

UNESCO Project Brief: **Earth Science Education Initiative in Africa**

Background

Based on requests from African National Committees of the International Year of Planet Earth, the Director General of UNESCO announced a new Earth Science Education Initiative at the regional launch of the International Year of Planet Earth in Arusha, Tanzania on 8 May 2008.

The overall intention of this Initiative is to support the development of the next generation of earth scientists in Africa who are equipped with the necessary tools, networks and perspectives to apply sound science to solving and benefiting from the challenges and opportunities of sustainable development. The opportunities in the earth sciences are great, starting with traditional mineral extraction and extending into environmental management such as climate change adaptation, prevention of natural hazards, and ensuring access to drinking water.

Initially, the focus of the Initiative is to create and expand a network of existing initiatives with a focus on University-level teaching and education research activities in a number of regional centers of expertise with strong ties to related industries and public institutions such as geological surveys. Future expansion of the Initiative could include primary level students and teachers. However, this focus is pending the feedback of the current scoping phase of the initiative.

In this scoping phase, UNESCO is developing a partnering scheme of the many relevant bodies already involved in earth science education in Africa. A component of this partnering scheme will be to encourage existing networks of communication and cooperation. Then, through a series of regional workshops in Africa, an assessment of the existing capacities and actual needs within existing faculties, universities, laboratories and applied schools will be prepared. Based on the recommendations received from these regional workshops and relevant partners, a strategy to proceed will be discussed and developed during a conference to be held in Paris Headquarters during the 1st trimester of 2010. Action plans with some innovative approaches will be expected to be proposed to interested donors.

Partners

On account of the current vacancy in the earth sciences in the UNESCO Nairobi office, this Initiative is being organized from UNESCO headquarters with strong partnerships with field offices in Africa. The Initiative is engaged with the intersectoral platforms of Science Education and Education for Sustainable Development and through this collaboration is striving to be fully integrated in relevant UNESCO activities. These activities include UNESCO's flagship projects for the African Union's Consolidated Plan of Action, namely the Enhancing Science and Technology Education Project and the African Virtual Campus. There are also strong possibilities to partner with the African Network of Science and Technology Institutions (ANSTI), the Academy of Sciences for the Developing World (TWAS), Southern African Ministerial Council on Science and Technology (SAMCOST).

Cooperative links should be also established at multilateral level with entities like the European Commission in Brussels (Directorate general for research – Directorate general for education and

culture – Directorate general for Development) as well as non-African foreign entities deeply involved in Africa bilaterally; Private sector included.

The Earth Science Education Initiative has received strong support from many different types of partners. Because it is not possible to have an exhaustive list at this time, we will not report potential partners now, but we certainly welcome more partners to be involved. Potential partners have indicated an interest to participate as organizational partners, content providers, relevant academic institutes, and funders.

- *Organizational partners:*
 - International Union of Geological Sciences (IUGS)
 - Geological Society of Africa (GSAf)
 - International Center for Training and Exchanges in the Geosciences (CIFEG)
 - Association of African Women Geoscientists (AAWG)

Schedule

Initially the following schedule is proposed:

- May 2009 – Present Initiative during a UNESCO Africa Group Meeting
- End of 2009 - Identify centers of expertise and host four regional workshops; identify capacities, needs and strategies
- October 24 - 28 2009 - Discussions at the Young Earth-Scientists Education Roundtable in Beijing, China
- Early 2010 – Launch event in Paris
- January 2011 - First result assessment at the Colloquium of African Geology in South Africa

Workshops

It has been suggested that three regional workshops be organized before the end of 2009. Currently there are workshops being planned in Cape Town, South Africa; Dakar, Senegal; and Assuit, Egypt. The objective of these workshops is to assess regional capacities and needs in earth science education, research and industry underlining existing centers of excellence through conversation with relevant regional and international experts including representatives of Universities, Applied Schools, Geological Surveys, Industry, and Government and plotting the way ahead for earth science education. Ideally participants should be senior experts as well as younger students and practitioners. There should be a balance between practical and theoretical discussions on the type and role of earth science education needed for the future. The recommendations from these workshops will be synthesized and form the basis of the launch event in Paris in 2010.

In order to encourage participation and an actively productive workshop, the size will be limited to 30 participants maximum. To maintain this size, participation is by invitation. Please contact us if you wish to express your interest in attending.

Partners have the following goals for these workshops:

- To develop a status update of the state of earth science education in Africa
- To produce a clear map that identifies centers of expertise, centers needing assistance and educational gaps.
- To continue to identify possible partners and their roles in the Initiative.
- To document existing actions or programs and identify the relationships with the Initiative.

- To agree, at an academic level, on the type and role of earth sciences in the local educational systems.
- To support and provide detail on the goal of the Initiative.
- To use the workshop event as an opportunity to raise the visibility of the importance and the relevance of the earth sciences for Africa.