

TERMS OF REFERENCE FOR A DIRECTED WRC PROJECT

THEME	Water Quality and Health
TITLE	Revision of the national contaminants of emerging concern knowledge hub
TOR NUMBER:	1010024

Rationale

Through WRC project C2021/2022-00256), a GIS-based Knowledge Hub for Contaminants of Emerging Concern (CECs) was established. This hub, which can be accessed here: <https://www.ceckh.agric.za/>, seeks to centralize, and disseminate data and research on CECs in water in South Africa. Currently, the CECs Knowledge Hub provides available information on emerging contaminants in South Africa's water bodies, such as microplastics, heavy metals, and pharmaceuticals. Given the dynamic nature of CEC-related research and advancements in GIS technologies, the final report to this project lists several recommended follow-on actions to ensure that the information remains current, relevant, comprehensive, and user-friendly for stakeholders. Some of the recommended updates include improving the usability, integration with other CECs knowledge platforms as follows:

Scope of work

The scope of work may be structured (but not limited) into the following key tasks:

Work Package 1: Content Update - This work package involves the identification and incorporation of new datasets, priority lists, factsheets, research findings, and case studies on CECs. This also includes updates on regulatory frameworks, monitoring protocols, and mitigation strategies related to CECs. Furthermore, enhancements to metadata documentation to improve data discoverability and usability should be explored. Collaboration with other WRC, national and international projects on water quality / CECs is imperative.

Work Package 2: Platform Enhancement - This work package involves upgrades to the platform, such as enhancement to the GIS tools to allow for more advanced spatial and temporal analysis, visualization, and reporting; integration of data science tools, interactive dashboards and mapping features to improve user experience. Additionally, enhancement of the platform for intuitive navigation and accessibility; optimisation for desktop and mobile use should be explored.

Work Package 3: Enhancement of stakeholder engagement and capacity building tools - This work package involves exploring the addition of features to facilitate collaboration, such as comment sections, discussion forums for water quality / CECs specialists groups, and data-upload or sharing options. Ensuring easier upload and access to datasets on CECs contaminants

is important. Additionally, sections that focus on training materials and user guides for stakeholders should be considered.

Main Objectives

The primary aim of this project is to enhance the functionality, usability, and content of the existing CECs Knowledge Hub, by incorporating the latest research, data, and best practices on CEC. Furthermore, the revised hub should incorporate risk communication by creating dedicated sections that offer clear, concise, and actionable information on the risks associated with emerging contaminants. This revision is to ensure that the platform supports national initiatives related to CECs monitoring, decision-making, capacity building, and knowledge dissemination

Specific Objectives:

The specific objectives of this revision assignment are:

1. Expand the content of CECs Knowledge Hub using newly available data and research.
2. Enhance the functionality and usability of the CECs Knowledge Hub.
3. Ensure easier upload and access to datasets on CECs
4. Introduce interactive dashboards for stakeholders to visualize different contaminant levels over time or different geographic locations.
5. Facilitate partnerships with both national and international research institutions, as well as government to enhance the data scope and alignment with national and international CECs initiatives. NB: alignment to the GWRC project titled: Developing a Global Risk-based Tool for Prioritizing Contaminants of Emerging Concern (CEC) for the Water Industry¹ is mandatory.
6. Incorporate educational modules to inform the public about the health and environmental risks of emerging contaminants.
7. Develop a system for tracking the impact of interventions based on data trends.

Deliverables

The deliverables below may be sub-divided by the proposers, into not more three deliverables per financial year. The first-year deliverables may NOT include an advance. The final deliverable of the print-ready final report, valued at 20% of the Budget is required.

Total Budget: R 2 000 000.00 (Including VAT)

Year 1: R500 000.00 (Including VAT)

Duration: 3 years

¹ <https://globalwaterresearchcoalition.net/resource/developing-a-global-risk-based-tool-for-prioritizing-contaminants-of-emerging-concern-cec-for-the-water-industry-new-project/>
