

## History of the miniSASS tool

South Africa has been a world leader in biomonitoring techniques using macroinvertebrates. The most successful of these is the South African Scoring System version5 (SASS5). miniSASS is based on SASS and also uses the presence of macroinvertebrates to indicate the “health of a river”. Where SASS5 contains over 90 different macroinvertebrate classes, miniSASS only has 13 different classes, allowing for simpler identification and understanding. miniSASS has been found to provide similar indications of “river health” status as the more comprehensive SASS5 assessment, thereby providing a good means of generating useful biomonitoring data. The original miniSASS (version 1) was developed/based on approximately 2000 SASS4 data records, whilst this updated miniSASS (version 2) is based on over 6000 SASS5 records. This makes miniSASS ver2 more robust as a useful water quality monitoring tool and more widely applicable in southern Africa.

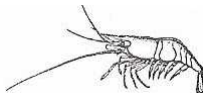
### Macroinvertebrates

#### What are they?

Macroinvertebrates are animals that have no backbone and can be seen with the naked eye.

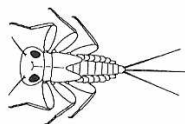
#### Why they're used for biomonitoring?

- Different macroinvertebrates have different sensitivities to pollution. The higher their score, the more sensitive they are.
- They are generally easy to collect and identify.
- They are relatively sedentary which allows the source of pollution to be detected.
- They integrate the water quality conditions at a site, providing an overall measure of the “health” of a river.
- They can provide a picture of the historical water quality at a site.



### What is the importance of water quality monitoring and management in South Africa?

Fresh water is essential for most life on earth. It is also used in all spheres of human life, namely agriculture, industry, biodiversity conservation, sanitation and hydration. However due to the amount of rainfall that South Africa receives, it is classified as a water stressed country. This means that if we do not monitor, manage and conserve our current water resources, we will be placing them and the population under tremendous stress in future!



As the general public, we can play a part in making a difference to managing freshwater resources in a community. miniSASS has the potential to be a powerful ‘red flag’ indicator for the identification of aquatic pollution sources. By using miniSASS we can actively take an interest and management in the health of freshwater bodies in our community.

Your interest and knowledge can be enhanced by adopting a local river in your community and monitoring it over time, identifying sources of pollution and taking local action to make a difference. You could also encourage more members of the community to take positive action towards monitoring and conserving water.

### Additional resources

[www.wrc.org.za](http://www.wrc.org.za)

[www.ground-truth.co.za](http://www.ground-truth.co.za)

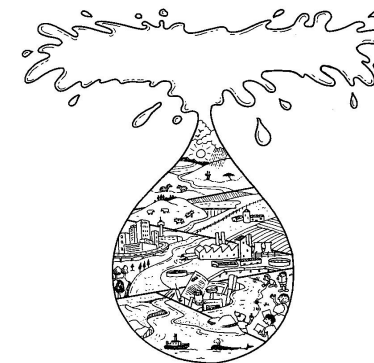
[www.wessa.org.za](http://www.wessa.org.za)

[www.dwaf.gov.za](http://www.dwaf.gov.za)



Download copies of miniSASS

[www.ground-truth.co.za](http://www.ground-truth.co.za)



Send your results to [minisass@ground-truth.co.za](mailto:minisass@ground-truth.co.za) to contribute to a developing picture of river quality in South Africa. miniSASS is available from Share-Net, PO Box 394, Howick, 3290. Tel: 033-3303931 ext 124/143/144

**River safety:** take special care in polluted waters. Beware of dangerous animals (crocs/hippos!) and fast flowing waters. Wear protective gear when necessary and wash your hands regularly with soap and clean water wherever possible!!

#### Key words for further reading/resources:

macroinvertebrates, benthic, water quality, conservation, biodiversity, water quality, river health, aquatic pollution.

### Glossary

**Biomonitoring:** the monitoring of biodiversity using biological organisms

**Biodiversity:** diversity within species, between species and of ecosystems

**Ecosystem:** a complete community of living organisms and the nonliving materials of their surroundings.

**Sedentary:** inactive, motionless, not moving

**Conservation:** the maintenance of environmental quality and functioning