



**SOUTH AFRICAN QUALIFICATIONS AUTHORITY**

**REGISTERED UNIT STANDARD:**

**Apply environmental management tools to assess impacts**

SAQA US ID	UNIT STANDARD TITLE			
119554	Apply environmental management tools to assess impacts			
ORIGINATOR				
SGB Environmental Sc/Mgt & Waste Mgt				
PRIMARY OR DELEGATED QA BODY				
-				
FIELD			SUBFIELD	
Field 10 - Physical, Mathematical, Computer and Life Sciences			Environmental Sciences	
ABET BAND	UNIT STANDARD TYPE	PRE-2009 NQF LEVEL	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	NQF Level 02	5
REGISTRATION STATUS		REGISTRATION START DATE	REGISTRATION END DATE	SAQA DECISION NUMBER
Reregistered		2015-07-01	2018-06-30	SAQA 10105/14
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT		
2019-06-30		2022-06-30		

*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 unit standard does not replace any other unit standard and is not replaced by any other unit standard.

**PURPOSE OF THE UNIT STANDARD**

In order for me to perform effectively in the field of environmental science, environmental management and waste management, I will be able to:

- Identify components of the environment and describe their interrelationships.
- Use appropriate terminology when speaking about environmental issues.
- Recognise the impacts of events and human activities on the environment.
- Gather information related to environmental impacts.
- Use an environment tool to assess impact.
- Record and report results.

I will also know and understand:

- Components of the environment and their interrelationships.
- Terminology related to the environment and environmental issues.
- The effects of various human activities on the environment.
- Principles and concepts related to using tools to assess environmental impacts (a basic level of understanding is required).

I can be assessed against this unit standard in the context of any activity which is related to managing environmental issues, such as:

- Waste management related activities, eg
  - > Materials recovery and buy back centres
  - > Waste reception
  - > Landfill operations
- Water course cleaning, care and maintenance.
- Care of public places, open areas, cultural and natural heritage sites.
- Maintenance of parks and sports fields.
- Involvement in community projects and job creation schemes relating to environmental practice.
- General industrial or extraction, ie activities with an environmental care or improvement focus.

The skill, the knowledge and the values reflected in this unit standard form part of the exit level outcomes required for the National Certificate in Environmental Practice NQF Level 2.

### **LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING**

It is assumed that the learner is competent in Communication and Mathematical Literacy at NQF level 1.

### **UNIT STANDARD RANGE**

The scope and level of this unit standard is indicated by range statements related to the Specific Outcomes.

The degree of complexity required in the use of the tools should be appropriate to NQF Level 2. The purpose is to alert the learner to the role of the tools in environmental management.

Tools include risk assessment, incident reports, checklists, statistical process control charts, maps, layout plans, workflow diagrams, TREM cards.

This unit standard deals only with assessment of impacts - addressing the impacts is covered in a companion unit standard.

## **Specific Outcomes and Assessment Criteria:**

### **SPECIFIC OUTCOME 1**

Identify a variety of potential and actual impacts on the environment and use the correct terminology to describe them.

### **OUTCOME RANGE**

Variety: 2 or 3 specific impacts in the learner's work, domestic or community context.

### **ASSESSMENT CRITERIA**

#### **ASSESSMENT CRITERION 1**

General components of the environment and their interrelationships are identified and described appropriately and accurately.

#### **ASSESSMENT CRITERION 2**

General impacts of human activities on the biophysical environment are identified and described appropriately and accurately.

**ASSESSMENT CRITERION 3**

Specific impacts of human activities on the environment in the learner's context are identified and described appropriately and accurately.

**ASSESSMENT CRITERION 4**

Environmental terminology is used correctly.

**SPECIFIC OUTCOME 2**

Explain the reasons for using particular assessment tool(s).

**OUTCOME RANGE**

Particular assessment tools: includes the tools used to conduct the assessments related to Specific Outcome: 'Explain the reasons for using particular assessment tool(s)' of this unit standard, as well as other environmental management tools typically used in the learner's context.

**ASSESSMENT CRITERIA****ASSESSMENT CRITERION 1**

The difference between predictive and monitoring tools is explained.

**ASSESSMENT CRITERION 2**

Typical applications of a variety of types of tool are identified and described accurately.

**ASSESSMENT CRITERION RANGE**

Described: an awareness of the role of the tools and a basic understanding of their application is required.

**SPECIFIC OUTCOME 3**

Use environmental management tools to assess the impacts.

**OUTCOME RANGE**

Tools: at least 2 different tools relevant to the context. The tools should be used in a simplified form at a level appropriate to NQF 2 - the purpose is for learners to be aware of the tools and to have a basic understanding of their role in environmental management.

Tools include preventive, predictive and monitoring tools.

**ASSESSMENT CRITERIA****ASSESSMENT CRITERION 1**

Relevant tools are used correctly to assess a selection of impacts on the environment.

**ASSESSMENT CRITERION 2**

Assessments are made that are adequate, accurate and relevant.

**SPECIFIC OUTCOME 4**

Record and maintain data and identify anomalies.

**OUTCOME RANGE**

Maintain data includes update, hand on, file and store.

## **ASSESSMENT CRITERIA**

### **ASSESSMENT CRITERION 1**

Data is recorded accurately and as required by the tools.

### **ASSESSMENT CRITERION 2**

Data is maintained in accordance with requirements.

### **ASSESSMENT CRITERION 3**

Anomalies in the data are identified and reported accurately.

### **SPECIFIC OUTCOME 5**

Determine the immediate causes of the identified impacts.

## **ASSESSMENT CRITERIA**

### **ASSESSMENT CRITERION 1**

The immediate causes of selected environmental impacts in the learner's context are identified correctly.

### **ASSESSMENT CRITERION 2**

The causes identified are recorded and reported accurately.

## **UNIT STANDARD ACCREDITATION AND MODERATION OPTIONS**

To obtain credits I must be assessed. The assessment will be based on evidence that I produce. My assessment will be governed by the policies and guidelines of a relevant Education and Training Quality Assurance body (ETQA), which has jurisdiction over this field of learning. The policies and procedures of the relevant ETQA will also determine:

- > How my assessment is moderated
- > How I can appeal against the outcome of the assessment

Any institution or company which offers learning that will enable me to achieve the purpose of this unit standard must be accredited as a provider through the relevant ETQA.

My assessment against this standard should meet all the requirements of established principles. It should include practical assessment activities, which are appropriate to the contents of this unit standard. These activities should include an appropriate combination of self and peer assessment, practical and oral assessments, observations, etc.

I can be assessed in the language of my choice although if I have to report incidents or conditions to someone else, I will be assessed on my ability to report in the language commonly used in my working environment.

I will be assessed on all the Specific Outcomes, Critical Cross-Field Outcomes and Essential Embedded Knowledge. The Specific Outcomes must be assessed in their own right, through oral and practical evidence. My assessment will not only be based on observation but also on other evidence which I compile into a portfolio of evidence. I cannot be assessed only through a written or oral test.

The Specific Outcomes and Essential Embedded Knowledge will be assessed in relation to each other. If I am able to explain the items which fall under the heading of Essential Embedded Knowledge, but am unable to perform the Specific Outcomes, then I cannot be assessed as 'competent'. Similarly, if I am able to perform tasks described under the Specific Outcomes, but cannot explain or justify them in terms of the fundamental concepts, principles and practice relevant to the level of the unit standard that underpins my skill, then I cannot be assessed as 'competent'.

I will also be assessed on my ability to apply the principles and techniques related to the Critical Cross-Field Outcomes, not only in terms of what I can demonstrate, but also in terms of what I know and can discuss.

My assessment for this unit standard can be done in conjunction with the assessment of other unit standards related to a qualification, and even in conjunction with my assessment for the qualification as a whole.

### **UNIT STANDARD ESSENTIAL EMBEDDED KNOWLEDGE**

The following items reflect the type of knowledge that the assessor will evaluate

1. Names & functions of:

- components of the environment and their interrelationships
- natural resources
- environmental management tools

2. Purpose of:

- applying environmental management tools for assessing environmental impacts
- wise use of resources

3. Attributes, descriptions, characteristics & properties:

- components of the environment and the interrelationships between them
- environmental impact of human activities (and other causes)
- environmental issues at local, regional, national and global levels, ie soil, water and air pollution, land degradation (desertification), loss of biodiversity, global warming
- environmental management tools for assessing and monitoring

4. Processes and events:

- assessing environmental impacts
- droughts, floods and other natural events
- pollution and environmental degradation

5. Causes and effects, implications of:

- effects of human activities on the environment
- effects of droughts, floods and other natural events
- pollution and environmental degradation, e.g. soil erosion, global warming, climate change
- implications of not applying the tools appropriately

6. Procedures and techniques:

- for applying the environmental management tools to assess impacts (at a basic level)
- for recording and reporting information

7. Sensory cues:

- related to identifying impacts
- related to using the tools

8. Regulations, legislation, agreements, policies, standards:

- related to assessing environmental impacts

9. Theory: rules, principles, laws:

- environmental principles
- legislation; regulations; science and technology related to using the tool to assess environmental impacts
- waste hierarchy
- biophysical cycles
- ecosystem processes

10. Categories:

- environmental management tools
- environmental impacts
- natural resources

11. Relationships, systems:

- relationship between the accuracy of the assessments and the value of the data collected
- relationship between human activities and environmental components

**UNIT STANDARD DEVELOPMENTAL OUTCOME**

N/A

**UNIT STANDARD LINKAGES**

N/A

**Critical Cross-field Outcomes (CCFO):**

**UNIT STANDARD CCFO IDENTIFYING**

Identify and solve problems

- Recognise the environmental impact
- Select and apply the appropriate tool

**UNIT STANDARD CCFO ORGANISING**

Organise and manage myself and my activities

- Use the tool correctly

**UNIT STANDARD CCFO COLLECTING**

Collect, analyse, organise and critically evaluate information

- apply the tool to assess environmental impacts
- record data

**UNIT STANDARD CCFO COMMUNICATING**

Communicate effectively

- use terminology related to environmental principles and concepts
- use terminology related to the tool

**UNIT STANDARD CCFO SCIENCE**

Use science and technology effectively and critically

- apply knowledge of environmental components and principles to identify and assess impacts
- use of assessment tools

**UNIT STANDARD CCFO DEMONSTRATING**

Demonstrate an understanding of the world as a set of related systems

- understand how human activities impact on the environment
- understand how to apply environmental management tools to assess impacts

**UNIT STANDARD ASSESSOR CRITERIA**

N/A

**REREGISTRATION HISTORY**

As per the SAQA Board decision/s at that time, this unit standard was Reregistered in 2012; 2015.

**UNIT STANDARD NOTES**

N/A

**QUALIFICATIONS UTILISING THIS UNIT STANDARD:**

	<b>ID</b>	<b>QUALIFICATION TITLE</b>	<b>PRE-2009 NQF LEVEL</b>	<b>NQF LEVEL</b>	<b>STATUS</b>	<b>END DATE</b>	<b>PRIMARY OR DELEGATED QA BODY</b>
Core	<a href="#">49605</a>	National Certificate: Environmental Practice	Level 2	NQF Level 02	Reregistered	2018-06-30	LG SETA
Core	<a href="#">74269</a>	National Certificate: Occupational Health, Safety and Environment	Level 2	NQF Level 02	Reregistered	2018-06-30	As per Learning Programmes recorded against this Qual
Core	<a href="#">64909</a>	National Certificate: Small Scale Mining	Level 2	NQF Level 02	Reregistered	2018-06-30	MQA
Elective	<a href="#">79806</a>	National Certificate: Occupational Hygiene and Safety	Level 3	NQF Level 03	Reregistered	2018-06-30	As per Learning Programmes recorded against this Qual

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