

The potential of citizen science to tackle the wicked problem of snail-borne diseases

Tine Huyse, on behalf of the ATRAP consortium

Department of Biology of the Royal Museum for Central Africa

Citizen science, where non-specialists are contributing to scientific research, has proven its merits in many scientific disciplines, as it can boost data collection and stimulate informal learning. In the ATRAP project we harness this untapped potential by developing a novel snail monitoring approach that can be executed by non-specialists. Both in DR Congo and Western Uganda we trained a network of 25 citizens to collect and identify snail species belonging to the genera that are involved in the transmission of schistosomiasis and fasciolosis. They report on a weekly basis on snail host abundances in predefined water contact sites, add GPS location, key water chemistry parameters, and photographs of the identified snails. Data is submitted using the freely available mobile phone application KoBoToolbox, followed by semi-automatic validation by trained researchers. By doing so, we hope to increase our understanding on snail population dynamics and generate the much-needed data to support local targeted snail control measures in remote and/or resource-limited environments. At the same time, these citizen scientists will act as communicator to the wider community using contextualized communication tools developed in the social strand of the ATRAP project.