Title:
The Bongwana Natural CO_2 Release

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Abstract:
The natural CO_2 release near the village of Bongwana in KwaZulu-Natal province in South Africa was first described in the early 20th century as dry gas exhalations (98% CO_2) along a line cutting through farmland over approximately 150 metres. Since then little work has been reported, however other gas seeps and the formation of travertines have been noted and it is thought the CO_2 release is caused by an ~80km long fault cutting through the tillite caprock above a potential carbonate hosted CO_2 reservoir. A team of SCCS and South African researchers performed initial fieldwork and reconnaissance in September 2015 and results to date are presented. Sampling and measurements include: soil gas and flux measurements, stable isotope and noble gas sampling of water and gas, travertine sampling as well as structural geological mapping and sampling of the fault zone. The aims of the project include both understanding the CO_2 source, migration path and controls on migration as well as to increase the technical capacity of the South African team to enable the successful delivery of a pilot CO_2 storage project in South Africa. Capacity building has been started by partnering SCCS researchers with local scientists and students in South Africa on the recent field visit.