TV Team from French-German channel ARTE visits SASSCAL

In May 2016, a SASSCAL-Team consisting of researchers from the University of Namibia (UNAM) and the Federal Institute for Geosciences and Natural Resources of Germany (BGR) was accompanied by a film-team from the French-German TV channel ARTE who are currently working on a documentary with the title "The hidden Water Resources of Africa".

UNAM and BGR are collaborating in SASSCAL Tasks 010 – ‘Improving the understanding of groundwater related processes and establishing groundwater budgets for water management purposes’ and 007 – ‘Improving knowledge and understanding of groundwater flow, water quality and quantity variations, improve methodology of groundwater availability study: Cuvelai’ and the field campaign in May 2016 was already their 7nd visit to the Cuvelai-Etosha Basin (CEB, Fig. 1), northern central Namibia.

At the core site east of the township of Eenhana, the film team followed every step of the research team. Principal investigator Thomas Himmelsbach (BGR) gave several interviews on the geological evolution of the CEB and the importance of a sustainable framework for regional groundwater management (see Fig. 2). Furthermore, the main interest was set on documenting the field experiments of the PhD students Josefina Hamutoko (UNAM, water quality and hydrogeochemical characterization of hand-dug wells in the Ohangwena Region), Marcel Gaj (BGR, field measurements of stable isotopes in soil water for the establishment of water balances) and Matthias Beyer (BGR, artificial labeling with stable water isotopes for the investigation of rooting depths and groundwater recharge). Within SASSCAL, the BGR-UNAM cooperation is aiming on improving the understanding of groundwater recharge related processes for the shallow, perched aquifers, but also the potential relevance for recharge to the deep seated, semi-fossil aquifer. A main focus in the sub-task is put on the unsaturated zone as the interface between the surface and groundwater with vegetation as a major control of the water balance. Scientifically spoken, these aspects are yet not fully understood, especially in water-limited environments. The cooperation has been very fruitful and resulted in several joint scientific publications.

The Cuvelai-Etosha Basin has a highly diversified geological history as once the river deltas of both the Okavango and Kunene rivers were located within the basin. Nowadays both river just touch the basin and bring their waters elsewhere leaving the CEB mostly dry. Recently, the CEB has received particular attention through the discovery of a vast, freshwater containing aquifer at depths greater 200 m in the Ohangwena Region of Namibia. In addition to investigating recharge pathways through the unsaturated zone, numerical models are currently established to understand and explain where the deep aquifer is gaining its water from. This is a critical step towards the sustainable management of the transboundary aquifer system which is known as the ‘Cubango Megafan’.

The documentary "The hidden Water Resources of Africa" is currently being finalized and will be broadcasted on ARTE in January 2016. It will be available in French and German languages.