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Africa: A natural laboratory for medical geology investigations

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Although there is a growing development of Medical Geology in the world, it is in Africa that application of research results would be most relevant. However, it is in Africa that the field is least developed.

African continent is characterised by a complex and dynamic geological history including frequent earthquakes, volcanic activities in tectonically active regions, pervasive dust, water toxicity due to interaction with the geological environment, flood...etc. All these naturally occurring process and material could have short and long term impact on humans and animals health.

In addition, most of the population in Africa live close to the land, relying on locally produced food and water, and that large tracts of cultivated land are arid, semi-arid, or lack essential trace elements for healthy plant growth. Such conditions aggravate the health impact of the geological processes and material.

Therefore, considering the significance of the health problems possibly related to the naturally occurring geological issues on the African continent in general, we strongly believe that it is necessary to develop this discipline. This would lead to broadening our understanding of the diagnostic spectrum as well as therapy for many geological related health issues and thus improve life quality on the African continent.

In this presentation, I will present some examples of naturally occurring geological process and materials, which might be the cause of a number of common health issues occurring in Africa such as some types of cancer, thyroid issues, fluorosis, silicosis, asthma…etc.