Project Update: December 2017

We undertook 2 weeks of fieldwork in Chimanimani, Eastern Highlands, Zimbabwe for crab survey along the Haroni and Nyahode River systems. We also managed to find crab diversities in pristine areas, i.e. national parks and low diversity in highly impacted areas by illegal mining (see Figure 1). Illegal gold diggers are washing away tonnes of soil into rivers at great loss to aquatic biodiversity (Figure 1b). These activities are not only destroying vast portions of both terrestrial and aquatic ecosystems, but are also threatening the livelihood of thousands of villagers along the river valleys where these operations are concentrated. Most of the July samples have been processed with regards to macroinvertebrate and sediment dynamics. Furthermore, we managed to interview the local chief (Chikukwa) and community members of a local conservation group on their perceptions regarding freshwater crab conservation and threats. We also managed to distribute 122 questionnaires among the Chikukwa village members within Chimanimani. We also managed to publish a short communication with South African Journal Science to highlight the potential threats of rampant illegal mining with the biodiversity hotspot.

Figure 1. A highly modified river system due to illegal gold mining (**a, b**) and illegal panners digging for gold along the Machira River, Eastern Highlands of Zimbabwe (**b**). Note the colour of river water and extensive damage of the river bed and riparian zone and also the two illegal miners without protective clothing, only wearing shorts (**b**)

Supplementary files:

1. Dalu MTB, Wasserman RJ and Dalu T. 2017. A call to halt destructive, illegal mining in Zimbabwe. *South African Journal of Science*. 113(11/12):a0242.
2. Dalu MTB, Wasserman RJ and Dalu T. 2017. Can Potamonautids be used as umbrella invertebrate species for conservation: identifying opportunities and challenges related to community sustainable livelihoods. *Physics and Chemistry of the Earth ABC*. 101(Oct):52–58.
   Website link:
   http://www.sciencedirect.com/science/article/pii/S1474706516303175
3. Dalu T, Wasserman RJ, Tonkin JD, Alexander ME, Dalu MTB, Motitso S, Manungo KI, Bepe O and Dube T. 2017. Assessing drivers of benthic macroinvertebrate community structure in African highlands: an exploration using multivariate analysis. *Science of the Total Environment*. 601–602(1 Dec):1340–1348.
   Website link:
   http://www.sciencedirect.com/science/article/pii/S0048969717314262

Ms Mwazvita TB Dalu and Shepherd Ruzvidzo adminstering questionnaires in Chikukwa village, Chimanimani.