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GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

23 August 2001

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with regulation 24(2)(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Nature Conservation

Registered by NSB 01 Agriculture and Nature Conservation, publishes the following unit standards based qualifications for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, titles and specific outcomes of the unit standards. The unit standards and qualifications can be accessed via the SAQA website at <u>www.saqa.org.za</u>.

Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar Street, Brooklyn, Pretoria.

Comment on the unit standards and qualifications should reach SAQA at the address below by no later than 18 September 2001. All correspondence should be marked Standards Setting – SGB for Nature Conservation, and be addressed to:

Th	ne Director: Standards Setting and
	Development
	SAQA
	Attention: Mr D Mphuthing
	Postnet Suite 248
	Private Bag X 06
	Waterkloof
	0145

or fax to 012 - 482 0907 or e-mail to dmphuthing@saqa.co.za

pp SAMUEL B.A. ISAACS EXECUTIVE OFFICER

No. 789

SOUTH AFRICAN QUALIFICATIONS AUTHORITY



NATIONAL CERTIFICATE IN CONSERVATION: FISHERIES RESOURCES MANAGEMENT NQF LEVEL 5

Field: Agriculture and Nature Conservation

Sub-field: Nature Conservation

NQF level: 5

Credits: 181

Purpose of the Qualification:

A learner assessed as competent against this qualification will be able to integrate supervisory skills and knowledge with conservation specific competence to contribute to the sustainable management of fisheries resources, ensure compliance with relevant legislation and contribute to the conservation of marine and coastal ecosystems.

This competence will contribute to the sustainability of fisheries resources while providing the learner with a basis for further learning in higher education.

The qualification has been developed to assist with professionalisation across the conservation industry.

Rationale for the qualification

Like many other aspects of life South Africa, the sector into which nature conservation falls is overwhelmingly defined by apartheid history. Despite the diversity of the subsectors within the sector, some patterns do exist across the sector, which are worth noting. Large enterprises have treated human resource management largely as a personnel function and directed energies and systems at the mechanisms for managing personnel rather than aligning human management with strategic priorities of organization. There are massive workplace and training inequities with regard to 'race'.

During the process of designing the qualifications, the many 'non-conservation' positions, people and areas of activity, which will need to use some of the conservation standards, must be considered. These include: tour guides, organized traditional practitioners, informal settlement, organized community, national and provincial conservation authority, development organizations and the private sector.

Learning assumed to be in place

It is assumed that the learner entering a programme leading to this qualification has achieved an FET certificate at NQF 4 or the equivalent, a Certificate in Conservation management, or has several years' relevant industry experience. The learner will have appropriate levels of written Communication, English proficiency, Mathematics and occupational competence equivalent to at least school leaving standards.

Exit level outcomes

On achieving this qualification the learner will be able to:

- 1 Supervise operational situations in order to maximise efficiency and effectiveness.
- 2 Exercise leadership of people involved in operational situations in order to enhance their performance and productivity.
- 3 Implement, supervise and evaluate management planning practices, e.g. integrated catchment management, plant and animal management, security and legal aspects and cultural heritage management, in order to monitor progress and performance against planned goals.
- 4 Undertake supervisory and operational functions while continuously monitoring and adapting own performance as required.
- 5 Use firearms competently.
- 6 Develop a set of values and ethics regarding conservation and environmental issues.
- 7 Maintain infrastructure in conserved areas including paths and road networks.
- 8 Safely crew a vessel.
- 9 Deal with and prevent pollution.
- 10 Demonstrate understanding of the history of fishing in South Africa and how it influences current practices.
- 11 Communicate effectively with the public to further conservation awareness.

Integrated assessment

Integrated assessment at the level of qualification provides an opportunity for learners to show that they are able to integrate concepts, ideas and actions across unit standards to achieve competence that is grounded and coherent in relation to the purpose of the qualification.

Integrated assessment must judge the quality of the observable performance, but also the quality of the thinking that lies behind it. Assessment tools must encourage learners to give an account of the thinking and decision-making that underpin their demonstrated performance. Some assessment practices will be of a more practical nature while others will be of a more theoretical nature. The ratio between action and interpretation is not fixed, but varies according to the type and level of qualification.

A broad range of task-orientated and theoretical assessment tools may be used, with the distinction between practical knowledge and disciplinary knowledge maintained so that each takes its rightful place.

In particular assessors should check for:

The learner must demonstrate an ability to consider a range of options and make decisions about:

- 1. Supervisory methods and techniques to apply in any given situation.
- 2. Management actions required within a conserved area.

The learner must demonstrate an understanding of:

- 1. The management planning process for a conserved area or a fishery.
- 2. The components / elements that require management actions in a conserved area or a fishery.
- 3. The contextual knowledge that underpins the competent management of a conserved area or fishery.

The learner must demonstrate the ability to:

- 1. Critically evaluate management decisions taken on the basis of available information.
- 2. Justify decisions made with respect to the management of a conserved area.
- 3. Reflect on the soundness of decisions made and on any adjustments that are made.

International comparability

The African continent with its unique wildlife, has led to the development of standards of practice unique to Africa. South Africa has taken the lead in the development of these standards, which have been widely accepted and used in the rest of Sub-Saharan Africa.

Recognition of prior learning

Any learner wishing to be directly assessed may arrange to do so, without attending further training or education. The assessor and learner will decide together on the most appropriate assessment route to be taken.

Moderation options

Anyone assessing a learner against these unit standards must be registered as an assessor with the relevant ETQA.

Any institution offering learning that will enable achievement of these unit standards or will assess these unit standards must be accredited as a provider with the relevant ETQA.

Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

Therefore anyone wishing to be assessed against these unit standards may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the relevant ETQA.

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UNIT STANDARDS FOR CONSERVATION: FISHERIES RESOURCES MANAGEMENT

Unit Standards at NQF Level 2

- * Title: Operate a personal computer (ID 7547)
- * Title: Organise oneself in the workplace (ID 8618)
- * Title: Operate in a business (ID 8553)
- * Title: Maintain occupational health and safety (ID 8493)

Unit Standards at NQF Level 4

* Title: Analyse and understand social issues (ID 8591)

Unit Standards at NQF Level 5

- 1. Title: Demonstrate a basic knowledge of fisheries resource management
- 2. Title: Demonstrate a working knowledge of marine organisms
- 3. Title: Demonstrate knowledge of the fishing industry in your local area
- 4. Title: Utilise knowledge of fishing techniques to ensure legal compliance
- 5. Title: Apply integrated coastal zone management
- 6. Title: Work with marine ecosystems
- 7. Title: Work with freshwater ecosystems
- 8. Title: Implement policies regarding HIV/AIDS in the workplace
- * Title: Plan and conduct a research project (ID 8663)
- * Title: Lead and manage teams of people (ID 7859)
- Title: Apply workplace communication skills (ID 8647)
- Title: Analyse and communicate workplace data (ID 8662)
- * Title: Demonstrate an understanding of professional values and ethics (ID 8648)
- * Title: Analyse external factors influencing people who have special needs (ID 8570/8617)
- Title: Facilitate Conservation understanding (ID 8385).
- Title: Construct and maintain infrastructure (ID 8368)
- Title: Participate in area integrity practices (ID 8365)
- * Title: Ensure conservation compliance (ID 8366)
- Title: Handle Weapons (ID 8350)
- Title: Manage cultural heritage resources in conservation (ID 8406)
- Title: Assess and control pollution (ID 8407)
- * Title: Apply basic conservation management planning (ID 8388)
- * Title: Provide first aid (ID 7854)
- * Title: Operate and maintain a vehicle in conservation areas (ID 8370)
- * Title: Crew a vessel (ID 8411)

Unit standards titles and specific outcomes at NQF level 2

- * Title: Operate a personal computer (ID 7547)
- * Title: Organise oneself in the workplace (ID 8618)
- * Title: Operate in a business (ID 8553)
- * Title: Maintain occupational health and safety (ID 8493)

Unit standards titles and specific outcomes at NQF level 4

Title: Analyse and understand social issues (ID 8591)

Unit standards titles and specific outcomes at NQF level 5

1. Title : Demonstrate a basic knowledge of fisheries resource management

Specific outcome 1. Use appropriate sampling methods.

Range: (Use statistically valid sampling techniques. Apply valid survey design methods.)

Specific outcome 2. Describe the methods used to assess marine living resources. Range: (Direct counts. Acoustic Surveys. Catch based methods)

Implement appropriate management tools for the sustainable Specific outcome 3. management of fish resources.

> Range: (Catch restrictions: bag limits; size limits. Gear restrictions: hook size; vessel restrictions. Financial methods: taxation; price fixing.)

Explain the biological fundamentals used to develop management Specific outcome 4. plans and procedures.

Range: (Age at sexual maturity. Fecundity. Species relationships.)

2. Title : Demonstrate a working knowledge of marine organisms

Specific outcome 1.

Identify significant interactions between organisms, _groups of organisms and the environment.

Range: (Predator prey relationships. Consequences of extractive use of resources. Biodiversity)

Specific outcome 2.

Identify organisms to species level by using the accepted methods of identification.

Range: (Physical examination of specimens. Morphometric characteristics, such as spine and ray counts in fish. Size and weight of species. Physical characteristics of species. Use of accepted identification guides and techniques.)

Specific outcome 3. Consider procedures for identifying organisms that are not in their natural state.

> Range: (Organisms have been processed e.g. skinned, dried. Parts of organisms, e.g. fish that have been headed and gutted.)

Specific outcome 4. Use correct sampling procedures for assessing the efficacy of management measures.

> Range: (Take unbiased samples of organisms. Take a suitable sub-sample of large catches and divide into species etc. Use correct methods of measuring species.)

Specific outcome 5. Explain management actions in the context of biological and ecological parameters.

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Range: (Local environment, biosphere, community interactions, biodiversity. Size and bag limits.)

Specific outcome 6. Describe the risks posed to marine organisms by pollution. Range: (Solid pollutants, e.g. plastic, etc. Chemical pollution. Biological "pollution", e.g. (harmful algal blooms, eutrophication.)

Specific outcome 7. Present the findings in an acceptable way. Range: (Evidence in court. Sworn statements. Reports.)

4. Title : Demonstrate knowledge of the fishing industry in your local area

Specific outcome 1. Identify the main role players in the local industry. Range: (Managers of factories. Angling clubs. Boat clubs. Conservation NGOs. Civil Society. Community groups.)

Specific outcome 2. Describe the structure of the fishing industry in your local area. Range: (Processing methods and products. Location of processing facilities. Location of factories and markets.)

Specific outcome 3. Apply knowledge of relevant legislation to interact with the stakeholders in your local area. Range: (Fisheries regulations. Zoning. Health and safety.)

5. Title + Utilise knowledge of fishing techniques to ensure legal compliance

Specific outcome 1. Identify the types of commercial, artisanal, subsistence and recreational fishing activities that are practised in his area of operation. Range: (Legal activities practised in the area where the person is based, i.e. Hout Bay, Port St Johns etc. Types of fishing would include, for instance, pelagic fishing, long lining, trap fishing for rock lobster.)

Specific outcome 2. Identify non-extractive activities Range: (Organised Scuba diving tours. Whale watching. Bird watching.)

Specific outcome 3. Identify probable illegal activities in the area. Range: (Poaching, Using illegal fishing methods, Illegal boating activities.)

Specific outcome 4. Report on own activities. Range: (Illegal activities.)

6. Title : Apply integrated coastal zone management

Specific outcome 1. Monitor and control driving on beaches. Range: (Selective opening and closing of areas.)

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Specific outcome 2.	Report on structures and development. Range: (Environmental Impact. Assessment processes.)
Specific outcome 3.	Manage waste. Range: (Pollution. Landfill. Pipelines.)
Specific outcome 4.	Protect ecologically sensitive areas. Range: (Coastal nesting and roosting sites. Salt marshes. Sensitive vegetation.)
7. Title: Work with	marine ecosystems
Specific outcome 1.	Demonstrate understanding of ocean currents and how they affect area of operation. Range: (The effect of the Agulhas and Benguela currents on the marine environment of South Africa.)
Specific outcome 2.	Describe the most important physical processes affecting fish stocks. Range: (Up welling. Frontal systems. Thermo clines and vertical mixing.)
Specific outcome 3.	Describe the interactions and interdependence of species. Range: (Species flip-flops. Effects of creating imbalances: Species replacement.)
Specific outcome 4.	Describe the effects of excessive predation. (Natural or Human) Range: (Change in species composition. Changes in age at sexual maturity. Unintended effects on apparently unrelated species.)
Specific outcome 5.	Explain the role of marine protected areas. Range: (Sanctuary areas. Reservoirs of biodiversity. Baseline study areas.)
8. Title: Work with	freshwater ecosystems
Specific outcome 1.	Specific outcome 1. Describe the fundamental ecology of an estuary and a river. Range: (Mouth dynamics. Implications of different flow regimes. Boundary between river and estuary.)
Specific outcome 2.	Identify the ecology of estuarine and river organisms. Range: (Fish. Plants. Invertebrates. Birds and mammals.)
Specific outcome 3.	Identify human impacts on freshwater systems. Range:(Recreation. Extraction of living resources. Effects of impoundments and water consumption. Pollution.)
Specific outcome 4.	Monitor and report on freshwater ecosystems.

Range: (Water quality and quantity. Fauna and flora including exotic invasions. Development. Water extraction.)

9. Title : Implement policies regarding HIV/AIDS in the workplace

- Specific outcome 1. Describe legislation and national policies relating to HIV/AIDS in the workplace.
- Specific outcome 2. Describe and analyse implicit or explicit organisational policies around HIV and AIDS in the workplace. Range: (From a given example of organisational policy.)

Specific outcome 3. Develop appropriate HIV/AIDS policy for workplace consistent with national requirements. Range: (Appropriately select and adapt elements of a given example.)

- Specific outcome 4. Describe legislation and national policies relating to HIV/AIDS in the workplace.
- Specific outcome 5. Describe and analyse implicit or explicit organisational policies around HIV and AIDS in the workplace. Range: (From a given example of organisational policy.)

Specific outcome 6. Develop appropriate HIV/AIDS policy for workplace consistent with national requirements. Range: (Appropriately select and adapt elements of a given example.)