Gaps Assessment and GHS Implementation Roadmap

Ghana

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Author(s)	Marco Camboni
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1 Introduction

Recognising the need for a comprehensive and cohesive approach to chemical management, Ghana has embarked on a strategic journey towards the implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). This report, which outlines the Gaps Assessment and GHS Implementation Roadmap, is a crucial step towards enhancing chemical safety and environmental sustainability.

This document serves as a cornerstone for Ghana's commitment to adopting global standards in chemical management. The roadmap draws on extensive findings from the baseline assessment conducted earlier, incorporating insights and practices established by UNEP, UNITAR, ILO, and other international organisations.[1,2,3,4]

Ghana's journey towards GHS implementation is underpinned by a recognition of key areas requiring improvement. The gaps assessment highlights three main areas: the legislative framework, sustainable financing of institutional capacity, and the capability for implementation and enforcement. These elements form the foundation of the structured action plan laid out in the roadmap.

The roadmap is structured into seven key elements, each addressing a specific aspect of the GHS implementation process. These include preparatory steps, establishing a GHS-based regulatory framework, capacity building and training, raising awareness, enforcement and compliance, international collaboration, and monitoring, evaluation, and reporting. Each element is meticulously planned with action owners, support structures, required resources, and targeted timelines.

This Gaps Assessment and Roadmap is not just a strategic document; it is a testament to Ghana's dedication to fostering a safe and sustainable chemical management environment. By aligning with the GHS, Ghana is taking a significant step towards protecting its citizens and the environment from the potential hazards of chemicals, while also ensuring compliance with international standards and practices.

The successful implementation of this roadmap will mark a significant milestone in Ghana’s journey towards a safer, more environmentally responsible future. It will also serve as a model for other nations in the region, demonstrating the tangible benefits of adopting and implementing the GHS in national chemical management strategies.

1 UNITAR/ILO 2010: Developing a National GHS Implementation Strategy. A Guidance Document to support implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). February 2022 Edition (as of the 8th revised edition of the GHS

2 ICCA 2019: A Selection and Summary of Case-Studies of Countries or Regions with Experience in Adopting and/or Implementing the Globally Harmonized System (GHS) of Classification and Labelling of Chemicals.

3 UNITAR 2021: GHS Implementation Experiences and lessons learned.

4 UNITAR 2020: Key Elements of a National GHS Adoption and Implementation Roadmap.

2 Gaps assessment

The three main gaps in Ghana relate to the legislative framework, the lack of sustainable financing of institutional capacity for chemicals control and the capacity to implement and enforce the upcoming requirements on the classification and labelling of chemical products. This section summarises the key findings of the baseline analysis, which have informed the development of the action roadmap.

2.1 Legislative framework

The chemical regulatory framework is set by the Environmental Protection Agency Act, 1994 (Act 490) (EPA Act) and the Pesticides Control and Management Act, 1996 (Act 528).[5] The Act defines structure and functions of the Hazardous Chemicals Committee (HCC) and regulates pesticides management and control. Part II of the EPA Act contains provisions for the classification, registration, labelling and transport of pesticides, although these do not refer to the GHS or any specific classification criteria, information to be included in the label and requirement for safety data sheets. There are no requirements for industrial and consumer chemicals, but there is an informal arrangement in place for which the HCC uses its discretionary powers to regulate chemicals other than pesticides.

The EPA is working on a new bill 'on chemical weapons and industrial chemicals' that will require the registration of chemicals and will have provisions on the restriction of manufacture, import, and export of certain chemicals. The Draft Bill is undergoing further review and drafting by the Attorney General's Department and is expected to be completed and submitted for cabinet and parliamentary approval in the first quarter of 2024. The Ghanian authorities may therefore consider whether to include classification and labelling requirements in this draft bill or develop a new specific piece of legislation.

2.2 Sustainable financing of institutional capacity

Having a sustainable financing framework for institutional capacity in the context of chemicals management is crucial for several reasons:

- Effective implementation of legislation: A sustainable financing framework ensures that institutions responsible for implementing chemicals legislation have the necessary resources to carry out their functions effectively. This includes activities related to monitoring, enforcement, and compliance.
- Human resources development: Financial support allows for the training and development of human resources within institutions. This is essential for building the expertise needed to manage complex chemical-related issues, including risk assessment, regulation, and emergency response.
- Infrastructure and technology: Sustainable funding enables the establishment and maintenance of necessary infrastructure and technological systems. This may include laboratories, monitoring equipment, and information systems critical for data collection and analysis.
- Timely response to emergencies: Adequate funding ensures that institutions can respond promptly to chemical emergencies. This includes having the necessary personnel, equipment, and procedures in place to address incidents like spills, accidents, or other hazardous situations.

[5] The two acts have been merged, with Act 528 being now Part II of act 490. Available at: http://www.epa.gov.gh/epa/sites/default/files/downloads/environmental%20protection%20agency%20act%201994.pdf

- Data collection and analysis: Financial support allows institutions to collect, analyse, and manage data related to chemical use, exposure, and risks. This information is vital for informed decision-making and the development of evidence-based policies.
- Capacity for regulatory oversight: Sustainable financing provides the capacity for regulatory bodies to oversee the industry effectively. This involves conducting inspections, audits, and ensuring that companies comply with regulations, permits, and licensing requirements.
- Public awareness and stakeholder engagement: Funding is essential for public awareness campaigns and stakeholder engagement programmes. This helps in educating the public about the risks associated with certain chemicals, promoting responsible chemical use, and involving stakeholders in decision-making processes.
- Research and Development: Financial resources support research and development activities aimed at identifying safer alternatives, assessing the environmental and health impacts of chemicals, and advancing scientific understanding in the field.
- Long-term planning and stability: Sustainable financing provides stability for institutions engaged in chemicals management. Long-term planning becomes feasible, ensuring that the institutional capacity is maintained over time.
- Compliance with international agreements: Adequate financing is necessary to meet obligations under international agreements, including reporting requirements and participation in collaborative initiatives.
- Incentives for industry compliance: Sustainable funding can be used to establish incentive programmes that encourage industry compliance with environmental and safety standards. This fosters a cooperative approach between regulatory bodies and the private sector.

In summary, a sustainable financing framework for institutional capacity is a cornerstone for building a robust and effective chemicals management system. It ensures that the necessary resources are available to address the complexities of regulating and managing chemicals in a way that protects human health and the environment.

The implementation of legislation on the classification and labelling of chemical substances will require Ghanian companies to adapt or develop GHS-compliant hazard communication tools, which are the basis for the sound management of chemicals. Chemical companies make profit by producing and importing chemical products and services which are key for any modern economy. The correct management of the risks involved in the production, import, placing on the market, and use of chemicals require chemical companies to step up to their important responsibilities. Placing the requirements of classification and labelling on industry stakeholders lower significantly the costs for the public authorities. However, public authorities still have very important roles to play:

- Developing legislation and guidance
- Providing training and capacity building
- Increasing awareness on the sound management of chemicals
- Ensuring compliance with the legislation

All these tasks have costs that require reliable, secure, and predictable financing sources. The EPA does not receive any funding by the government from the state budget. All the work done is self-financed through fees and charges obtained from permits and licenses. Part of the funding is used for enforcement, monitoring, and administration. The EPA budget is reviewed annually, and fees adapted to cover for the expenses. Some additional funding comes from grants from external donors. The EPA will have to consider how to cover the costs of their activities related to classification and labelling legislation, possibly considering the national chemical legislative framework as a whole, to build a coherent and sustainable financing system.

2.3 Implementation and enforcement capacity

The GHS Implementation Committee needs to be established. During the contractors' visit in Accra in April 2023, its possible composition was discussed, and it was suggested that it could be composed of the same members that were part of the Special Programme Committee:

- Environmental Protection Agency
- Ministry of Environment, Science, Technology & Innovation
- Ministry of Health
- Ministry of Trade and Industry
- Water Research Institute of the Council for Scientific and Industrial Research
- Customs Division of the Ghana Revenue Authority
- Ministry of Foreign Affairs and Regional Integration
- Ministry of Lands and Natural Resources
- Ministry of Information
- Plant Protection Regulatory Services Directorate of Ministry of Food and Agriculture
- Department of Factories Inspectorate of the Ministry of Employment and Labour Relations
- Ghana Health Service
- Planetary Harmony Solutions
- Environment Youth Action Network
- Ghana Standards Authority
- National Development Planning Commission

The EPA could consider the involvement of the Ministry of Transport and the Ministry of Interior, the latter as coordinator of the emergency services (the Ghana Police Service and the Ghana National Fire Service).

2.3.1 Public authorities

The Chemicals Control Management Centre (CCMC) of the EPA employs 15 Full-Time Equivalents — although not all are permanent staff. CCMC staff oversee the implementation of Part II and sections of Part I of the EPA Act. In practice, the five main workstreams relate to:

- Pesticides
- Industrial and consumer chemicals
- Waste
- Enforcement
- International projects

CCMC hosts two national multi-stakeholder committees:

- The Hazardous Chemicals Committee; and
- The Pesticides Technical Committee.

The programme officers, senior programme officers, the deputy-director and the director of the CCMC are also enforcers and can carry out field **enforcement** activities. Enforcement is a shared responsibility with other ministries and departments, e.g. the Plant Protection and Regulatory Services Directorate of the Ministry of Food and Agriculture.

The CCMC acts also as **helpdesk** for all stakeholders searching for information on chemicals' management. They receive enquiries from importers via phone and in person.

CCMC staff and other relevant public authorities lack knowledge of the legal and technical aspects of GHS implementation. Five people participated in GHS training (three EPA representatives, one representative from the Department of Factories Inspectorate of the Ministry of Employment and Labour Relations, and the only employee of the National Poison Centre), but only two EPA representatives obtained a certificate of 'successful accomplishment'. There is also inadequate coordination between EPA and other enforcement authorities, as there is no common platform for data and information sharing.

2.3.2 Business and industry

Multinational chemical companies operating in Ghana use chemical hazard communication tools compatible with GHS provisions, including safety data sheets (SDS) and labels. These are likely to be used throughout their supply chains. However, workers of companies acquiring and providing goods and services[6] to and from these companies in Ghana — in other words, Ghanaian upstream and downstream businesses not part of these large chemical business groups — may not be trained to understand the SDSs and labels and act accordingly. National manufacturers and importers of chemical products may be familiar with GHS hazard communication tools but may not implement them systematically.

The combined efforts of public authorities and industry associations is needed to raise awareness and support capacity building in industry stakeholders. There are a number of business associations that can contribute towards this goal. These are:

- Association of Ghana Industries (AGI)
- CropLife Ghana
- Ghana Agri-Input Dealers Association (GAIDA)

CropLife Ghana in particular may have relevant expertise in training and capacity building, and knowledge of the GHS.

2.3.3 Civil society

Two NGOs were part of the Special Programme Committee and have collaborated in developing the communication strategy for the sound management of chemicals and waste in Ghana:

- Planetary Harmony Solutions
- Environment Youth Action Network

Other important players could be the local universities, which offer chemistry and chemical engineering programmes.

[6] Including transport services and logistics.

3 GHS National Implementation Roadmap

3.1 Overview

Implementing the GHS involves a series of steps and actions to ensure compliance with international standards and the safety of workers, consumers, and the environment. The proposed national roadmap is structured as follows:

1) **Preparatory steps.** Establish the GHS Implementation Committee and organise a workshop to launch the roadmap and obtain the support of senior representatives from the public and private sectors.
2) **GHS-based regulatory framework and implementing activities.** Develop the legislation on the classification and labelling of chemical products and accompanying guidance document. Establish a technical committee to keep the legislation up-to-date and ensure coherence of other legislative acts.
3) **Capacity Building and Training**. Identify and train representatives of relevant ministries and government agencies, industry, and other stakeholders on the GHS principles and requirements.
4) **Raise awareness**. Implement the communication strategy developed within the Special Programme project 'Strengthening institutional capacity for the sustainable sound management of chemicals and waste throughout their lifecycle and the effective implementation of the Basel, Rotterdam, Stockholm and Minamata Conventions and the Strategic Approach to International Chemicals Management (SAICM) in Ghana'.
5) **Enforcement and compliance**. Develop an enforcement framework to monitor and ensure compliance with GHS requirements.
6) **International collaboration.** Collaborate with neighbouring African nations and other partners to ensure regional harmonisation and facilitate cross-border trade.
7) **Monitoring and reporting.** Provide reports and updates to international organisations to demonstrate Ghana's commitment to GHS compliance.

This roadmap serves as a guideline for implementing the GHS in Ghana. The process will require close collaboration between ministries, industry stakeholders, and the public to ensure successful adoption and continuous improvement of chemical safety standards.

3.2 Key element 1: preparatory steps

3.2.1 Action 1.1: Establish the GHS Implementation Committee

The Ghanian GHS implementation committee held its inaugural meeting in June 2024.

3.2.2 Action 1.2: Organise a national GHS workshop

The national GHS workshop was held on 10 July 2024 in Accra (Ghana). It was attended by around 50 stakeholders and provided the opportunity to discuss the action roadmap for the implementation of the GHS. Participants discussed the current regulatory framework, the need for additional actions and resources, and the pros and cons of the adoption of different legislative options for the adoption of a GHS-aligned national legislation.

Table 3-1 summarises action owner, required resources and time target for this first action.

Table 3-1: GHS key element 1: Preparatory steps										
Action		**Action owner and support**						**Required resources**		
1.1 Establish the GHS Implementation Committee		The EPA						-		
1.2 Implement a national GHS workshop		The EPA, with the support of the GHS Implementation Committee, the Project Steering Board and the contractors								
Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 1.1	COMPLETED									
Action 1.2	COMPLETED									

3.3 Key element 2: GHS-based regulatory framework and implementing activities

3.3.1 Action 2.1: Develop the legislation on the classification and labelling of chemical products

It is recommended that the GHS Implementation Committee — and in particular the Chair, the EPA — develops the legislation on the classification and labelling of chemical products, with the support of the Project Steering Board. This is an outline of the steps to be followed:

- **Define scope and purpose**: Clearly define the scope of the legislation, providing unambiguous definitions and specifying which chemical products are outside the scope (e.g. medicinal products, veterinary medicinal products, cosmetic products, food, and feed stuffs). Clarify the purpose of the legislation, emphasizing the need for hazard assessments, classification, and labelling.
- **Classification and labelling**: Include requirements for manufacturers, importers, and suppliers to classify chemical products and label them accordingly.
- **Reference international standards**: Explicitly state that hazard assessments, classification, and labelling shall be done in accordance with internationally recognised standards, such as the GHS.
- **Safety Data Sheets:** Include the obligation for suppliers to provide SDSs and specify the minimum information requirements.
- **Storage and transportation requirements**: Include requirements for importers, producers, users, and distributors to follow standard protocols for storage and transportation, including proper signage, records of transport, and the use of specific safety equipment and vehicles.
- **Reporting Requirements**: Include provisions allowing governing bodies to request information related to chemicals and define the conditions under which such information can remain confidential. Oblige industry and other parties to report any new information related to the risk assessment of chemicals.
- **Harmonised classification and labelling**: Consider the inclusion of requirements for the competent authorities to propose harmonised classification and labelling for substances that fulfil the classification criteria for respiratory sensitisation (category I), germ cell mutagenicity (category 1A, 1B or 2), carcinogenicity (category 1A, 1B or 2), reproductive toxicity (category 1A, 1B or 2), active substances used in biocidal products and plant protection products, and other substances to be selected on a case by case basis.
- **Evaluation**: Define the purpose of evaluation, responsibilities, and methods. Encourage the use of evaluations done in other jurisdictions to minimize resources.

- **Packaging**: Consider the inclusion of requirements about the characteristics of packaging for certain chemical products.
- **Advertising**: Include provisions for controlling advertising, designating the authority for enforcement, and prohibiting misleading or false advertising.
- **Training**: Include requirements for the regular training of employers and employees.
- **Offences and penalties**: Define offences, categorize them as criminal or administrative, and establish penalties for non-compliance with the legislation.
- Sanctions: Allow for sanctions in cases of continual non-conformance with orders.
- **Inspections and enforcement**: Identify the authorities responsible for inspections, specifying their obligations and powers.
- **Appeals**: Set out procedures for appeals against sanctions and negative administrative decisions.
- **Miscellaneous provisions**: Address issues that do not fit into other categories but are important for the legislation.
- **Entry into force and application**: Clearly state when the legislation comes into force and consider whether to provide transitional provisions for the classification and labelling of mixtures.

It is suggested to include the institutional framework and principles in a law, while the more technical details (such as the classification criteria, the pictograms, etc.) could be provided in a guidance document or code of practice. This is, for example, the set up followed by Malaysia[7].

3.3.2 Action 2.2: Develop a guidance document

It is recommended that the EPA develops a guidance document illustrating the classification and labelling processes and providing the classification criteria and labelling elements. Periodically (every one or two months), the draft guidance document is shared with the GHS implementation Committee for comments and suggestions. Every four months, the draft guidance document is shared with the Project Steering Board for comments and suggestions. This also enables the monitoring of the action progress.

3.3.3 Action 2.3: Propose substances with harmonised classification and labelling

To ensure an adequate risk management, the EPA and the Plant Protection Regulatory Services Directorate of Ministry of Food and Agriculture should consider proposing harmonised classification and labelling (CLH) for substances with hazards of the highest concern (carcinogenicity, mutagenicity, reproductive toxicity and respiratory sensitisers, active substances of biocidal and plant protection products). The GHS Implementation Committee will have to decide how often to propose CLH substances and how to publish the list, e.g. in the guidance document[8]. It is suggested that the GHS Implementation Committee consult the European Chemicals Agency (ECHA) on how to implement the process. Moreover, the GHS Implementation Committee could screen the list of CLH substances in the European Union, identify those that are also used in Ghana and propose the same CLH.

[7] Occupational Safety and Health Act 1994. Occupational safety and health (classification, labelling and safety data sheet of hazardous chemicals) regulations 2013.

[8] As, for example, Part 1 of the Industry Code of Practice on chemicals classification and hazard communication in Malaysia.

3.3.4 Action 2.4: Apply to become observers in the United Nations Sub-Committee of Experts on the GHS, and the United Nations Subcommittee of Experts on the Transport of Dangerous Goods

The GHS is in constant evolution and is *updated, revised and improved every two years as needs arise and experience is gained in its implementation*.[9] The two groups tasked with the maintenance, updating and promotion of the GHS are the United Nations Sub-Committee of Experts on the GHS (UNSCEGHS), and the United Nations Subcommittee of Experts on the Transport of Dangerous Goods (UNSCETDG). Countries may apply to become observers or full members. For the latter, countries need to commit to participate on a regular basis.

It is recommended that Ghana applies to become an observer in both groups. The EPA could be tasked with this responsibility. Its participation in the two groups would ensure that GHS Implementation Committee is able to keep legislation, standards and guidance documents up to date.

3.3.5 Action 2.5: Establish a sustainable financing system for chemicals control

It is recommended that the GHS Implementation Committee carries out an analysis of the costs of the infrastructures necessary to ensure the functioning of the chemicals' control system.

It is advisable to estimate the costs of the whole national chemicals' management system and decide on the allocation to different activities (including GHS-related activities) on an annual or biannual basis. The main elements of a chemicals' management system are:

- Identification and assessment of chemicals' hazardous properties and risks.
- Dissemination of hazard, risk and safety information.
- Making informed choices about chemicals to be placed on the market.
- Organisation of workers and public safety.
- Compliance monitoring.[10]

The costs related to the implementation and enforcement of the GHS-based legislation are:

- Costs related to the functioning of the GHS Implementation Committee and any future sub-committee.
- Costs of developing and updating the legislation, standards and guidance documents.
- Costs of gathering hazard classifications of chemical products.
- Costs of proposing harmonised classification and labelling for certain chemical products.
- Costs of inspections and verification of the adequacy of hazard classifications and labelling of chemical products on the market.
- Costs of communication activities (workshops, leaflets, maintenance of webpages, helpdesks, etc.).

The analysis of the costs needs to be matched by an analysis of the possible funding sources. In general, these can be:

[9] https://unece.org/about-ghs

[10] UNEP 2015. UNEP guidance on the development of legal and institutional infrastructures and measures for recovering costs of national administration for sound management of chemicals. Table 1 at page 20 lists the key activities for each main element of the management system.

- Allocations from the state budget
- Internally generated revenues
- External funding

To estimate the internally generated revenues, the competent authorities need the following information: number of duty-holders that will have to classify and label chemical products (and notify this information if required by the legislation) and number of chemical products placed on the market. The CCMC maintains an unofficial list of imported chemical products, which could be used as a starting point and complemented through the collaboration with industry stakeholders, to arrive to an estimate. EPA will then be able to define the value of the fee per service provided.

External funding (such as the Global Environmental Facility grants, the UN special Programme development projects, and other types of funding provided by countries offering bilateral support) can be used in the short term to support the drafting of the legislation and guidance document and build capacity, but should not be relied upon in the long term.[11]

The GHS Implementation Committee should also reconsider over time the fee values, not just in terms of cost coverage, but also in terms of their effect on compliance and general response of the companies. For example, the Committee may like to consider remodulating the fees according to the size of the companies, quantities of chemicals traded, etc.

Table 3-2 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-2: GHS key element 2: GHS-based regulatory framework and implementing activities

Action	Action owner and support	Required resources
2.1 Develop the legislation on the classification and labelling of chemical products	The GHS Implementation Committee, with the lead of the EPA and the support of the Project Steering Board.	1 Full-Time Equivalents (6 people x 0.16 FTE x 1 years)
2.2 Develop a guidance document	The GHS Implementation Committee, with the lead of the EPA and the support of the Project Steering Board.	2 Full-Time Equivalents (6 people x 0.16 FTE x 2 years)
2.3 Consider proposing substances with harmonised classification and labelling	The GHS Implementation Committee, with the lead of the EPA and the support of the Project Steering Board. ECHA could provide training on harmonised classification and labelling.	0.25 FTE per year
2.4 Establish a technical committee to keep the legislation, standards and guidance documents up to date	The GHS Implementation Committee.	-
2.5 Establish a sustainable financing system for chemicals control	The GHS Implementation Committee, led by the EPA and the Ministry of Finance and Economic Planning. The Project Steering Group and some of its members (e.g. ECHA) can also provide advice.	-

Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 2.1								X		
Action 2.2								X		

[11] Strategic Approach to International Chemicals Management (SAICM), & United Nations Environment Programme (2022). *Study on Industry Involvement in the Integrated Approach to Financing the Sound Management of Chemicals and Waste - April 2022*. https://wedocs.unep.org/20.500.11822/40069.

Table 3-2: GHS key element 2: GHS-based regulatory framework and implementing activities										
Action 2.3								X		
Action 2.4								X		
Action 2.5								X		

3.4 Key element 3: Capacity Building and Training

3.4.1 Action 3.1: Define training needs and identify representatives to undertake training

It is recommended that the GHS Implementation Committee define the training needs of each organisation member of the Committee and identify two representatives per organisation to be trained. The training of two people per organisation should ensure that the knowledge and skills built through training are not lost because of staff turnover[12]. Given the limited resources available and the need for training a wide cohort of people, it is recommended to follow a 'train-the-trainers' model. This implies that the people selected to undertake the training in each organisation should be confident and skilled public speakers / communicators as a minimum and should undertake to train further colleagues in their units or stakeholder groups.

UNITAR provides a GHS e-learning course of 10 weeks which runs twice a year, starting every March /April and September/October. This is a comprehensive course encompassing all technical elements of the GHS. It is recommended that five representatives of the CCMC undertake the course. This training would also be very useful for all industry representatives responsible for the classification and labelling of chemical products, and for consultancies interested in providing these services.

Not all stakeholders require training on all technical elements. Table 3-3 lists webinars and training materials available at UNITAR (highlighted in green) and ideas for tailor-made GHS courses that could be developed and implemented. The latter could also be developed and offered by ICCA/Cefic, ECHA and other international partners. It also provides suggestions on the target audience and indicative time of implementation. The GHS Implementation Committee should consider the priorities and propose trainees and discuss implementation times with the Project Steering Board.

Table 3-3: Indicative list of training courses with suggested participants and time of implementation		
Trainings	**Suggested stakeholders**	**Suggested implementation time**
UNITAR GHS e-learning course https://event.unitar.org/full-catalog/classifying-and-labelling-chemicals-according-un-ghs-18-september-1-december-2023	EPA	Q2 2024
Legislation of chemicals placed on the market https://event.unitar.org/full-catalog/legislation-chemicals-placed-market-course	All members of the GHS Implementation Committee	Q1-Q2 2024
Risk Reduction of Chemicals https://event.unitar.org/full-catalog/risk-reduction-chemicals-course	All members of the GHS Implementation Committee	Q1-Q2 2024
Enforcement of chemicals legislation	EPA and other inspectorates	Q3-Q4 2024

[12] People retiring or moving to other positions or organisations.

Table 3-3: Indicative list of training courses with suggested participants and time of implementation		
Trainings	**Suggested stakeholders**	**Suggested implementation time**
https://event.unitar.org/full-catalog/enforcement-chemicals-legislation-course		
Sustainable Financing of Institutional Capacity for Chemicals Control https://event.unitar.org/full-catalog/sustainable-financing-institutional-capacity-chemicals-control-course	All members of the GHS Implementation Committee	Q1-Q2 2024
Training on emergency response and sources of emergency response information	Poison centre, emergency responders	Q3-Q4 2024
Developing, reading and interpreting Safety Data Sheets	All stakeholders, including poison centre and emergency responders.	Q3-Q4 2024
Understanding labels	All stakeholders, including poison centre and emergency responders.	Q3-Q4 2024
Training on stakeholder engagement	EPA	Q1-Q2 2025

The list of representatives selected to undertake the training should be ready by the start of the first quarter of 2024. UNITAR could support the GHS Implementation Committee by holding a call to explain the content, modules, prior knowledge /skills required, and duration of each course.

3.4.2 Action 3.2: Undertake UNITAR training courses

All selected representatives undertake UNITAR training courses. It is suggested that the EPA use the five scholarships available on the UNITAR GHS e-learning course starting in February/March 2024 or in September 2024. All GHS Implementation Committee members should undertake the three courses available online upon registration on legislation of chemicals placed on the market, risk reduction of chemicals, and sustainable financing of institutional capacity for chemicals control. These take 45 minutes each and provide the bases for the Committee to discuss and develop the national framework. The EPA and other inspectorates should also undertake the online course on the enforcement of chemicals legislation. Importantly, participants should be committed to attend UNITAR training until the end. Drop-off from the training courses should be monitored, reported to the Project Steering Board and the underlying issues discussed.

3.4.3 Action 3.3: The 'trained trainers' deliver the training in their organisations

The representatives who have finalised the UNITAR GHS e-learning course should train their colleagues as soon as their own training is complete, so that the knowledge and skills acquired are still 'fresh' and the risk of losing skilled resources through staff turnover is minimised. The participants to the UNITAR GHS e-learning course receive a pdf document at the end. While this document is not in an adequate format to be used for training, it can be used to develop training material. Moreover, UNITAR will develop further training material which will be accessible for free.

The training courses implemented by the trained personnel should be evaluated by the participants through satisfaction surveys. Moreover, the participants could complete UNITAR final exams, which could help to establish whether the courses have achieved the expected results.

3.4.4 Action 3.4: Training and capacity building by ECHA, the Commission, ICCA/Cefic and other institutions

Beyond UNITAR, other members of the Project Steering Board, in particular ECHA, the Commission and ICCA/Cefic can provide training and capacity building. This could take the form of site visits (in Finland and Belgium) by the Ghanian authorities, or series of webinars on specific topics. Key ministries and the EPA would greatly benefit from the expertise of these institutions' experts.

Topic that could be discussed are the functioning of the CLP Regulation (Classification and Labelling Inventory, harmonised classification and labelling, new hazard classes added to the EU system, poison centres, Enforcement Forum) (with ECHA), and the synergies between CLP and other legislation (with the Commission). ICCA/Cefic and its members could describe best industry practices from the classification and labelling of chemical products. Moreover, EU Member State enforcement authorities could also offer to describe their enforcement processes and practices, recurrent issues and ways forward.

It is recommended that large international chemical manufacturers and distributors which operate in Ghana (e.g. Bayer Crop Science Division Ghana, BASF Ghana) provide training on the GHS (e.g. developing, reading and interpreting Safety Data Sheets, understanding labels) to their local suppliers and clients. The training could be organised by ICCA and Cefic in collaboration with the local business associations (CropLife Ghana and AGI).

Table 3-4 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-4: GHS key element 3: Capacity building and training

Action	Action owner and support	Required resources
3.1 Define training needs and identify representatives to undertake training	The GHS Implementation Committee, with the support of UNITAR	10 working days
3.2 Undertake UNITAR training courses	Individuals selected to undertake the trainings	Five scholarships available. Additional €20,000 could be dedicated to train additional workforce.
3.3 The 'trained trainers' deliver the training in their organisations	Trained trainers in their own organisations, with the support of UNITAR	2.5 FTEs (0.125 FTE x 20 people) ~€10,000
3.4 Training and capacity building by ECHA, the Commission, ICCA/Cefic and other institutions	The GHS Implementation Committee selects the delegates. ECHA, the Commission and Cefic organise the capacity building programme. ICCA, Cefic and their members, with the support of CropLife Ghana and AGI, organise capacity building for the private sector.	~€10,000

Target	2024 Q1	2024 Q2	2024 Q3	2024 Q4	2025 Q1	2025 Q2	2025 Q3	2025 Q4	2026 Q1	2026 Q2
Action 3.1	X									
Action 3.2										
Action 3.3										
Action 3.4										

3.5 Key element 4: raise awareness

3.5.1 Action 4.1: Implement the GHS-related activities of the communication strategy

A communication strategy was developed in the context of the Special Programme project aiming to strengthen the institutional capacity of Ghanaian authorities on the sound management of chemicals and waste. The communication strategy aims to complement the 10-year Strategic Plan on the sound management of chemicals and waste in Ghana, which includes the implementation of the GHS.

The communication strategy is articulated in six strategic objectives and includes 23 actions. The total estimated resources required to implement the strategy amount to almost USD 1.1 million.[13] It is recommended that the EPA starts organising and implementing some of the activities (workshops, social media campaigns) to raise public awareness on the sound management of chemicals (of which the GHS is a core part).

Table 3-5 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-5: GHS key element 4: raise awareness

Action	**Action owner and support**							**Required resources**		
4.1 Implement the GHS-related activities of the communication strategy	EPA Support from the Project Steering Board.							~€20,000		
Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 4.1										

3.6 Key element 5: Enforcement and compliance

3.6.1 Action 5.1: Develop an enforcement strategy

It is recommended that the GHS Implementation Committee develops an enforcement strategy. A comprehensive inspection system is an essential component of the legislative framework and has the objective to ascertain whether duty-holders have the skills and processes in place to ensure the correct communication of hazard information to all actors in their supply chains. Enforcement of the chemical management legislative framework in Ghana is the primary responsibility of the EPA, with support from the Customs Division of the Ghana Revenue Authority. The police may also support when required (serious breaches of the laws resulting in criminal charges, or checking transport documents). The strategy should cover all intervention points: primary supply (manufacturers and importers), transport and storage (logistics and transport service suppliers), the point of sales (distributors and retailers), and the point of uses (industrial and professional users of chemical products), and set targets (number of inspections in different sectors per year). The strategy should also ensure the coverage of large, medium and small enterprises. Importantly, the strategy should ensure the coordination of enforcement authorities, avoiding that the same entity is inspected by more than one enforcement authority on classification and labelling requirements.

[13] It is important to note that the scope of the strategy is wider than raising awareness on the GHS.

The Enforcement Forum hosted by ECHA has developed a number of documents and coordinated various enforcement projects over the last 15 years. The Forum could hold a workshop[14]/webinar to support the Ghanian enforcement authorities in developing the enforcement strategy.

3.6.2 Action 5.2: Implement the enforcement strategy

The enforcement strategy is also a tool for increasing awareness of all duty-holders with regard to their requirements on classification and labelling of chemical products. In the first phase of the enforcement campaign, the authorities may want to use issue notifications of non-compliance, explaining how the classification and labelling of the chemical products inspected do not conform to the GHS and the steps to align the hazard communication tools. The notifications should be followed up to verify compliance. The authorities may want to follow this 'educational' approach in particular with regard to mixtures, where the capacity of industry stakeholders to classify and label accordingly mixtures needs to be built over time.

In a second phase, the authorities may want to increase the number of 'surprise' site inspections, issue fines and prosecute non-compliances. Whatever phase the enforcement strategy is in, inspections following reported problems should be carried out systematically, and situations where there is a danger for human health or the environment prosecuted.

Table 3-6 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-6: GHS key element 5: Enforcement and compliance

Action	**Action owner and support**							**Required resources**		
5.1 Develop an enforcement strategy	The GHS Implementation Committee, with support from the Enforcement Forum hosted by ECHA							0.5 FTE		
5.2 Implement the enforcement strategy	EPA, Customs, police							-		
Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 5.1										
Action 5.2										

3.7 Key element 6: International collaboration

3.7.1 Action 6.1: Exchange information with the other three beneficiaries of the four-year pilot projects

It is recommended that a series of four (in presence) events are organised, during which the chairs of the respective GHS Implementation Committees present on the progress with the action roadmaps. This format would allow the beneficiaries to share the issues and barriers encountered and discuss possible ways forward together with the Project Steering Board. The events should be organised by each beneficiary in turn, with the support of the Project Steering Board.

3.7.2 Action 6.2: Exchange information with regional partners

One of the objectives of the pilot project is to generate a regional 'aspiration' effect encouraging other countries to follow suit in the implementation of the GHS. Ghanaian authorities have exchanged

[14] This could be held in the context of the visit of the Ivorian authorities to ECHA, for example.

information with their peers in Côte d'Ivoire. This type of collaboration could be facilitated by organising a network of competent authorities in the West Africa region. These could be invited as observers to the event for exchanging information on the progress with the beneficiaries' action roadmaps to be organised in Ghana or Côte d'Ivoire. It is recommended that the Project Steering Board facilitates the establishment of the network by approaching The Economic Community of West African States (ECOWAS). Table 3-7 summarises action owners, required resources and time targets for the actions in this roadmap key element.

3.7.3 Action 6.3: Seek further assistance

It is recommended that the EPA seeks to establish cooperation with a country or group of countries with established chemicals management framework. Examples are the project run by the Swedish Chemicals Agency (KEMI) in Zambia between 2020 and 2023, which saw a KEMI expert working side-by side with colleagues at the Zambia Environmental Management Agency to strengthen the institutional capacity in the management of pesticides.[15] Another example is the EU Twinning Project "Peer-to-Peer institutional support to the Office of the Auditor General in Zambia", which is pioneering a new type of cooperation that the European Union has never implemented beyond its immediate neighbourhood.[16] The twinning project is implemented by specialised agencies and institutions from four different EU Member States.

Table 3-7: GHS key element 5: Enforcement and compliance

Action	Action owner and support							Required resources		
6.1 Exchange information with the other three beneficiaries of the four-year pilot projects	The GHS Implementation Committee, with support from the Project Steering Board							~€5,000		
6.2 Exchange information with regional partners	The Project Steering Board							-		
6.3 Seek further assistance	The EPA with the support of the Project Steering Board							-		
Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 6.1				X		X		X		X
Action 6.2										
Action 6.3										

3.8 Key element 7: Monitoring, evaluation, and reporting

3.8.1 Action 7.1: Establish a monitoring, evaluation, and reporting system

It is recommended that the GHS Implementation Committee establishes a monitoring, evaluation, and reporting system for the action roadmap and, more in general, the implementation and enforcement of the GHS. Table 3-8 suggests possible indicators to track the progress of each action.

[15] https://www.kemi.se/en/international-cooperation/global-regional-and-bilateral-cooperation/regional-and-bilateral-cooperation/bilateral-cooperation-with-zambia

[16] https://www.eeas.europa.eu/delegations/zambia/european-union-pioneers-twinning-zambia-first-pilot-country-outside-europe-and-its-immediate_und_ru?s=128

Table 3-8: Action roadmap and monitoring indicators	
Action	**Suggested indicators**
1. Preparatory steps	
1.1 Establish the GHS Implementation Committee	The GHS Implementation Committee is officially established and functioning.
1.2 Organise a national GHS workshop	- Preparatory phase (concept and characterisation) completed - Preparatory phase (marketing & communications) completed - Implementation phase (management & logistics) completed - Steering & closing phase (Co-ordination & quality assurance) completed. The GHS workshop is successfully implemented
2. GHS-based regulatory framework and implementing activities	
2.1 Develop the legislation on the classification and labelling of chemical products	- The draft law on the classification and labelling of chemical products is submitted to the Parliament - The law is adopted by the Parliament
2.2 Develop a guidance document	- Objectives and target audience are established - Section on the physical hazards classification criteria is finalised - Section on the health hazards classification criteria is finalised - Section on the environmental hazards classification criteria is finalised - Section on the classification of mixtures is finalised - Section on the development of Safety Data Sheets is finalised - Section on the labelling is finalised - Section on transport is finalised
2.3 Propose substances with harmonised classification and labelling	- The EPA screens the list of CLH substances maintained by ECHA and identify substances used in Ghana - No. of CLH substances proposed by the EPA - No. of CLH substances adopted
2.4 Apply to become observers in the United Nations Sub-Committee of Experts on the GHS, and the United Nations Subcommittee of Experts on the Transport of Dangerous Goods	- Ghana applies to become observer in the GHS committees
2.5 Establish a sustainable financing system for chemicals control	- Cost analysis is completed - Revenue analysis is completed - An 'optimal' mix of funding sources is established
3. Capacity Building and Training	
3.1 Define training needs and identify representatives to undertake training	- Trainees are identified (per organisation, training course)
3.2 Undertake UNITAR training courses	- Number of people (per organisation) enlisted in UNITAR trainings - Number of people (per organisation) finalising the courses successfully - Number of drop-offs
3.3 The 'trained trainers' deliver the training in their organisations	- Number of training courses offered by Ghanian trainers - Number of people (per stakeholder) enlisted in domestic trainings - Number of people (per stakeholder) finalising the courses successfully - Number of drop-offs
3.4 Training and capacity building by ECHA, the Commission, ICCA/Cefic and other institutions	- Number of attendees to webinars/site visits - Number of companies participating in trainings
4. Raise awareness	
4.1 Implement the GHS-related activities of the communication strategy	- Resources allocated to GHS-specific communication initiatives - Number of information days organised - Number of participants to communication events

Table 3-8: Action roadmap and monitoring indicators	
Action	**Suggested indicators**
	- Information webpages established - Success level of social media campaigns (through metrics such as: profile impressions, profile reach, followers, audience growth rate, engagement rate, video plays, posting frequency, clicks, shares, likes, website traffic, comments, mentions, etc.)
5. Enforcement and compliance	
5.1 Develop an enforcement strategy	- Enforcement strategy completed
5.2 Implement the enforcement strategy	- Number of inspections per intervention point (manufacturers, importers, transport and logistics providers, distributors, retailers, industrial users, professional users) - Number of non-compliances - Number of follow-up activities
6. International collaboration	
6.1 Exchange information with the other three beneficiaries of the four-year pilot projects	- Event in Ghana is successfully organised and implemented - Successful participation of the Ghanian delegation to the other three events
6.2 Exchange information with regional partners	- Regional network is established
6.3 Seek further assistance	- Cooperation opportunities are identified - Cooperation opportunities are discussed with the potential partners - cooperation partnerships are established
7. Monitoring, evaluation and reporting	
7.1 Establish a monitoring, evaluation and reporting system	- The monitoring, evaluation and reporting system is established

Table 3-9 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-9: **GHS key element 7: Monitoring, evaluation and reporting**										
Action	**Action owner and support**							**Required resources**		
7.1 Establish a monitoring, evaluation and reporting system	The GHS Implementation Committee, with support from the Project Steering Board							0.5 FTE		
Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 7.1		X								

3.9 Conclusions

This roadmap is a strategic response to the identified gaps in Ghana's chemical management framework. It marks Ghana's commitment to adopting global standards in chemical management and ensuring the safety of its environment and citizens.

1. **Legislative Development**: A primary focus of the roadmap is the enhancement of the legislative framework. The development and enactment of comprehensive legislation for the classification and labelling of chemicals, as outlined in the roadmap, are pivotal. This step will bring Ghana's regulatory environment in line with international GHS standards.

2. **Sustainable Financing**: The roadmap acknowledges the critical need for sustainable financing mechanisms for institutional chemical management. It emphasizes that effective implementation of GHS-related legislation, capacity building, and public awareness campaigns are contingent upon secure and reliable funding. The roadmap suggests diverse sources of financing, including state budget allocations, internal revenue generation, and external funding, albeit with a cautious approach towards long-term dependency on external sources.

3. **Capacity Building and Training**: The commitment to extensive training and capacity building is a cornerstone of the roadmap. The recommended 'train-the-trainers' model and the involvement of various stakeholders in UNITAR e-learning courses and other training programs underline the importance of building a knowledgeable and skilled workforce for effective GHS implementation and enforcement.

4. **Awareness and Communication**: The roadmap's emphasis on raising awareness about GHS among all stakeholders, including the public, is commendable. The development of a strategic communication plan indicates a proactive approach to ensuring that information about chemical hazards and safe practices reaches all layers of society.

5. **Enforcement and Compliance**: The establishment of a robust enforcement strategy underlines Ghana's seriousness in ensuring compliance with the new GHS guidelines. The roadmap's call for regular inspections and verifications reflects a commitment to maintaining high standards of chemical safety.

6. **International and Regional Collaboration**: The roadmap recognizes the value of international and regional partnerships in the successful implementation of GHS. These collaborations will not only provide Ghana with valuable insights and resources but also integrate the country into a global network committed to chemical safety.

7. **Monitoring, Evaluation, and Reporting**: The inclusion of a comprehensive monitoring, evaluation, and reporting system in the roadmap is crucial for assessing progress and effectiveness. This system will enable Ghana to make informed decisions and necessary adjustments in its GHS implementation strategy.

8. **A Model for the Region**: Ghana's GHS Implementation Roadmap is not only significant for the country but also serves as an exemplary model for other African nations. Its success will demonstrate the benefits of aligning national chemical management strategies with global standards.

The success of the GHS Implementation Roadmap will require commitment, coordination, and collaboration across various sectors and stakeholders. The roadmap sets Ghana on a path towards a safer, more environmentally responsible future, serving as a beacon for others in the region to follow.

Table 3-10 shows the Gantt chart and the suggested allocation of financial resources from the pilot project.

Table 3-10: GHS National Implementation Roadmap – Ghana												
Actions	**Financial resources required**	**Timeline**										
		2024 Q1	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
1. Preparatory steps											
1.1 Establish the GHS Implementation Committee		COMPLETED									
1.1 Organise a national GHS workshop		COMPLETED									
2. GHS-based regulatory framework and implementing activities											
2.1 Develop the legislation on classification and labelling of chemicals											X
2.2 Develop a guidance document											X
2.3 Propose substances with harmonised classification and labelling											X
2.4 Apply to become observers in the United Nations Sub-Committee of Experts on the GHS, and the United Nations Subcommittee of Experts on the Transport of Dangerous Goods											X
2.5 Establish a sustainable financing system for chemicals control											X
3. Capacity Building and Training											
3.1 Define training needs and identify representatives to undertake training					X						
3.2 Undertake UNITAR training courses	~€30,000										
3.3 The 'trained trainers' deliver the training in their organisations	~€10,000										
3.4 Training and capacity building by ECHA, the Commission, ICCA/Cefic and other institutions											
4. Raise awareness											
4.1 Implement the GHS-related activities of the communication strategy	~€30,000										
5. Enforcement and compliance											
5.1 Develop an enforcement strategy											
5.2 Implement the enforcement strategy											
6. International collaboration											
6.1 Exchange information with the other three beneficiaries of the four-year pilot projects					X		X		X		X
6.2 Exchange information with regional partners											
6.3 Seek further assistance											
7. Monitoring, evaluation and reporting											
7.1 Establish a monitoring, evaluation and reporting system			X								

4 References

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RPA Europe
Via F. Turati 8, 20121 Milan (Italy)
www.rpa-europe.eu