

1. BACKGROUND

The Johannesburg Plan of Implementation includes the commitment to implement the Globally Harmonised System for the Classification and Labelling of Chemicals (GHS) in all countries by 2008. Responsibility for chemicals management in South Africa is spread over a number of Ministries. Implementation of the GHS is thus likely to present significant challenges. In order to evaluate these challenges and develop mechanisms to meet them, the National Economic Development and Labour Advisory Council (NEDLAC), which undertakes research into issues of socio-economic importance through its Fund for Research into Development, Growth and Equity (FRIDGE) initiated a study for implementing the GHS in South Africa and the development a national implementation strategy by December 2003. The study is co-funded by the United Nations Institute for Training and Research (UNITAR).

The GHS study comprises three phases. The first phase was the compilation of a Situation Analysis which identifies and assesses infrastructure and available national expertise relevant to chemical classification and hazard communication. This phase was completed in April 2003. Based on the information collected for the Situation Analysis, a Gap Analysis has been undertaken to identify areas where intervention is required to implement the GHS. Furthermore, the socio-economic implications of the identified interventions have been evaluated. This draft report sets out the findings of the gap analysis and the socio-economic evaluation.

The methodology followed comprised the following steps:

- The GHS requirements were critically assessed using the latest GHS document (UN Document ST/SG/AC.10/C.4/2002/16, Dec.2002). The specific GHS requirements, i.e. for hazard classification, criteria for classification, test methods, labelling, safety data sheets, and, training and awareness, are detailed in the separate sections of chapter two of this report.
- South African requirements and current practice for the classification and labelling of hazardous chemicals (as identified in the Part 1 Situation Analysis Study) are compared with the GHS requirements in Chapter 2 of this report. Where they are not identical, a gap is registered and quantified.
- Based on the identified gaps, the legal, technical, and socio-economic implications (Chapter 3), should South Africa implement the GHS, were explored.

1.1 GHS Baseline

1.1.1 Principles

The GHS is based on the following agreed principles of harmonisation¹:

- The level of protection offered to workers, consumers, the general public and the environment must not be reduced as a result of harmonising the classification and labelling systems;
- The hazard classification process refers principally to the hazards arising from the intrinsic properties of chemical elements and compounds and mixtures thereof, whether natural or synthetic;
- Harmonisation means establishing a common and coherent basis for chemical hazard classification and communication, from which the appropriate elements relevant to means of transport, consumer, worker and environment protection are selected;

¹ UN Document ST/SG/AC.10/C.4/2002/16, Dec.2002

- The scope of harmonisation includes both hazard classification criteria and hazard communication tools, e.g. labelling and chemical safety data sheets, taking into account especially the four existing systems identified in the International Labour Organisation (ILO)²;
- Changes in all these systems will be required to achieve a single globally harmonised system; transitional measures are included in the process of moving to the new system;
- The involvement of concerned international organizations of employers, workers, consumers, and other relevant organisations in the process of harmonisation are to be ensured;
- The comprehension of chemical hazard information, by the target audience, e.g. workers, consumers and the general public must be addressed;
- Validated data already generated for the classification of chemicals under the existing systems are accepted when reclassifying these chemicals under the harmonised system;
- The new harmonised classification system requires adaptation of existing methods for testing of chemicals; and
- In relation to chemical hazard communication, the safety and health of workers, consumers and the public in general, as well as the protection of the environment, are to be ensured while protecting confidential business information, as prescribed by the competent authorities.

1.1.2 Scope

The GHS includes the following elements³:

- Harmonised criteria for classifying substances and mixtures according to their health, environmental and physical hazards; and
- Harmonised hazard communication elements, including requirements for labelling and safety data sheets.

The GHS covers all hazardous chemicals. The mode of application of the hazard communication components of the GHS (e.g. labels and safety data sheets) varies by product category or stage in the life cycle. Target audiences for the GHS include consumers, workers, transport workers, and emergency responders. The term chemical is used broadly and includes substances, products, mixtures and preparations.

The GHS does not include establishment of uniform test methods or promotion of further testing to address adverse health outcomes:

- Tests that determine hazardous properties, which are conducted according to internationally recognized scientific principles, are used for purposes of a hazard determination for health and environmental hazards. The GHS criteria for determining health and environmental hazards are test method neutral, allowing different approaches as long as they are scientifically sound and validated according to international procedures and criteria in existing systems for the hazard class of concern and produce mutually acceptable data. Criteria for physical hazards are linked to specific test methods for hazard classes.
- The harmonized classification criteria are developed on the basis of existing data, compliance with these criteria will not require retesting of chemicals for which accepted test data already exists
- In addition to animal data and valid in vitro testing, human experience, epidemiological data, and clinical testing that provide important information are considered in the application of the GHS.

The GHS is not intended to harmonize risk assessment procedures or risk management decisions (such as establishment of a permissible exposure limit for employee exposure), which generally require some risk assessment in addition to hazard classification.

² 1992 ILO Report on the Size of the Task of Harmonizing Existing Systems of Classification and Labelling for Hazardous Chemicals.

³ UN Document ST/SG/AC.10/C.4/2002/16, Dec.2002

1.1.3 Application of the GHS

The goal of the GHS is to identify the intrinsic hazards found in chemical substances and mixtures and to convey hazard information about these hazards. The criteria for hazard classification are harmonised. Hazard statements, symbols and signal words have been standardised and harmonised and form an integrated hazard communication system. The GHS allows the hazard communication elements of the existing systems to converge. Competent authorities will decide how to apply the various elements of the GHS based on the needs of the competent authority and the target audience.

For *transport*, it is expected that application of the GHS will be similar to application of current transport requirements. Containers of dangerous goods will be marked with pictograms that address acute toxicity, physical hazards and environmental hazards. As for workers in other sectors, workers in the transport sector will be trained. The elements of the GHS that address such elements as signal words and hazard statements are not expected to be adopted in the transport sector.

In the *workplace*, it is expected that all of the GHS elements will be adopted, including labels that have the harmonised core information under the GHS, and safety data sheets. It is also anticipated that employee training to help ensure effective communication will supplement this.

For the *consumer sector*, it is expected that labels will be the primary focus of GHS application. These labels will include the core elements of the GHS, subject to some sector-specific considerations in certain systems.

Building block approach: The harmonized elements of the GHS are a collection of building blocks from which countries form a regulatory approach. While the full range is available to all countries and should be used if a country or organisation chooses to cover a certain effect when it adopts the GHS, the full range does not have to be adopted. While physical hazards are important in the workplace and transport sectors, consumers may not need to know some of the specific physical hazards in the type of use they have for a product. As long as the hazards covered by a sector or system are covered consistently with the GHS criteria and requirements, it will be considered appropriate implementation of the GHS. Notwithstanding the fact that an exporter needs to comply with importing countries GHS implementation, it is hoped that the application of the GHS worldwide will eventually lead to a fully harmonized situation.

The coverage of hazards information may vary by the perceived needs of the target audience. In particular, the transport sector focuses on acute health effects and physical hazards, but to date has not covered chronic effects due to the types of exposures which are expected to be encountered.