



TERMS OF REFERENCE FOR A DIRECTED WRC PROJECT

KEY STRATEGIC AREA 3:	Water Use, Wastewater and Sanitation Futures
THRUST 3:	Sustainable Integrated Wastewater Resource Futures
PROGRAMME 1:	Quantification and Minimization of Water Use and Effluent Production
TITLE	Natsurv 19: Water and wastewater management in the Winery Industry (Edition 1)

Objectives:

General:

To review and document water and wastewater management within the winery industry and generate the first edition Natsurv report for the South African winery industry.

Specific Aims:

1. Provide a detailed overview of the winery industry in South Africa, its projected future change(s). It is important that representative samples of the respective industries are used as case studies.
2. Critically evaluate and document the “generic” industrial processes of winery industry in terms of current practice, best practice and cleaner production.
3. Determine the water consumption and specific water consumption (local and global indicators, targets; benchmarks, diurnal trends) and recommend targets for use, reuse, recycling and technology adoption.
4. Determine wastewater generation, and typical pollutant loads (diurnal trends) and best practice technology adoption.
5. Determine local electricity, water, and effluent prices and by-laws within which these industries function and critically evaluate if the trends and indicators are in line with water conservation demand management and environmental imperatives.
6. Critically evaluate the winery industry water (including wastewater) management processes adopted and provide appropriate recommendations
7. Evaluate the industry adoption of the following concepts: cleaner production, water pinch, energy pinch, life cycle assessments, water footprints, wastewater treatment and reuse, best available technology and ISO 14 000 to name a few.
8. Provide recommendations on the best practice for this industry.

Rationale:

In the 1980s the Water Research Commission (WRC) and Department of Water and Sanitation (DWS) embarked on a series of national surveys. These reports were referred to as Natsurv documents. The Natsurv reports for different industries have been well used since they were developed by the sector. As the landscape changes with new industries emerging it is important to give consideration to such industries and review their water and wastewater management in support of water security. One such

industry that has grown over the years is the wine industry with a contribution to the country's GDP exceeding \$2.6 billion annually and creating about 290,000 direct and indirect jobs.

The process of reviewing and documenting water and wastewater management within the winery industry to generate the first edition Natsurv report for the South African winery industry commenced on 1 April 2022. However this could not be completed due to circumstances beyond the WRC.

The current Terms of Reference aim to complete the process so that the first national survey on water and wastewater management for the winery industry can be published.

Note:

Reports for work already completed under this project can be requested from the WRC.

Deliverables:

1. Best practice report
2. Draft Final Report
3. Policy brief
4. Final project report

Thematic areas:

- Water Use
- Water Quality and Health
- Water Availability

Impact Areas:

- Water and the Economy; Water and the Environment; Water and Society

Knowledge Tree

- Sustainable Development Solutions

Time Frame: 18 months

Total Funds Available: R 630,000.00 inclusive of VAT