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Investigation into Industry, informal settlements, and small-scale farmers; ability to cope and adapt to drought and other water related to changing climate along three majors rivers in KwaZulu Natal Province, Durban, South Africa.**Sibonelo Thanda Mbanjwa***PhD, South Africa*

The current pressures placed on river systems by industrial giants, coupled with use by indigenous squatter development as well as changing climatic conditions resulting in increased temperatures and lower rainfalls have impacted negatively on the amount of unpolluted available water for human consumption, agricultural utilization as well as industrial functionality. This is visible in the current drought situation that South Africa is facing. Small scale indigenous farmers develop sustainable gardens to facilitate a source of income. However, the indiscriminate use by many for purposes other than human consumption delimits the available water for essential purposes.

These indigenous people rely heavily on the freshwater resources that should be readily available. Coupled with the agricultural need, industrial needs for water are ever increasing with more and more small and medium enterprises are being established to create entrepreneurs. When water levels are in excess, industrial chemical pollutants expelled into water systems are diluted to the extent that minimal is detected when analyses are carried out. However due to this resource being limiting and with the recent drought situation in Southern Africa (which

is still prevalent in Western Cape), the impact from industry as well as rural agricultural communities on the river systems results in increased

chemical and domestic pollution. This pollution inadvertently impacts on the riverine biodiversity extensively eradicating indigenous vegetation and making way for alien species invasion. These drastic environmental changes resulting in drought is a major threat globally, impacting agriculture, industrial, infrastructure, and socio-economic activities. Current investigation is pertinent to provide answers to this increasing problem, however the need to change from a one-dimensional focus on climate change forecasting and weather to a host of other factors intensifying vulnerability to drought impacts which includes pollution and availability of useable water.

South Africa has experienced the worst droughts in decades during the 2015 calendar year and is still recovering from such a disastrous occurrence with immense losses faced by the agricultural industry. Ultimately the resultant of such droughts leads to food safety as polluted water is used to irrigate the crops, some of which the crops absorb and would store the heavy harmful metals causing health risks.

Biography

Sibonelo Thanda Mbanjwa has his expertise in Climate Change and passion in improving the health and wellbeing. His open and contextual evaluation model based on responsive constructivists creates new pathways for improving healthcare. He has built this model after years of experience in research, evaluation, teaching and administration both in nature conservation industry and education institutions. He obtained his PhD in Environmental Science from University of South Africa (2017). He has presented papers nationally and internationally. He is currently working as full-time lecturer, teaching Biodiversity module and Climate Change Mitigation. He supervises student from ungraduated level to masters level.