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New hydropower atlas created for South Africa

South Africa has become acutely aware of the need to shift towards renewable electricity generating methods to alleviate poverty and to mitigate climate change. An estimated 76% of installed renewable energy in South Africa is being generated by wind and solar. It is believed that the rate of development of hydropower plants in South Africa is lagging due to the uncertainty pertaining to the hydropower potential that exists within South African rivers and water infrastructure.

To fill this knowledge gap, the Water Research Commission (WRC) funded a project, undertaken by the University of Pretoria, to create South Africa’s first hydropower atlas (<http://bit.ly/3o5qhl3>). The aim of the project was to enhance the uptake of microhydro technology, making local stakeholders (private sector, financial sector, government entities etc) aware of the opportunities that this technology brings and the efforts required to get this technology successfully implemented in South Africa.

The South African Hydropower Atlas was developed on a Geographic Information System (GIS)-based platform to not only visualise the hydropower opportunities in South Africa, but to create a database where data related to hydropower quantification can be shared. This allows for users of the atlas to share available data and aid in the identification of additional sites or to improve the reliability of data already included in the atlas.

The functionality and data layers have been selected to provide the following:

* Information on all existing and decommissioned hydropower sites.
* Locations of all potential hydropower sites identified using generic evaluation methods.
* Links, relevant studies, images, reports etc.
* A feedback page where users can make their own contribution to the atlas.

The South African Hydropower Atlas provides general information regarding the assessment of hydropower potential and provides the information required regarding the feasibility of such projects. This is an exciting development, which should enhance the uptake of microhydro technology, making local stakeholders aware of the opportunities of hydropower technology implementation within existing South African water infrastructure and rivers.