

4 Recommendations for addressing outstanding information requirements

Key content areas that should be covered by a comprehensive chemicals website include:

- ▶ Market information
- ▶ Resources
- ▶ Careers and skills
- ▶ Current events
- ▶ Companies
- ▶ Chemistry
- ▶ Legislation and regulation
- ▶ Institutional support
- ▶ Research and innovation
- ▶ Health, safety and environment
- ▶ Industry organisations

Overall, the review of international websites revealed that there is a huge proliferation of chemicals sector related information readily available on the world-wide web. The challenge was to prioritise the most relevant sources, according to information needs.

There is a broad range of websites available, including:

- ▶ Industry organisation websites, e.g. the American Chemicals Council website
- ▶ Environmental organisation websites, e.g. the United Nations Environment Programme (UNEP) Chemicals website
- ▶ Government supported websites which provide portals for chemical industries, and environmental and legal information
- ▶ Commercial website providers that provide news and information about the industry e.g. European Chemical News
- ▶ Global or regional organisation websites e.g. OECD website on chemical safety

The recommendations to address the gaps in the information available identified in the previous section are detailed below. Additional links to industry organisations are also provided.

For a detailed overview of relevant websites please refer to [Appendices 1](#) and [2](#) of this document.

4.1 Market information

Information required		Suggested links	Description of website	Recommendations
Sector overview	Information for international sub sector markets	http://www.ecvm.org/ http://www.vinyl.org/ https://www.uktradeinvest.gov.uk/ukti/appmanager/ukti/sectors?_nfpb=true&pageLabel=vpage_2&virtualPage=Oil http://www.plastics.org/splastics/index.asp http://www.worldchlorine.org/ http://www.chlorineinstitute.org/ http://www.c3.org/	Industry organisation websites, e.g.: Vinyl: ▶ European Council of Vinyl manufacturers ▶ Vinyl.org Plastics: ▶ American Plastics council website Chlorine: ▶ World Chlorine Council	Link to sites

Information required		Suggested links	Description of website	Recommendations
Sector overview	Information for national and international end use markets	http://www.naacam.co.za	Websites covering end use sectors, e.g.: Automotive: ▶ National Association of Automotive Component and Allied Manufacturers	Link to site
		http://www.cbi.nl/show.php?file=show_document.html&id=33&setSection=exp	Information provided for exporters by the Netherlands – free registration required	Link to site
		http://www.intracen.org/mas/mb.htm	Market briefs provided on the International Trade Centre website	Link to site
Country overview	Market overviews for potential export markets	http://www.cia.gov/cia/publications/factbook/index.html	The CIA provides up to date country profiles for all countries	Link to site
Production	International chemicals production National production	http://www.cefic.org/factsandfigures/level02/growthindustry_index.html	Production information for the EU and international comparisons on CEFIC	Link to site Similar user friendly information should be developed for the South African context
Demand	Demand information for potential export markets and markets other than SADC	See international trade links		
Trends	Global trends in the chemicals sector	http://www.chemistry.org/portal/a/c/s/1/acsdisplay.html?DOC=industry%5Cindustry.state.html	Trends detailed on the American Chemical Society Website	Link to this site
Trade	Trade agreement information	http://www.eurunion.org/legislat/gsp/gsp.htm	Generalised System of Preferences	Link to this site
		http://www.dfa.gov.za/foreign/Multilateral/africa/sacu.htm	Department of Foreign Affairs site on the Southern African Customs Union	Link to this site

Information required		Suggested links	Description of website	Recommendations
Trade	Trade agreement information	http://www.comesa.int/	COMESA website	Link to the site Although South Africa is not a COMESA member this site may be useful for companies interested in investing in other African countries
		www.sadcreview.com	SADC Trade, Industry and Investment Review 2004	Link to this site
		www.agoa.gov/	Site for AGOA by the US government	Link to this site
		http://www.southafrica.info/doing_business/sa_trade/agreements/traderelations.htm	South Africa information site that details trade agreements	Link to this site
	Trade issues	http://www.cefic.be/Templates/shwPublications.asp?NID=2&T=3&S=9	CEFIC - Position papers	Link to this site. Links to specific articles on trade issues could also be made.
	International trade of chemicals products	http://www.thedti.gov.za/econdb/raportt/rapmenu1.html	World trade at 3 to 6 digit level with specific information for: <ul style="list-style-type: none"> ▶ South Africa ▶ US ▶ UK ▶ OECD countries ▶ Japan 	Link to specific sections and describe the link, e.g.: Exports and imports of Primary Ethylene
		http://www.austrade.gov.au/australia/layout/0,,0_S2-1_CLNTXID0019-,00.html	Austrade search page for information on exporting to other countries	Polymer (SITC 571) for 162 countries for 1997 – 2002:
http://www.export.gov/tradestatistics.html		Information for exporters on US trade and international trade statistics	http://www.thedti.gov.za/econdb/raportt/PRIMARYETHYLENEPOLYMERcomtr.html	
Employment in the chemicals sector in South Africa	-	-	Develop statistics on employment in the chemicals industry in South Africa	
	http://www.labour.gov.za	Department of Labour	Link to this site	

Information required		Suggested links	Description of website	Recommendations
Employment	Employment in the chemicals sector in South Africa	http://www.cosatu.org.za/affiliates/afficep.htm	CEPPWAWU – Chemicals, Energy, Paper, Printing, Wood and Allied Workers Union of South Africa on the COSATU website	Link to this site
Health and safety indicators	Health and safety indicators for South Africa and other countries	http://www.oecd.org/infobycountry/0,2646,en_2649_34365_1_70915_1_1_1,00.html	OECD Chemicals safety site for South Africa	Link to this site

4.2 Resources

Information required		Suggested links	Description of website	Recommendations
Academic	Further links to academic resources relating to chemicals research	http://www.chemweb.com/abstracts/	Free search of chemicals abstracts	Link to this site
		http://www.chemweb.com/journals	Free search of chemicals journals, with free access to abstracts	Link to this site

4.3 Careers and skills

Information required		Suggested links	Description of website	Recommendations
Training/Skills	Information on skills available	http://www.chieta.org.za/home.asp	Chemicals Industry Education and Training Authority	A skills database may be developed by CHIETA; In future link directly to the database Link to the CHIETA site
		http://www.chempeople.com/	Subscription site that facilitates global networking within the chemicals industry	Link to this site
	Further links	http://inventors.about.com/library/inventors/blplastic.htm	Provides a history of plastics	Link to site
http://www.teachingplastics.com/index.html		Guide and material for teachers on plastics education at three different levels	Link to site	
		http://www.chemistry.org/portal/a/c/s/1/educatorsandstudents.html	Educational material for all levels	Link to this site

4.4 Current events

Information required		Suggested links	Description of website	Recommendations
Current issues	More recent material on issues facing the chemicals sector	-	-	Develop more recent South Africa specific articles with input from industry experts
News	Links to news websites relating to the chemicals sector	http://chemicalmarketreporter.com/home/Default.asp?type=0&liSectionID=12	Chemical Market Reporter provides news and market reports – by subscription only	Link to site – specify that this site is by subscription only
		http://www.chemistry.org/portals/a/c/s/1/newscenter.html	Selection of news articles, journal articles	Link to site
		http://chemweb.tradepub.com/	Comprehensive list linked to chemicals and chemicals-related magazine sites that may need to be accessed by subscription	Link to site. Assess access issues.
		http://www.europeanchemicalnews.com/home/Default.asp?type=1&liArticleID=653063&liSectionID=201	European Chemical News – news in the chemicals industry This link is by subscription only	Link to site Specify that access can be gained only by subscription
Events	Provide details for trade expos and conferences worldwide	http://www.chemnet.com/expo/m/expo/	Provides details for trade expos worldwide	Contact relevant organisations, e.g. Department of Science and Technology to ascertain event schedules and post on website
Tenders	Details on tenders in the chemicals sector in South Africa	http://www.tradeworld.net	Tenders on Tradeworld	Link to site
		http://www.info.gov.za/documents/tenders/index.htm	Tenders published in the government gazette	Link to site
		http://www.engineeringnews.co.za/eng/essentials/tenders/	Tenders on engineering news	Link to site

4.5 Companies

Information required		Suggested links	Description of website	Recommendations
Companies	Information on BEE companies	-	-	Link to dti database of BEE companies when available online

4.6 Chemistry

Information required		Suggested links	Description of website	Recommendations
Chemistry in daily life	Chemistry information for people outside the chemicals sector	http://www.cefic.be/Template/shwStory.asp?NID=13&HID=104	Information on chemicals uses and products pitched at a level that is widely understandable	Link to site
Physical processes	Information on physical processes used in the manufacture of chemicals	http://www.chemical-industry.org.uk/	Physical processes	Link to site
Chemical reactions	Information on reactions used in the manufacture of chemicals	http://www.cas.org/CASFILES/casreact.html	Information on chemical reactions	Link to site
		http://www.chem.ox.ac.uk/vrchemistry/	Chemistry department at Oxford University	Link to site
		http://www.chemical-industry.org.uk/	Information on chemical reactions	Link to site

4.7 Legislation and regulation

Information required		Suggested links	Description of website	Recommendations
Relevant legislation	Agriculture related	http://www.ais.up.ac.za/vet/fertiliz.pdf	Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act	Link to this document
		http://www.polity.org.za/polaacts/2003/	Agricultural Produce Agents Amendment Act (No. 47 of 2003)	Link to relevant legislation
		http://www.polity.org.za/html/govdocs/bills/1998/index.html	Agricultural Product Standards Amendment Bill, No.24	Link to relevant legislation
		http://www.polity.org.za/html/govdocs/legislation/1997/index.html	Marketing of Agricultural Products Amendment Act, No.59	Link to relevant legislation
	Labour	http://www.polity.org.za/polaacts/2002/	Basic Conditions of Employment Amendment Act (No. 11 of 2002)	Link to relevant legislation

Information required		Suggested links	Description of website	Recommendations
Relevant legislation	Labour	http://www.polity.org.za/pol/acts/2002/	Labour Relations Amendment Act (No. 12 of 2002)	Link to relevant legislation
	Businesses	http://www.polity.org.za/pol/acts/2004/	Companies Amendment Act (No. 20 of 2004)	Link to relevant legislation
	Health	http://www.info.gov.za/gazette/acts/1993/a85-93.htm	Occupational Health and Safety Act	Link to this site
		http://www.polity.org.za/html/govdocs/legislation/1997/index.html	Compensation for Occupational Injuries and Diseases Amendment Act, No.61	Link to relevant legislation
		http://www.polity.org.za/pol/acts/2003/	National Health Act (No. 61 of 2003)	Link to relevant legislation
		http://www.polity.org.za/pol/acts/2002/	Occupational Diseases in Mines and Works Amendment Act (No. 60 of 2002)	Link to relevant legislation
	Disaster management	http://www.polity.org.za/pol/acts/2002/	Disaster Management Act (No. 57 of 2002)	Link to relevant legislation
	Engineering/ Professional related	http://www.polity.org.za/html/govdocs/bills/2000/index.html	Engineering Profession Bill, No 19	Link to relevant legislation
		http://www.polity.org.za/pol/acts/2003/	Natural Scientific Professions Act (No. 27 of 2003)	Link to relevant legislation
	Environment related	http://www.polity.org.za/html/govdocs/legislation/1997/index.html	Environmental Laws Rationalisation Act, No.51	Link to relevant legislation
		http://www.polity.org.za/pol/acts/2003/	National Environmental Management Amendment Act (No. 46 of 2003)	Link to relevant legislation
		http://www.polity.org.za/pol/acts/2002/	National Environmental Management Amendment Act (No. 56 of 2002)	Link to relevant legislation
		http://www.polity.org.za/pol/bill/2003/	National Environmental Management Amendment Bill (B 29-2003)	Link to relevant legislation
		http://www.polity.org.za/pol/acts/2004/	National Environmental Management: Biodiversity Act (No. 10 of 2004)	Link to relevant legislation
		http://www.polity.org.za/pol/acts/2003/	National Environmental Management: Protected Areas Act (No. 57 of 2003)	Link to relevant legislation
		http://www.polity.org.za/pol/bill/2004/	National Environmental Management: Protected Areas Amendment Bill (B 2-2004)	Link to relevant legislation

Information required		Suggested links	Description of website	Recommendations
Relevant legislation	Environment related	http://www.polity.org.za/html/govdocs/bills/1996/index.html	Environment Conservation Act Extension Bill, No.66	Link to relevant legislation
		http://www.polity.org.za/policies/acts/2003/	Environment Conservation Amendment Act (No. 50 of 2003)	Link to relevant legislation
	Explosives	http://www.polity.org.za/policies/acts/2003/	Explosives Act (No. 15 of 2003)	Link to relevant legislation
	Intellectual property	http://www.polity.org.za/html/govdocs/legislation/2001/index.html	Patents Amendment Act, 10	Link to relevant legislation
		http://www.polity.org.za/html/govdocs/legislation/1997/index.html	Intellectual Property Laws Amendment Act, No.38	Link to relevant legislation
	Petroleum related	http://www.polity.org.za/policies/acts/2002/	Mineral and Petroleum Resources Development Act (No. 28 of 2002)	Link to relevant legislation
		http://www.polity.org.za/policies/bill/2002/	Mineral and Petroleum Royalty Bill (B 1-2002)	Link to relevant legislation
		http://www.polity.org.za/policies/acts/2003/	Petroleum Pipelines Act (No. 60 of 2003)	Link to relevant legislation
		http://www.polity.org.za/policies/bill/2004/	Petroleum Pipelines Levies Bill (B 18-2004)	Link to relevant legislation
		http://www.polity.org.za/policies/acts/2003/	Petroleum Products Amendment Act (No. 58 of 2003)	Link to relevant legislation
		http://www.polity.org.za/policies/bill/2004/	Petroleum Products Amendment Bill (B 16-2004)	Link to relevant legislation
		http://www.polity.org.za/policies/bill/2003/	Petroleum Products Amendment Bill (B25-2003)	Link to relevant legislation
	Research	http://www.polity.org.za/html/govdocs/legislation/1998/index.html	National Research Foundation Act, No.23	Link to relevant legislation
	Pharmacies related	http://www.polity.org.za/html/govdocs/legislation/1995/index.html	Pharmacy Amendment Act, No.6	Link to relevant legislation

4.8 Institutional support

Information required		Suggested links	Description of website	Recommendations
Incentive and support entities	More direct links to entities	http://www.twib.co.za	Technology for Women in Business (TWIB)	Link to site
		http://www.idc.co.za	Industrial Development Corporation	Link to site
		http://www.treasury.gov.za	National Treasury	Link to site
		http://www.thedti.gov.za/thedti/organisation1e.htm	The Enterprise Organisation (TEO)	Link to site

Incentive and support entities	More direct links to entities	http://www.theinnovationhub.com	The Innovation Hub	Link to site
		http://www.dti.gov.za/offering/offeringgroup.asp?offeringgroupid=22	Small Business Development	Link to site
		http://www.dti.gov.za/offering/offeringgroup.asp?offeringgroupid=25	Technology Transfer Guarantee Fund	Link to site
		http://www.spil.co.za	SPII Fund	Link to site
		www.nrf.ac.za	National Research Foundation	Link to site
		www.dst.gov.za	Department of Science and Technology	Link to site
		www.innovationfund.ac.za	Innovation Fund	Link to site

4.9 Research and innovation

Information required		Suggested links	Description of website	Recommendations
Research and innovation	R&D expenditure	http://www.hsrc.ac.za/RnDSurvey/downloads/2001_02RnDSurveyIndex.pdf	South African National Survey of Research and Experimental Development 2001/02	Link to this document
	Additional sources of information	http://www.theinnovationhub.com	The Innovation Hub	Link to this site
		http://www.chemweb.com/abstracts/	Free search of chemicals abstracts	Link to this site

4.10 Health, Safety & Environment

Information required		Suggested links	Description of website	Recommendations
Hazards	Further links/ information	-	-	Provide companies' Materials Safety sheets on website
		http://www.chem.unep.ch/rptc/default.htm	UNEP chemicals programme page. Provides information on UNEPs chemicals programmes	Link to site
		http://www.unitar.org/cwm/about.htm	UNITAR Chemicals & Waste	Link to site
		http://www.basel.int/	Basel Convention	Link to site
		http://www.who.int/ifcs/infocap/	INFOCAP	Link to site
		http://www.who.int/ipcs/en/	IPCS	Link to site
		http://www.who.int/ifcs/	Intergovernmental Forum on Chemical Safety	Link to site

Information required		Suggested links	Description of website	Recommendations
Hazards	Further links/ information	http://www.oecd.org/departm ent/0,2688,en_2649_34365_1_1_1_1_1_00.html	Comprehensive site relating to chemicals safety	Link to site
		http://www.chemistry.org/port al/a/c/s/1/acdisplay.html?D OC=greenchemistryinstitutei ndex.html	Green Institute	Link to site
International initiatives	Responsible Care Initiative	http://www.cefic.be/Template s/shwStory.asp?NID=3&HID =8	CEFIC - Responsible Care	Link to site
		http://www.responsiblecare-us.com/	American Chemistry Council (ACC) - Responsible Care	Link to site
		http://www.fecc.org/en/index.php?pageid=45	FECC - Responsible Care	Link to site
		http://www.chemical-industry.org.uk/responsiblecare.htm	The Chemical Industry - Responsible Care	Link to site
		http://www.icca-chem.org/section02a.html	ICCA - Responsible Care	Link to site
		http://www.mbendi.co.za/caia/rescare.htm	CAIA - Responsible Care	Link to site
		http://www.ccpa.ca/ResponsibleCare/	Responsible Care at the Canada Chemicals Producers Association page. The Responsible Care initiative was originated by this organisation	Link to site
	High Production Volumes Initiative	http://www.icca-chem.org/section02b.html	High Production Volume (HPV) Chemicals Initiative	Link to site
	Long range research initiative	http://www.icca-chem.org/section02c.html	ICCA – Long Range Research Initiative	Link to site
		http://www.cefic-iri.org/Templates/shwStory.asp?NID=19&HID=369	CEFIC – Long Range Research Initiative	Link to site
		http://www.usri.org/	ACC – Long Range Research Initiative	Link to site
		http://www.j-iri.org/	JCIA - Long Range Research Initiative	Link to site
		http://www.usri.com/	Long Range Research Initiative In the US	Link to site

Information required		Suggested links	Description of website	Recommendations
Sustainable development	Further information on sustainable development	http://www.unep.org/themes/chemicals/	United Nations Environment Programme (Division of Technology, Industry and Economics)	Link to site
		http://europa.eu.int/comm/environment/chemicals/	Chemicals and the environment on the EU site	Link to site
		http://unfccc.int/2860.php	United Nations Framework on climate change Provides information on climate change and the Kyoto protocol	Link to site
Consumer confidence and safety	Further information on consumer health and safety	http://www.fda.gov/	US Food and Drug Administration – information on products	Link to site
		http://europa.eu.int/comm/consumers/cons_safe/prod_safe/chem_risks/index_en.htm	EU site on consumer safety with relation to chemicals	Link to this site

4.11 Industry organisations

Information required		Suggested links	Description of website	Recommendations
Industry organisations	Links to international industry organisations	http://www.icca-chem.org/	International Council of Chemical Associations Provides information on health, safety and environmental issues	Link to site
		http://www.chemistry.org/portals/a/c/s/1/acdisplay.html?DOC=careers.html	American Chemical Society	Link to site
		http://www.plasticsindustry.org/	Society of the Plastics Industry (United States)	Link to site
		http://www.ccpa.ca/	Canada's Chemicals Producers	Link to site
		http://www.nikkakyo.org/English/organizations/iri/index.php3/	Japan Chemical Industry Association	Link to site
		http://www.nicnas.gov.au/	National Industrial Chemicals Notification and Assessment Scheme (NICNAS) provides assessments of chemicals in Australia in terms of health and safety concerns	Link to site

Information required		Suggested links	Description of website	Recommendations
Industry organisations	Links to international industry organisations	http://www.pacia.org.au/	Plastics and Chemicals Industry Association Australia	Link to site
		http://www.nzic.org.nz/	New Zealand Institute of Chemistry	Link to site

5 Strategy for ongoing expansion of the information system

The website should be maintained with the objectives of keeping the content and format up to date and relevant. This can be done by:

- ▶ Regularly assessing new links and sources of information
- ▶ Regularly checking that links function correctly
- ▶ Developing new information on a regular basis
- ▶ Conducting regular user satisfaction surveys

As highlighted by the analysis above, most of the information gaps identified can be addressed by providing links to other websites. These websites to which links are made should be assessed according to their content and format. This should be done according to the criteria set out below.

5.1 Ongoing screening of potential sources of information

Potential sources of information that relate to both the South African context and the international chemicals industry should be identified as they become available for further expansion of the information system.

These could include:

- ▶ Industry studies by chemical consultants or industry experts
- ▶ Databases developed to include information on chemical products, companies, or skills
- ▶ Government notices of legislation, regulation and tenders
- ▶ International and South African websites

Websites to which links can be established should be evaluated according to their content and their format:

Criteria to assess a website's content

Criteria ¹	Considerations	Recommendations
Authority	<ul style="list-style-type: none"> ▶ Is it clear who is responsible for the site? ▶ Is the source appropriate to the type of information provided? ▶ Is the site an official site of an organisation? ▶ Can the information be verified? ▶ Can the author be contacted? ▶ Has the site received reviews and have these been favourable? 	<ul style="list-style-type: none"> ▶ The website should be managed by a reputable industry organisation ▶ There should be contact details of the responsible authority

¹Developed from:

<http://nml.gov/scr/conhlth/evalsite.htm>

<http://www.llrx.com/features/evaluating.htm#Criteria%20of%20Evaluation>

<http://www.clubi.ie/webserch/resources/integrity.htm>

<http://www.isinet.com/essays/selectionofmaterialforcoverage/23.html/>

<http://library.usm.maine.edu/research/researchguides/webevaluating.html>

Criteria ¹	Considerations	Recommendations
Currency	<ul style="list-style-type: none"> ▶ Is the site regularly updated? ▶ Is the frequency of updating appropriate to the information? ▶ Is new information included on a timely basis? ▶ Is older information archived? ▶ Does the site have clear pointers to new content? ▶ Is there a commitment to ongoing maintenance of the resource? 	<ul style="list-style-type: none"> ▶ Information that should be updated regularly: <ul style="list-style-type: none"> ○ News, events, tenders ▶ Information which should be updated on a timely basis: <ul style="list-style-type: none"> ○ Changes in legislation or regulation
Accuracy	<ul style="list-style-type: none"> ▶ Is the information in the resource accurate? ▶ Has the information been through a selection process? ▶ Is the information supported by research findings? ▶ Is there a facility for sending corrections to inaccurate information? 	<ul style="list-style-type: none"> ▶ The information presented should be accurate and verifiable
Relevance	<ul style="list-style-type: none"> ▶ Is the information relevant to the chemicals sector? ▶ What is the intended audience? ▶ Is the level at which the resource is pitched appropriate for the intended audience? ▶ Is the material appropriate for minors? 	<ul style="list-style-type: none"> ▶ The information should be relevant to the chemicals sector of South Africa ▶ The information should be accessible to both industry and non-industry audiences
Objectivity	<ul style="list-style-type: none"> ▶ What is the purpose of the site? ▶ Is the resource reasonably balanced? ▶ Is the information based on fact or opinion? 	<ul style="list-style-type: none"> ▶ The purpose of the site should be clearly stated so that any bias is made clear
Comprehensiveness	<ul style="list-style-type: none"> ▶ Is the resource comprehensive within its given area? ▶ What is the level of detail? ▶ Is there adequate coverage of the subject? ▶ Are there any obvious omissions? ▶ Is the site still under construction and therefore incomplete? ▶ Does the site contain original information or links or both? 	<ul style="list-style-type: none"> ▶ The site should be as comprehensive as possible within its given scope

Criteria ¹	Considerations	Recommendations
Coverage	<ul style="list-style-type: none"> ▶ What is the scope of the website? ▶ What is the range of different subjects covered within the area? ▶ What is the retrospective coverage of the source? ▶ What type of information is included? ▶ Does the resource cover the subject adequately? ▶ Are there any links to further information? 	<ul style="list-style-type: none"> ▶ The website should cover any subject that may impact on chemicals industry stakeholders including companies, support industries, research institutions, government, the environment, labour and consumers

Criteria to assess a website's format

² Criteria	Considerations	Recommendations
Design and layout	<ul style="list-style-type: none"> ▶ Is the resource well designed? ▶ Is there effective use of navigation aids such as a site map, index, menus, toolbars or search facility? ▶ Is the design consistent between different parts of the same resource? ▶ Are images used appropriately? ▶ Is advertising used appropriately or does it detract from the value of the information? ▶ Is user support provided? ▶ Are links clearly identifiable? 	<ul style="list-style-type: none"> ▶ The website should be attractively designed and clearly laid out so that information can be easily accessed. (Otherwise users will be deterred from using the site regularly)
Presentation	<ul style="list-style-type: none"> ▶ Is the writing of good quality? ▶ Are graphics professionally presented? ▶ Are there any typographical or grammatical errors? 	<ul style="list-style-type: none"> ▶ All information should be presented in clear language, although the type of language used will differ according to the audience for which the site is intended

² <http://nrlm.gov/scr/conhlth/evalsite.htm>
<http://www.llrx.com/features/evaluating.htm#Criteria%20of%20Evaluation>
<http://www.clubi.ie/webserch/resources/integrity.htm>
<http://www.isinet.com/essays/selectionofmaterialforcoverage/23.html/>
<http://library.usm.maine.edu/research/researchguides/webevaluating.html>
http://www.vuw.ac.nz/staff/alastair_smith/eval/index.htm
<http://hitweb.mitrettek.org/docs/policy.html>
<http://biome.ac.uk/guidelines/eval/summary.html>

Criteria	Considerations	Recommendations
<p align="center">Copyright and cost issues</p>	<ul style="list-style-type: none"> ▶ Do users need to register to use the resource, and if so, is this a straightforward process? ▶ Is there a charge to access the resource and how does this compare to other materials? ▶ Is the price structure indicated? ▶ Are services available with limited functionality, or for trial periods? ▶ Is there sufficient transaction security for payments? 	<ul style="list-style-type: none"> ▶ Links can be provided whether the site requires a subscription or not, as the users then have the choice of subscribing ▶ Links that require a subscription should be described as such ▶ Sites which require subscription may be willing to pay for advertising on the portal site

5.2 Promotion of awareness and usage of the website

The website should also be promoted to increase awareness and usage of the site. This can be done by:

- ▶ Direct emailing to stakeholders
- ▶ Tailoring of content to user needs
- ▶ Interactive features to drive traffic to the site
- ▶ Links on related pages, such as industry organisation sites, government sites, and general information sites such as www.southafrica.info.

Means of assessing the success of website promotion should be set up, including:

- ▶ Website traffic measurement
- ▶ User interviews

This would require sufficiently skilled human resources for both technical and strategic applications. These functions of website/content manager could be outsourced or appointed in-house.

Appendix 1 : Overview of major national sites

Website name	URL	Chemical Hazard - Production	Chemical Hazard - Use	Applicable legislation	International chemical initiatives	SA industry info	Comment
Chemweb	new address: http://www.chemissa.co.za/new/	✓ Articles (e.g. The Chemical Industry's Health, Safety and Environmental Initiative article) and environmental issues links	✓ Articles (e.g. The Chemical Industry's Health, Safety and Environmental Initiative article) and environmental issues link			✓	Starting point for information system expansion. Good overview of SADC countries and South Africa, good structure and good categorisation on banners. Good method of either providing information on their pages or linking directly to other sites.
Chemissa	http://www.chemissa.co.za					✓	Provides information on consumption and trade of chemicals in 14 SADC countries.
Empowerment of African Sustainable Development	http://www.easd.org.za/default.asp	✓ White Paper on Environmental Management Policy and Draft White Paper on Integrated Pollution and Waste Management for South Africa					

Website name	URL	Chemical Hazard - Production	Chemical Hazard - Use	Applicable legislation	International chemical initiatives	SA industry info	Comment
South African Government Information	http://www.info.gov.za			✓			Link Provides access to legislation, draft legislation and policy documents.
Policy and Law Online News	http://www.polity.org.za/pol/home/			✓			Link Provides access to all South Africa Bills and Acts. Link page could include suggested links to relevant legislation.
Mbendi Chemicals Industry Profile	http://www.mbendi.co.za/indy/chem/af/sa/p0005.htm					✓	Create section based upon Provides a good overview of the industry including industry structure, incentives and contacts for major players. May be useful to link to as background reading on SA chemicals industry (CAIA already does this). Statistics section is a bit dated (1994-1998).
Chemical and Allied Industries' Association (CAIA)	http://www.mbendi.co.za/caia/index.htm				✓ Responsible Care	✓	Link
South African Petroleum Industry Association	http://www.mbendi.com/sapia/					✓	Link
South Africa Institution of Chemical Engineers (SAICHE)	http://www.saiचे.co.za/					✓	Link

Website name	URL	Chemical Hazard - Production	Chemical Hazard - Use	Applicable legislation	International chemical initiatives	SA industry info	Comment
South African Chemical Institute	http://www.saci.co.za/					✓	Link Information is out dated and not easy to navigate.
Science and Technology Research Organisation (CSIR)	www.csir.co.za/					✓	Link May be useful to link to section on Bio/Chemtek.
South African Bureau of Standards	http://www.sabs.co.za/					✓	Link May be useful as a link for standards, regulation and for chemical/ petrochemical commercial services offered.

Appendix 2: Overview of key international sites

Website name	URL	Chemical Hazard - Production	Chemical Hazard - Use	Applicable legislation	International chemical initiatives	Industry info	Comment
The International Council of Chemical Associations (ICCA)	http://www.icca-chem.org/				✓ Responsible Care, High Production Volume (HPV) Chemicals Initiative, Long Range Research Initiative	✓	Link
American Chemical Society	http://www.chemistry.org					✓	Link Representative body link that has further links to databases, directories and other chemicals based resources.
CEFIC (European Chemical Industry Council)	http://www.cefic.be				✓ Responsible Care Long Range Research Initiative, Trade Position papers	✓	Link Representative body link that has further information on chemicals industry in EU.
American Chemistry Council (ACC)	http://www.americanchemistry.com/				✓ Responsible Care Long Range Research Initiative	✓	Link Representative body link that has further information on chemicals industry in US.

Website name	URL	Chemical Hazard - Production	Chemical Hazard - Use	Applicable legislation	International chemical initiatives	Industry info	Comment
The Chemical Industry	http://www.chemical-industry.org.uk/				✓ Responsible Care	✓	Link Representative body link that has further information on chemicals industry in UK.
Japan Chemical Industry Association (JCIA)	http://www.nikka-kyo.or.jp/English/index.php3				✓ Long Range Research Initiative	✓	Link Representative body link that has further information on chemicals industry in Japan.
The Physical and Theoretical Chemistry Laboratory Oxford University Chemical and Other Safety Information	http://physchem.ox.ac.uk/MSDS/	✓	✓				Link Source of general information about safety and the potential hazards of chemicals.
National Institute for Occupational Safety and Health - Chemical Safety Databases and Other Resources	http://www.cdc.gov/niosh/topics/chemical-safety/default.html	✓	✓				Link Source of information on chemical hazards.
International Programme on Chemical Safety (IPCS) INCHEM	http://www.inchem.org/	✓	✓				Link Source of information on chemical hazards
ChemQuik MSDS (Material Safety Data Sheet) Sources	http://www.chemquik.com/site/cq/freecq-sources.asp	✓	✓				Link Source of information on chemical hazards.

Website name	URL	Chemical Hazard - Production	Chemical Hazard - Use	Applicable legislation	International chemical initiatives	Industry info	Comment
Emergency response guide 2000	http://www.tc.gc.ca/canotec/erg_gmu/erg2000_menu.htm	✓	✓				Link Source of information on chemical hazards.
Hazardous substances databank	http://ull.chemistry.uakron.edu/erd/	✓	✓				Link Source of information on chemical hazards.
HazDat database	http://www.atsdr.cdc.gov/hazdat.html	✓	✓				Link Source of information on chemical hazards.
An Introduction to Chemical Hazards in the Workplace	http://www.dhs.ca.gov/ohb/HESIS/uts.htm	✓	✓				Link Source of information on chemical hazards.
Chemical Hazards Communication Society	http://www.chcs.org.uk/	✓	✓				Link Source of information on chemical hazards.
Chemical Hazards in Industry	http://www.rsc.org/is/database/chihome.htm	✓	✓				Link A monthly newsletter which reports on health and safety issues for all sectors of the chemical and allied industries.
OECD Website - Chemical safety	http://www.oecd.org/toxic/0,2686,en_2649_34365_1_1_1_1_3746_5,00.html	✓	✓				Link Source of information on chemical hazards.

Website name	URL	Chemical Hazard - Production	Chemical Hazard - Use	Applicable legislation	International chemical initiatives	Industry info	Comment
United Nations Environment Programme (UNEP) Chemicals	http://www.unep.org/themes/chemicals/	✓	✓				Link UN body that seeks to encourage partnership in caring for the environment.
United Nations Environment Programme (Division of Technology, Industry and Economics)	http://www.uneptie.org/						Link
FECC: The European Association of Chemical Distributors	http://www.fecc.org/en/index.php?pageid=43				✓ Responsible Care	✓	Link Representative body link that has further information on chemicals industry in Europe.
UNITAR Chemicals & Waste	http://www.unitar.org/cwm/about.htm				✓ Chemical and waste management		Link UN Institute for Training and Research – Chemical and waste management programme
Basel Convention	http://www.basel.int/				✓ Chemical and waste management		Link UNEP site providing information on the Basel Convention.

Website name	URL	Chemical Hazard - Production	Chemical Hazard - Use	Applicable legislation	International chemical initiatives	Industry info	Comment
INFOCAP	http://www.who.int/fcs/infocap/				✓ Chemical and waste management		Link Information Exchange Network on Capacity Building for the Sound Management of Chemicals.
Rotterdam Convention	http://www.pic.int/en/viewpage.asp?id_cat=0				✓ Prior Informed Consent		Link Provides information on the Rotterdam Convention on PIC.
Stockholm Convention	http://www.pops.int/				✓ Persistent Organic Pollutants		Link Provides information on the Stockholm Convention on POP.
Organisation for the Prohibition of Chemical Weapons (OPCW)	http://www.opcw.org				✓ Prohibition of chemical weapons		Link Provides information on the OPCW and its efforts to abolish chemical weapons.

Website name	URL	Chemical Hazard - Production	Chemical Hazard - Use	Applicable legislation	International chemical initiatives	Industry info	Comment
WHO - International Programme on Chemical Safety	http://www.who.int/ipcs/en/	✓	✓		✓ Chemical safety		Link Provides information on the IPCS and its efforts to establish the scientific basis for safe use of chemicals, and to strengthen national capabilities and capacities for chemical safety.
Intergovernmental Forum on Chemical Safety	http://www.who.int/fcs/						Link Provides information on the IFCS and how it develops and promotes strategies and partnerships among national governments, intergovernmental and non-governmental organisations
Chemical Market Reporter	http://chemicalmarketreporter.com					✓	Subscription website with news and market information
European Chemical News	http://www.europeanchemicalnews.com					✓	Subscription website with news and market information

Website name	URL	Chemical Hazard - Production	Chemical Hazard - Use	Applicable legislation	International chemical initiatives	Industry info	Comment
Chemicals technology	http://www.chemicals-technology.com					✓	Market information, news, extensive links