

## 4. CONCLUSIONS

This gap analysis has critically assessed South African current practice for chemical hazard communication with the requirements of the GHS, in terms of -

- 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 analysis has identified key areas where intervention is required to implement the GHS in South Africa. In addition, the socio-economic implications of the identified interventions have also been evaluated. I

The gap analysis indicates that although current practice for chemical hazard communication South Africa meets some of the requirements of the GHS, there are many detailed aspects of the requirements that are not being met. Furthermore, within South Africa the requirements for chemical hazard communication are not harmonised. Hence, in order to comply with the GHS requirements the relevant laws, regulations and Codes of Practice will have to be suitably adapted.

The main conclusions based on the identified key gaps and the major implication associated with the implementation of the GHS for South Africa are highlighted below.

**Hazard Classification:** South African laws do not deal uniformly or comprehensively with all the sectors contemplated by the GHS. The approach to the “classification” of substances for the purposes of the legislation differs. The terminology used is not consistent, e.g. legislation refers variously to hazardous chemical substances, hazardous substances and dangerous goods. For many classes in GHS the criteria are semi-quantitative or qualitative and expert judgment is required to interpret the data for classification purposes. Many aspects of hazard classification and communication are dealt with by voluntary Codes of Practice developed by the national standards authority.

The Code that deals with classification, SABS 0228 is the only Code of Practice referenced in legislation. This Code currently does not fully comply with the requirements of the GHS. The classification system thus does not fully comply with the GHS requirements. Gaps include the absence of bridging principles to facilitate classification where no test data is available. The allocation of classification categories does not coincide with the GHS allocation. Flash points for flammable liquids differ. Some of the health hazards are not aligned.

**Test Methods:** The physical test methods currently applied for hazardous substances and mixtures in South Africa (referenced in SABS 0228, SABS 0265 and SABS 0304) are not fully aligned with the test methods prescribed by the GHS.

The larger South African companies are either able to test for physical properties of new formulations or mixtures, or access local expertise in this regard. Capacity to test substances for health and environmental risk is limited in South Africa, with companies relying in the main on international data.

**Hazard Communication - Labelling:** Labelling requirements are not dealt with uniformly or comprehensively in all sectors. The transport and agriculture sectors have extensive provisions for the regulation of labelling. However, there is very limited regulation of labelling in the industrial sector (including the workplace) and consumer sector.

The GHS specifies that the label must be updated when new information becomes available. In addition, the information on which the label is based must be reviewed periodically. Currently, no formal requirements exist in South Africa for the updating of label information when new information is made available or for the regular review of the information on the product.

Signal words and hazard statements are not all aligned with GHS phrases. The discretionary aspects of the GHS need to be subjected to further analysis as part of the implementation strategy.

**Hazard Communication: Safety Data Sheets:** The GHS requirements for SDSs specify information arranged under 16 headings and in a specific order. The South African requirements for MSDSs also specify 16 headings, but the order of headings differs. Furthermore, terminology used differs, i.e. the GHS uses the terms substance or mixture, whereas the MSDS uses product and preparations.

The information provided in MSDSs is not always accessible to workers and customers. There are currently no requirements for the review of MSDSs. Where reviews are undertaken (particularly by larger companies), they are undertaken as part of the ISO reviews of management systems; or ongoing risk assessments and internal reviews of hazard data trends.

**Hazard Communication – Transport:** In South Africa, hazard communication by means of a Tremcard is considered an integral part of the hazard communication system in place. Although the GHS does not include specific requirements for this form of hazard communication, the study has included a review of current practice. The other methods of communication for the transport sector like placards have been compared against the GHS requirements.

**Training and Awareness Raising:** The current level of awareness raising is not sufficient to ensure successful implementation of the GHS. This is particularly important at the workplace and consumer level as workers and consumers can play a useful watchdog role in ensuring compliance with requirements.

Current levels of training are not sufficient to maintain the existing systems of hazard classification and communication. Skill development is undertaken through 26 SETAs. CHIETA and TETA are the two that would be the most affected by implementation of the GHS. As government officials will also require training, the public service educational training authority will also need to be involved in the strategy development.

**Socio-Economic Implications:** The major socio-economic impact of GHS implementation versus non-implementation is expected to be on the trade in chemicals. Non-implementation of the GHS could result in non-tariff barriers to South Africa's exports for not conforming to the harmonised system of hazard communication. Non-conformance to the GHS would also imply a disregard for human safety and for the environment and, on their own, have the potential to become grounds for non-tariff measures. Implementation of the GHS should assist South African chemical exporters to avoid these measures that could impact negatively on trade.

A variety of resources are required for the implementation of the GHS. Human expertise is required in respect of classification, classification criteria, test methods, labelling, legislation and training with regard to the GHS. Success with implementation will require extensive training, particularly in the work place, in transport and the delivery of emergency services, while consumer awareness and training need to be more prominent and effective than in the past. Substantial resources will be required for training and awareness.

Because of a lack of suitable information, the cost of implementation could not be quantified by this study. Many of the institutions/organisations involved are unable to estimate the cost of their present activities in hazard communication. This suggests that hazard communication does not carry high costs and that adoption of the GHS would imply incremental rather than significant costs. However, a shortfall in the levels of existing delivery is apparent even before the higher performance requirements of the GHS are considered. Furthermore, once-off costs need to be incurred in the course of the implementation phase, while recurrent costs may become of lesser concern once the system is running capably again.

The GHS offers benefits in standardised elements of hazard communication obviating the need for their development by individual countries. The objective of the WSSD GHS Partnership between UNITAR, ILO and OECD, which was launched at the WSSD, was to mobilize support and catalyse partnerships in assisting with implementation of the GHS. It can be expected that the Partnership will be the vehicle for donor assistance for implementation of the GHS. The Partnership will assist

especially in respect of capacity building, awareness raising, training and strategy development for implementation.

Since the cost involved in the implementation of the GHS would only be incremental to current expenditure it may well be absorbed into departmental budgets. This is especially applicable for recurrent costs while once off costs may possibly be defrayed from donor funds. From a company perspective, medium and small businesses as well as new export entrants will probably find it harder and more costly to comply with the GHS than the larger companies.