk management.

A central element of this component is the establishment or strengthening of, and access to, poison centre functions providing expert toxicological advice and support. Countries may develop these services progressively, working towards extended hours of coverage — including 24/7 access where resources allow — as part of broader strengthening of health system emergency preparedness. Poison centres perform core functions related to the clinical management of poisonings, contribute to early detection of emerging risks and generate critical exposure data.

These functions are complemented by public health surveillance systems that analyse data from poison centres, healthcare facilities and other relevant sources to identify trends, detect unusual events and evaluate the effectiveness of regulatory and preventive measures over time.

IOMC toolbox

[Public health management of chemicals and WHO chemicals road map](#)

This management scheme links chemicals management with public health systems, drawing on WHO guidance and the WHO chemicals road map. It provides resources on poison centres, chemical surveillance, health-sector preparedness and the use of health data to inform risk management decisions. The toolbox highlights how public health evidence can be integrated into national chemicals management frameworks to detect emerging risks, evaluate policy effectiveness and protect vulnerable populations.

6.4. Building Block 4 – Legacy management and market transformation

This building block brings together measures that address both legacy risks from past chemical use and the prevention of future risks through upstream and market-based approaches. It focuses on the identification and remediation of environmental contamination and exposure, as well as on influencing product design, supply chains, innovation and production and consumption patterns.

While Building Block 3 focuses primarily on controlling identified risks through regulatory and operational measures, this Building Block focuses more broadly on upstream prevention, long-term system transformation and reduction of future risks through safer product design, supply-chains measures, innovation and market-oriented approaches.

Key components include approaches to address contaminated sites and legacy pollution, product and supply-chain measures to address substances of concern and the promotion of green and sustainable chemistry innovation. These measures support substitution, improved information on chemicals in products and the integration of chemical safety considerations into market practices and policy frameworks.

While many of these measures require coordination across sectors, value chains and policy areas, they can be developed gradually in line with national priorities, market conditions and available institutional and technical capacity.

Component 4.1: Environmental and legacy management

This component addresses the longer-term consequences of chemical use, including environmental contamination, human exposure and legacy pollution.

Its objective is to establish national approaches for monitoring chemical presence in environmental media and, where relevant, human populations; identifying and prioritising contaminated sites; and implementing remediation measures based on risk.

Monitoring systems provide essential information to support risk management, identify emerging concerns and evaluate the effectiveness of regulatory measures over time. Inventories of contaminated sites enable prioritisation based on risk to human health and the environment.

Remediation efforts may be guided by the polluter pays principle and implemented in a phased and risk-based manner, focusing on priority substances, sites and exposure pathways, particularly where resources are limited.

Component 4.2: Product and supply chain measures (Product standards, circular economy)

This component aims to extend chemicals management from substances and mixtures to finished products and articles, recognising that risks may arise throughout the value chain and across the product life cycle. It promotes upstream and market-based approaches aimed at reducing the presence and circulation of substances of concern in products and supply chains, including through safer product design, substitution, product standards and supply-chain due diligence.

The component also supports the integration of chemicals considerations into eco-design requirements, sustainable public procurement, circular economy policies and approaches that promote material circularity while avoiding the recycling and recirculation of substances of concern in secondary materials. It may also include product information systems aimed at improving transparency across value chains and supporting safer material circularity.

Countries may implement these approaches progressively, selectively or in adapted forms, depending on national contexts, market structures, regulatory reach, levels of industrial development and available institutional and technical capacity.

Component 4.3: Green and sustainable chemistry innovation

This component promotes the development, adoption and scaling-up of green and sustainable chemistry approaches that reduce or eliminate the use and generation of substances of concern

throughout the life cycle of chemicals and products. It encourages innovation in safer chemicals, materials, manufacturing processes and technologies that minimise risks to human health and the environment while supporting resource efficiency, pollution prevention, low-carbon production and sustainable consumption patterns. The component also supports the design of products and materials that are safer, more durable, reusable, recyclable and compatible with circular economy objectives.

Measures under this component may include research and development programmes, incentives for the substitution of substances of concern with safer alternatives, support for sustainable business innovation and collaboration among governments, academia, industry and financial institutions. The component may also promote the integration of green and sustainable chemistry principles into education and training programmes, industrial development strategies, public procurement policies and national innovation frameworks, thereby helping to strengthen long-term capacity for sustainable chemicals management and market transformation.

7. Conclusion

The SMC is not a peripheral issue, but a strategic investment in public health, environmental protection, economic resilience and long-term sustainability. Effective national chemicals management systems are an essential component of modern governance, helping to protect populations from harm, support safe and productive workplaces, strengthen regulatory predictability and enable sustainable development.

The Building Blocks approach provides a practical and flexible implementation support tool to assist countries in strengthening national systems for the SMC in line with the objectives and targets of the GFC. By organising the core functions of national systems into interlinked Building Blocks and components, the approach supports coherent decision-making, strategic prioritisation and long-term system development.

Implementation of the Building Blocks approach can support progress towards the achievement of the GFC and multiple Sustainable Development Goals (SDGs), including those related to good health and well-being (SDG 3), clean water and sanitation (SDG 6), decent work and economic growth (SDG 8) and responsible consumption and production (SDG 12). Strong national systems can support a shift chemicals management from a reactive compliance exercise towards a more integrated approach that supports prevention, innovation, environmental protection, institutional resilience and public confidence.

Recognising that countries have different starting points, capacities and priorities, the Building Blocks approach is intended to support realistic, context-appropriate and sustainable progress. Through continued development of national systems and effective use of available international tools, countries can advance national chemicals management in ways that support human health, environmental protection and sustainable economic development over time.

Annex A: Table of interlinkages

This table illustrates the strong linkages between the Building Blocks approach, the targets of the GFC and the tools available in relevant guidance from IOMC participating organizations. It provides indicative examples of international guidance and tools that may support implementation of individual Building Blocks. Inclusion of a reference does not imply mandatory use or sequencing, and countries are encouraged to select, adapt or combine resources in line with national priorities, capacities and regulatory approaches. The table is intended to be a living reference and may be updated over time to reflect evolving guidance, experience and emerging priorities.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
Cross-cutting strategic guidance	Cross-cutting support to implementation of several GFC objectives and targets	IOMC Toolbox for Decision-Making in Chemicals Management	Provides access to international guidance, tools and resources supporting implementation of national chemicals management systems across legal, institutional, technical and regulatory functions.
		UNEP Leapfrogging Guidance on Chemicals Regulation ⁸	Provides practical guidance for the design and reform of national chemicals legislation, including preventive and resource-efficient regulatory approaches, use of international data and regulatory decisions, risk management, transparency, sustainable financing and institutional coordination.
		SAICM Overall Orientation and Guidance (OOG) (2015)	Supports countries in strengthening national systems for the SMC by providing overarching strategic guidance on governance, institutional development, coordination, prioritisation and capacity-building, contributing to coherent implementation of the GFC across legal, institutional and policy areas.
		GFC Gender Action Plan	Supports gender-responsive implementation of the GFC by providing guidance on inclusive legal frameworks, sex-disaggregated and gender-relevant data, participation, capacity-building, risk reduction and monitoring across chemicals management systems.
		WHO Chemicals roadmap (2017)	Supports integration of chemicals management into national public health systems, including surveillance, prevention, preparedness and health-sector engagement.

⁸ Based on the review of Version 1.0 – June 2026 of the Working Draft for Pilot Implementation. Link to be added once the guidance is publicly available

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
		UNITAR National Chemicals Management Profile guidance	Supports countries in assessing and documenting national chemicals management systems, including legal frameworks, institutional arrangements, infrastructure, capacities and priority gaps, as a basis for coordinated national planning and implementation.
1.1 Framework legislation and institutional setup	Target A1. This is the core linkage. This building block establishes the legal and institutional basis for the sound management of chemicals. Target E1. Framework legislation and institutional arrangements enable integration of chemicals management across sectors and policy areas. Target E2. Institutional setups typically include coordination bodies and mechanisms that facilitate stakeholder engagement and cooperation. Target E6. Clear allocation of roles across authorities supports coherence between environment, health, labour, trade and other sectors.	UNEP LIRA Guidance (2015)	Supports countries in establishing coherent legal and institutional infrastructures for the SMC, including allocation of mandates, interinstitutional coordination and sustainable financing approaches.
		UNEP GUIDANCE National Authority for Chemicals Control: Structure and Funding	Supports countries in designing and maintaining national authority structures for chemicals control by providing guidance on institutional arrangements, governance functions and financing approaches.
1.2 Sustainable financing and economic viability	Target A1. Financing mechanisms often require legal provisions and institutional arrangements to be implemented effectively. Target E1. Integration of chemicals management into national budgets and financial systems supports long-term	SAICM Study on Industry Involvement in the Integrated Approach to Financing the Sound Management of Chemicals and Waste	Supports understanding of industry participation and financing approaches for the SMC and waste, including opportunities for shared responsibility and long-term financing mechanisms.
		UNEP LIRA Guidance (2015) – Legal and Institutional Infrastructures and Measures	Supports countries in establishing sustainable financing approaches for national chemicals management systems,

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
	sustainability.	for Recovering Costs of National Administration for SMC	including administrative fees, licensing schemes and cost-recovery mechanisms.
	Target E3. This is the core linkage. This building block focuses directly on securing long-term financing for chemicals management systems.	UNEP GUIDANCE National Authority for Chemicals Control: Structure and Funding	Supports countries in strengthening the institutional and financial sustainability of national chemicals control systems through guidance on authority structures and financing arrangements.
	Target E4. Financing frameworks and planning processes support the identification of gaps and prioritisation of resources.	UNEP Guidance Document on Implementing Domestic Financing for the SMC and Waste	Supports countries in developing domestic financing strategies and institutional arrangements for the SMC and waste, including integration into national planning and use of economic instruments.
	Target E5. Cost-recovery mechanisms such as fees, levies and extended producer responsibility schemes operationalise this target.	OECD Recommendation of the Council on the Implementation of the Polluter-Pays Principle	Supports the use of economic instruments and financing approaches that allocate the costs of pollution prevention, control and remediation to responsible actors, contributing to the long-term financial sustainability of chemicals management systems.
1.3: International integration	Target A1. International commitments and alignment can guide the development and strengthening of national legal and institutional frameworks.	Manual for the implementation of the Basel Convention	Supports countries in implementing obligations related to transboundary movements and environmentally sound management of hazardous wastes through practical guidance on legal, institutional and operational measures.
	Target A2. This is the core linkage. International integration enables countries to apply existing guidance, tools and approaches, including those available through the IOMC Toolbox.	Guide to the Development of National Legal Frameworks to Implement the Basel Convention	Supports countries in developing or reviewing national legislation to implement the Basel Convention through practical legal guidance and implementation approaches.
		Basel Convention guidance documents	Provide guidance and technical resources to support implementation of obligations related to hazardous wastes and environmentally sound management.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
	Target B4. Alignment with international systems such as GHS and MAD facilitates harmonisation and consistency across jurisdictions.	Guide on the Development of National Laws to Implement the Rotterdam Convention - Secretariat of the Rotterdam Convention	Supports countries in developing national legal frameworks for implementation of prior informed consent procedures for hazardous chemicals and pesticides in international trade.
	Target E2. International integration strengthens cooperation, knowledge sharing and participation in global and regional networks.	Guidance on developing and updating National Implementation Plans (NIPs) - Stockholm convention	Supports countries in developing and updating national implementation plans, inventories and risk reduction measures related to persistent organic pollutants.
	Target E6. Alignment with multilateral environmental agreements and international frameworks supports policy coherence across sectors.	Minamata Convention guidance documents	Provide guidance and technical resources to support implementation of measures related to mercury management and reduction of mercury risks.
1.4 Enforcement, compliance assurance and trade control	Target A1. This is the core linkage . Enforcement and compliance systems ensure that regulatory obligations are effectively implemented in practice. Target A5. Trade controls and customs coordination are key mechanisms to detect and prevent illegal trade in chemicals and related products. Target B4. Risk-based inspections, compliance strategies and enforcement tools rely on recognised methodologies and good practices.	UNEP Enforcement of Chemicals Control Legislation (2019)	Supports countries in developing and strengthening enforcement systems for chemicals legislation, including inspection planning, compliance promotion and proportionate enforcement approaches.
		UNEP Guidelines on Compliance with and Enforcement of MEAs (2002)	Supports countries in establishing legal and institutional frameworks for environmental compliance and enforcement, including inspection systems and enforcement strategies.
		Basel Convention – Guidance on Illegal Traffic (2017)	Supports detection and prevention of illegal transboundary movements of hazardous wastes through practical guidance for customs, inspectors and enforcement authorities.
		Green Customs Initiative	Supports customs authorities in identifying and preventing illegal trade in environmentally regulated chemicals and wastes through training and practical implementation guidance.
		Guidelines on Compliance and Enforcement of a Pesticide Regulatory Programme (FAO/WHO, 2006)	Supports implementation and enforcement of pesticide regulatory systems through guidance on inspections, compliance monitoring and enforcement measures.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
	Target E1. Enforcement data and compliance outcomes inform policy priorities and regulatory improvements. Target E2. Effective enforcement often requires coordination across agencies (e.g. environment, customs, police) and international cooperation.	FAO/WHO Guidance Note on Addressing Illegal Trade of Pesticides (2025)	Supports development of regulatory and enforcement measures to prevent illegal pesticide trade, including border controls, licensing and market surveillance.
		Illegal Trade in Chemicals (UNEP-GRID Arendal Report, 2020)	Supports strengthening of enforcement and border control measures by identifying challenges, risks and good practices related to illegal trade in chemicals.
		OECD Regulatory Enforcement and Inspections Toolkit	Supports risk-based inspection and enforcement approaches by providing methodologies for prioritisation, compliance assurance and proportionate sanctions.
		OECD Recommendation of the Council on Countering the Illegal Trade of Pesticides	Supports development of coordinated enforcement and customs approaches to prevent illegal pesticide trade and strengthen market oversight.
		OECD Best Practice Guidance to Identify Illegal Trade of Pesticides	Supports authorities in detecting and addressing illegal pesticide trade through practical guidance on inspections, profiling and inter-agency cooperation.
1.5 Governance and stakeholder coordination	Target A1. Effective coordination across ministries and authorities is a key component of institutional capacity. Target B5. Stakeholder platforms often support outreach, capacity-building and awareness-raising activities. Target E2. This is the core linkage. Governance and coordination mechanisms enable structured engagement across government, industry, civil society and other stakeholders. Target E1. Whole-of-government approaches support integration of chemicals management into broader policy and planning processes.	UNEP LIRA Guidance (2015)	Supports establishment of coordination mechanisms, stakeholder engagement processes and governance arrangements for national chemicals management systems.
		FAO/WHO International Code of Conduct on Pesticide Management (2014)	Supports collaborative governance approaches and shared responsibilities among governments, industry and other stakeholders across the pesticide life cycle.
		OECD Taking an integrated approach to the promotion of transparency, integrity, accountability and stakeholders' participation: Towards an Open Government Strategy	Supports transparent and participatory governance approaches, including stakeholder participation, accountability and interinstitutional coordination.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
	Target E6. Coordination mechanisms enable alignment across environment, health, labour, trade and other sectors.		
1.6 Monitoring, evaluation and learning	Target A1. Establishing monitoring and evaluation systems requires institutional mandates, coordination and capacity. Target B3. Monitoring systems often integrate and make use of data from inventories, PRTRs and other reporting mechanisms.	UNEP Global Chemicals and Waste Indicator Review Document	Supports development and use of indicators and monitoring frameworks for chemicals and waste management, including tracking progress towards international objectives and targets.
	Target B4. Indicators, methodologies and evaluation frameworks rely on standardised approaches to ensure comparability and reliability. Target B7. This is a core linkage. Monitoring and evaluation systems support the collection, analysis and use of data to track trends, exposures and outcomes over time. Target E1. Monitoring and evaluation link chemicals management to policy cycles, budgeting and priority-setting.	OECD Guidance on Developing Safety Performance Indicators For Industry	Supports development of performance indicators and monitoring approaches for industrial safety, continuous improvement and evaluation of risk reduction measures.
2.1: Hazard classification and labelling: The GHS	Target A1. Supports implementation of national legal and institutional frameworks by operationalising hazard communication requirements.	IOMC Classification and Labelling System Scheme	Supports countries in implementing the Globally Harmonized System (GHS) through guidance on legal transposition, scope definition, institutional coordination and phased implementation approaches.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
	Target B2. GHS labelling and safety data sheets provide foundational hazard information that can support broader information flows along value chains. Target B4. This is the core linkage. The GHS provides internationally harmonised criteria for hazard classification and communication through labels and safety data sheets. Target B5. Effective GHS implementation requires training of workers, regulators and supply chain actors. Target B6. Direct correspondence. This building block operationalises the implementation of the GHS at national level. Target D7. GHS underpins workplace risk management by providing consistent hazard communication.	UNECE GHS website	Provides access to the official GHS framework, including harmonised classification criteria, labelling elements, hazard communication requirements and SDS provisions.
		ILO Chemicals Convention, 1990 (No. 170)	Supports implementation of the GHS through requirements related to chemical classification, labelling, safety data sheets, hazard communication and worker access to information, contributing to the safe use of chemicals in the workplace and protection of workers from chemical hazards.
		ILO / OECD / UNITAR - The global partnership to implement the GHS	Supports international cooperation, capacity-building and coordinated implementation of the GHS through guidance materials, training resources and stakeholder engagement initiatives.
		UNITAR/ILO - Developing a National GHS Implementation Strategy (2022)	Supports development of national GHS implementation strategies through guidance on legal reform, institutional coordination, stakeholder engagement and capacity-building.
		UNITAR Programme on the GHS	Provides practical implementation resources, training materials and technical guidance to support development and operation of national GHS systems.
		UNITAR GHS Model Legislation for the Caribbean	Supports development and adaptation of national legal frameworks for GHS implementation through model legislative provisions, institutional approaches and practical implementation guidance. Available in English and Spanish.
		UNEP Guidance: Risk Reduction Tools for Chemicals Control (2019)	Supports integration of GHS into national chemicals control systems as a foundation for hazard communication, risk reduction and supply-chain information management.
		OECD eChemPortal – Global Portal to Information on Chemical Substances	Provides access to international chemical hazard and classification information, supporting consistent application of GHS classification and hazard communication approaches.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
2.2: Harmonised data quality and mutual acceptance of data (MAD/GLP)	Target A1. Participation in GLP/MAD systems may require national compliance monitoring programmes, institutional arrangements and regulatory alignment.	OECD Mutual Acceptance of Data (MAD)	Supports international acceptance and sharing of chemical safety data generated in accordance with OECD standards, reducing duplication of testing and strengthening regulatory cooperation.
	Target B1. This is the core linkage . GLP and MAD ensure that safety data are generated according to recognised scientific standards and are available for regulatory use.	OECD Principles of Good Laboratory Practice (GLP)	Supports generation of reliable, traceable and internationally accepted chemical safety data through harmonised quality standards for non-clinical laboratory studies.
	Target B4. GLP and MAD are foundational international systems that standardise how data are generated, assessed and accepted across jurisdictions. Target E2. MAD is inherently based on international cooperation and mutual trust in data, strengthening regulatory collaboration.	OECD Testing of chemicals resources	Provides internationally recognised guidance, methodologies and tools for chemical testing and assessment, including test guidelines, QSAR and read-across approaches, reporting templates, alternative assessment approaches and methodologies supporting hazard evaluation and regulatory decision-making.
2.3: PRTR	Target A1. Establishing a PRTR typically requires legal mandates for reporting, institutional arrangements and compliance systems, thereby strengthening national regulatory infrastructure.	IOMC National management scheme for PRTRs	Supports countries in establishing and operating PRTR systems through guidance on system design, reporting thresholds, institutional arrangements, data quality and public access to information.
	Target B3. This is the core linkage . PRTRs generate systematic, facility-level data on releases and transfers of chemicals to air, water and land.	UNECE Protocol on pollutant release and transfer registers (Kyiv PRTR Protocol) – full text	Provides the international framework for establishment and operation of PRTR systems, including reporting obligations, pollutant lists, public access provisions and institutional requirements.
	Target B4. PRTRs are based on internationally recognised methodologies (e.g. UNECE, OECD, UNITAR guidance), contributing to harmonised data generation and	UNECE Guidance on implementation of the PRTR Protocol	Supports practical implementation of PRTR systems through guidance on institutional arrangements, reporting architecture, data quality and public dissemination of information.
		UNITAR – PRTR implementation resources	Supports phased development and implementation of PRTR systems through practical guidance on legal frameworks, reporting systems, institutional coordination and public access to environmental information.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
	comparability across countries.	UNITAR Implementing a National PRTR Design Project: A Guidance Document	Supports countries in designing national PRTR systems through stepwise approaches covering institutional arrangements, reporting mechanisms and implementation planning.
	Target B7. PRTR and facility reporting can feed exposure source mapping and environmental surveillance priorities.	OECD Guidance Document on elements of a PRTR: Part 1 and Part 2	Provides internationally recognised guidance on the objectives, design, implementation and operation of PRTR systems, including reporting, data management and dissemination approaches.
	Target E1. PRTR data supports environmental policy, permitting, priority setting and land-use planning.	OECD Emission Scenario Documents	Supports estimation of releases from industrial activities and product uses through standardised methodologies relevant to exposure assessment, release estimation and PRTR systems.
2.4 Transparency, disclosure and information systems	Target B2. This is the core linkage . Transparency, disclosure systems, product passports and supply-chain information directly operationalise this target by enabling the flow of information on chemicals in products across actors.	SAICM Chemicals in Products (CiP) Programme	Provides approaches and guidance for improving information exchange on chemicals in products across supply chains and to users, supporting transparency, informed decision-making and safer product management throughout product life cycles.
	Target B3. Disclosure and reporting systems (including sustainability reporting and footprint approaches) contribute to broader data availability.	UNEP Chemicals in products and related guidance	Supports approaches for improving transparency and access to information on chemicals in products, including supply-chain communication and information systems supporting safer product management and circular economy approaches.
	Target B4. This component includes emerging but increasingly standardised approaches (e.g. disclosure formats, digital systems, reporting frameworks) that support	OECD Due Diligence Guidance for Responsible Business Conduct	Supports responsible business conduct and supply-chain transparency by encouraging companies to identify, prevent and address environmental and health impacts associated with products and production processes.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
	harmonisation and comparability of information. Target E1. Sustainability reporting and disclosure mechanisms integrate chemicals management into corporate decision-making, investment flows and policy processes. Target E2. Transparency systems facilitate collaboration and information exchange across supply chains, regulators, industry and other stakeholders.	UNEP - Global chemicals outlook II	Highlights global challenges related to information gaps, chemicals in products, circularity and supply-chain transparency, supporting policy approaches aimed at strengthening information systems and life-cycle approaches to chemicals management.
3.1: Regulation of chemical products and industrial substances	Target A1. This is the central mechanism through which countries operationalise A1. It establishes enforceable systems to regulate chemicals across their life cycle. Target B3. Regulatory systems generate key data through inventories, registration dossiers, authorisation processes and post-market controls. Target B4. Risk assessment, prioritisation and risk management measures are core elements of this building block. Target C1. Prioritisation and regulatory workplans for substances provide the structured processes envisioned under this target.	WHO INCHEM portal	Provides internationally recognised toxicological and health information on chemicals, supporting hazard identification, risk assessment and informed regulatory decision-making.
		SAICM E-learning Course on Industrial Chemicals Databases and Information Sharing	Supports countries in identifying, accessing and using internationally available information sources and databases relevant to prioritisation, assessment and management of industrial chemicals.
		WHO/ILO/UNEP International Programme on Chemical Safety (IPCS) Harmonization Project and Methodology Publications	Supports harmonised terminology and methodological approaches for chemical hazard, exposure and risk assessment, contributing to greater consistency and comparability in regulatory decision-making.
		WHO Chemicals Management and Health Sector Guidance	Supports development of national chemicals management systems from a public health perspective, including institutional strengthening, risk reduction priorities and integration of health considerations into chemicals management approaches.
		OECD eChemPortal	Provides integrated access to international chemical hazard and safety information from multiple national and international

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
	Target D2. Regulatory measures (restrictions, authorisations, conditions of use) can drive substitution and safer alternatives. Target D4. Substance prioritisation and risk management measures can contribute to safer alternatives and substitution. Target D6. Regulatory controls often translate into sector-specific measures and standards.		programmes, supporting data sharing, regulatory cooperation and efficient risk assessment processes.
		OECD Benefits from Implementing a Chemical Management System	Highlights the public health, environmental, economic and governance benefits associated with implementation of national chemicals management systems, supporting policy development and strengthening of risk-based regulatory approaches.
		Government Risk Management Approaches Used for Chemicals Management	Provides comparative information on regulatory approaches used by governments for chemical prioritisation, assessment and risk management, supporting development of risk-based regulatory systems adapted to national contexts and capacities.
		OECD Considerations for Assessing the Risks of Combined Exposure to Multiple Chemicals	Supports risk assessment and prioritisation approaches under substance-based chemicals management systems by providing methodological considerations for assessing combined exposure to multiple chemicals, including cumulative and aggregate exposure scenarios relevant to human health and environmental protection.
		OECD Guidance Document on Risk Communication for Chemical Risk Management	Supports development of communication approaches related to chemical risk management decisions, including communication of regulatory measures, stakeholder engagement and risk information exchange in support of informed decision-making and implementation.
3.1.A: Regulation for chemical products for specific uses (Registration and licensing)	Same as 3.1 plus: Target A7. This is a direct linkage, particularly for pesticide registration systems, which enable restriction, non-approval, re-evaluation and phase-out decisions Target D5. Product authorisation systems can promote safer use conditions, integrated pest management and non-chemical alternatives.	IOMC National management scheme for pesticides	Supports development and implementation of product-based regulatory systems for pesticides, including registration, authorisation, re-evaluation, risk assessment and post-market controls.
		FAO Pesticide Registration Toolkit	Supports pesticide registrars in evaluation and authorisation of pesticides through practical guidance, assessment tools and decision-support resources.
		WHO guidelines on pesticide legislation (2021)	Supports development and strengthening of national pesticide legislation, including provisions related to registration, licensing, import controls, compliance and enforcement.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
		WHO – Guidance on Pesticide Licensing Schemes (Code of Conduct)	Supports establishment and operation of national pesticide licensing schemes covering registration, import, distribution and use of pesticides.
3.1.B: Regulation for industrial chemicals (substance prioritisation, risk assessment, risk management)	Same as 3.1	IOMC Industrial and Consumer Chemicals Management Scheme	Supports substance-based approaches to regulation of industrial and consumer chemicals, including prioritisation, risk assessment and proportionate risk management measures.
		UNEP Guidance: Risk Reduction Tools for Chemicals Control (2019)	Supports development of national chemicals control systems through guidance on hazard communication, risk reduction measures and integration of GHS approaches into regulatory frameworks.
		WHO National chemicals registers and inventories: benefits and approaches to development	Supports establishment and maintenance of national chemicals registers and inventories through practical approaches, institutional considerations and examples of national implementation.
		OECD Guidance on Establishing a National Chemicals Register (2024)	Supports development of national chemicals registers and reporting systems that enable identification, prioritisation and regulatory oversight of chemicals placed on the market.
		OECD Guidance on Grouping of Chemicals, Third Edition	Supports efficient prioritisation and assessment of substances through grouping, category and read-across approaches, enabling more effective use of existing data and regulatory resources.
3.2: Occupational Safety and Health (OSH)	Target A1. OSH requires a legal and institutional framework defining employer duties, inspection systems and enforcement mechanisms.	IOMC Occupational Safety and Health Management Scheme	Supports protection of workers from chemical risks through guidance on workplace risk assessment, hierarchy of controls, hazard communication, worker training and integration of GHS approaches into occupational safety systems.
	Target B5. OSH relies heavily on worker training, employer responsibilities, hazard communication and capacity-building.	ILO Occupational Safety and Health Convention, 1981 (No. 155)	Supports the establishment of national occupational safety and health frameworks that address chemical risks through preventive measures, workplace risk assessment, hazard communication, worker training, employer duties and exposure control, contributing to the protection of workers from adverse effects of hazardous chemicals in the working environment.
	Target D7. This is the core target . OSH systems directly implement measures to	ILO Chemicals Convention, 1990 (No. 170)	Provides the international framework for protection of workers from hazardous chemicals through requirements related to

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
	protect workers from chemical exposures through risk assessment, control measures and safe handling practices. Target E6. OSH connects labour, health and environmental authorities, contributing to integrated chemicals management.		classification, labelling, Safety Data Sheets, exposure prevention, worker information and employer responsibilities.
		ILO Chemicals Recommendation, 1990 (No. 177)	Supports practical implementation of occupational chemical safety measures, including workplace risk assessment, safe handling, emergency arrangements, worker participation and training.
		ILO Occupational Cancer Convention, 1974 (No. 139)	Supports prevention and control of occupational exposure to carcinogenic substances through risk-based workplace protection measures and exposure reduction approaches.
		WHO/ILO Chemical Safety Cards (ICSCs)	Provides internationally recognised workplace safety information on chemicals, including hazards, exposure prevention, handling precautions and emergency response measures relevant to occupational risk management.
		ILO: Safety in the Use of Chemicals at Work (1993)	Provides practical guidance on chemical safety management in workplaces, including hazard communication, exposure prevention, engineering controls and worker protection measures.
		ILO Technical guidelines on biological hazards in the working environment	Provides practical guidance on workplace risk assessment, exposure prevention, monitoring and worker protection measures relevant to occupational health management systems and hazardous workplace exposures.
3.3: Chemical Accident Prevention and Preparedness (CAPPR)	Target A1. CAPPR requires a clear legal basis for identifying high-hazard installations, mandating safety management systems and establishing responsibilities across operators and authorities. It is a core operational element of an enforceable system.	IOMC Chemical accident prevention, preparedness and response	Supports development of national systems for prevention of, preparedness for and response to chemical accidents, including safety management systems, emergency planning, institutional coordination and risk reduction measures for hazardous installations.
	Target B5. Effective CAPPR depends on trained personnel, emergency responders and informed communities, including drills, communication systems and awareness programmes.	ILO Prevention of major industrial accidents Convention, 1993 (No. 174)	Provides the international framework for prevention of major industrial accidents through requirements related to hazard identification, safety management systems, emergency planning, worker involvement and competent authorities oversight.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
	Target B7. CAPPR systems generate and use information on hazardous installations, accident scenarios and potential exposure pathways, supporting risk identification and preparedness planning.	UNEP/APELL (Awareness and Preparedness for Emergencies at Local Level)	Supports local-level emergency preparedness and community awareness related to industrial and chemical accidents through coordinated planning, communication and response approaches.
	Target D7. Accident prevention and operational controls deliver both worker and environmental protection Target E1. CAPPR links chemicals management with disaster risk reduction, land-use planning and emergency management systems. Target E6. It requires coordination across environment, labour, health, civil protection and local authorities, reinforcing integrated governance.	OECD – Guiding Principles for Chemical Accident Prevention, Preparedness and Response (2023)	Provides internationally recognised guidance for prevention and management of chemical accidents, including safety management systems, preparedness planning, emergency response and coordination among authorities and operators.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
3.4: Integrated Pollution Control (IPPC/BAT)	Target A1. IPPC systems require a strong legal basis for permitting, setting conditions of operation, monitoring and enforcement. They are a core mechanism to operationalise risk management at facility level. Target B3. IPPC generates structured data through permitting, monitoring and reporting requirements, contributing to national datasets on emissions and pollution. Target B4. BAT-based permitting is a standardised, internationally recognised approach to industrial pollution control, aligned with OECD and EU practices. Target D2. IPPC directly implements this target through the application of Best Available Techniques (BAT) and integrated permitting to prevent or minimise emissions and environmental impacts.	IOMC Best available techniques	Supports application of Best Available Techniques (BAT) and integrated permitting approaches for industrial installations, including pollution prevention, emissions control and performance-based operational standards.
	Target E1. IPPC links chemicals management with environmental regulation, industrial policy and resource efficiency strategies. Target E6. It integrates chemicals management with air, water and land protection, as well as energy and climate considerations.	OECD – Best Available Techniques (BAT) for Industrial Pollution	Supports development and implementation of BAT-based approaches for industrial pollution prevention and control, including permitting systems and operational measures aimed at reducing environmental and health impacts.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
3.5: Public health management of chemicals	Target A1. Integrating public health functions into chemicals management requires institutional arrangements, mandates and coordination mechanisms across health and environmental authorities.	IOMC toolbox – Public health management of chemicals and WHO chemicals road map	Supports integration of public health functions into chemicals management systems through guidance on poison centres, surveillance, preparedness, health-sector coordination and use of health data for chemicals risk management.
	Target A6. This is a direct match . Establishing poison centres and strengthening clinical toxicology capacity is at the core of this component.	WHO Chemicals roadmap (2017)	Supports development of national action plans and public health approaches for chemicals management, including institutional strengthening, surveillance, risk reduction and multisectoral coordination.
	Target B5. This component relies on trained healthcare professionals, toxicologists and emergency responders and often includes public awareness components	WHO International health regulations (2005) – consolidated text incorporating amendments	Provides the international framework for national capacities to detect, assess, notify and respond to public health events, including chemical incidents and emergencies.
	Target B7. Public health systems (poison centres, hospitals, surveillance programmes) generate real-world data on exposures, trends and emerging risks, directly supporting this target.	WHO guidance: International health regulations and chemical events	Supports development of national capacities for preparedness and response to chemical events, including surveillance systems, institutional coordination and emergency response arrangements.
	Target E1. Links chemicals management with health systems, emergency preparedness and national public health strategies.	WHO Poison Centres resources	Supports establishment and strengthening of poison centres and toxicovigilance systems through guidance on surveillance, emergency response, toxicological information services and management of chemical incidents and poisonings.
	Target E6. Bridges environment, health, labour and emergency response systems, enabling integrated risk management.	WHO Guidelines for establishing a poison centre	Supports establishment and strengthening of poison centres through guidance on toxicological services, surveillance functions, emergency response and integration into national health systems.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
4.1: Environmental and legacy management	Target B3. Monitoring systems and contaminated site inventories rely on and contribute to data on releases, both historical and current. Target B7. This is a core linkage. Environmental and human monitoring systems generate data on contamination levels, exposure pathways and trends over time.	Guidance on Best Available Techniques and Best Environmental Practices for the Management of Sites Contaminated with Persistent Organic Pollutants - Secretariat of the Stockholm Convention	Supports identification, assessment and remediation of POPs-contaminated sites through risk-based approaches, environmentally sound remediation techniques and long-term management strategies.
	Target C1. Contaminated sites and legacy pollution are classic “issues of concern” requiring structured programmes, prioritisation and long-term management plans.	Guidance on the Management of Contaminated Sites – Secretariat of the Minamata Convention on Mercury	Supports identification, assessment and management of mercury-contaminated sites through guidance on inventories, risk assessment, remediation planning, stakeholder engagement and long-term site management.
	Target E5. Remediation frameworks often operationalise the polluter pays principle through liability, cost recovery and financing mechanisms. Target E6. Environmental and legacy management connects chemicals policy with land use, public health, water management, biodiversity and climate resilience.	UNEP - Global chemicals outlook II	Highlights global challenges related to environmental contamination, legacy pollution, monitoring systems and long-term management of hazardous chemicals and wastes.
4.2: Product and supply chain measures (Product	Target B2. This is the core linkage. Product and supply-chain measures operationalise this target through disclosure, traceability and due diligence across value chains.	SAICM Chemicals in Products (CiP) Programme	Promotes international cooperation and policy approaches aimed at improving the availability and exchange of information on chemicals in products across supply chains and throughout product life cycles.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
standards, circular economy)	Target B4. Product standards, passports and disclosure systems contribute to harmonisation and comparability across markets.	UNEP - Global chemicals outlook II	Highlights global challenges related to chemicals in products, supply chains and material cycles, supporting policy approaches aimed at safer and more sustainable production, consumption and circular economy systems.
	Target D1. Supply-chain transparency and product-level measures create the conditions for innovation and safer alternatives.	UNEP Chemicals in products resources and related guidance	Supports practical approaches and tools for improving supply-chain communication, product stewardship and access to information on chemicals in products in support of safer product management and circular economy objectives.
	Target D2. Directly supports this target by promoting safer product design, substitution of substances of concern and circular economy approaches that avoid recirculation of hazardous substances.	UNEP Guidelines for Sustainable Public Procurement	Supports integration of chemicals management into sustainable public procurement through life-cycle approaches, safer product selection, substitution of substances of concern and promotion of more sustainable supply chains.
	Target D4. By identifying substances of concern in products, these measures enable targeted substitution and safer design.	UNIDO Cleaner Production and Circular Economy resources	Supports approaches aimed at improving resource efficiency, circular economy practices and safer management of materials and substances of concern across product life cycles and supply chains.
	Target D6. Often implemented through sector-specific approaches (e.g. construction, textiles, electronics), aligning with this target.	OECD- Guidance on Key Considerations for the Identification and Selection of Safer Chemical Alternatives	Supports approaches for identifying and evaluating safer alternatives to hazardous substances, contributing to substitution, safer product design and reduction of substances of concern in products and supply chains.
	Target E1. Links chemicals management with product policy, trade, circular economy and sustainable consumption frameworks.	OECD - Towards a more resource-efficient and circular economy	Supports policy approaches aimed at improving resource efficiency and material circularity while reducing the circulation and recirculation of substances of concern in products and secondary materials.

Building Blocks components	Primary GFC targets supported	Relevant International Guidance or Tool	Summary of Linkage
4.3: Green and sustainable chemistry innovation	Target D1. This is the core target . The building block directly promotes the development and uptake of safer substances, materials and processes.	UNIDO Cleaner Production and Circular Economy resources	Supports cleaner production, resource efficiency, circular economy practices and sustainable industrial innovation aimed at reducing risks from hazardous chemicals across production systems.
	Target D2. Innovation in green chemistry underpins circular economy strategies, resource efficiency and low-impact production.		
	Target D4. Supports prioritisation of substitution and the design of inherently safer chemicals and products.	UNEP - Global chemicals outlook II	Highlights the role of innovation, sustainable production and prevention-oriented approaches in reducing risks from hazardous chemicals and supporting long-term sustainability transitions.
	Target D6. Green chemistry approaches are often implemented through sector-specific innovation pathways (e.g. materials, construction, textiles, agriculture).	OECD Risk management, risk reduction and sustainable chemistry resources	Supports approaches aimed at reducing risks from hazardous chemicals through safer substitution, sustainable chemistry innovation and risk reduction strategies across products and production processes.
	Target E1. Links chemicals management with industrial policy, innovation systems, education and sustainable development strategies.	OECD Substitution and Alternatives Assessment Toolbox	Provides methodologies and tools to support evaluation of safer alternatives and informed substitution decisions for hazardous substances.
	Target E2. Requires collaboration across government, industry, academia and finance to scale innovation.	OECD- Guidance on Key Considerations for the Identification and Selection	Supports identification and evaluation of safer alternatives to hazardous substances, contributing to innovation and safer product and process design.