

## Citizen science

### Online map-based miniSASS data portal

A project by the Water Research Commission (WRC) has led to the development of an online map-based miniSASS data portal.

#### Background

The need for capacity building, public awareness and participatory approaches towards water resources management is becoming increasingly important.

miniSASS (mini Stream Assessment Scoring System), a community river health monitoring tool, was developed in response to this need through the use of community participation and a simple aquatic biomonitoring technique to determine river health.



*miniSASS allows citizens of any change to monitor river health.*

This low technology, scientifically reliable and inexpensive participatory technique to monitor water quality in rivers and streams allows a simpler understanding of the successful, but technically complex, macroinvertebrate bio-assessment technique, the South African Scoring System (SASS).

miniSASS facilitates real-time monitoring and investigation of water quality and pollution sources by any age group, thus building capacity and enabling improved water resource management.

Six years after its original development, the miniSASS tool was further refined following an audit of users' needs, expectations and the perceived limitations of miniSASS with the updated version subjected to field testing.

The upgrade of miniSASS generated results to be submitted to a central database where results could be gathered, checked, stored, and shared by national and international communities, with the most viable option being submission of data into an online map-based data portal with geospatial mapping.

This project was thus initiated to further develop the miniSASS package as a citizen science river health monitoring tool through the development of a dedicated website and tailored database for the universal capture, exploration and sharing of miniSASS data by citizens. An active, user-friendly central Internet data portal for miniSASS data submission would empower every community and school in South Africa to become part of an international network of river health monitors.

The online map-based data portal is in the form of a website ([www.minisass.org](http://www.minisass.org)) which provides a dedicated home for miniSASS.

#### Outline of the miniSASS data portal

The website outlines the correct methods for collecting a miniSASS sample, the explanation of river categories, a

miniSASS checklist and hints and tips for getting ready for sampling. Updated and improved field sheets are available for download, where visitors will find the information and score sheet, identification guide and dichotomous key for miniSASS.

Visitors to the site are able to submit for download, and view reports of projects that have used miniSASS, or other educational resources and literature references relevant to miniSASS. A dedicated Wordpress blog was created to share the latest miniSASS news, where miniSASS has been undertaken and all the projects that miniSASS forms part of.

## Conclusion

Shortly after the release of the miniSASS database it had already generated much activity and shows great promise in generating a national database of citizen-collected river

health data. The website has since been further assisted by the development of a mobile miniSASS application.

### Further reading:

To order the report, *miniSASS data management: Development of an online map-based data portal* (**Report No. TT 639/15**), contact Publications at Tel: (012) 330-0340, Email: [orders@wrc.org.za](mailto:orders@wrc.org.za) or Visit: [www.wrc.org.za](http://www.wrc.org.za) to download a free copy.