

## 3 IMPLEMENTATION ISSUES AND OPTIONS

The GHS comprises of both mandatory and discretionary elements (a number of which are currently unresolved). This section gives a brief overview of these elements, followed by a description of the implementation issues and strategic options for addressing them. The elements are structured as components of a chemicals management system, i.e. legislation, institutional matters, training, awareness raising and technical infrastructure.

### 3.1 GHS Mandatory and Discretionary Elements

#### 3.1.1 Legal Issues

A range of legislation appropriate to chemical hazard classification and labelling is currently administered by several different Government Departments in South Africa; these include: DOL, DOH, DME, NDOT, NDA, DEAT and **the dti** (through Imports and Exports, Consumer Regulatory Affairs and STANSA). The GHS is not prescriptive as to which authority implements the GHS, but refers to the various functions and responsibilities of the *competent authority(ies)*. The legal analysis (see section 3.2) explores the legal options and associated appropriate roles and responsibilities.

There are various SABS Codes of Practice that cover the classification of chemicals and the labelling requirements, but none are fully aligned with the GHS requirements. Currently, only SABS 0228 and the International Maritime Dangerous Goods (IMDG) Code, which cover classification, are referenced in legislation, although these focus only on acute health effects and physical hazards and do not cover chronic or environmental effects. Similarly, pesticide classification is based on the hazard of the active ingredient only and does not take into account the impact of additional hazardous ingredients in the preparation.

In addition, it is in the transport sector that detailed labelling requirements are referenced in legislation. SABS Codes of Practice are implemented as guideline documents for labelling in the agricultural sector and for sale, handling and use although registration of pesticides requires submission and approval of the label before printing. No requirements are currently specified for consumer labelling. Problems have been experienced by consumers and in the workplace in accessing information due to the small font size often used on the labels.

There are no legal requirements to review and revise the label information periodically or when new information is available, although this is a requirement of the ISO 9000 and ISO 14000 certification system.

### 3.1.2 Technical Issues

The **mandatory aspects** of the GHS that have to be addressed in the National Implementation Strategy include:

- The hazard classes and associated criteria for classifying chemicals are mandatory. Where a country implements the GHS and a system covers something that is in the GHS then coverage should be consistent. For example, if a system covers the carcinogenicity of a chemical, it should follow the harmonised classification system and the harmonised label elements.
- The GHS prescribes *physico-chemical* test methods for hazardous substances and mixtures. The majority of test methods prescribed are taken from the *UN Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria (3<sup>rd</sup> Revised Edition, 1999)*. Certain test methodologies have not yet been finalised, but the UN subcommittee work on this issue is continuing. The imminent publication of the 4<sup>th</sup> Revised Edition of the *Manual of Tests and Criteria* will address, *inter alia*, the outstanding prescribed *physico-chemical* test methods.
- Any words and phrases that are translated from a foreign language to English, or any other South African official language for use on labels, must retain their comprehensibility while conveying the same meaning. The standardised phrases and words that are used in the GHS would have to be correctly translated into other languages should a decision be made to include labels in different languages that are indigenous to South Africa.
- Periodic review and updating of label information on receipt of new information are mandatory. Suppliers must respond to new and significant information they receive about a chemical by updating the label and MSDS for that chemical. New and significant information is any information that changes the GHS classification and leads to a change in the information conveyed on the label or MSDS and the appropriate control measures. Suppliers must also periodically review the information on which the label and MSDS for a chemical is based, even if no new and significant information has been provided. This applies to labels and MSDSs that are not subject to any approval mechanisms. In pesticide labelling systems, where the label is part of the approval mechanism, suppliers may not update the label on their own initiative. However, the transport placard should be updated on receipt of new information.
- For labels (placard in the transport sector):
  - The hazard symbols, signal words and hazard statements have all been standardised and assigned to each hazard category. These standardised elements should not be subject to variation. However, as the transport sector relies on information primarily in a graphic form that is displayed on the vehicle placards, the UN Sub-Committee of Experts on the Transport of Dangerous Goods is still considering whether or not to include signal words and hazard statements as part of the information provided on the placard.
  - A product identifier should be used on a GHS label, which should match the product identifier used on the MSDS.
  - The name, address and telephone number of the manufacturer or supplier of the substance or mixture should be provided on the label.

- The label for a substance should include the chemical identity of the substance. For mixtures, the label should include the chemical identities of all the ingredients that contribute to acute toxicity, skin corrosion or serious eye damage, germ cell mutagenicity, carcinogenicity, reproductive toxicity, skin or respiratory sensitisation or target organ systemic toxicity. Alternatively, the competent authority may require the inclusion of all ingredients or alloying elements that contribute to the hazard of the mixture or alloy.
- Appropriate mechanisms must be established for the protection of confidential business information (CBI) in accordance with the principles of GHS and national law in order to ensure that health and safety is not compromised. The general principles of GHS include:
  - CBI claims are to be limited to the names of chemicals and their concentrations regarding information disclosed on the label and safety data only, i.e. the name and amount of (or concentration range of) chemical ingredients, other than the 'active ingredients', if not hazardous, need not be provided. All other information is to be displayed as required. Where information is withheld, the label or MSDS must indicate this.
  - CBI must be disclosed to the competent authorities upon request. The competent authorities must protect the confidentiality of the information in accordance with the applicable legislation.
  - Where a medical professional requires additional information for treatment of a medical emergency due to exposure to a hazardous chemical, a mechanism must be in place to ensure the timely disclosure by the supplier, employer or competent authorities. The medical professional must maintain confidentiality of the information.
  - In non-emergency situations, the supplier or employer must ensure disclosure of confidential information to a safety or health professional providing medical or other health and safety services to exposed workers or consumers, and to workers or worker's representatives. Persons requesting the information must provide specific reasons for the disclosure and should agree to use the information only for the purpose of consumer or worker protection and to otherwise maintain its confidentiality.
  - Where non-disclosure of CBI is challenged, the competent authorities must address the challenges or provide for an alternative process for challenges. The supplier or employer must be responsible for supporting the assertion that the withheld information qualifies for CBI protection.
- The GHS requires that SDSs be produced for all substances and mixtures which meet the GHS harmonized criteria for physical, health or environmental hazards, and for all mixtures which contain substances that meet the criteria for carcinogenicity, toxic to reproduction or target organ systemic toxicity in concentrations exceeding the cut-off limits specified by GHS specified criteria for mixtures. The prescribed information has to be presented using 16 prescribed headings and in a specified order.

Elements of the GHS that are **discretionary** and require a policy decision to be made by the competent authorities include:

- Countries are free to determine which of the GHS building blocks will be applied in different parts of their systems. The expectations of the GHS Expert Committee are that all the GHS elements will be adopted in the workplace, the label will be the primary GHS application for the consumer sector, and that the UN Recommendations on the Transport of Dangerous Goods Model Regulations will continue to apply. However, for the purposes of this Strategy,

it has been assumed that the entire system will be implemented (see section 3.2: Legal Issues and Options).

- Test methods for determining environmental and health hazards are not prescribed, but the test methods applied must be conducted according to internationally recognised scientific principles. It may be necessary to provide a guideline list of acceptable environmental and health hazard test methods. Test data already generated for the classification of chemicals under existing systems are accepted when classifying chemicals according to GHS in order to avoid duplicate testing and the unnecessary use of test animals.
- Competent authorities may choose to require SDSs for mixtures not classified as hazardous based on the GHS criteria for hazard classification, i.e. for mixtures which contain substances that do not meet the criteria for carcinogenicity, toxic to reproduction or target organ systemic toxicity in concentrations exceeding the cut-off limits specified by GHS criteria.
- Although the review of label information is mandatory, the competent authorities can decide the extent of the review period. Consideration should be given to practical issues associated with changing systems (e.g. costs and logistics) and an appropriate period allowed, typically between 3 and 5 years.
- In order to simplify labelling on consumer products, risk based labelling can be applied by the competent authorities to chronic hazards of chemicals. All acute health, environmental and physical hazards should be displayed on the label. Risk based labelling is based on an assessment of risk, or the likelihood of injury occurring from exposure to the product. The competent authority will need to establish what level of risk is acceptable to implement risk based labelling for consumer products with chronic effects. The work on the GHS has not addressed harmonisation of this type of approach and does not prescribe an approach to risk based labelling. Should risk based labelling be adopted, the GHS requires specific procedures for determining the potential exposure and risk for the use of the product to be developed and implemented by the competent authorities. Risk based labelling is currently not implemented in South Africa.
- The format and layout of the label is not specified and the competent authorities can decide on the use of precautionary information and pictograms, the use of a black border on GHS pictograms where the product is not for export, and use of colour to implement special labelling requirements. Alternative means can be implemented in the workplace to provide workers with the same label information but in a different written or displayed format when such a format is more appropriate to the workplace and communicates the information as effectively as the GHS label. For example, label information could be displayed in the work area rather than on the individual containers and the use of permanent placarding for fixed piping.

## 3.2 Legislation

### 3.2.1 Legislative Issues

The GHS does not require the whole system to be implemented at once, but rather that where an element is implemented, it must be done in its entirety. In order to enforce the implementation of the system, it will be necessary to ensure that the requirements are underpinned by legislative obligations, and compliance and enforcement provisions. This Strategy is based on the implementation of the whole system, although different tasks to achieve this may be rolled out sequentially.

The findings highlighted in section 2, i.e. those from the Situation Analysis and Gap Analysis, indicate that certain changes to the current legislative framework will be required in order to incorporate the requirements of the GHS within South African legislation. These issues are summarised in Table 3.1 below.

**Table 3.1: Legislative Issues to be Addressed in the Implementation of the GHS**

Issue	Description
<b>Issues emanating directly from the GHS requirements</b>	
Classification and criteria	<ul style="list-style-type: none"> <li>• The terminology differences between the various Acts should be streamlined by means of consistent definitions to ensure that there is a common understanding to the approach taken to classification.</li> <li>• Much of the legislative classification requirements are based on SABS Codes of Practice, which do not comply fully with GHS requirements. In addition certain Codes are used which do not have legislative force (for example, SABS 0265) and which are not fully compliant with the requirements of the GHS. Currently only the SABS 0228 and IMDG Codes are referenced in legislation although these focus on acute health and physical effects and do not cover chronic effects. Similarly, pesticide classification is based on the hazard of the active ingredient only and does not take into account the impact of additional hazardous ingredients in the preparation. To address this issue, either all the existing codes will have to be incorporated into legislation, where applicable, (with the requisite amendments) or the codes could be consolidated in the form of a new technical code, or the provisions of the GHS could be expressly incorporated in legislation by reference to the GHS document or replication of the provisions.</li> <li>• Regulations under the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act which are not compatible with the GHS and which have been superseded by other practices must be repealed and replaced.</li> </ul> <p>These issues will need to be informed by a decision regarding the approach to be taken to the discretion afforded by the GHS as to which of the components to apply in the different parts of the classification system.</p>
Test methods	<p>Applicable test methods are largely contained in SABS Codes of Practice. Certain of these Codes do not have legislative force (for example, SABS 0265) and none of the Codes are fully compliant with the requirements of the GHS. Furthermore, test methods for environmental and health hazard testing are not standardised.</p> <p>Should GHS testing only be undertaken in accredited laboratories, it will be necessary to incorporate a provision in the legislation. (This is not a strict GHS requirement, but is suggested in subsequent sections of this Strategy to facilitate international acceptance of South African information used for classification).</p>

Issue	Description
	<p>A number of the GHS mandatory physico-chemical test methods are referenced in the <i>UN Manual of Tests and Criteria, Recommendations on the Transport of Dangerous Goods</i>, but this document has not finalised selection of all methods, e.g. the test methods for Classes 2, 6, 7 and 8. Specifically the GHS test method for flammable aerosols references the <i>UN Manual of Tests and Criteria</i>, which has not yet been finalised. The UN has indicated that this matter will be addressed in the near future.</p> <p>In practice at present:</p> <ul style="list-style-type: none"> <li>• Accredited laboratories use physico-chemical test methods prescribed by the relevant SABS Code of Practice;</li> <li>• Environmental and health hazard testing is not widely applied with suppliers relying on information from their overseas principles.</li> <li>• There are currently no accredited laboratories in South Africa applying these methods.</li> </ul>
Safety data sheets	<ul style="list-style-type: none"> <li>• The reference to the ISO and ANSI codes in the GAR regulations should be removed and replaced by the GHS requirements or the latter revised to reflect the GHS requirements.</li> <li>• The prescribed order in the GAR regulations must be amended to reflect the GHS order.</li> <li>• The requirements in respect of hazard communication elements needs to be extended to sectors which are not currently covered by the requirement and which do not have a corresponding requirement in governing legislation, and in particular, the mining sector.</li> </ul>
Labelling	<ul style="list-style-type: none"> <li>• Current legislative gaps, such as the regulation of labelling in respect of industrial use and consumers, needs to be addressed.</li> <li>• Legislative provisions for the review, periodic updating and application of CBI need to be considered. (In terms of the GHS, the actual period of time for review and updating as well as the regulation of confidential business information is left to the discretion of the competent authority, typically between 3 and 5 years).</li> <li>• Discretionary elements which require a decision include the colour on labels, use of precautionary statements and format of labels.</li> </ul>

Issue	Description
<b>Other issues</b>	
Overlap of jurisdiction	<p>In certain instances, there is a regulatory overlap of provisions. For example, both the Hazardous Substances Act and the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act have provisions regulating aspects of agricultural remedies. Furthermore, there is a significant overlap between regulatory authorities in respect of emergency response. Clarity regarding the different departmental regulatory authority should be established.</p>
Regulation throughout the life-cycle	<p>Gaps exist with respect to the regulation throughout the life-cycle of chemicals. For example -</p> <ul style="list-style-type: none"> <li>• The introduction of a new hazardous substance is not regulated uniformly. In terms of the Hazardous Substances Act, substances are classified into two main groups and the approach to the regulation of the substances accordingly depends on which group it falls within. A gap exists particularly in respect of those chemicals that constitute Group II substances in terms of the Hazardous Substances Act, as the rules and mechanisms for regulating such substances have not been passed;</li> <li>• The new approach to waste generation and management as outlined in policy is not reflected in current legislation, other than for some limited provisions in the HCS regulations;</li> <li>• Hazard communication in the consumer sector is largely unregulated; and</li> <li>• Although the overarching ambit of the Occupational Health and Safety Act (OHSA) has the potential to remedy some of the deficiencies created by these gaps, it must be noted that the focus of the Act is primarily on health and safety within the workplace and not on the broader environment and consumer protection.</li> </ul> <p>These gaps will need to be addressed to ensure that there is a legislative base for all aspects of the GHS to be implemented, particularly as GHS is intended to apply throughout the life-cycle.</p>
Incorporation of a rights-based approach	<p>Provisions regarding the duty to inform are less articulate in legislation than provisions regarding access to information, particularly in respect of consumers and legislation which was promulgated prior to 1994. In some instances it may be necessary to address this to give effect to the objectives of the GHS, to achieve proactive, rather than reactive communication of hazards.</p>

Issue	Description
Institutional co-ordination	There is no legislative requirement for hazard communication activities to be co-ordinated between the different regulatory authorities. Currently co-ordination takes place on an <i>ad hoc</i> basis or through reliance on MOUs. Co-ordination between the different regulatory authorities is important for the successful implementation of GHS and accordingly, it would be preferable for such co-ordination to be formalised.
Compliance and enforcement	<p>In general there are deficiencies in the implementation of the current compliance and enforcement system i.e.</p> <ul style="list-style-type: none"> <li>• Information regarding compliance and enforcement activities by government is limited; and</li> <li>• In general there are capacity constraints in implementing adequate enforcement activities either because of human resource constraints or because recently promulgated legislation is still being operationalised.</li> </ul> <p>Legislative amendment to address information management, including the mandatory gathering of information from the regulated sectors in certain instances and the disclosure of information for use by, for example, poison centres, will therefore need to be considered as well as options for optimising compliance and enforcement.</p>
Exempt quantities	The Department of Transport's has requested that the practice of exempt quantities contained in the Road Traffic Act and Regulations be retained. It will have to be established if the exempt quantities practice can be harmonised with the GHS requirements.

### 3.2.2 Legislative Options

The strategic options to address the issues arising from these findings may take various forms, and a policy decision will accordingly be necessary, taking into account the needs and current initiatives of the regulatory authority and regulated sectors. A summary of these options and a brief indication of both the positive and negative implications of each option are set out in Table 3.2 below. (It should be noted that a comprehensive assessment of the implications for each of the government departments involved in GHS falls beyond the scope of this document).

**Table 3.2: Legislative Options and Implications for the Development of a National Implementation Strategy**

Approach	Implications and comments
1. Implement the GHS system by means of a single consolidated Act.	A single consolidated Act has the advantage of clarifying the roles and responsibilities of government departments and should overcome current overlaps and gaps. However, in the absence of consolidating chemical management as a whole, a single Act for the implementation of GHS may fragment the current legislative position further. Furthermore, the undertaking of such a law reform process would require a considerable amount of time and co-ordination between all the relevant government departments and it is unlikely that it could be promulgated by 2008.

Approach	Implications and comments
2. Amend existing legislation to incorporate the provisions of the GHS.	Reflecting the GHS requirements in legislation would provide for maximum certainty. However, it could be difficult to accommodate changes to the GHS requirements in order to ensure implementation by 2008, given that 2004 is an election year and very little new legislative processes will be initiated. In view of this, it would be critical that in order for this option to be feasible, clear implementation actions would have to be undertaken in parallel to the drafting process. It would be difficult to address the requirements in respect of consumers without substantial legislative reform.
3. Amend existing legislation to incorporate the GHS document by reference.	Incorporating the GHS document into appropriate legislation by reference would theoretically require minimal input. However, it should be noted that because the GHS document is vague and ambiguous in certain instances and gives the competent authority discretion in other instances, legislative clarity would still be required. Furthermore, the relationship between legislation and the current application of SABS Codes of Practice would have to be addressed.
4. Amend existing SABS Codes of Practice to reflect the requirements of the GHS and incorporate into legislation by reference with limited amendments to actual legislation (e.g. ensuring that there are corresponding provisions for compliance and enforcement).	The use of SABS Codes of Practice should result in a more flexible and efficient approach than extensive regulation directly by legislation, as the revision of codes does not have the same process as legislation. An influence on this option is the accessibility of the codes which is currently being addressed by government. (The codes would require revision to address areas in which they are not compatible with the GHS).
5. Consolidate existing SABS Codes of Practice into one code or create a new standard that reflects the requirements of the GHS and incorporate into legislation by reference with limited amendments to actual legislation (e.g. ensuring that there are enabling provisions and corresponding provisions for compliance and enforcement).	This approach is in line with the Government's recently adopted approach to a technical regulatory framework and has the advantage of ensuring that a uniform technical approach will be reflected in all legislation. It also provides a basis for regional implementation.

It is clear from the above that legislative amendments will be required irrespective of which option is adopted. Although it is assumed that the OHS Act would be the logical "lead Act" within which to place the basis of the GHS system, most of the other Acts and/or regulations identified in Phase 1 of the GHS Study would require amendment to a greater or lesser extent. (For example, where there is under-regulation of certain sectors such as consumers, a greater degree of legislative intervention would be required).

For the purposes of this report, methods and approaches for addressing existing gaps and overlaps in the regulatory framework have not been considered unless they are of such a nature that they relate directly to a requirement of the GHS. Furthermore, Option 5 is considered to be the most feasible in the short term and has therefore been used as the basis for the actions in the subsequent sections of this document.

### 3.3 Institutional

#### 3.3.1 Institutional Issues

This section addresses the institutional arrangements required to give effect to the legislative, training, awareness raising and technical support requirements. Key issues that require attention are summarised in Table 3.3 below.

**Table 3.3: Institutional Issues to be Addressed in the Implementation of the GHS**

Issue	Description
<b>Issues related to National Institutions</b>	
Strengthening the role of existing institutional mechanisms in support of GHS implementation.	<p>Existing structures and institutions within the different regulatory authorities should be used to implement appropriate aspects of the GHS as shown below:</p> <ul style="list-style-type: none"> <li>• in terms of occupational health and safety issues, the DOL's Advisory Council for Occupational Health and Safety (ACOHS) and the Chief Directorate: Occupational Health and Safety;</li> <li>• in terms of analytical methodologies for health related parameters, the DOH's National Health Laboratory Service and private laboratories;</li> <li>• in terms of occupational health issues in the mining industry, the DME's Mining Occupational Health Advisory Committee and the Chief Inspectorate of Mines;</li> <li>• in terms of GHS pesticide related issues, the NDA's Inter-Departmental Advisory Committee for the Protection of Man against Poisons and the Registrar of Act 36; and</li> <li>• in terms of classification of chemicals which impact on the environment, DEAT and the CEC.</li> </ul>
Improved co-ordination between the emergency services at the local authority level	Inter-governmental forums are to be formalised by the National Disaster Management Centre. Impetus needs to be given to the development of an action plan to strengthen the emergency services, particularly in rural areas, and to include issues related to the implementation of the GHS.
Co-ordination between governmental, non-governmental, business and consumer organisation	Mechanisms need to be developed to bring about effective co-ordination between governmental, non-governmental, business and consumer organisation involved in raising public awareness about hazardous chemicals.
Improved compliance and enforcement	The Situation Analysis and Gap Analysis have highlighted a number of deficiencies in the compliance and enforcement of legislation related to the current situation with respect to GHS elements which need to be addressed. For example - implementation of and communication about the GHS requirements, information gathering, technical expertise and MSDSs. All government departments with a regulatory role will need to strengthen their capacity in this regard.

Issue	Description
Support for non-governmental implementing agencies	Non-governmental agencies (e.g. labour, NGOs, consumer organisations and industry, particularly SMMEs) that play a role in the implementation of the GHS may need government support and additional funding.
Support for SABS Technical Committees on Dangerous Goods	Standards SA requires more active participation from all the relevant government departments, NGOs, organized labour and the private sector, for their relevant technical committees.
Issues related to Regional and International Institutions	
Consultation with regional partners	The Strategy needs to ensure that GHS implementation in South Africa is harmonised with its implementation in SADC and ultimately the African Union.
Continuous alignment with international trends	An institutional arrangement is required to ensure ongoing alignment of the South African approach with international trends.
Co-ordinated input to work of relevant United Nations Sub-committees	A formal mechanism is required to ensure that all relevant South African government departments and other stakeholders can provide input to and receive feedback from the UN Sub-committees. Co-ordination of this approach within South Africa is required so that the stakeholder representatives are adequately mandated and informed.

### 3.3.2 Institutional Changes and Challenges

Implementation of Legislative Option 5 (as set out in section 3.2.2) will require a number of changes to existing institutional arrangements. The proposed changes and their implications are set out in Table 3.4a below.

**Table 3.4a: Institutional Changes and their Implications for the Development of a National Implementation Strategy**

Changes/Activities	Implications and comments
Amend relevant laws (see Table 4.1)	Each government department will have to amend its relevant law(s) to address the GHS mandatory (and where appropriate discretionary) requirements related to the institutional issues associated with regulating hazardous chemicals under its jurisdiction (see Table 3.4b for the specific roles of each of the departments).
Harmonised implementation of GHS within government, as well as by other stakeholders	The relevant government departments need to co-ordinate the harmonised implementation of the GHS.

Changes/Activities	Implications and comments
Addressing deficiencies in compliance and enforcement	The current deficiencies in the compliance and enforcement systems of the relevant departments need to be addressed through the proposed legislative changes (Table 4.1). This will address overlaps in jurisdiction and ambiguity regarding the jurisdictional mandate; training, awareness raising and associated institutional capacity building; as well as the allocation of appropriate resources, e.g. for monitor compliance and developing and implement appropriate information management system.
Consultation with regional institutions	Consultation with South Africa's regional (SADC) partners should take place through SADCSTAN.
Consultation with African Union partners	Consultation with African Union partners should take place through the relevant NEPAD structures.
Consultation with international institutions and input to the UN Committee of Experts on the GHS	The relevant government departments need to consult with and take due cognisance of the requirements of the relevant international institutions (e.g. GEF, UNITAR, UNEP).  The relevant government departments, NGOs and the private sector need to actively support SABS to more effectively fulfil its mandate in representing South Africa on the United Nations GHS Expert Committee.
Institutional arrangement for training and awareness raising	See Tables 3.5 and 3.6
Assisting non-government institutions	Assisting non-government institutions (e.g. Labour, NGOs, Consumer Organisations and SMMEs) to comply with the GHS requirements through developing government processes and programmes, including - awareness raising, training and resource provision, as well as through existing programmes such as the dti incentive schemes or supply side measures
Institutional arrangement for technical infrastructure development	See Table 3.7

**Table 3.4b: Proposed Roles and Responsibilities of Various Government Departments in Implementing the GHS**

Department	Role and Responsibility in terms of GHS Elements
Department of Labour	Industrial production: classification, MSDSs, Labelling, training, emergency response
Department of Health	Classification, labelling, training
Department of Minerals and Energy	Mining sector: training, emergency response
Department of Transport	Transportation sector: classification, labelling, Tremcards, training, emergency response
National Department of Agriculture	Agricultural sector: chemicals, classification, labelling
Department of Environmental Affairs and Tourism	Environment, emergency response, waste management (indirectly through the DWAF Minimum Requirements for waste)
Department of Provincial and Local Government	Emergency response, disaster management, training

## 3.4 Training

Although the GHS does not prescribe training as mandatory, some South African legislation prescribes training for a number of GHS elements. For example, the DOL's legislation already provides for training duties, structures, etc.

The GHS document states that training users of hazard information is an integral part of hazard communication. Systems should identify the appropriate education and training for GHS target audiences who are required to interpret label and/or SDS information and to take appropriate action in response to chemical hazards. Training requirements should be appropriate for, and commensurate with the nature of the work or exposure.

The training requirements of the different target audiences include:

**Competent Authorities:** Staff members of Government Departments, who will be responsible for implementation and monitoring of the GHS, will require training on all elements of the GHS.

**Workplace:** Information in the workplace is accessed from labels, MSDSs and risk management systems. Training needs to be provided for hazard identification and prevention. Employers and workers need to know the hazards specific to the chemicals used and handled in the workplace, as well as specific protective measures required to avoid adverse effects that may be caused by those hazards. Staff members involved in the preparation of labels, MSDSs and hazard communication strategies will also be required to understand the requirements of the GHS.

**Consumers:** In most cases, the label is the sole source of information readily available to the consumer. Consumer education is required to understand the information conveyed by the label with regard to the chemical hazard and handling of the product.

**Emergency Responders:** Emergency responders require information on a range of levels. Fire fighters and other emergency responders need to be trained in the use of graphical and coded information on the labels to correctly respond to emergency situations. Medical personnel responsible for treating victims of an emergency or accident need to understand the detailed information about hazards and response techniques provided by GHS.

**Transport:** All stakeholders involved in the transportation of chemicals require training to understand and be able to respond to the information conveyed on the vehicle placards and transport documentation. Stakeholders that have historically not been provided with hazard training, such as towing companies and import clearing agents, will also require GHS training.

In accordance with the GHS, training for the different target audiences is mandatory but the systems and mechanisms implemented to meet this requirement are at the discretion of the competent authorities.

### 3.4.1 Training Issues

In order to meet the training requirements of the GHS and within the constraints identified in Phases 1 and 2 of this project, the following issues must be addressed by the Strategy.

- Skills development is undertaken through 26 Sectoral Educational and Training Authorities (SETAs). The Chemical Industries Education and Training Authority (CHIETA) and the Transport Education and Training Authority (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 (PSETA) will also need to be involved in the strategy development.

- The SETA system provides a mechanism for training workers in the industrial, agricultural, transport and emergency response sectors and domestic workers. GHS training programmes that are commensurate with the roles and responsibilities of the different target audiences have to be developed and implemented. Training should be extended to all personnel in the organisation and should be extended to contract, casual and seasonal workers. Programmes for GHS refresher training must be formalised.
- The target audiences for the GHS are covered by a number of SETAs. The development and implementation of GHS training programmes needs to be harmonised across the sectors to minimise duplication of work and to ensure that the sector specific needs are addressed. Training in hazard communication of all role-players needs to be aligned with activities along the value chain.
- Consumers currently do not receive any training regarding the hazards of chemicals (e.g. cleaning agents) that they use. Training provided by the Services SETA, that provides training for service industries such as domestic workers, cleaning services and W&RSETA could be extended to include those aspects of GHS that are related to labelling of consumer products and the hazard information conveyed. Services SETA training programmes could be extended to members of the public.
- Additional training service providers will need to be identified and accredited across the target audience sectors to ensure that there is sufficient capacity to train all relevant role-players along the value chain.
- Peer education and train-the-trainer programmes are recognised to be effective mechanisms to increase the level of training in the workplace. The role of peer education should be strengthened and extended to include GHS training. The capacity of organisations that can assist with in-house training needs to be strengthened.
- The specific training needs of SMMEs and organisations located in the rural areas needs to be addressed for implementation of GHS training.

### 3.4.2 Training Challenges

The GHS does not prescribe the method or scope of training to be implemented but it is recognised that training is essential for the successful implementation of the GHS. The options that are available to address the identified issues and their implications are tabulated in Table 3.5.

**Table 3.5: Training Challenges and Implications for the Development of a National Implementation Strategy**

Challenge	Implications and comments
Build on existing capacity in National Skills Development System to extend training to all role-players in the value chain	<p>The South African Qualifications Authority and the relevant SETAs will need to ensure that the necessary unit standards are developed and accredited.</p> <p>The monitoring of the effectiveness of the training programmes, which is already a key activity of the SETAs, will ensure that the programmes are appropriate for the specific sector.</p>
Harmonise training modules along the value chain	Links will need to be established amongst the relevant SETAs to ensure that duplication of work is minimised and that accredited GHS training programmes are available through each SETA.
Ensure that sufficient training service providers are accredited to deliver the training	Appropriate service providers will need to be identified and accredited by the appropriate SETA. Cross-sectoral training by the relevant service providers would be facilitated by a co-ordinated approach by the SETAs.
Ensure that consumers understand the hazards of materials they are using	Reaching consumers requires a different strategy and the possibility of accessing the national skills development fund for this purpose needs to be explored. The foundation for educating consumers on the hazards of chemicals should also be laid at primary and secondary education level.
Exploit a variety of training approaches	A range of training systems is required in order to reach the various target audiences. The most appropriate mechanism will need to be established and implemented according to the different training needs.
Address the specific training needs of SMMEs and rurally based organisations	Resource constraints are the primary reason for inadequate training in SMMEs and organisations located in rural areas. The SETA system must accommodate the specific needs of these organisations and through consultation develop mechanisms that mitigate the constraints. Mechanisms could include the development of distance learning programmes, implementation of train-the-trainer programmes for employers, attendance at organised business training workshops and the provision of training by manufacturers along the product life-cycle.

## **3.5 Awareness Raising**

One key component to the successful implementation of the GHS is to raise awareness of the stakeholders about the GHS and the various elements that are applicable to their sector, as well as the need to raise awareness about hazards and how to mitigate effects of hazardous chemicals.

Awareness raising is not specified in the GHS document and the system implemented is at the discretion of the competent authorities.

### **3.5.1 Awareness Raising Issues**

In order to meet the training requirements of the GHS and within the constraints identified in Phases 1 and 2 of this project, the following issues must be addressed in the Strategy.

- Appropriate awareness raising programmes need to be implemented in all sectors with regard to the GHS and hazard communication and the roles and responsibilities of each target audience. The current awareness raising initiatives need to be strengthened and extended to include the GHS.
- Awareness raising should be harmonised within the sectors and across the sectors to ensure that programmes reach all target audiences.
- Awareness raising programmes for consumers are weak and need to be addressed.

### **3.5.2 Awareness Raising Challenges**

The challenges that are available to address the identified issues and their implications are tabulated in Table 3.6.

**Table 3.6: Awareness Raising Challenges and Implications for the Development of a National GHS Implementation Strategy**

Challenge	Implications and comments
Strengthen and extend existing awareness raising programmes to include GHS	<p>The content of the awareness raising programme will be dependent on the specific sector role and responsibilities. A range of mechanisms will be required to raise awareness to ensure that the information is accessible and comprehensible to all target audiences.</p> <p>Existing hazard communication programmes will need to be revised to include the relevant GHS elements and extended to increase the scope of the initiative.</p> <p>Appropriate service providers will need to be identified to meet the increased levels of awareness required and to address all role players along the value chain.</p> <p>The effectiveness of the programmes implemented will have to be monitored and revised where necessary.</p>
Establish and implement specific interventions to assist consumer awareness raising	<p>Specific interventions and assistance will be required by other sectors to facilitate implementation of initiatives within the consumer sector. This could include the introduction of hazard communication information into the educational curricula, extending chemical safety awareness programmes of industry associations, labour federations, environmental organisations and consumer groups.</p>
Harmonise awareness raising within and along the value chain	<p>Mechanisms will need to be implemented to facilitate co-ordination of programmes within each sector and in the sectors along the product life-cycle. This will ensure that all target audiences are addressed and where feasible co-ordinated cross-sectoral programmes are implemented.</p>

### 3.6 Technical Infrastructure

This section sets out the technical infrastructural requirements for the proposed National Implementation Strategy, such as testing facilities, poison centres and information management systems.

The GHS system specifies harmonised criteria for classifying substances and mixtures according to their health, environmental and physical hazards, which must be complied with when implementing the GHS. The test methods for determining the physical hazards of chemicals are mandatory and are prescribed in the GHS. Currently, physico-chemical hazards are determined according to the test methods and criteria described in SABS 0228. One discrepancy exists between SABS 0228 and the GHS; the GHS recommends that the test method in ASTM G31-72 (re-approved 1990) be used to determine the criteria for corrosive to metals. Although the criteria for classification for the *hazard corrosive to metals* is the same, the SABS 0228 recommends the test outlined in part III, section 37, paragraph 37.4 of the UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, which is currently not defined and reserves the section for a future test method.

The GHS criteria for determining health and environmental hazards are test neutral, allowing different approaches provided the tests are conducted according to internationally recognised scientific principles and criteria already referred to in existing systems. The test conditions need

to be standardised so that the results are reproducible with a given chemical substance and the standardised tests yield “valid” data for defining the hazard class of concern.

Testing of chemicals is not required in terms of the GHS where the relevant data on the hazards of the chemical is available. Classification is thus carried out using existing data, where available. Testing is thus only required where the necessary information has not been generated previously.

### 3.6.1 Testing Facilities

The issues that need to be addressed in the National Implementation Strategy include:

- The test methods currently used for determination of the physical, environmental and health hazard properties of a chemical are not fully aligned with GHS and do not cover all the classes of hazard. In addition, although the test methods for environmental and health hazards are discretionary they must produce valid results. Validation of the test method is the process whereby the reliability and relevance of the procedure is established for the specific hazard class.
- Accreditation of laboratories, using common standards and practices is seen as the most effective way of removing technical barriers to a free market economy. SANAS represents South Africa in all matters related to accreditation in conformity assessment and in the broader area of international acceptance of the tool of conformity assessment. The national laboratory accreditation system should be extended to cover all GHS testing. Laboratories that are able to undertake the required analyses but currently not accredited through SANAS should be formally accredited.
- The role of SANAS in GHS testing accreditation must be internationally recognised to ensure that laboratories accredited through SANAS are uniformly assessed according to standards and practices with other facilities worldwide. This would ensure that test results are internationally accepted.
- Manufacturers and laboratories need to be aware of the importance of accreditation of laboratories and standardisation of test conditions in classifying chemicals in accordance with GHS. Awareness needs to be raised on the GHS and its application in South Africa, and the need to use only accredited laboratories to ensure international acceptance of the classification process.
- The database that currently exists needs to be updated and maintained to include laboratory facilities that are accredited to undertake GHS testing.

### 3.6.2 Poison Centres

The issues that need to be addressed in the National Implementation Strategy include:

- There are currently no requirements for manufacturers to provide information to poison centres. Mechanisms need to be implemented to ensure that the manufacturers make appropriate information available to the poison centres with regard to the hazards of chemicals and emergency response measures.
- Mechanisms are required for the maintenance of an information management system that is appropriate to South Africa and accessible to poison centres.

- The poison centres are currently operating under constrained resource conditions and would require strengthening in order to extend their role to facilitate the implementation of GHS and to respond to enquiries from stakeholders.
- Awareness of the poison centres and their assistance in the event of a chemical incident is currently limited. Awareness needs to be raised within all sectors of the role of the poison centre in the implementation of the GHS and the information that can be obtained from them.

### 3.6.3 Information Management Systems

The issues that need to be addressed in the National Implementation Strategy include:

- Data is stored at various Government Departments but there is no integration and co-ordination of the data. Each Government Department requests information relevant to their function with no standard reporting requirement. Information requirements should be formalised in order to monitor the implementation of GHS and to prioritise intervention strategies. Appropriate data should be more accessible to stakeholders and for use by organisations for classification purposes. Reliable epidemiological data and experience that is collected on the effects of chemicals on humans, such as OHS data and data from accident databases and accidental poisonings, is important for classification purposes where criteria take into account the impact of a chemical on human health. Generally, good quality and reliable data has precedence over other data.
- The current information management systems for compliance monitoring at the Government Departments are generally poorly maintained and not regularly updated. Mechanisms should be established to ensure that data is readily accessible, updated on an ongoing basis and links made to other relevant government databases. Capacity in the relevant Government Departments needs to be strengthened to maintain information databases and the access of relevant information for GHS compliance monitoring.
- Some chemicals may have to be re-classified in accordance with GHS against the GHS criteria. Testing of chemicals is not required in terms of the GHS where the relevant data on the hazards of the chemical is available. Access to appropriate data will facilitate the process of re-classification. A number of international databases provide information that is relevant to chemical hazard communication and classification. Awareness needs to be raised on the information that is accessible to stakeholders.
- The access to chemical databases and information is largely Internet based. Specific assistance needs to be provided to SMMEs in accessing information and its use in implementing GHS.

### 3.6.4 Technical Infrastructure Challenges

The GHS does not prescribe the technical infrastructure to be provided to facilitate the implementation of GHS. South Africa currently has existing infrastructure that could be strengthened to include issues regarding the GHS and to facilitate its implementation. The challenges and their implications in addressing the identified issues are tabulated in Table 3.7.

**Table 3.7: Technology Infrastructure Challenges and Implications for the Development of a National GHS Implementation Strategy**

Challenge	Implications and comments
<b>Testing Facilities</b>	
Align test methods with GHS	<p>Prescribed physical tests methods for each hazard class covered by the GHS will have to be incorporated into the proposed GHS Code of Practice.</p> <p>SABS will have to implement a process to reach agreement of the test methods that meet the requirements for determination of the environmental and health hazards, e.g. a Code of Practice.</p>
International acceptance of test methods for classification of chemicals	<p>SANAS will need to accredit laboratories in South Africa for undertaking test methods for all hazard classes prescribed in South Africa. Currently, there are no accredited facilities for environmental and health testing and some hazard classes are not implemented. Appropriate facilities will have to be identified and assisted with accreditation.</p> <p>The GHS test methods and accreditation for GHS testing will have to be accepted internationally.</p>
GHS testing only to be undertaken by accredited facilities	<p>Facilities accredited to undertake the GHS test will have to be used to ensure international acceptance of chemical classification.</p> <p>This requirement could be referenced in legislation to ensure a consistent approach. Mechanisms will need to be established and implemented to monitor compliance.</p>
<b>Poison Centres</b>	
Maintenance of an up-to-date chemical hazard information database	<p>Guidelines need to be developed regarding the manufacturers' obligation to provide information on chemical products. This requirement may need to be included in legislation to ensure that updated information is made available on an ongoing basis. Mechanisms would be required to monitor compliance.</p> <p>Data and information collected will need to be stored on an information databases that can be accessed by relevant role players.</p>
Strengthen poison centres	<p>In order to strengthen the capacity of the poisons facility, either the capacity of each centre could be strengthened or one centre could be established (at one of the existing centres or at a new location) that is fully equipped to respond nationally to enquiries on a 24-hour basis. The centre(s) could assist in monitoring the effectiveness of the implementation of the GHS by recording the number and range of enquiries received.</p> <p>The scope of the poison centre could be extended to respond to all incidents involving chemicals, e.g. chronic and epidemiological impacts.</p>

Challenge	Implications and comments
<b><i>Information Management Systems</i></b>	
Formalise and harmonise GHS information requirements	<p>Provision is currently made in legislation for the mandatory reporting of specified information. This legal provision could be revised to include GHS information reporting requirements and the information that should be available in the public domain.</p> <p>Existing databases could either be updated and co-ordinated or one central database established that is accessible to all departments.</p> <p>Government staff members will need to be capacitated to manage the database and to extract appropriate information for GHS compliance monitoring.</p>
Assist SMMEs in accessing chemical hazard information	<p>Access to chemical information is largely internet based. In general, larger companies have access to electronic information and are aware of the information that is available. Smaller companies may require assistance in accessing the data and its use for classifying chemicals and compiling labels and MSDSs. Assistance could be provided by organisations such as CAIA and AVCASA through activities that include training workshops, direct provision of information and awareness raising programmes.</p>