

Geological Society of Africa

Professor Aberra Mogessie, President of the GSAf, calls for sustainable management of the continent's resources, further focus on Africa's young people and emphasises the need for developed countries to view Africa as a partner to work with rather than a continent in need of help

Could you begin by outlining the principles and objectives of the Geological Society of Africa (GSAf)?

The GSAf was established in 1973 in Addis Ababa, Ethiopia to encourage geoscientific collaboration and cooperation across the continent. It is an affiliated organisation of the IUGS (International Union of Geosciences), Geological Society of America (GSA) and the American Geoscience Institute (AGI). Its main objectives are to promote understanding of the Earth Sciences and improve standards of Earth Science education and research in Africa, as well as providing a forum for discussion and dissemination of information across national boundaries between scientists, associations and institutions engaged in African geology and Earth resources. We also promote the development and sustainable management of the continent's Earth resources, and aim to improve natural hazards assessment and disaster mitigation.

Africa faces considerable development challenges. How can geoscience be applied to help mitigate these challenges?

Africa is a continent with rich mineral, energy and water resources. In order to use these resources effectively, develop the African countries and improve the standard of living, the geosciences can play a major role. Therefore, we need experts in the Earth Sciences who can help in the exploration and exploitation of such resources and advise the policy makers to make the right decisions.

It should be noted that Africa has excellent scientists (although few in number) within the continent and scattered in the diaspora. Therefore, the decision or policy makers in Africa must set their priorities on advancing science and technology in the African continent for fast track development. One way of dealing with this is encouraging the formation of national Earth Science associations (in the field of geosciences) which



will help all those engaged in the Earth Sciences – from university to industry – to convene and develop a strategy to encourage research and education, and build the human capital necessary in this important sector for Africa.

Could you tell us about the GSAf's efforts to promote the sustainable management of Africa's natural resources in order to advance the continent's socioeconomic development?

The GSAf works with different organisations and, as part of the expert/technical group, is actively engaged in helping decision makers formulate the right strategy in these sectors. Organisations we work with include UNESCO/IUGS in Earth Science Education and Research; the ACP (African-Caribbean Secretariat, Brussels); the European Commission (Brussels); and the African Union (AU) and Economic Commission for Africa (UNECA) on Sustainable Mineral resources management in Africa. We are also a member of the steering committees of the African-European Georesources Observation System (AEGOS) and Geoscience Information in Africa-Network (GIRAF).

During AEGOS Phase 1, the 23 partners (African and European) conducted common work to build strategies on information dissemination and relevant capacity building for the sustainable development of georesources in the continent. This manifests itself through the adoption of international rules, taking advantage of collective means, facilitating harmonisation and trans-border resource management, and contributing to improve national strategies including social acceptance. Under the AEGOS structure, it is recommended that the AU be responsible for policy decisions, the Organisation of African Geological Surveys (OAGS) for infrastructure development and the Geological Society of Africa for Earth Science education and research during the final implementation stage. This implies that our society has a big responsibility to achieve the goals of capacity building in the Earth Sciences in Africa to help advance the socioeconomic development of the continent and support the sustainable management of its mineral resources.

Global environmental change is expected to exacerbate natural disasters. How positive do you feel about current national and international efforts to mitigate and reduce the effects of climate change in Africa?

Former President of the GSAf, Professor Sospeter Muhongo of Tanzania, recently expressed the state of the problem in Africa at a conference on geoenvironment and climate in Ottawa, Canada which I have cited below:

"Africa (54 countries) contributes less than 3 per cent of the global CO₂ emissions and accounts for ~2 per cent of the world's GDP. Consequently, Africa's current emission of greenhouse gases is insignificant with the exception of a couple of countries; compared to Europe, the U.S. and the BRIC countries. Africa is a region staggered under a heavy burden of poverty, famine and diseases. Her limited utilisation of energy resources (eg. fossil fuels – oil, coal and natural gas) has partly brought about this socioeconomic reality.

"The above facts indicate the existence of the strong relationship between growth (ie. wealth creation and economic prosperity) and greenhouse gas emissions. With 57.5 researchers per 1 million inhabitants – India, Brazil and China have 136.9, 656.9 and 1,070.9, respectively; South Africa has 392.9; (UNESCO, 2010) – and almost all countries spending less than 1 per cent of their national GDPs on R&D, Sub-Saharan Africa remains vulnerable to the negative consequences of climate change.

"The continent requires sufficient financial support and technology transfer; skilled human resource; climate science, technology and innovation infrastructure; and implementable climate policies for its sound, measurable and sustainable green economy – equitable growth and sustainable development are the paradigm for a global society."

It is recommended that the GSAf should work in cooperation with the African Academy of Sciences (AAS) and other major actors, such as the

United Nations Environmental Program (UNEP) and their secretariats in Nairobi, Kenya, in tackling problems related to climate change in Africa. Several efforts are being made in this sector. However, as is the case in Africa, the continent does not have enough human capacity specialised in the field of climate science to really engage in concrete activities at national level and also defend its position on international forums.

Therefore, the key to solving the problems related to climate change or use of mineral resources is educating the youth and make capital resources available. I am optimistic that we are moving in the right direction, but at a slow pace.

What funding sources does the GSAf have to conduct its work?

GSAf is subsidised by the IUGS along with membership fees from individual members and associated national geological societies and some profits from its conferences. The level of funding is too small for a continental organisation and needs strong support from all concerned by and benefiting from our work. All progress is made thanks to the dedication of our members who use their expertise and free time to contribute.

How positive do you feel about international development commitments with regards to Africa's economic and social challenges?

I have a problem with this question. There is too much talking and no practical work when decision makers deal with Africa.

The international community should not look at Africa in the way they have been looking at the continent in the past. There are several actors in the continent at the moment and a large population of young people who are hopeful of positive change. To develop the natural resources in a sustainable manner that has win-win outcomes, most developed countries have to consider Africa as a partner to work with and not a continent which is looking for help. The potential to develop Africa quickly is there but requires a change in attitude from all actors.

I wish to state a positive example here of what governments and organisations with an interest to develop Earth Science education and research in Africa can do. In August 2012 a large number of African geologists will participate in the International Geological Congress (IGC 34) in Brisbane, Australia. This is the first time that African geologists have had an opportunity to attend an international geological congress in such a large number, thanks to the organisers and the generous financial support of the Australian Government. This should be an example for those countries, organisations and companies engaged in the mineral exploration sector in Africa to follow and encourage the development of Earth Sciences in the continent.

What are your hopes for the future? What single goal would you most like the GSAf to achieve in the coming years?

Based on the work we have carried out to date and the network we have established, I am very optimistic for the future. Our wish is to foster capacity building in the Earth Sciences (education, research and infrastructure development) in Africa. To achieve this objective we have already started preparations for the establishment of Geological Society of Africa Student Chapters in all African Universities with Earth Science Departments. It is the African students themselves who are engaged in the YES Africa Network (Young Earth Scientists); they are given the responsibility to establish and organise the student chapter. This will be implemented during our 14th Conference of the Geological Society of Africa which will be held in Addis Ababa, Ethiopia (8-14, January 2013).

The GSAf has numerous ideas for developing Earth Science research and education in Africa and help the continent to really follow an environmentally acceptable development path. However, it lacks the resources to do this. There are, of course, philanthropists such as Bill Gates and the Bill Clinton foundation along with others, who contribute significantly to AIDS and Malaria programmes in Africa. This is good, but the continent can only truly develop and help itself once it educates its youth.

I hope someone who reads this interview and wants to contribute to making a difference will contact us, so together we can do the right thing for Africa and make the world a better place for all.

www.geologicalsocietyofafrica.org

