

Dominic Mazvimavi

Improving hydrological prediction through the adoption of national and regional guidelines/standards in the SADC Region.

A considerable number of river basins in the Southern African Development Community (SADC) region are ungauged. Several studies aimed at improving methods for hydrological prediction in these basins at both national and regional levels have over the years been undertaken. However, the improvements made have not always been incorporated in procedures used by practising hydrologists and water resources planners. In addition, water resources planners within the same country often use different methods for hydrological prediction due to lack of standard national guidelines. Similarly countries sharing the same river basin use different methods for water resources assessment due to lack of common standards at the SADC level. There has also been a proliferation of rainfall-runoff models used in the SADC region. Some of the models have been introduced through externally funded water resources assessment and development activities. Most countries in the SADC region have no guidelines with regards to models which should be used for water resources assessment in order to achieve consistency in the analysis. This paper explores the potential for improving prediction in ungauged basins through the adoption of national and SADC wide standards or guidelines. The development of these guidelines will ensure that advances made in improving hydrological prediction are incorporated into practice. Gaps that need to be addressed in research will also become apparent during the development of these guidelines. Implementation of the guidelines or standards will ensure that there is consistency when assessing various aspects of water resources within and between SADC countries. The Southern Africa FRIEND study demonstrated the feasibility of developing SADC wide methods for water resources assessment. The process of developing national and regional guidelines will contribute towards building the capacity of water resources planners in the region. Training programmes for hydrologists in the SADC region will have to cover these standard guidelines leading to consistency among the various training programmes.