



TERMS OF REFERENCE FOR A SOLICITED WRC PROJECT

KEY STRATEGIC AREA	KSA 34
PROGRAMME	National Dam Siltation Management Programme
TITLE	Piloting the NatSilt skills programmes for effective implementation

Background and Rationale

The National Dam Siltation Management Programme is implemented by the Water Research Commission (WRC) and funded by the Department of Water and Sanitation (DWS). The Programme's overarching aim is to develop a strategy that will guide, advise, and ensure effective siltation management and related improved storage capacity of the large dams in South Africa.

The programme is being implemented over 3 phases:

- Phase 1. Development of a Siltation Management Strategy and related tools for Large State Dams
- Phase 2. Piloting of the draft Strategy, Models and Tools for finalisation (current ToR focus)
- Phase 3. Review and revision towards a final strategy, with relevant models and tools

Phase 1 is complete, and Phase 2 is currently underway. All the Phase 1 outputs will be piloted in Phase 2. This project is part of numerous projects that will be implemented in phase 2.

Reports developed during Phase 1 of the programme can be found in the portal under the TOR under National Dam Siltation Management reports to provide context on the development process of the skills programmes:

The development of a siltation management strategy for large dams in South Africa will provide a new framework, models and protocols to manage dam siltation holistically. The multi-disciplinary and sectoral approach has provided the opportunity to simultaneously develop new skills, learning materials and a community of practitioners. Embedded training and capacity development enables organisations and individuals to cope with technological changes and challenges, and effectively adopt new ways of managing integrated resources.

There is currently a shortage of the key and scarce skills required for dam siltation management. Four occupational-based dam siltation management skills programmes have been developed in phase 1 to support the implementation of the national strategy and empower a new cohort of professionals and citizens. These skills programmes have been identified as a priority programme to provide learners with essential knowledge and skills in the workplace for both technical and managerial focus areas related to siltation and water infrastructure management. This will enhance the efficiency of dam siltation

management through training, capacity development, skills and professional development.

The skills programmes developed are:

- Dam Siltation Manager (NQF Level 8)
- Dam Siltation Practitioner (NQF Level 5)
- Dam Siltation Network and Partnership Coordinator (NQF Level 5)
- Dam Siltation Controller (NQF Level 3)

Overview of the proposed approach

The approach to this work is to examine the consultative processes, development, and registration of the four skills programmes that occurred during phase 1, then facilitate a process for the institutionalisation of the NatSilt skills programmes and the adoption of the E-Silt learning platform as a major transition towards internet-based learning for the DWS.

Objectives:

The aim is to sustain the learning interventions of the skills programmes to ensure effective long-term dam siltation management through skills and professional development:

The objectives of the project will be to:

- **Support the sustainability planning for the delivery of the skills programmes**
 - Provide the training of facilitators, assessors and e-mentors
 - Identification of assessors
 - Conduct training workshop for the DWS regional training co-ordinators and partner organisation trainers for the registration, uploading, and performance tracking on the E-Silt learning platform
 - Develop participant's evaluation feedback form, answer sheets, scoring sheets, assessment criteria, and training material (videos, presentations, handouts)
 - Support the accreditation compliance report with recommendations on QCTO assessment findings
- **Augment the E-silt Learning Platform**
 - Augment current course materials with interactive learning experiences, build new content from NatSilt cases studies into E-Silt and establish electronic assessment systems
 - Develop the full content (Knowledge & skills application modules) for the Network co-ordinator and the Process controller skills programmes developed
 - Develop a Performance tracking system for E-Silt
 - Develop an electronically automated assessment system that is QCTO compliant
 - Enhance knowledge sharing components and develop hosting and maintenance protocol into the future.
- **Develop a NatSilt network of subject matter experts**
 - Identify and invite a pool of human resources i.e., subject matters experts (facilitators), assessors, moderators and E-mentors to be involved in the roll-out of the NatSilt skills programmes
 - Provide support to the WRC towards establishing the NatSilt Network
- **Develop a marketing strategy and toolkit**
 - Develop marketing and awareness-raising material for the promotion the skills programmes
- **Develop Siltation Management material**
 - Develop siltation management material that is pitched to a less technical audience and community level
- **Develop a Monitoring, Evaluation, Reporting and Learning (MERL) system**
 - Design a participant Monitoring and evaluation system and complement it with evaluation feedback forms

Outputs and Outcomes:

The output and outcomes of this project will be:

- DWS training coordinators who are competent to use the e-learning platform and fully competent facilitators, assessors, and E-mentors
- Full compliance of the IBTC and/or services provider with the QCTO standards for training services provision which includes service provider assessment compliance preparations, assessment management systems and records maintenance
- All for skills programmes' content uploaded and augmented on E-Silt with special features, video footage and interactive learning processes
- Performance tracking system functional and operative
- Automated assessment system functional and operative
- Siltation management Network established with a pool of experts
- Long-term Monitoring, Evaluation, Reporting and Learning (MERL) system for strategic adaptive management of E-Silt developed

Deliverables:

1. Workshops delivered and training manuals (facilitator, Assessor and E-mentor training manuals and delivery of training workshops and delivery of training workshop for DWS regional training coordinators and partners for registration, uploading, and performance tracking on the e-platform)
2. Participants' evaluation feedback form, answer sheets, scoring sheets, assessment criteria, and training material (videos, presentations)
3. Accreditation and QCTO compliance support report
4. Four skills programmes completed content and upgraded E-Silt
5. Performance tracking system programmed into E-Silt
6. Automated assessment system linked to E-Silt in accordance with QCTO assessment standards
7. Workshop report with a list of expert practitioners and NatSilt network
8. NatSilt Microsite
9. Marketing and awareness support material (brochures, flyers and course descriptors)
10. Siltation management material
11. Monitoring, Evaluation, Reporting and Learning (MERL) system

Time Frame: November 2022 – November 2024

Total Funds Available: R3 000 000.00

Year 1: R1 135 000

Year 2: R1 500 000

Year 3: R365 000