Building Blocks of a National Chemicals Management System

A Framework for Developing National Systems for the Sound Management of Chemicals

Draft version 4. Updated: March 2026

Draft for comment by GFC Focal Points

Deadline for comment: 8 May 2026

(use the online form or send to: iomc@unitar.org)

Executive Summary

This framework presents the Building Blocks of a national chemicals management system 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 Framework is a non-binding, high-level strategic guide. 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. 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 Framework responds to a common challenge faced by many countries: the need to build effective, enforceable and sustainable chemicals management systems incrementally, under conditions of constrained resources, fragmented mandates and competing priorities. It therefore organises national chemicals management systems into four interlinked functional layers:

1. governance and enabling conditions;
2. information and transparency;
3. risk management and control; and
4. prevention and market transformation.

These layers describe functional domains of a comprehensive national system. They are not presented as a hierarchy of importance or a fixed order of implementation. Countries may act across one or more layers in parallel, depending on national circumstances, priorities and opportunities for early impact.

At its core, the Building Blocks Framework recognises that a national chemicals management system is not only a technical exercise, but a foundational element of public governance. Effective national systems help protect human health and the environment, strengthen worker safety and health, 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.

A central feature of the Building Blocks Framework is its emphasis on proportionality, 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 trusted authorities 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 Framework also clarifies its relationship with existing international guidance. It is intended to help countries identify what system functions need to be developed and why. Detailed technical methodologies and implementation guidance are available through specialised resources, including the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) Toolbox and other relevant guidance instruments. In this sense, the Building Blocks Framework provides the strategic architecture, while the Toolbox and related materials can support implementation in practice.

To further support countries in applying this Framework, a self-assessment tool is expected to be developed in a future phase. That tool is intended to help countries assess their current level of development across the Building Blocks, identify priority gaps and opportunities, and navigate relevant 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 Framework is intended to support realistic and context-appropriate progress. Used as a strategic guide, it can help countries design national chemicals management systems that are coherent, credible, enforceable and sustainable over time.

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Acronyms

- BAT – Best Available Techniques
- EPR - Extended Producer Responsibility
- CAPPR - Chemical Accident Prevention, Preparedness & Response
- CBI – Confidential Business Information
- CiP – Chemicals in Products
- GFC – Global Framework on Chemicals
- GHS – Globally Harmonised System of Classification and Labelling of Chemicals
- IOMC – Inter-Organization Programme for the SMC
- IPPC - Integrated Pollution-Prevention & Control
- MAD – Mutual Acceptance of Data
- OSH – Occupational Safety & Health
- PRTR – Pollutant Release and Transfer Register
- SDGs - Sustainable Development Goals
- SMC – Sound Management of Chemicals

1. Introduction

The sound management of chemicals (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 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 instruments or governance arrangements should be prioritised.

The Building Blocks Framework has been developed to help address these challenges. It provides a structured overview of the key functions that a national chemicals management system should be able to perform in order to manage risks effectively across the life cycle of chemicals. The Framework is intended to support countries in identifying priorities, designing coherent regulatory systems and strengthening institutional capacity over time.

The Framework is a strategic guide. It does not prescribe a single legislative model, institutional structure or sequence of reforms. It does not constitute a prescriptive or exclusive model for GFC implementation, nor does it seek to redefine or constrain the strategic ambition of the GFC. National systems may take different forms depending on legal traditions, economic structures, risk profiles and existing institutional arrangements. The Framework therefore focuses on the core regulatory functions that need to be fulfilled, rather than on a specific legal or administrative design.

For the purposes of this document, national chemicals management systems are organised into four functional layers:

Layer 1 – Governance and enabling conditions

Layer 2 – Information and transparency

Layer 3 – Risk management and control

Layer 4 – Prevention and market transformation

These layers describe complementary functions that together form a coherent national system. They should not be interpreted as a strict sequence of implementation. Countries are encouraged to adapt, reorder, combine or omit Building Blocks as appropriate, and to pursue innovative or alternative approaches where these better support the achievement of GFC objectives and targets, depending on national priorities, available capacity and opportunities for early impact.

The Building Blocks Framework is explicitly designed to accommodate different national starting points. It does not assume the existence of comprehensive framework legislation, mature inspection systems, advanced laboratory capacity or stable long-term financing from the outset. Nor does it require countries to begin with a fixed set of basic instruments before pursuing other actions. Instead, it recognises that progress toward GFC targets can be achieved through multiple entry

points, including sectoral measures, convention-driven actions, supply-chain interventions, or targeted controls addressing priority risks.

The Framework should be read in conjunction with existing international guidance and technical resources. While this document describes the key regulatory functions and policy objectives associated with each building block, detailed technical guidance on implementation is available through specialised instruments and tools developed by international organisations, including the IOMC Toolbox and other relevant guidance materials.

To further support countries in applying this Framework, a self-assessment tool is expected to be developed in a future phase. This tool will assist countries in assessing their current level of development across the building blocks, identifying priority gaps and opportunities for improvement, and navigating relevant Toolbox modules and other guidance resources that can support implementation.

The Framework is intended to support progressive strengthening of national systems in line with national circumstances and capacities. By providing a clear structure for understanding the functions of a comprehensive chemicals management system, it aims to help countries develop regulatory approaches that are coherent, effective and sustainable over time.

Core principles

The Building Blocks Framework is guided by a set of core principles that support the development of effective, credible and sustainable national chemicals management systems. These principles reflect widely recognised approaches in chemicals governance and are intended to guide policy design, regulatory implementation and capacity development.

- **Prevention and early risk reduction:** Preventing adverse effects on human health and the environment is a central objective of the Framework. 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, while recognising national circumstances and capacities.
- **Flexibility and adaptability:** Countries differ widely in legal traditions, institutional arrangements, economic structures and capacity constraints. The Building Blocks Framework therefore functions as a flexible guide, rather than a checklist or template, and is intended to support diverse national pathways toward GFC implementation.
- **Non-linear, results-oriented progression:** Building Blocks are designed to be implemented in parallel or selectively, allowing countries to prioritise actions that address urgent risks, existing obligations or feasible opportunities, while progressively strengthening system coherence and coverage.
- **Integrated governance:** Effective chemicals management depends not only on technical regulations, but also on governance arrangements, sustainable financing, coordination across ministries, and credible enforcement. These system-wide functions are treated as permanent capabilities that evolve alongside technical regulatory measures.

- **Proportionality and cost-effectiveness:** The Framework promotes risk-based and preventive regulatory approaches that support a high level of protection for human health and the environment, while taking account of national contexts and capacities. Regulatory ambition and complexity are aligned with the level of risk and available institutional resources, recognising that early design choices shape long-term enforceability and system performance. Countries are encouraged to use internationally agreed tools, data 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.

- **Confidential business information (CBI) and transparency**: All data collection and disclosure mechanisms should include clear provisions for the protection of CBI and proprietary data, consistent with international practice. At the same time, transparency should be maximised to the extent possible through non-confidential summaries, aggregated data and recognised industry initiatives that support public trust and informed decision-making. Provisions for CBI should not compromise the health and safety of workers or consumers, or the protection of the environment.

2. Objectives

The Building Blocks Framework is a high-level strategic guide that:

- **It is informed by the vision of the GFC** of a planet free of harm from chemicals and waste for a safe, healthy, and sustainable future.
- **Supports 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 that states: By 2030, Governments have adopted and are implementing and enforcing legal frameworks, and have established appropriate institutional capacity to prevent or, where prevention is not feasible, minimize adverse effects from chemicals and waste as appropriate for their national circumstances.
- **Informs the implementation of Resolution V/8**, and Implementation Programme 1 "Developing a GFC Implementation Programme on Strengthening National Chemicals Legislation and Institutional Capacities".
- **Maps the architecture of a comprehensive national chemicals management system**, identifying key functional domains and their interlinkages, without prescribing a single institutional model or reform sequence.
- **Supports 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 costs. The Framework encourages regulatory systems that are proportionate, adaptable and capable of progressive strengthening.
- **Clarifies the relationship with existing international guidance**, including the IOMC Toolbox. The Building Blocks Framework is intended to help countries identify *what* system

functions to prioritise and *why*, while detailed technical methodologies and implementation guidance are provided through Toolbox modules and other specialised resources. Annex A compiles indicative references and cross-links to support complementary, efficient and context-appropriate use, particularly for low- and middle-income countries.

- **Supports diverse national pathways for implementation,** recognising that countries may prioritise different building blocks depending on national risks, capacities, existing regulatory frameworks and opportunities for early impact.

3. GFC target coverage and scope

The Building Blocks Framework contributes to the achievement of GFC objectives and targets in three complementary ways. In particular, it is designed to directly support GFC Strategic Objective 1 on strengthening national legal and institutional frameworks, by translating relevant targets into concrete regulatory and institutional actions at national level. Detailed mappings between Building Blocks, GFC targets and supporting international guidance are provided in Annex A.

First, a number of GFC targets are supported through specific Building Blocks that translate GFC commitments into operational national system functions. These include, in particular, the establishment and enforcement of national legal and institutional frameworks (e.g. Target A1); implementation of the Globally Harmonised System (GHS) for classification and labelling (e.g. Targets A1 and B4); risk-based regulation of chemical products and substances; prevention of illegal trade through regulatory and customs controls (e.g. Target A5); access to poison centre functions and public health surveillance related to chemical exposures; and the mobilisation of sustainable financing and mainstreaming of chemicals management into national planning and budgeting processes.

Second, several GFC targets are enabled structurally by the systems established in the Building Blocks Framework but are expected to be delivered through complementary instruments or sector-specific measures. This includes, for example, information on chemicals in products along the value chain (e.g. Targets B6 and B7), education and training programmes (e.g. Target C1), and the promotion of safer alternatives, sustainable production and innovation (e.g. Targets B8 and D1). The Building Blocks Framework provides the regulatory architecture, information backbone and governance mechanisms required for these objectives; while recognising that dedicated industrial, innovation, procurement or education policies may be needed for their full implementation.

Third, certain GFC targets fall outside the defined scope of the Building Blocks Framework and are therefore not addressed as standalone measures. These include, in particular, criminal law and prosecution frameworks related to illegal international traffic (e.g. aspects of Target A5), and detailed design of waste management systems and infrastructure under Strategic Objective 3 . The Building Blocks Framework does not seek to provide a comprehensive framework for waste management. However, it recognises the close linkages between chemicals management and waste management, particularly in relation to end-of-life stages, contaminated sites and legacy risks. Coordination between these policy domains is therefore essential to avoid regulatory gaps and downstream impacts. Targets in these areas are expected to be addressed through parallel or complementary national strategies.

4. How to read and use the Building Blocks Framework

Purpose and scope

The Building Blocks Framework is intended to support countries in translating the objectives and targets of the Global Framework on Chemicals into coherent and context-appropriate national action. It provides an overarching institutional, regulatory and information architecture for national chemicals management systems.

The Framework is not a prescriptive model or checklist. Nor does it replace sector-specific regulatory instruments, waste management frameworks, health system responses or criminal justice mechanisms. Rather, it provides a structure that can support the coherent operation of these instruments across the chemicals life cycle.

Partial implementation, reliance on international or regional information, and incremental system strengthening are legitimate and expected pathways under this Building Blocks Framework, particularly in resource-constrained contexts. The absence of one building block should not be interpreted as a barrier to action in others.

The Building Blocks Framework does not assume the existence of stable funding, comprehensive inspection systems or advanced laboratory infrastructure at early stages. It is designed to support implementation in resource-constrained contexts through proportionality, reliance on existing international standards and data, and the progressive strengthening of institutional and technical capacity over time.

The Framework does not provide a comprehensive framework for waste management. It should therefore be used alongside national and international waste management frameworks to ensure continuity across the chemicals life cycle.

Interpreting the layered structure

The Building Blocks Framework is organised around four interlinked system layers:

Layer 1 – governance and enabling conditions

Layer 2 – information and transparency

Layer 3 – risk management and control

Layer 4 – prevention and market transformation

These layers describe functional domains of a comprehensive chemicals management system, rather than a linear sequence of implementation. They are intended to support clarity and flexibility in system design and should not be interpreted as a hierarchy of importance or a fixed order of action.

Countries may engage with one or more layers in parallel, depending on national risks, capacities, existing frameworks and policy priorities. Building Blocks located in different layers may represent high-impact priorities at any stage of system development.

In particular, preventive approaches related to chemicals in products and supply chains may be prioritised early where national risks, exposure patterns or market structures justify this. Countries are encouraged to combine and sequence actions across layers in ways that maximise early impact while supporting coherent and sustainable system development over time.

Multiple national entry points

National chemicals management systems have evolved through different pathways. In many countries, implementation of the Basel, Rotterdam and Stockholm Conventions has provided a primary entry point, with strong emphasis on transparency, information exchange, prior informed consent, and the identification and control of chemicals of concern.

These elements may already be well established and can serve as effective foundations for broader system strengthening under the GFC. Countries may therefore begin at different points within the Building Blocks Framework and progress at different speeds, adapting and combining Building Blocks to reflect existing legal frameworks, institutional arrangements and policy priorities.

Level of technical detail

The Framework provides a structured overview of system Building Blocks and their interlinkages, but does not include detailed technical methodologies, such as risk assessment protocols or analytical methods.

These are addressed in dedicated technical manuals and guidance, including those available through the IOMC Toolbox and other referenced resources.

5. A schematic overview of the Building Blocks Framework structure

This section presents a schematic overview of the architecture of the Building Blocks Framework. The framework is organised as a set of interlinked system layers that together form a comprehensive structure for the sound management of chemicals. These layers represent distinct functional domains of national chemicals management systems, ranging from governance and enabling conditions to information and transparency, risk management and control, and prevention and market transformation.

The layered structure is not intended to imply a linear sequence of implementation or a hierarchy of importance. Cross-cutting system functions underpin technical regulatory measures, and building blocks across different layers may be developed and implemented in parallel. Countries may therefore engage with the layers at different entry points and progress at different speeds, depending on national risks, capacities, existing frameworks and policy priorities.

The purpose of this schematic structure is to provide a clear and coherent picture of the main system building blocks and their interrelationships, illustrating how they interact and reinforce one another over time.

Table 1. Architecture of a national chemicals management system. The system is composed of interconnected Building Blocks that together form a comprehensive framework for the SMC. Countries may develop these Building Blocks in parallel, according to national priorities and capacities.

Layer	Primary objective	Building Blocks	Expected impact on the SMC
Layer 1 – Governance & 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 and compliance assurance 1.5 Customs and trade controls 1.6 Governance and stakeholder coordination 1.7 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.
Layer 2 – Information & Transparency	Enable reliable and internationally accepted chemical safety information and studies for regulatory use.	2.1 Hazard classification and labelling: The GHS 2.2 : Harmonised data quality and mutual acceptance of data (GLP, MAD)	Establishes internationally recognised frameworks for hazard classification, hazard communication and safety data generation. GHS standardises hazard classification criteria and communication through labels and safety data sheets, 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. Together, these mechanisms strengthen the reliability, comparability and cross-border usability of

			hazard information used in chemicals management systems.
Layer 3 – Risk management & Control	Reduce and control risks to health and environment	3.1 Regulation of chemical products and industrial and consumer substances 3.2 OSH requirements 3.3 Facility safeguards, pollution prevention and emergency Preparedness (CAPPR, PRTR, IPPC) 3.4 Public health management of chemicals	Establishes regulatory and operational mechanisms to identify, assess and control risks arising from the manufacture, use and release of chemicals. Through regulatory controls on substances and products, workplace protection measures, industrial emission and accident-prevention systems, and public health surveillance and response functions, this layer directly reduces exposures and prevents harm to workers, communities and the environment.
Layer 4 – Prevention & Market Transformation	Avoid risks and drive systemic change	4.1 Product and supply-chain measures (CiP, circular economy) 4.2 Environmental and legacy management	Addresses risks at the product and lifecycle level by influencing product design, supply chains and long-term environmental management. Measures in this layer promote substitution or phase-out of substances and uses that pose significant risks, improve transparency on chemicals in products, support safer material cycles and enable the identification and remediation of legacy contamination. Together, these approaches reduce the introduction of new risks into the economy and address long-term environmental burdens from past chemical uses.

5.1. Layer 1 – Governance and enabling conditions

The effectiveness of a national chemicals management system is not solely dependent on its legal and technical instruments, but also on a set of foundational system capabilities. Layer 1 focuses on the system foundations required to make all other regulatory functions operate in a coherent, credible and sustainable manner over time.

Building Blocks within this layer should be understood as permanent system functions rather than one-time actions. They remain relevant throughout system development and interact closely with measures in other layers, including risk management and control instruments such as occupational safety and health requirements, implementation of the GHS, and enforcement activities.

Building block 1.1: Framework legislation/policy and institutional setup

This building block 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.

Experience shows that weaknesses at this level, including fragmented mandates, unclear authority, overly complex procedures or misaligned incentives, are a major source of delay, inefficiency and limited impact in national systems.

This building block can be achieved 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 and coordination mechanisms is essential to identifying a pathway that strengthens protection outcomes while remaining workable and sustainable.

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

Building block 1.2: Sustainable financing and economic viability

The objective of this building block 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 where appropriate. These instruments ensure that those who place chemicals on the market or generate pollution contribute to the costs of oversight, aligning with the polluter-pays principle.

Building block 1.3: International integration

This building block 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, ISP-CWP, and 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 and trusted authorities. This can reduce costs, avoid duplication, and accelerate protective action, while preserving national decision-making authority.

Building block 1.4: Enforcement and compliance assurance

A system without enforcement lacks credibility. This building block 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 inspectorates and by border authorities, including customs, within their respective mandates. Compliance assurance also includes guidance and training, particularly for small and medium-sized enterprises (SMEs), to progressively drive behaviour towards safer practices.

Approaches should be adapted to available capacity, prioritising high-risk activities and combining inspections with compliance promotion.

Building block 1.5: Customs and trade controls

The objective is to use customs as a specialised enforcement control point to monitor and regulate chemicals at the border before they enter the domestic market.

This may involve linking import and export licencing systems to customs classifications, including Harmonized System (HS) codes, and using trade data to identify high-risk shipments. Alignment between chemical nomenclature and customs classification is important to reduce regulatory gaps.

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.

Building block 1.6: Governance and stakeholder coordination

This building block establishes 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, civil society and academia, supports improved regulatory design and implementation. Such dialogue complements formal public consultation processes and can reduce compliance challenges, particularly where administrative capacity is limited.

Building block 1.7: Monitoring, evaluation and learning

This building block aims to ensure that national systems are able to assess their performance and improve over time.

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

Monitoring and evaluation do not require complex systems at early stages. Even basic tracking of activities and outcomes can support transparency, accountability and evidence-based decision-making.

Over time, 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.

5.2. Layer 2: Information and transparency

Layer 2 establishes the information foundations required for effective chemicals management. It focuses on the generation, communication and acceptance of hazard information using internationally recognised frameworks.

Key elements include the GHS, which provides common criteria and formats for hazard classification and communication, and internationally recognised systems for ensuring data quality and acceptance, such as Good Laboratory Practice (GLP) and the OECD Mutual Acceptance of Data (MAD). Together, these frameworks improve the comparability, transparency and usability of hazard information across national systems and international supply chains.

This layer enables countries to access and use reliable hazard information without the need to generate all data domestically. By relying on internationally agreed standards and existing data from

trusted sources, countries can support effective and proportionate regulatory action, particularly where technical and institutional capacity is still developing.

Building block 2.1: Hazard classification and labelling: The GHS

The objective of this building block is to ensure that relevant actors, including workers, emergency responders, regulators 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 Safety Data Sheets (SDS). It introduces standardised classification criteria, consistent labelling elements and structured Safety Data Sheets (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 progressively, focusing on priority sectors, uses or exposure contexts, and expanding coverage over time as institutional, technical and enforcement capacities develop. The building block 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 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.

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

This building block 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 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 build confidence in scientific evidence without establishing a national GLP compliance monitoring programme or undertaking formal MAD adherence procedures.

2. Partial adherence to the MAD system: Countries may choose to establish a national GLP compliance monitoring programme and adhere to selected 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: 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.

5.3. Layer 3: Risk management and control

Layer 3 brings together the regulatory and operational measures through which chemical risks are actively managed and controlled. These building blocks 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.

This layer includes risk-based regulatory approaches, workplace and facility-level controls, public health response functions, and compliance mechanisms. 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 central to the effective functioning of a national chemicals management system and may be developed progressively in line with national priorities, risk profiles and available resources.

Building block 3.1: regulation of chemical products and industrial and consumer substances

Countries regulate chemical risks through different legal and regulatory approaches, depending on national legal frameworks, priorities and capacities. This Building Blocks Framework 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 **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). Under this approach, a product may only be marketed or used once it has been authorised by the competent authority, usually based on an assessment of the hazards, risks and conditions of use.

A second approach is **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, authorities may impose restrictions, conditions of use, information requirements or restrictions on specific substances to address risks that are not otherwise managed through product-based systems.

These approaches differ in regulatory logic and legal effect. 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 progressively, depending on national circumstances.

The Framework explicitly supports both approaches as legitimate and effective tools for managing chemical risks. In particular, substance-based regulation of industrial and consumer 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 building block 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.

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

This building block establishes or strengthens regulatory systems for products that contain or are made of chemicals—such as pesticides, pharmaceuticals, veterinary products, or food additives. 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.

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.

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

This building block applies to uses of substances that are not subject to product- or use-specific authorisation regimes under Building block 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. This component aims 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 progressively.

Substance Prioritization. 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. 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 efficient initial 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.

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. Countries are encouraged to make effective use of existing international assessments and data, adapting them to national conditions where appropriate, rather than duplicating work.

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, codes of practice, emission or use restrictions, conditions of use, substitution requirements, authorisation schemes or bans. The stringency of controls should be matched to the level of risk and national implementation capacity, ensuring that measures are evidence-based, practical and capable of being enforced.

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.

Building block 3.2: Occupational, Safety and Health (OSH) Requirements

This building block 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 and training, and arrangements for monitoring and enforcement.

Although presented in Layer 3, 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 lifecycle. 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.

Building block 3.3: Facility safeguards, pollution prevention and emergency preparedness (PRTR, IPPC, CAPPR)

This building block addresses facility-level instruments used to manage chemical risks associated with industrial activities, ranging from routine releases and emissions to major accidents. It brings together complementary regulatory approaches that operate through legally binding duties on operators, supported by permitting, reporting, inspection and enforcement mechanisms.

Together, these instruments aim to control routine emissions, prevent major chemical accidents, strengthen preparedness and response, and generate reliable information to support regulatory oversight, environmental planning and public transparency.

These instruments are positioned within Layer 3 because they depend on operational regulatory capacity, clearly defined duties for facility operators, and functioning compliance and inspection systems. Where basic emergency response arrangements already exist, they may be strengthened progressively through more formalised prevention, preparedness and reporting requirements as institutional capacity develops.

Building block 3.3.A: Pollutant release and transfer registers (PRTR)

This sub-building block 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. For this reason, PRTRs are positioned within Layer 3 as a core operational instrument, while contributing system-wide to access to environmental information and evidence-based chemicals management.

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.

Building block 3.3.B: Industrial emissions control and permitting (IPPC / BAT)

This sub-building block 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.

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 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.

Building block 3.3.C: Chemical accident prevention, preparedness and response (CAPPR)

This sub-building block 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, 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.

Building block 3.4: Public health management of chemicals

This building block 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 component of this building block is the establishment or strengthening of poison centre functions, providing 24/7 expert toxicological advice to the public, healthcare professionals and authorities. Poison centres support 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.

5.4. Layer 4: Prevention and market transformation

Layer 4 focuses on preventive and upstream measures that reduce chemical risks at source by influencing product design, supply chains, markets and patterns of production and consumption. These Building Blocks support the substitution of substances of concern, improved information on chemicals in products, and the integration of chemical safety considerations into market practices and innovation pathways.

In circumstances where credible evidence indicates serious or irreversible risks, preventive measures, including substitution or phase-out where appropriate, may be justified as part of a proportionate and protective regulatory response.

Measures in this layer play a critical role in preventing future harm, reducing long-term environmental and health burdens, and avoiding the creation of legacy problems. While their implementation may require coordination across sectors and value chains, many preventive actions can be initiated early and deliver high impact, particularly where market leverage, trade dynamics or existing regulatory frameworks provide opportunities for action.

Building block 4.1: Product and supply-chain measures (CiP, circular economy)

This building block 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.

Key elements include systems for providing information on chemicals of concern in products 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 measures improve transparency across value chains, support informed decision-making by regulators, businesses and consumers, and facilitate safer reuse, recycling and circular economy approaches. They also contribute to the progressive substitution of substances of concern in products and supply chains.

Implementation may be phased and adapted to national contexts, taking into account market structures, regulatory reach and available capacity.

Building block 4.2: Environmental and legacy management

This building block 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.

6. Conclusion

The SMC is not a peripheral issue but a strategic investment in public health, economic resilience and long-term sustainability. A well-functioning national chemicals management system is a core component of modern governance, protecting populations from harm, supporting safe and productive workplaces, and ensuring that economic development is compatible with environmental protection.

This Building Blocks Framework provides a practical, non-binding implementation support tool to help countries translate the objectives and targets of the GFC into coherent and context-appropriate national action. It does not promote a single institutional model or assume the existence of comprehensive regulatory capacity at the outset. Instead, it sets out the key functions of an effective system and illustrates how these can be developed progressively, in line with national priorities, risks and available resources.

Implementing the Framework directly supports the targets of the GFC and contributes to the achievement of multiple Sustainable Development Goals (SDGs), including those related to good health (SDG 3), clean water (SDG 6), decent work (SDG 8), and responsible consumption and production (SDG 12). A robust national system transforms chemicals management from a perceived compliance burden into a driver of public health gains, economic efficiency, and sustainable innovation.

Operationalising the Building Blocks Framework

To translate the Building Blocks Framework into action, countries may follow an iterative and context-appropriate process. The layered structure and Building Blocks described define the functional architecture of a national chemicals management system, while the operational steps below illustrate how countries may translate that architecture into practical action over time, based on national circumstances.

1. **Baseline assessment:** Develop or update a national chemicals profile, mapping existing laws, institutions, enforcement arrangements and technical infrastructure, alongside available information on chemicals produced, imported, used and released. This provides a shared evidence base on current capacities, gaps and risks.

2. **Prioritisation informed by available data:** Use available data sources — including inventories, PRTRs where established, trade data and other regulatory or health information — to identify priority substances, sectors or exposure pathways. Where information is limited, initial prioritisation may rely on qualitative screening, international data and risk indicators, with refinement as national information systems are strengthened.

3. **Institutionalisation and financing:** Secure national budget lines and establish sustainable financing tools (fees, levies, EPR schemes) to ensure long-term continuity and viability.

Financing considerations should be integrated into the prioritisation process, alongside risk, exposure, feasibility and potential impact, to support proportionate and realistic sequencing of actions, in line with national capacities.

4. **Monitoring, review and learning:** Define a limited set of indicators, review progress regularly, and update priorities as capacities develop and new risks emerge. Monitoring and evaluation support transparency, accountability and continuous improvement.

This process is not linear. Information generation, prioritisation, regulatory development and capacity-building are mutually reinforcing and can progress in parallel, enabling countries to deliver early protective outcomes while strengthening system coherence and effectiveness over time.

By using the Building Blocks Framework as a strategic guide, countries can design national chemicals management systems that are credible, enforceable and sustainable. In doing so, they contribute to a future in which economic development, human health and environmental protection advance together, for the benefit of present and future generations.

Annex A: Table of interlinkages

This table illustrates the strong linkages between the Building Blocks Framework, 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.

Layers & Building block	*Related GFC Target(s)*	Relevant International Guidance or Tool	Summary of Linkage
1.1 Framework legislation and institutional setup	*A1 (adopt implement enforce legal frameworks and institutional capacity): this building block is the enabling mechanism for A1.* *E1 (mainstream SMC across sectoral plans budgets and development plans): a framework law or policy is the normal route to mandate mainstreaming across ministries and plans.* *E2 (partnerships and networks strengthened): institutional set up usually includes national focal points committees and coordination structures that operationalise partnership expectations.* *E6 (strengthen synergies with other policies such as health labour climate biodiversity): explicit institutional role allocation across environment health*	IOMC Toolbox for Decision-Making in Chemicals Management	An online tool developed by nine international organizations to help countries establish comprehensive chemicals management systems. The Toolbox's Industrial Chemicals Management Scheme includes a Legal and Institutional Framework module outlining the foundational components of a national chemicals regime, such as organizing legislation and administration, defining government/industry responsibilities, financing mechanisms, and other key considerations. This resource directly supports Building block 1.1 by guiding policymakers on how to create or strengthen a framework law, designate a lead authority, clarify ministerial roles, and coordinate institutions for sound chemicals management.
		UNEP LIRA Guidance (2015)	The LIRA guidance (Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for SMC) outlines how to assign clear mandates to institutions and establish coordinating bodies (e.g. national chemicals committees) to align actions across ministries. It also recommends engaging non-government stakeholders through formal mechanisms, and includes measures for sustainable financing of administrative capacities. This helps countries develop coherent governance structures and multi-stakeholder partnerships for chemicals safety.
		UNEP GUIDANCE National Authority for Chemicals Control: Structure and Funding	This document builds on an earlier United Nations Environment Programme (UNEP) publication, Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for SMC (LIRA Guidance); and provides additional information on how to establish and maintain a national authority structure for chemicals control.

	labour trade enables the synergies asked for in E6.		
1.2 Sustainable financing and economic viability	*E1 (mainstreaming into budgets and plans): this building block explicitly pushes mainstreaming via dedicated budget lines* *E3 (mobilise adequate predictable sustainable finance, including private and innovative finance): this building block is directly aligned (budget lines, cost recovery, levies).* *E4 (identify funding gaps, including through the GFC fund): financing assessments and plans are the practical way to identify gaps and justify external support.* *E5 (internalise costs of SMC through different approaches): fees levies and polluter pays instruments are exactly the mechanisms referenced in E5.*	UNEP LIRA Guidance (2015) – Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for SMC	The Guidance proposes measures such as administrative fees, chemical licensing charges, and budgetary provisions to recover the costs of national chemicals oversight.
		UNEP GUIDANCE National Authority for Chemicals Control: Structure and Funding	This document builds on an earlier United Nations Environment Programme (UNEP) publication, Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for SMC (LIRA Guidance); and provides additional information on how to establish and maintain a national authority structure for chemicals control.
		OECD Recommendation of the Council on the Implementation of the Polluter-Pays Principle	Building block 1.2 on sustainable financing and economic viability gives concrete effect to the OECD Recommendation of the Council on the Implementation of the Polluter-Pays Principle by embedding cost internalisation at the core of national chemicals management systems. Consistent with the Recommendation, it promotes the use of predictable and proportionate economic instruments such as registration and permitting fees, levies and other cost-recovery mechanisms to ensure that the costs of prevention, monitoring, enforcement and, where relevant, remediation are borne by those who place chemicals on the market or generate risks, rather than by the general public. By linking financing to regulatory effort and risk, and by encouraging stable budgetary arrangements and ring-fenced funds, this building block supports economically efficient regulation, avoids distortionary subsidies, and underpins the long-term financial sustainability of chemicals management in line with OECD guidance.
		SAICM Study on Industry Involvement in the Integrated	The present study is the first that aims to provide a holistic description of the activities associated with industry involvement in the integrated approach to

		Approach to Financing the Sound Management of Chemicals and Waste	financing the SMC and waste, including options for action at various levels and for a variety of actors.
1.3: International integration	*A2 (intergovernmental guidelines and toolbox support): the building block's focus on systematic use of IOMC tools and international approaches mirrors the A2 "guidelines/toolbox" pathway.* *B4 (apply guidelines best practices standardised tools): reliance on OECD MAD, GHS, and recognised assessments is a direct mechanism to meet B4 efficiently.* *E2 (strengthened partnerships and networks): international integration is, by definition, a partnerships and cooperation target.* *E6 (synergies and linkages): alignment with MEAs and relevant bodies operationalises E6*	Manual for the implementation of the Basel Convention	The Manual for the implementation of the Basel Convention aims at assisting Parties as well as non-Parties, the private sector, NGOs, and individuals to understand the obligations set up in the Convention. It explains the provisions of the Convention in simple language and gives examples of situations covered by the Convention (e.g. actions by the State of Export, Import and Transit, as well as by the Exporter, Importer, Carrier, Generator, Disposer, etc.) related to the environmentally sound management of hazardous wastes and their disposal. The Manual is complemented by a Checklist for the Legislator intended to assist Parties in their review of their national legal frameworks to ensure they adequately reflect the provisions of the Basel Convention.
		Guide to the Development of National Legal Frameworks to Implement the Basel Convention	Prepared by the Implementation and Compliance Committee and adopted by the Conference of the Parties at its fourteenth meeting (decision BC-14/15), the Guide is a comprehensive guidance document intended to help Parties ensure that they have in place adequate legal frameworks to fully implement the Convention. It is the primary guidance document Parties can turn to, to develop new legislation or to review existing legislation.
		Basel Convention	A variety of guidance documents are available to support Parties in implementing the convention
		Guide on the Development of National Laws to Implement the Rotterdam Convention - Secretariat of the Rotterdam Convention	This Guide is designed as a reference document and training tool to assist in the development of national laws to implement the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
		Guidance on developing and updating National Implementation Plans	A variety of guidance documents are available to support Parties in developing and updating their NIPs. These range from general guidance on developing, reviewing, and updating NIPs to specialized guidance on preparing inventories for specific POPs, as well as applying Best Available Techniques and Best Environmental Practices (BAT/BEP).

		(NIPs) - Stockholm convention	
		Minamata Convention	A variety of guidance documents are available to support Parties in implementing the convention
1.4 Enforcement and compliance assurance	*A1 (implement and enforce frameworks): This Building Block supports implementation of Target A1 by strengthening enforcement mechanisms and ensuring that regulatory obligations are effectively implemented.* *A4 (prevent illegal trade and traffic): risk-based inspections and penalties support deterrence and detection, especially when coordinated with customs.*	UNEP Enforcement of Chemicals Control Legislation (2019)	UNEP's guidance document specifically on building and strengthening national enforcement programmes for chemicals laws. It explains core enforcement concepts – such as legal powers for inspectors, risk-based inspection planning, and progressive enforcement actions – needed to ensure industries comply with chemical safety rules. By outlining methods for efficient inspections and "how to ensure effective compliance with rules and regulations" through enforcement mechanisms, this guidance helps countries establish graduated penalty systems and compliance promotion strategies (noting the importance of supporting smaller enterprises in meeting their obligations).
		OECD Regulatory Enforcement and Inspections Toolkit	OECD's best-practice guidance helps authorities design inspection and compliance strategies that focus on the highest risks and apply graduated sanctions, which directly supports the Building Blocks Framework's call for risk-based inspections and proportionate penalties.
		Guidelines on Compliance and Enforcement of a Pesticide Regulatory Programme (FAO/WHO, 2006)	An authoritative guide under the FAO/WHO pesticide code that advises governments on organizing enforcement of pesticide laws. It underscores that even the best regulations are ineffective without on-the-ground compliance: regular inspections of pesticide manufacturers, importers, and sellers are needed to ensure rules are followed. The guidelines lay out core principles and Building Blocks for a pesticide compliance and enforcement program – from legal authority for inspectors, to risk-based inspection planning, to using a range of compliance tools and graduated penalties.
		UNEP Guidelines on Compliance with and Enforcement of Multilateral Environmental Agreements (2002)	A global guideline document (adopted with UNEP's leadership and used in the UNECE region) that provides a framework for countries to implement and enforce environmental agreements, including chemicals-related conventions. These guidelines present a "set of approaches and considerations" for developing effective national laws, inspection systems, and enforcement strategies for environmental compliance. Key recommendations include establishing clear legal mandates and institutions for enforcement, employing

			monitoring and reporting tools to detect non-compliance, and applying appropriate sanctions or remedies for violations. The guidelines highlight the need for proportionate penalties and compliance incentives, and their breadth and clarity have made them a foundational reference for building enforcement programmes under treaties on chemicals and pollution control.
1.5 Customs and trade controls	*A4 (prevent illegal trade and traffic): border controls and HS code integration are core measures for this target.* *B3 (data on production use emissions and releases made available): trade data systems are a major source of national "how much of what" flows and can feed data consistent with the target.*	Illegal Trade in Chemicals (UNEP–GRID Arendal Report, 2020)	This UN Environment report provides a global overview of the scale and challenges of illegal trade in toxic, hazardous and highly regulated chemicals. It analyses enforcement gaps and highlights best practices for border control and inter-agency cooperation. The findings inform policymakers and authorities on strengthening detection of illicit chemical shipments, improving information-sharing (e.g. via customs alert systems), and targeting high-risk trade flows
		Basel Convention – Guidance on Illegal Traffic (2017)	Developed under the UN's Basel Convention on hazardous wastes, this guidance focuses on enforcement cooperation and compliance in the context of cross-border movement of hazardous chemicals and wastes. It provides "practical and workable guidance for all actors involved in control of transboundary movements", including customs officers, environmental inspectors, police, and prosecutors. The document helps countries set up legal and procedural frameworks to detect and deter illegal shipments (e.g. through risk profiling and inspection of shipments), assign clear responsibilities (exporter, importer, etc.), and apply penalties or corrective measures in line with the convention. By harmonizing how violations are handled, this international guidance strengthens enforcement networks and promotes compliance, complementing national chemicals enforcement programmes (especially where illegal trade can undermine domestic chemical safety efforts).

		OECD Recommendation of the Council on Countering the Illegal Trade of Pesticides	Building block 1.5 on customs and trade controls operationalises the Organisation for Economic Co-operation and Development Recommendation on Countering the Illegal Trade of Pesticides by translating its enforcement and cooperation principles into practical border and trade control measures. In line with the Recommendation, Building block 1.5 emphasises the role of customs as a first line of defence through risk-based targeting, alignment between chemical regulatory requirements and customs procedures, and the use of harmonised product identifiers and HS codes to detect non-compliant or prohibited products. By promoting information exchange between chemicals authorities and customs, strengthening inspection capacity, and integrating trade data into compliance and enforcement strategies, the building block supports effective prevention of illegal imports and exports, protects human health and the environment, and reinforces market integrity, fully consistent with OECD guidance on tackling illegal pesticide trade
		OECD Best Practice Guidance to Identify Illegal Trade of Pesticides	Developed under the IOMC framework, this guidance provides regulators and inspectors with concrete best practices to detect and combat illegal pesticide traffic. It covers the entire pesticide supply chain – from manufacture and distribution to border inspection and disposal – emphasizing risk-based targeting of shipments and coordinated enforcement. The OECD guidance advises authorities on profiling suspicious consignments (e.g. mislabelling, misuse of HS codes by smugglers) and on strengthening cooperation across countries and agencies.
		FAO/WHO Guidance Note on Addressing Illegal Trade of Pesticides (2025)	Published via the FAO/WHO pesticide management program, this normative guidance strengthens national laws and enforcement against illegal pesticides. It advises on establishing robust import/export licensing, border inspection, and market surveillance for pesticides. Notably, it promotes closer collaboration between customs, health, and environment authorities by providing common standards and practices for oversight. The guidance calls for monitoring of pesticide trade flows, information-sharing on illegal activities, and coordinated law enforcement across borders.

		Green Customs Initiative	The Green Customs Initiative, coordinated by UNEP with partners (WCO, Interpol, MEA Secretariats, UNODC, OPCW, etc.), provides specialized training to customs officers on preventing illegal trade in environmentally sensitive goods, including toxic chemicals, hazardous waste, ozone-depleting substances and others. The Green Customs Guide to Multilateral Environmental Agreements consolidates the trade-related requirements of treaties like the Basel, Rotterdam, Stockholm, Minamata and Montreal Protocol, translating them into practical customs enforcement actions. It enhances customs' capacity to recognize controlled chemicals (e.g. by HS code flags, proper labelling) and to detect smuggling techniques.
1.6 Governance and stakeholder coordination	*A1 (institutional capacity): interministerial coordination and lead authority designation are core parts of capacity.* *B5 (education training and awareness programmes): multi stakeholder structures typically carry or steer training and outreach programmes* *E2 (partnerships and networks): structured stakeholder platforms and predictable dialogue mechanisms directly serve E2.* *E6 (synergies across policies): governance structures are what make synergies real in day-to-day decision making.*	UNEP LIRA Guidance (2015)	The LIRA guidance (Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for SMC) outlines how to assign clear mandates to institutions and establish coordinating bodies (e.g. national chemicals committees) to align actions across ministries. It also recommends engaging non-government stakeholders through formal mechanisms and includes measures for sustainable financing of administrative capacities. This helps countries develop coherent governance structures and multi-stakeholder partnerships for chemicals safety.
		FAO/WHO International Code of Conduct on Pesticide Management (2014)	A voluntary global framework that sets standards for sound pesticide management across their life-cycle. The Code of Conduct explicitly defines the roles and shared responsibilities of all actors – government regulators, the private sector, farmers/workers, academic and civil society – in a cooperative effort
		OECD Taking an integrated approach to the promotion of transparency, integrity, accountability and stakeholders' participation: Towards an Open Government Strategy	Presents a concept and related evidence to support the development of whole-of-government frameworks in the area of open government. It highlights the benefits of Open Government Strategies and presents concrete and practical considerations on ways to design, implement, monitor and evaluate them.

		UNDP INSTITUTIONAL AND COORDINATION MECHANISMS	Aims to provide information on how countries have adapted their existing institutional and coordination frameworks or established new ones in order to implement the SDGs
1.7 Monitoring, evaluation and learning	*B3 (data on production and use and emissions and releases): national indicator systems routinely aggregate these datasets where available.* *B4 (standardised tools and practices): indicator definitions and review cycles usually require standard methods and QA.* *B7 (monitoring and surveillance data on concentrations and exposure sources): the building block's monitoring loop aligns directly.* *E1 (mainstreaming): performance indicators tied to budget and planning cycles are a mainstreaming mechanism*	UNEP Global Chemicals and Waste Indicator Review Document	This guidance document presents a methodology for measuring chemicals and waste-related indicators, particularly those aligned with the SGDs. It strengthens countries' capacity to collect and analyse data on chemical pollution and hazardous waste, helping them identify data gaps and track progress toward global targets
		OECD Guidance on Developing Safety Performance Indicators For Industry	This OECD guidance (developed within the IOMC framework) helps organizations in the chemicals industry establish and use performance indicators to monitor safety and prevent chemical accidents. It outlines a seven-step process for setting targets and tracking both outcomes and activities, enabling companies and authorities to measure the effectiveness of safety management systems and interventions. Importantly, the guidance encourages a feedback loop: enterprises are advised to start with a few key indicators and then expand and refine their indicator programmes as experience is gained, reviewing results and updating their goals accordingly.
2.1: Classification and labelling: The GHS	*A1 legal and institutional frameworks): Supports implementation of national legal and institutional frameworks by operationalising hazard communication requirements.* *B2 (information on chemicals in materials and products throughout the value chain): SDS and labelling are an early hazard information layer that can support broader chemicals in*	IOMC Classification and Labelling System Scheme	The classification and labelling scheme in the IOMC toolbox supports countries in implementing the UN globally harmonised system (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.
		UNECE GHS website	The official website defines the entire GHS framework. Published by UNECE, the Purple Book sets out the harmonized classification criteria for physical, health, and environmental hazards, along with the standard hazard communication elements (pictograms, signal words, hazard statements,

	products systems later. *B4 (hazard communication and access to information): Directly implements harmonised hazard classification, labelling and safety data sheets to ensure access to chemical hazard information.* *B5 (education training and awareness): GHS implementation inherently requires training for workplaces regulators and supply chains.* *B6 (implement GHS): directly corresponds to this Building Block.* *D7 (occupational health and safety practices): hazard communication is a key input for OSH risk controls.*		precautionary statements and SDS format). On the website many elements for supporting GHS implementation can be found
		UNEP Guidance: Risk Reduction Tools for Chemicals Control (2019)	A guidance document from the UN Environment Programme (Chemicals and Health Branch) emphasizing GHS as a cornerstone of chemicals risk reduction. It advises governments to incorporate the Globally Harmonized System into national chemicals control laws, so that hazard classification, labelling requirements, and SDS use are "in line with the GHS." This ensures that information on chemical hazards and safe handling is conveyed down the supply chain in a standardized format
		OECD eChemPortal – Global Portal to Information on Chemical Substances	An online tool hosted by the OECD that provides free access to international chemical hazard data, including GHS classification and labelling information from many jurisdictions. eChemPortal allows users to search for substances by name or CAS number and retrieve their hazard classifications according to the UN GHS criteria. It also links to official chemical databases and Safety Data Sheets. By centralizing GHS-based classifications and hazard profiles, eChemPortal helps industry and regulators apply consistent labels and precautions, thus facilitating GHS implementation and improving hazard communication globally.
		ILO / OECD / UNITAR - The global partnership to implement the GHS	The OECD, ILO and UNITAR have worked in a partnership since 2002 to support implementation of the GHS, building on their collaboration through the IOMC. The partnership, alongside a coalition of stakeholders including governments, regional economic integration organizations, trade unions, NGOs and the private sector, is seeking to re-energise commitment and scale up implementation of the GHS and has produced a number of tools and guidance
		UNITAR/ILO - Developing a National GHS Implementation Strategy (2022)	A comprehensive guidance document prepared by UNITAR in cooperation with ILO (under the IOMC umbrella) to help countries plan and execute their adoption of the GHS. This guide walks officials through evaluating existing chemical safety infrastructure, identifying gaps, and drafting a step-by-step national GHS implementation plan. It covers legal and regulatory measures (e.g. updating hazard classification standards and labelling laws), stakeholder coordination, training, and outreach needed for effective GHS rollout.

2.2: Harmonised data quality and Mutual Acceptance of Data (MAD/GLP)	*B1 (data on chemical properties generated and accessible): GLP and acceptance of studies are foundational to reliable property datasets.* *B4 (apply guidelines best practices standardised tools): MAD GLP are standardisation mechanisms by design.* *E2 (partnerships and networks): MAD is explicitly built around international cooperation and reliance.*	OECD Mutual Acceptance of Data (MAD)	MAD is a framework where safety data generated in one country is accepted by others, avoiding duplicate testing. Adopting OECD's MAD system allows countries to leverage data from abroad, saving resources and fostering mutual trust.
		OECD Principles of Good Laboratory Practice (GLP)	The OECD Principles of GLP are the internationally accepted quality standards for non-clinical laboratory studies. These principles "establish quality standards for the organisation and management of test facilities" and guide how studies on chemical safety are planned, performed, monitored, and reported. By defining requirements for personnel, procedures, equipment, and record-keeping, OECD GLP ensures that test data are reliable, traceable, and credible across laboratories and jurisdictions.
3.1: Regulation of chemical products and industrial substances	*A1 (implement and enforce frameworks): risk-based regulation is the operating content of an enforceable system.* *B2 (chemicals in products information): the Building Blocks Framework's later link to supply chain transparency builds naturally from substance identification and hazard profiles* *B3 (data on production and use and emissions and releases): inventories, authorisation files and post market controls are key data generators.*	OECD Guidance on Establishing a National Chemicals Register (2024)	This recent report by the OECD provides detailed advice for governments on setting up a national chemical's register (inventory of chemicals in commerce). It frames the register as "a key element for SMC", typically a database of substances and their manufacturers/importers that gives authorities information on chemicals being used domestically. The guidance explains that collecting data on chemical identities, the volumes placed on the market, and their intended uses – combined with available hazard information – enables regulators to identify and prioritize chemicals of concern for risk management. It covers defining the register's purpose and scope, legal reporting requirements for industry, data management, and using the inventory to inform decisions

	B4 (hazard and risk assessment tools): this building block institutionalises the use of risk assessment and proportionate risk management tools. *C1 (processes and programmes with timelines for issues of concern): prioritisation and workplans for substances and products are the practical "programme of work" implied by C1.* *D2 (policies encouraging safer alternatives and sustainable approaches, including BAT and circular economy approaches): policy levers and authorisation conditions can promote safer substitutions and sustainable practices.* *D6 (sector strategies to reduce impacts and inputs): risk controls frequently translate into sectoral measures and standards, especially where major sectors are prioritised.*	WHO National chemicals registers and inventories: benefits and approaches to development	An authoritative guidance document from the WHO Regional Office for Europe that describes practical approaches to set up national chemicals registers and how these improve chemicals management. It compiles international recommendations that can guide countries in establishing their own chemicals inventory and discusses the complementary roles of international and national actions. The document provides examples of existing national registers/inventories (how they were developed, their scope, and how they are maintained) to illustrate best practices
3.1.A: Regulation for chemical products for specific uses (Registration and licensing)	*Same as 3.1 plus:* *A7 (phase out highly hazardous pesticides where risks not managed and alternatives available): pesticides authorisation and re-evaluation are core delivery mechanisms for A7.*	IOMC National management scheme for pesticides	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.

	D5 (support safer and sustainable agricultural practices including IPM and non-chemical alternatives): product regimes can drive transitions through conditions restrictions and promotion of alternatives.	FAO Pesticide Registration Toolkit	The FAO Pesticide Registration Toolkit is a decision support system for pesticide registrars in low- and middle-income countries. It will assist registrars in the evaluation and authorization of pesticides. The Toolkit can best be considered as a web-based registration handbook intended for day-to-day use by pesticide registrars.
		WHO guidelines on pesticide legislation	WHO's Guidelines on pesticide legislation (2021) directly support the implementation of Building block 3.1.A by guiding countries in developing or strengthening national laws that regulate the lifecycle of pesticides. The document outlines essential legal provisions for product registration, import controls, licensing, compliance and enforcement, and aligns legislation with public health and environmental protection goals. It provides model legal text and explains how legislation can support risk-based registration systems.
		WHO – Guidance on Pesticide Licensing Schemes (Code of Conduct)	WHO's Code of Conduct guidance (2021) provides detailed guidance on national pesticide licensing schemes. It builds on FAO/WHO pesticide legislation and enforcement guidelines, outlining how to establish or strengthen regulatory programmes for pesticide registration, import, distribution, and use (including agriculture, public health and household 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	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.
		UNEP Guidance: Risk Reduction Tools for Chemicals Control (2019)	A guidance document from the UN Environment Programme (Chemicals and Health Branch) emphasizing GHS as a cornerstone of chemicals risk reduction. It advises governments to incorporate the Globally Harmonized System into national chemicals control laws, so that hazard classification, labelling requirements, and SDS use are "in line with the GHS." This ensures that information on chemical hazards and safe handling is conveyed down the supply chain in a standardized format

3.2: Occupational Safety and Health (OSH) Requirements	*B5 (training and awareness): OSH regimes require workforce training and employer capacity building.* *B6 (GHS): OSH chemical safety duties strongly depend on GHS aligned hazard communication.* *D7 (ensure effective occupational health and safety practices and environmental protection throughout supply chain): this building block is the OSH delivery pathway for D7.*	IOMC Occupational Safety and Health Management Scheme	This scheme consolidates international guidance on protecting workers from chemical risks across their lifecycle. 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.
		ILO Chemicals Convention, 1990 (No. 170)	The Chemicals Convention (No. 170) supports Building block 3.2 by establishing core legal duties for safe chemicals management in workplaces, including hazard identification and communication (labelling and safety data sheets), worker information and training, exposure prevention and control measures, and responsibilities across employers, suppliers and competent authorities. It reinforces alignment between national OSH requirements and international standards and provides a normative basis for integrating GHS-aligned hazard communication into workplace risk management.
		ILO Chemicals Recommendation, 1990 (No. 177)	Recommendation No. 177 operationalises Building block 3.2 by providing practical measures to implement the Chemicals Convention, including workplace risk assessment, safe storage and handling, emergency arrangements, worker participation, and training expectations. It can be used as an implementation companion to frame detailed national OSH regulations and guidance for employers and inspectors.
		ILO Occupational Cancer Convention, 1974 (No. 139)	Convention No. 139 supports Building block 3.2 by requiring periodic determination of occupational carcinogens and the adoption of preventive and protective measures to control worker exposure. It strengthens the legal basis for risk-based workplace controls, targeted monitoring and health protection measures for high-concern substances, complementing national prioritisation and risk management approaches.
		ILO: Safety in the Use of Chemicals at Work (1993)	Practical guidance for chemical safety in the workplace. It emphasizes a systematic approach: manufacturers must provide hazard information (labels, MSDS) and employers must implement measures (hazard communication, risk assessments, engineering controls, training) to protect workers from chemical risks

3.3.A: Facility safeguards and emergency preparedness (PRTR, IPPC, CAPPR)	*B4 (apply standard tools and best practices): CAPPR, IPPC and BAT are structured best practice approaches.*		
3.3.A: PRTR	*Same as 3.2 plus:* *B3 (data on emissions and releases): PRTRs and permitting are explicit emissions and releases data generators.* *B7 (monitoring and surveillance): PRTR and facility reporting can feed exposure source mapping and environmental surveillance priorities* .	IOMC National management scheme for PRTRs	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.
		UNECE Protocol on pollutant release and transfer registers (Kyiv PRTR Protocol) – full text	The Kyiv PRTR Protocol supports Building block 3.3 by providing the binding international framework for establishing a national PRTR system, including facility reporting, pollutant lists and thresholds, public access provisions and quality requirements. It strengthens transparency and accountability for industrial releases and transfers, and provides an internationally recognised basis for PRTR design choices referenced under the Building Blocks Framework's PRTR component.
		UNECE Guidance on implementation of the PRTR Protocol	This UNECE guidance supports Building block 3.3 by providing practical direction on how to implement the PRTR Protocol, including scope, institutional arrangements, reporting architecture, data quality approaches, and public access features. It helps translate Protocol obligations into a workable national PRTR programme aligned with capacity constraints, and strengthens consistency of reporting and use of PRTR data for oversight and risk management.
		UNITAR – PRTR	Provides practical guidance to support countries in the design and phased implementation of PRTR systems, including legal frameworks, institutional arrangements, reporting mechanisms and public access to environmental information, in support of transparency and evidence-based decision-making.
		OECD Guidance Document on elements of a PRTR: Part 1	Sets out the core elements, objectives and design principles of pollutant release and transfer registers, supporting the establishment of transparent, comparable and reliable systems for reporting and public disclosure of industrial emissions.

		OECD Guidance Document on elements of a PRTR: Part 2	Provide internationally recognised guidance on the objectives, core elements and design of PRTR systems (Part I), as well as practical considerations for implementation, reporting, data management and public dissemination (Part II), supporting transparency, environmental monitoring and evidence-based decision-making.
		Implementing a National PRTR Design Project: A Guidance Document	This Guidance Document is the core of the UNITAR Guidance Series for Implementing a National PRTR Design Project. The UNITAR Guidance Series, which is comprised of the present document and four supplements, has been developed to assist countries in implementing a national PRTR design project. It builds on the substantive and technical information contained in the OECD Guidance Manual for Governments by providing countries with a suggested step-wise approach for undertaking the design of a national PRTR system
3.3.B: IPPC	*Same as 2.2 plus:* *D2 (policies encouraging BAT, green procurement, circular economy): BAT and integrated permitting align directly with the BAT reference in D2.*	IOMC 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 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.
		OECD – Best Available Techniques (BAT) for Industrial Pollution	OECD defines Best Available Techniques (BAT) as the most effective modern methods to prevent or reduce industrial pollution. Its guidance helps governments set evidence-based permit standards: BAT-based approaches use state-of-the-art controls that are economically and technically feasible, ensuring high protection of health and environment.
3.3.C: CAPPR	*Same as 2.2 plus:* *D7 (OSH and environmental protection practices): accident prevention and operational controls*	IOMC 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

	deliver both worker and environmental protection		preparedness and response capabilities, even where inspection and enforcement capacity is limited.
		ILO Prevention of major industrial accidents Convention, 1993 (No. 174)	Convention No. 174 supports Building block 3.3 by setting international requirements for preventing major accidents involving hazardous substances and limiting consequences when they occur. It underpins legal provisions for identifying high-hazard installations, requiring safety management systems, emergency planning and coordination, worker involvement, and competent authority oversight, aligning directly with CAPPR-type frameworks in the Building Blocks Framework.
		OECD – Guiding Principles for Chemical Accident Prevention (2023)	OECD's Guiding Principles (3rd ed., 2023) provide global recommendations for preventing and managing major chemical accidents. They synthesize lessons from recent disasters and support authorities and industry in planning and operating facilities safely. The principles cover accident prevention measures, preparedness planning, and response actions to mitigate impacts of incidents.
3.4: Public health surveillance and poison centres	*A6 (access to poison centres and training in clinical toxicology): direct match.* *B5 (training and awareness): poison centre operation depends on trained professionals and outreach.* *B7 (monitoring and surveillance data on exposure): health surveillance and poison centre datasets are core exposure intelligence streams.*	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.
		WHO Chemicals roadmap (2017)	The WHO Chemicals Road Map provides a structured framework to support countries in developing tailored national action plans by promoting specific effective public health intervention and by leveraging the health sector's role. The Road Map prioritizes action areas related to reducing health risks, improving knowledge and evidence, and by strengthening institution capacity, leadership and multi-sectoral coordination
		WHO International health regulations (2005) – consolidated text incorporating amendments	The IHR support Building block 3.4 by setting legally binding requirements for national capacities to detect, assess, notify and respond to public health events, explicitly including chemical events within all-hazards preparedness. They provide the international legal basis for establishing national coordination functions (including national focal points), surveillance and response systems

			that integrate poison centre operations and health-sector preparedness for chemicals incidents.
		WHO guidance: International health regulations and chemical events	This WHO guidance supports Building block 3.4 by describing how to build IHR core capacities specifically for chemical events, including roles of national institutions involved in chemical management, inter-ministerial coordination mechanisms, event assessment and notification pathways, and response readiness. It strengthens the Building Blocks Framework's linkage between chemicals management, public health surveillance and emergency response functions.
		WHO Guidelines for establishing a poison centre	WHO guidelines (2021) stress that national poison centres are critical for chemical safety. They provide expert toxicological advice and support clinical management of poisoning cases, while collecting surveillance data. Under the International Health Regulations, poison centres form an integral part of a country's capacity to detect and respond to chemical public health emergencies
4.1: Product and supply-chain measures (CiP, circular economy)	*B2 (information on chemicals in materials and products throughout value chain): this building block is the Building Blocks Framework's primary mechanism for B2.* *D1 (company innovation for sustainable chemistry and resource efficiency): supply chain transparency and product passports are common enabling conditions for innovation investments* *D2 (policies encouraging safer alternatives and sustainable approaches, including circular*	UNEP - Global chemicals outlook II	Building block 4.1 aligns with UNEP's Global Chemicals Outlook II by addressing chemicals risks at the product and supply-chain level as a prerequisite for sustainable production and consumption. By promoting chemicals-in-products information, supply-chain transparency and substitution of substances and uses that pose significant risks, Building block 4.1 responds directly to the Outlook's call to move upstream, reduce future chemical legacies and enable a transition towards circular economy models that minimise harm to human health and the environment.
		OECD- Guidance on Key Considerations for the Identification and Selection of Safer Chemical Alternatives	Building block 4.1 on product and supply-chain measures aligns with the OECD guidance on the identification and selection of safer chemical alternatives by creating the information and governance conditions needed for effective substitution. Through chemicals-in-products disclosure and supply-chain transparency, Building block 4.1 enables access to hazard and use information that underpins alternative assessments, supporting informed substitution decisions, reducing the risk of regrettable substitution and encouraging safer product design and circular economy practices in line with OECD guidance.

	economy): explicit alignment via circular economy and product level measures. *D4 (priority to sustainable solutions and safer alternatives in R and I): chemicals in products systems enable informed substitution and targeted innovation.* *D6 (sector strategies): product and supply chain measures are often implemented sector by sector (construction, textiles, electronics, etc).*	OECD - Towards a more resource-efficient and circular economy	Building block 4.1 supports the OECD guidance on moving towards a more resource-efficient and circular economy by addressing chemicals risks upstream in products and supply chains. Through chemicals-in-products information and supply-chain transparency, it helps prevent substances of concern from circulating in reuse and recycling streams, supports safer material choices at the design stage, and enables circular economy approaches that protect human health and the environment in line with OECD policy objectives
4.2: Environmental and legacy management	*B3 (emissions and releases data): contaminated site inventories and monitoring frequently rely on historical and current release datasets and strengthen future reporting.* *B7 (monitoring and surveillance data): environmental and human monitoring programmes directly implement B7.* *C1 (processes and programmes for issues of concern): contaminated sites and legacy pollution are classic "issues of concern" requiring programmes with timelines.* *E5 (internalise costs): the Building Blocks Framework's polluter pays*	Guidance on Best Available Techniques and Best Environmental Practices for the Management of Sites Contaminated with Persistent Organic Pollutants - Secretariat of the Stockholm Convention	This recently adopted guidance (Feb 2025) provides a comprehensive framework for identifying, assessing, managing and remediating POPs-contaminated sites. It covers development of contaminated-site inventories, risk-based site assessment and environmentally sound remediation techniques (including financing and legal measures). In accordance with Article 6 of the Convention, it emphasizes strategies to locate legacy POPs sites and to clean them up in a sustainable manner
		Guidance on the Management of Contaminated Sites – Secretariat of the Minamata Convention on Mercury	This official guidance (adopted by COP 3 in 2019) helps Parties implement Article 12 of the Convention. It advises how to survey and inventory mercury-contaminated sites, assess human and ecosystem risk, engage stakeholders, and design cleanup plans consistent with "polluter pays" principles. It includes practical advice on monitoring sites and evaluating remediation costs and benefits

	framing is directly aligned with E5. *E6 (synergies): legacy management intersects strongly with health, labour, land use, biodiversity, and climate resilience policies.*		