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30 April 2013

ATTENTION: Ms Tyhileka Madubela

The Efficacy of South Africa's EIA Regime
The Portfolio Committee on Water and Environmental Affairs
Committee Section
Parliament of the Republic of South Africa
90 Plein Street
Cape Town
8001

Sent via e-mail to: tmadubela@parliament.gov.za

Dear Honourable Portfolio Committee Members

THE EFFICACY OF SOUTH AFRICA'S EIA REGIME:
Building on three decades of continuous improvement

Since the 1980s South Africa has provided world class advances in the field of Integrated Environmental Management (IEM), which incorporates the project-level tool of Environmental Impact Assessment (EIA). The central aim of IEM, as documented in the Department of Environmental Affairs IEM Guideline Series (1992) is that South Africa -- as a developing country – needs to integrate environmental considerations into the development planning and implementation process. From the outset the emerging Environmental Assessment Practitioner (EAP) profession has sought to contribute to meeting the social and economic needs of the country while recognising that development must be implemented in a way that does not undermine environmental goods and services, as required by Section 24 of the Constitution. The services of nature that benefit human society, also called 'green infrastructure', constitute assets of financial value to our economy. Should these assets be lost through degradation or eradication, society would incur significant costs (in Rands and cents) in replacing these assets with engineering infrastructure to provide similar services. Such natural services include the water cleaning potential of rivers, flood absorbing capacities of wetlands, the role of dune systems in buffering the impact of storms on coastal communities and even shielding them from the effects of sea-level rise resulting from climate change, the absorption of carbon dioxide and the production of oxygen by vegetation and trees, and the agricultural bounty of soils and biodiversity, to mention just a few obvious examples.

Since the promulgation in 1997 of the legal requirement for Environmental Impact Assessment (EIA) in South Africa, the EIA community – consisting of people in government (national, provincial, local), business and industry, Environmental Assessment Practitioners, environmental specialists ranging from water pollution experts to ecologists and social scientists, non-governmental organisations and members of the public – have played an active role in **continuous improvement of our institutional arrangements for environmental assessment and management**.

Since 1997 there have been numerous amendments to the EIA regulations under the National Environmental Management Act (NEMA), Act 107 of 1998, and the promulgation of a whole range of sectoral legislation under NEMA for example relating to biodiversity, protected areas, air quality, waste management, coastal zone management and so on.

As a result of a Cabinet directive in 2006, the Department of Environmental Affairs and Tourism (DEAT) embarked on a law reform process, which led to the promulgation of the improved EIA regulations in 2006 and later in 2010. DEAT commissioned two studies on a '*Capacity Audit and Needs Analysis Survey for Environmental Impact Assessment Administrators*', and a '*Review of the Effectiveness and Efficiency of EIA in South Africa*', both of which were published in 2008. Findings from these studies were presented at a DEAT-hosted conference in Somerset West in 2008 called '*10 Years of EIA*', attended by about 500 people, which debated the current state of affairs and issues arising. A direct outcome of this conference was the establishment by DEAT of the Environmental Impact Assessment and Management Strategy (EIAMS) process, which started in 2010 by discussing the full list of issues identified at the conference. The purpose of the EIAMS process is to facilitate a participatory process in order to compile a strategy that gives effect to the objectives of Integrated Environmental Management as contained in Section 23 of NEMA within the context of the principles of sustainable development (Section 2 of NEMA). The strategy is planning the desired future state for the EIAM system and the way to achieve it within the mandate provided by Chapter 5 of NEMA. The following list of themes and subthemes gives an indication of the extent of the issues being addressed:

Theme 1: Governance and Administration
Subtheme 1: Procedures and Organisational Structures
Subtheme 2: Knowledge and Information
Subtheme 3: Public Participation
Subtheme 4: Monitoring and Enforcement
Subtheme 5: Quality assurance and Independence of EAPs
Theme 2: Capacity, Skills & Transformation
Subtheme 6: Representative demographics within service providers and civil society
Subtheme 7: Empowerment of marginalized communities
Subtheme 8: Skills of EAPs and Government Officials
Theme 3: Impacts and Instruments
Subtheme 9: Existing and new Environmental Impact Management Tools
Subtheme 10: Co-operative Governance: EIAM tools
Subtheme 11: Quality Management: EIAM Tools

I represent the academic sector on the Project Steering Committee (PSC) of this national strategy process. The PSC consists of 41 people from a large range of organisations and sectors from different parts of the country, which represents a commendable initiative by the Department of Environmental Affairs in collaborative governance towards improving policies, laws, regulations and practice (see attached list in Appendix A of PSC members). The strategy process has included the appointment of different consultants by the Department of Environmental Affairs to address each of the subthemes listed above, and more recently two further consultants to consolidate the subtheme reports into two main themes. After three and a half years of interaction, this strategy process is nearing completion. The investigation of the Portfolio Committee should be informed by and, in turn, inform this strategy process. Justice will be done if the voluntary contributions of the large number of people involved in this strategy process and the reports of the numerous specialist consultants are given serious consideration by the Portfolio Committee in making recommendations to those who commissioned this hearing.

I am a member of the Board of the Environmental Assessment Practitioners Association of South Africa and Chair of the Standards and Criteria Committee of the Board. On 10 April the Board Chair Ms Sibusisiwe Hlela made a submission to the Portfolio Committee with regard to the application that EAPASA has submitted to the Minister of Water and Environmental Affairs to be appointed as a registration authority for EAPs in South Africa. As a complement to the EAPASA submission, I elaborate briefly on the role of EAPASA in engaging with academic institutions. A key component of the quality assurance process for the emerging EAP profession is the planned accreditation of academic programmes offering qualifications to students in the field of environmental assessment practice. To this end, individual tertiary educational institutions will be required to engage with the Council on Higher Education (CHE) with respect to the accreditation of a learning progamme against the Environmental Assessment (EA) Practice qualification, which has been approved by the South African Qualifications Authority under the National Qualifications Framework (see attachment 1). This accreditation will be done by the CHE through its permanent committee that deals with the accreditation of programmes, namely the Higher Educational Quality Committee (HEQC). Educational institutions – called providers – will develop a curriculum or learning programme that meets the requirements of the EA Practice qualification. Once accredited by the HEQC of the CHE, such a learning programme will be 'recorded against this qualification'. This is an important quality assurance component of EAPASA's mission as a registration authority and quality assurance body. In future, all potential EAPs will have to be graduates with an EA Practice Honours degree accredited by the HEQC.

I trust that the evidence I have submitted shows that the emerging profession of Environmental Assessment Practitioners has been exceptionally active in responding to issues as they arise, in efforts towards continuous improvement of policies and laws, and the quality assurance of professional practice. I would be most grateful to receive the findings of your investigation. I am confident that members of the EAP profession will apply their minds collectively to address the issues arising from the Portfolio Committee's hearing.

Yours sincerely

RC Hill

Dr Richard Hill
Senior Lecturer
Academic sector representative on the Project Steering Committee of the Environmental Impact Assessment and Management Strategy Process
Member of the Board of the Environmental Assessment Practitioners Association, and Chair of the Board's Standards and Criteria Committee

Appendix A: Project Steering Committee members for EIA&M national strategy process currently underway

environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

EIAMS PROJECT STEERING COMMITTEE

NO	NAME & SURNAME	SECTOR
1.	Dr. Richard Hill	Academics
2.	Dr. Dhiraj Rama	Association of Cementitious Material Producers (ACMP)
	Ms Urishani Govender	
3.	Ms. Adele Meyer	BUSA
5.	Dr. John Scotcher	BUSA
6.	Ms. Carol Dixon	Chamber of Mining
7.	Mr. Haroon Karodia	Government: DAEA
8.	Mr. Paul Hardcastle	Government: DEA:DP
	Mr Ayub Mohamad	
9.	Mr. Victor Mongwe	Government: DEDAT
	Ms Tinyiko Malunganu	
10.	Ms. Caroline Richardson	Government: DPE
	Ms. Joan Arrikum	
11.	Ms. Samukelisiwe Mkatshwa	Government: DWA
	Mr. Ronald Mulaudzi	
	Ms. Valerie Du Plessis	
12.	Mr. Eksteen van Wyk	Government: GDACE
13.	Dr. Garth Bachelor	Government: MDALA
14.	Prof. Francois Retief	IAIA (EAPS)
15.	Mr. Gerrie van Schalkwyk	IAIA (EAPS)
16.	Ms. Reetsang Mothibi	INDUSTRIAL DEVELOPMENT CORP
17.	Mr. Richard Summers	Law
18.	Mr. Chris Galliers	NGO: Biodiversity
19.	Ms. Mercia Komen	NGO: Federation for a Sustainable Environment (FSE)
20.	Mr. Fred Holden	NGO: Pollution
4.	Ms. Angela Andrews	NGO: Pollution and Energy
21.	Mr. Rico Euripidou	NGO: Pollution, Waste and Environmental Justice
22.	Ms. Mariette Liefferink	NGO: Water and mining
23.	Mr Nthangeni Nwendamutswu	Petroleum Agency SA
	Ms. Phumla Ngesi	
24.	Ms. Abenda Kwayisi	Planners: South African Planning Institute. (SAPI)
	Ms Andile Sitshal	
25.	Mr. Thavanesan Chetty	Property owners
	Mr. Tsakane Shilubane	
26.	Mr. Mthobeli Kolisa	SALGA
	Ms Deborah Ramalope	
27.	Ms. Mondo Komane	SASOL
28.	Ms. Bernadette Vollmer	South African Council for the Landscape Architectural Profession
	Ms. Lizelle Prosch	
30.	Mr. Lebeau Labuschagne	Government: DMR
	Ms. Ethel Sinthumule	

[Registered Qual & Unit Std Home page] [Search Qualifications] [Search Unit Standards]

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

REGISTERED QUALIFICATION:

National Certificate: Environmental Assessment Practice

SAQA QUAL ID	QUALIFICATION TITLE			
61831	National Certificate: Environmental Assessment Practice			
ORIGINATOR		**ORIGINATING PROVIDER**		
Task Team - Environmental Sciences				
QUALITY ASSURING BODY				
-				
QUALIFICATION TYPE	**FIELD**		**SUBFIELD**	
National Certificate	Field 10 - Physical, Mathematical, Computer and Life Sciences		Environmental Sciences	
ABET BAND	**MINIMUM CREDITS**	**PRE-2009 NQF LEVEL**	**NQF LEVEL**	**QUAL CLASS**
Undefined	120	Level 7	New Level Assignment Pend.	Regular-ELOAC
REGISTRATION STATUS		**SAQA DECISION NUMBER**	**REGISTRATION START DATE**	**REGISTRATION END DATE**
Reregistered		SAQA 0695/12	2012-07-01	2015-06-30
LAST DATE FOR ENROLMENT		**LAST DATE FOR ACHIEVEMENT**		
2016-06-30		2019-06-30		

In all of the tables in this document, both the pre-2009 NQF Level and the NQF Level is shown. In the text (purpose statements, qualification rules, etc), any references to NQF Levels are to the pre-2009 levels unless specifically stated otherwise.

This qualification does not replace any other qualification and is not replaced by any other qualification.

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

This qualification addresses environmental assessment in a broad context. It encompasses the practice of Environmental Impact Assessment, Strategic Environmental Assessment and Sustainability Assessment, their aims, purpose and evolution. The qualification aims to:

- Harness into common practice the variety of skills and knowledge from various disciplines engaging in environmental assessment related activities.
- Allow for standardisation of the academic requirements that a potential EAP requires. The intention is to set this qualification at a level that ensures that EAPs have adequate knowledge and the skills necessary to undertake/review environmental assessment.
- Provide a formal qualification for those individuals who conduct and/or review environmental assessments, in public or private practice.
- Improve the quality of environmental assessment and contribute to improved decision making.

Qualifying learners will be able to:

- Demonstrate a conceptual understanding of the environment, sustainable development, environmental

assessment, and integrated environmental management.
- Demonstrate the ability to think holistically, systemically, systematically, spatially and in an integrative manner and to discern what is relevant to decision-making.
- Identify and apply environmental assessment and management procedures and methods.
- Review and monitor environmental assessment procedures and methods.
- Conduct applied research in a specific context.
- Meet specific communication requirements at all levels through environmental reporting processes and stakeholder engagement.

The qualification provides a basis for further learning in environmental planning, environmental management, environmental law or any related specialist fields

Rationale:

The South African Constitution recognizes the right of all South Africans to an environment that is not harmful to their health or well-being, as well as the State's responsibility to respect, protect, promote and fulfil environmental and socio-economic rights. The National Environmental Management Act (Act 107 of 1998) requires that environmental management serve physical, psychological, developmental, cultural and social interests equitably. It therefore requires that development must be socially, environmentally and economically sustainable.

South Africa is currently concluding a National Sustainable Development Strategy and debating the sustainable future it wishes to achieve. One of the legal mechanisms available to enable sustainable development-based decision-making is the environmental authorisation requirement. The requirement for environmental impact assessment and subsequent authorisation for listed activities was established in law in 1997 and given effect in 2006 by regulations promulgated in terms of the National Environmental Management Act, Act 107 of 1998. The implementation of these regulations and amendments has identified a range of legal, institutional capacity and professional challenges in the system. One of the key challenges is to improve the quality and ethics of environmental assessment practice.

In order to address issues of quality and ethics in the arena of environmental assessment, the Minister of Environmental Affairs and Tourism may appoint registration authorities. One of the requirements considered as necessary for registration to be effective, and to add value, is a broadly accepted national registered qualification for environmental assessment in terms of South Africa's National Qualifications Framework. An accepted equitable basis for the assessment of professional competencies for environmental assessment practice would be established. In so doing, an additional intention of government is to (a) address the historical inequities in access to opportunities in education and training and professional work in South Africa; (b) improve the quality of environmental assessment practice. The qualification therefore needs to be achievable and accessible to South African citizens to assist in creating a pool of Environmental Assessment Practitioners (EAPs) that is both better prepared and more representative.

The range of professionals - scientists, planners, engineers, lawyers and landscape architects - who undertake environmental assessments, or have the intention of gaining certification with a registration authority would need to have academic qualifications that comply with the SAQA registration and accreditation requirements. This qualification represents a component of the learning pathway that allows individuals from a variety of disciplines to access the profession and to obtain credit for further learning. It will also promote environmental assessment as a profession.

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

- Collect, analyse, organise, interpret and apply information and knowledge utilising different resources NQF Level 6.
- Communicate effectively using language skills NQF Level 6.
- Identify and solve problems NQF Level 6.

All competencies reflected in the learning assumed to be in place could be achieved through the recognition of prior learning.

Recognition of Prior Learning:

The structure of this non-unit standards-based qualification makes the Recognition of Prior Learning possible through challenging the associate Exit Level Outcomes. This qualification may therefore be achieved in part through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. The learner should be thoroughly briefed on the mechanism to be used and support and guidance should be provided. Care should be taken that the mechanism used provides the learner with an opportunity to demonstrate competence and is not so onerous as to prevent learners from taking up the RPL option towards gaining a qualification.

If the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this qualification the appropriate credits should be assigned to the learner. Recognition of Prior Learning will be done by means of Integrated Assessment as mentioned above.

This Recognition of Prior Learning may allow:
- Accelerated access to further learning at this or higher levels on the NQF.
- Obtaining of this Qualification in part or whole.

Access to the Qualification:
- At least a relevant 3-year Bachelors degree in the natural or physical or social sciences or degrees in other disciplines such as planning, law, landscape architecture and engineering from a South African university (or recognized equivalent, including a qualification from a country outside South Africa).

RECOGNISE PREVIOUS LEARNING?

Y

EXIT LEVEL OUTCOMES

1. Demonstrate a conceptual understanding of the environment, sustainable development, environmental assessment, and integrated environmental management.
- Range: Conceptual understanding includes but is not limited to performance, quality, function, structure and thresholds.

2. Demonstrate the ability to think holistically, systemically, systematically, spatially and in an integrative manner and to discern what is relevant to decision-making.

3. Identify and apply environmental assessment and management procedures and methods.

4. Review and monitor environmental assessment procedures and methods.
- Range: review and monitor include but are not limited to assessment of appropriateness of procedures and methods used, assessment of project risk, determining monitoring procedures and requirements.

5. Conduct applied research in a specific context.
- Note: An EAP is not required to conduct specialist studies.

6. Meet specific communication requirements at all levels through environmental reporting processes and stakeholder engagement.
- Range: Specific communication requirements include technical and non-technical requirements.
- Note: Stakeholder engagement also refers to public participation.

Critical Cross-Field Outcomes:

This qualification promotes, in particular, the following critical cross-field outcomes:
- Identifying and solving problems in which responses show that integrative thinking and critical analysis has been made when:

> Gathering and assessing information for environmental assessment purposes.
> Determining measures to mitigate and manage impacts.
> Reviewing reports and identifying gaps.
> Assessing cumulative impact and investigating alternatives.

- Working effectively with others as a member of a inter-disciplinary team when:

> Integrating and synthesising information from various sources for informed decision making.
> Working as a member of, or leading, a project team.
> Appreciating the purpose and role of environmental assessment in the decision-making process.

- Organising and managing oneself and one's activities responsibly and effectively when:

> Applying assessment techniques.
> Managing/working with inter-disciplinary project team.
> Meeting deadlines.
> Preparing and working within budgets.

- Communicating effectively with stakeholders and authorities using:

> Written and verbal communication techniques to support environmental assessment activities.
> Analysis, interpretation and dissemination of information through documents, presentations and workshops.
> Stakeholder engagement.

- Collecting, analysing, organising and critically evaluating information from various sources when:

> Analysing impact and preparing environmental assessment reports.

- Using science and technology effectively and showing responsibility towards the environment and health of

others when:
> Selecting environmental assessment procedures and methods.
> Predicting and assessing impacts and identifying measures to mitigate and manage impact.
- Demonstrating an understanding of the world as a set of related systems by recognising the complex and dynamic nature of these systems as well as the inter-relationships and linkages that exist between systems when:
> Applying theoretical knowledge to environmental assessment procedures and methods.
> Assessing and synthesising information from various sources.
> Analysing impact and determining significance.
> Considering and interpreting effects of development at a hierarchy of different scales.
- Being culturally and aesthetically sensitive to the social and cultural systems of others when:
> Engaging with stakeholders.
> Analysing and assessing social and cultural systems.
> Assessing the impact of a development on the natural and built environment.
> Respecting and using indigenous or traditional knowledge.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria For Exit Level Outcome 1:

1.1 The concept of sustainable development is explored with regard to its origins, content, imperatives, ethical basis and implications.
1.2 An understanding of environmental management is demonstrated to provide a context for the purpose and need of environmental assessment.
- Range: An understanding include but is not limited to knowledge of the cycle of activities (plan, implement, check and review), the tools used, its purpose, aim, history and role in promoting sustainable development.

1.3 An understanding of environmental assessment is demonstrated by a knowledge of its history, purpose and role in promoting sustainable development.
- Range: environmental assessment refers to Environmental Impact Assessment, Strategic Environmental Assessment and Sustainability Assessment.

1.4 An understanding of the intricate linkages within and between systems and processes are demonstrated through critical review to reflect an appreciation of the principles and requirements that would facilitate sustainability within these systems.
- Range: biophysical, socio-economic, institutional, cultural and built environment.

1.5 The intricate linkages within and between systems and processes are analysed according to structure, function, performance and interdependencies.
- Range: systems include but are not limited to biotic, abiotic, social, economic, political, institutional, cultural and built environment.

1.6 The interdependencies of human well-being and the integrity of the natural environment are explored utilising trans-disciplinary frameworks and knowledge.
1.7 Technology and technological solutions to environmental problems are explored and utilised to contribute to sustainable development.
1.8 Environmental and planning legislation and policies are interpreted in order to reflect relevance to environmental assessment practice
- Range: Environmental and planning legislation and policies include but not limited to international environmental protocols and conventions, national environmental and planning legislation, subordinate legislation, guidelines.

Associated Assessment Criteria For Exit Level Outcome 2:

2.1 Inter-relationships and linkages between the component parts of the environment are distinguished and analysed in terms of their complexities, dynamics, spatial relationships, influences on and relevance to environmental decision-making and sustainable development.
- Range: Component parts include but are not limited to natural and social components.

2.2 Limits of acceptable change and/or thresholds beyond which systems may fail are determined in order to avoid damage or loss.
2.3 Environmental resilience is evaluated in order to assess the ability of the environment to restore itself.
2.4 Relevant specialist studies are integrated and synthesised to inform decision making.
2.5 Information is interpreted to reflect systemic causation of impacts.
- Range: Impacts include but are not limited to direct, indirect, secondary and cumulative.
- Range: Information includes but is not limited to component parts, inter-relationships, limits of acceptable change, thresholds and resilience.

2.6 Other relevant processes are analysed to reflect their inter-relationships with and relevance to environmental assessment.
- Range: Other relevant processes include but are not limited to planning, re-zoning, institutional, legal, regulatory.

Associated Assessment Criteria For Exit Level Outcome 3:

3.1 A knowledge of environmental assessment procedures and methods is demonstrated in order to determine which method to apply in a specific context.
- Range: Environmental assessment procedures and methods may include Social Impact Assessment, Risk Assessment, Life Cycle Analysis, Health Impact Assessment, Biodiversity Assessment, Technology Assessment, Economic Assessment, Strategic Environmental Assessment, Sustainability Assessment, Heritage Impact Assessment.

3.2 Fundamental environmental assessment procedures and methods are integrated and applied according to specific context requirements.
- Range: Fundamental environmental assessment procedures and methods (including Cumulative Impact Analysis) refer to Environmental Impact Assessment, Strategic Environmental Assessment and Sustainability Assessment.
- Range: Integrative manner includes but is not limited to holistic, systemic, systematic, and spatial.
- Range: Specific context requirements include but are not limited to social, economic, built, biophysical, cultural components; scale at which the assessment is to be undertaken; relevance in terms of international, national, provincial, or local significance.

3.3 The results of specialist environmental assessment procedures and methods are interrogated and synthesised in order to determine the effects of a development proposal.
- Range: Environmental assessment procedures and methods may include Social Impact Assessment, Risk Assessment, Life Cycle Analysis, Health Impact Assessment, Biodiversity Assessment, Technology Assessment, Economic Assessment, Strategic Environmental Assessment, Sustainability Assessment, Heritage Impact Assessment.

3.4 Legal requirements relevant to environmental assessment are interpreted and applied in terms of their relevance to the specific proposal.
- Range: Legal requirements include but are not limited to Acts, sub-ordinate legislation, policies, guidelines and international legal instruments and protocols.

3.5 Scoping is conducted in order to identify potential environmental impacts.
- Range: Scoping includes but is not limited to comprehensive identification, rationale for inclusion or dismissal of impacts, required level of assessment, environmental scanning, site inspection, societal values, community concerns.

3.6 Judgements are made on the desirability of development proposals based on an evaluation of their sustainability, impacts, mitigation options and the likely benefits.

3.7 A judgement is made on specialist inputs required in order to provide a scoped assessment.
- Range: Judgement includes but is not limited to if and when, nature, terms of reference including scale, scope, significance of proposal, key questions, project management, mitigation measures.
- Range: Inputs may include studies, advice, intervention, mitigation.

3.8 The Significance of potential impacts is assessed based on a detailed qualitative and/or quantitative evaluation of all the anticipated environmental impacts of the proposal and all alternatives.
- Range: Impacts include but are not limited to direct, indirect, secondary, cross-media, cumulative.

> Note: Significance is determined in terms of criteria which include but are not limited to magnitude, extent, spatial distribution, social equity, intensity, duration, nature, probability, status, risks, irreplaceability, irreversibility, limits of acceptable change, efficiency of resource use, loss of natural capital, livelihood sufficiency, inter-and intra-generational equity, precautionary principle, trade-offs.
- Range: Alternatives include but are not limited to feasibility, location, activity, technology, no-go option, design, operational.

3.9 Measures are determined in order to manage impact.
- Range: Measures include but are not limited to prevention, mitigation, rehabilitation and restoration, compensation.

Associated Assessment Criteria For Exit Level Outcome 4:

4.1 The adequacy of environmental assessment reports is examined to determine whether they provide the information necessary for recommendations and decision-making.

4.2 Assessment of project risk is conducted in order to inform decision making processes.

> Note: Assessment of project risk includes but is not limited to identifying, quantifying and evaluating all sources, pathways and outcomes; types of risk include but are not limited to physical, ecological, social and economic.

4.3 Assessments are reviewed for quality assurance and decision-making purposes.
- Range: Quality assurance purposes include but are not limited to determining information gaps, matters for further investigation and/or consultation, amendments, supplementary information, ethical considerations, procedure.

4.4 Management and monitoring procedures are identified and specified to ensure adherence to the requirements as specified in the environmental assessment recommendations.
- Range: Monitoring measures include but are not limited to procedures, protocols, and environmental audits.
- Range: Requirements include but are not limited to environmental assessments, environmental authorisations, environmental management programmes and environmental assessment peer reviews.

Associated Assessment Criteria For Exit Level Outcome 5:

5.1 The environmental problem to be assessed is conceptualised in order to specify topics for investigation.

5.2 Key questions are formulated to guide the investigation and data gathering.

5.3 Methods and techniques are identified and selected to gather, analyse and interpret data in order to determine

relevance to a specific application.
- Range: Methods and techniques may include but are not limited to field and laboratory testing, sampling, statistical analysis, geographical information systems (GIS), mapping, observation, questionnaires, interviews, modelling.

5.4 Research results are documented and communicated in simple, clear and appropriate style and language.

Associated Assessment Criteria For Exit Level Outcome 6:

6.1 Specific communication requirements are identified and utilised in order to engage with stakeholders and as well as related professionals.
- Range: communication requirements include dissemination of information, elicitation of in-puts from stakeholders, feedback processes, mediation, formats, media, mediums, trans-disciplinary methods and processes.
- Range: Related professionals include but not limited scientists, planners, engineers, lawyers, landscape architects, urban designers.

> Note: language used is simple, clear and appropriate to audience needs.

6.2 Reports are written through the synthesis of information from various sources.
- Range: Information sources include but are not limited to literature review, specialist studies stakeholder in-put and legal requirements.
- Range: Synthesise includes but is not limited to review, integration and evaluation.

6.3 Environmental assessment reports and environmental assessment decisions are prepared and produced in accordance with legal requirements, guidelines and ethical norms.

6.4 Stakeholder engagement and public participation processes are conducted objectively and transparently in order to enable the right of stakeholders and the public to participate in the environmental assessment process within specific contexts.
- Range: Stakeholder engagement and public participation include but are not limited to appropriateness, relevance, effectiveness, methods of dissemination of information, methods of consultation, public participation processes, mediation, identification of key groups, knowing how widely to consult depending on scale of project, advertisements and use of media.

Integrated Assessment:
- The term `Integrated Assessment` implies that theoretical and practical components should be assessed together.
- An integrated approach to assessment is incorporated into the qualification to ensure that assessment practices are open, transparent, fair, valid, and reliable and that no learner is disadvantaged by a particular assessment procedure.
- Learning, teaching and assessment are inextricably interwoven. Whenever possible, the assessment of knowledge, skills, attitudes and values specified in the qualification must be integrated.
- A variety of methods must be used in assessment and tools and activities must be appropriate to the context in which the learner is working or will work. Where it is not possible to assess the learner in the workplace or on-the-job, simulations, case studies, role-plays and other similar techniques should be used to provide a context appropriate to the assessment.
- During integrated assessments, the assessor should make use of a range of formative and summative assessment tools and methods; and assess combinations of theoretical, practical, applied, foundational and reflective competencies.
- Assessors must assess and give credit for evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.
- Assessment should ensure that all specific outcomes, embedded knowledge and critical cross-field outcomes are evaluated in an integrated manner.

INTERNATIONAL COMPARABILITY

The task team consulted and took into account:
- The Commonwealth Universities Online Database for qualifications in environmental assessment (frequently offered as components of qualifications in environmental management, 40 Masters programmes listed).
- The European Union project on the Promotion of European Education on Environmental Assessment for third country audience (PENTA).
- The International Association for Impact Assessment (IAIA) Training Course Database, as well as the IAIA Principles of Environmental Impact Assessment Best Practice.
- Training Programmes offered by the World Bank Institute.
- Prospectuses of Institutions affiliated to the American Association of Universities.

The qualification closely matches national qualifications that are offered by many universities in the European Union, particularly the United Kingdom, as well as in Australia-both of which are world leaders in the formalization of Environmental Impact Assessment qualifications. Similar qualifications were also found for the Malaysia Institute of Technology, University of the West Indies (Jamaica) and the Jawaharal Nehru Technological University in India. In SADC countries somewhat similar qualifications were found to exist in universities in Botswana, Mauritius, Uganda

and Zambia. Similarities were found at lower lever or under-graduate qualifications, with entry-level content being covered. There were also similarities in terms of content covered in short courses, but which are not comparable to full qualifications at post-graduate level. In the United States of America Environmental Impact Assessment is most often offered as a modular component of Master's degrees in Science or Engineering. The only International Accord relating to training in the field is the European project to Promote European Education on Environmental Assessment. This initiative stems from the Bologna declaration of 1999 to promote European Education worldwide by establishing a European Higher Education Area by 2010.

Particular attention has been devoted to the institutions mentioned above because Environmental Impact Assessment (EIA) was formally adopted through legislation in the United States of America, Western Europe and Australia in the early 1970's. These countries have the longest track record of EIA implementation and of formal training of practitioners. The World Bank also adopted EIA as a requirement for development projects that it funds, and this led to their standards and procedures being regarded as good practice and being implemented in developing countries. The International Association for Impact Assessment is the world's leading network of Impact Assessment practitioners and it has been involved in the production of Impact Assessment training manuals for the United Nations Environmental Programme and for the United Nations University.

The comparability is based on content, level and credit value. Those qualifications reflecting "very close" comparability means comparability in terms of all three criteria; "close" comparability means comparability in terms of two criteria and "fair" comparability means comparability in terms of at least one criterion.

Comparability was done with the qualifications below:
- Institution: Oxford Brookes University.

> Country: United Kingdom.
> Qual/Courses: Post graduate Certificate Environmental Science.
> Post graduate Diploma Environmental Assessment.
> Master of Research Environmental Science.
> Admission requirement: Relevant 1st degree.
> Comparability between qualifications: Very close.

- Institution: University of Manchester.

> Country: United Kingdom.
> Qual/Course: Master Arts Environmental Assessment.
> Admission requirement: Relevant 1st degree.
> Comparability between qualifications: Very close.

- Institution: Murdoch University.

> Country: Australia.
> Qual/Course: Post graduate Certificate Environmental Science.
> Post graduate Diploma Environmental Management.
> Master of Science Environmental Assessment.
> Admission requirement: Relevant 1st degree.
> Comparability between qualifications: Very close.

- Institution: Griffith University.

> Country: Australia.
> Qual/Course: Post graduate Certificate.
> Master Environmental Assessment.
> Master Environmental Assessment & Thesis.
> Admission requirement: Relevant 1st degree.
> Comparability between qualifications: Very close.

- Institution: Johns Hopkins University.

> Country: USA.
> Qual/Course: Graduate Certificate Environmental Practice.
> Masters Environmental Assessment.
> Admission requirement: Relevant 1st degree.
> Comparability between qualifications: Close.

- Institution: Tufts University.

> Country: USA.
> Qual/Course: Graduate Certificate Environmental Science.
> Master of Science: Environmental Assessment.
> Admission requirement: Relevant 1st degree.
> Comparability between qualifications: Close.

- Institution: Universiti Teknologi.

> Country: Malaysia.
> Qual/Course: Masters of Science Environmental Management.
> Admission requirement: Relevant 1st degree.
> Comparability between qualifications: Close.

- Institution: University of West Indies.

> Country: Jamica.
> Qual/Course: Post graduate Diploma Environmental Science.
> Masters of Science Environmental Assessment.
> Admission requirement: Relevant 1st degree.
> Comparability between qualifications: Fair.
- Institution: University of Botswana.

> Country: Botswana.
> Qual/Course: Masters of Science Environmental Assessment.
> Master of Philosophy Environmental Assessment.
> Admission requirement: Relevant 1st degree.
> Comparability between qualifications: Fair.
- Institution: Nkumba University.

> Country: Uganda.
> Qual/Course: Post graduate Diploma Environmental Management.
> Admission requirement: Relevant 1st degree.
> Comparability between qualifications: Fair.

Examples of postgraduate programmes in environmental assessment in the UK:
- Institution: University of Manchester.

> Qual/Course: MA Environmental Impact Assessment and Management.
> Area of Specialisation: EIA, SEA, Auditing, Spatial Planning.
- Institution: University of East Anglia.

> Qual/Course: MSc in Environmental Assessment and Management.
> Area of Specialisation: Environmental Assessment, SEA, Risk Management.
> Climate Change Science.
- Institution: Oxford Brookes University.

> Qual/Course: MSc in Environmental Assessment and Management.
> Area of Specialisation: Environmental Assessment, Ecosystem Degradation and Management + options including GIS and Modelling.
- Institution: University of Aberystwyth.

> Qual/Course: MSc Managing the Environment with Environmental Impact.
> Assessment pathway.
> Area of Specialisation: EIA Theory and Practice, Environmental Sustainability.

> Institution: University of Liverpool.
> Qual/Course: MA Environmental Management and Planning.
> Area of Specialisation: Environmental management, spatial planning, environmental assessment.

This qualification accords with international qualifications in Environmental Impact Assessment in terms of level (post 1st degree), access from a range of undergraduate degrees and hours of student effort required to attain the qualification (Aprox 1200). Its content also accords in its need for a conceptual understanding of sustainable development and the environment, and the ability to think holistically and in an integrative manner. It also requires the ability to effectively use environmental assessment procedures and methods and to enable qualifiers to undertake applied research and to communicate effectively at a professional level.

ARTICULATION OPTIONS

This qualification may articulate horizontally with honours degrees in natural, physical or social sciences and the final year of professional degree programmes in planning, law, landscape architecture and engineering.

This qualification may articulate vertically with masters' programmes in disciplines related to the specialisation (e.g. environmental planning, environmental management, environmental law or related specialist fields).

MODERATION OPTIONS

- Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with an appropriate Education, Training, Quality Assurance (ETQA) Body or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
- Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA. Moderation of assessment will be overseen by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the ETQA`s policies and guidelines for assessment and moderation.
- Moderation must include both internal and external moderation of assessments at exit points of the Qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual Unit Standards as well as in the exit level outcomes described in the Qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

For an applicant to register as an assessor, the applicant needs:

- Assessment competencies and subject matter experience of the assessor can be established by recognition of prior learning.
- Well-developed interpersonal skills, subject matter and assessment experience.
- To be competent in the planning and conducting assessment of learning outcomes as described in the unit standards Plan and Conduct assessment of Learning outcomes NQF Level 5.
- Well-developed subject matter expertise in environmental assessment.
- A relevant tertiary qualification and 3 years experience in the relevant field.
- To be registered with the relevant Education and Training Quality Assurance Body.
- Detailed documentary proof of educational qualification, practical training undergone, and experience gained by the applicant must be provided (Portfolio of evidence).

NOTES

As per the SAQA decision, after consultation with the Quality Councils, to re-register all qualifications and part qualifications on the National Qualifications Framework that meet the criteria for re-registration, this qualification has been re-registered from 1 July 2012.
This qualification has been developed utilising the current SAQA level descriptors and qualification types. The implications in the new Higher Education Framework for the level and qualification type were also considered. It is anticipated that the qualification will need adjustment should the new HE Framework be implemented.

UNIT STANDARDS:

This qualification is not based on Unit Standards.

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION:

NONE

PROVIDERS CURRENTLY ACCREDITED TO OFFER THIS QUALIFICATION:

This information shows the current accreditations (i.e. those not past their accreditation end dates), and is the most complete record available to SAQA as of today. Some Quality Assuring Bodies have a lag in their recording systems for provider accreditation, in turn leading to a lag in notifying SAQA of all the providers that they have accredited to offer qualifications and unit standards, as well as any extensions to accreditation end dates. The relevant Quality Assuring Body should be notified if a record appears to be missing from here.

NONE
