



PROCEEDINGS

International Year of Planet Earth Meeting of Science Implementation Team Leaders and National Committee Chairs (Africa): Progress Report and the Future

(18 – 19 May 2009, Pretoria, South Africa)



Acronyms

AEON	Africa Earth Observatory Network
AU	Africa Union
ESTA	Ethiopian Science and Technology Agency
EU	European Union
GSAf	Geological Society of Africa
ICSU ROA	International Council for Science Regional Office for Africa
ICSU	International Council for Science
IUGG	International Union of Geodesy and Geophysics
IUGS	International Union of Geological Sciences
IYPE	International Year of Planet Earth
NC	National Committee
NRF	National Research Foundation of South Africa
SABA	South African Bio-energies Association
SIT	Science Implementation Team Leaders of IYPE
UCEC	Cousteau Ecotechnie Chair
UNESCO	United Nations Educational, Scientific and Cultural Organization
YES	Young Earth Scientists

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Welcome Remarks and Official Opening of Workshop (Sospeter Muhongo, ICSU ROA)

The convenor of the meeting, Prof Sospeter Muhongo, Executive Director of the International Council for Science, Regional Office for Africa (ICSU ROA) and Chairperson of the Science Programme of the International Year of Planet Earth (IYPE) welcomed delegates and expressed appreciation for the effort they made to attend the meeting. In his introduction, he outlined the history of the IYPE which was planned as a three-year programme starting 2007 and ending 2009. He then called on participants to deliberate on the future of the IYPE after the Year ends in 2009.

Prof Muhongo described the science agenda of the Year as contained in the 10 broad themes. He noted that for each of the themes, a Science Implementation Team (SIT) leader had been identified at global level, four of whom were participating in the meeting. He further pointed out that the meeting was intended to glean the progress of the Year at global level from the SIT leaders and at national level from the Africa's National Committee (NC) chairs, as well as to facilitate interaction between the SIT leaders, the NC chairs and ICSU ROA project leaders. He noted that one of the objectives of the meeting was to formulate the way forward after the Year ends in 2009. Prof Muhongo informed the participants that the legacy of the Year includes the publication of a book on each of the 10 themes as well as bringing in young scientists to join the Earth Scientists community.

Session 1: Science Implementation Team Leaders

1.1 Theme 1: Climate – Chair, Prof J Dodson (Institute for Environmental Research, Australia)

In his address, Prof Dodson stated that human-enhanced climate change is a global issue that requires cooperation from all countries and in future climate change studies scientists would need the use of robust climate models well tested against past climate scenarios. These scenarios would be provided by earth scientists who could reconstruct them with the aid of tree rings, sediments, corals, speleotherms and ice core. He described and discussed the climate change study done in south-west Australia where Moondyne Cave speleotherms were used to reveal climate variations in that region over the last century.

On the legacy book of Climate Change, Prof Dodson informed participants that the Climate Change Group is putting together a book in which past climate studies can be used to inform the future for society. It is envisaged that the book will have 12 chapters. He outlined the chapters and the contributing authors. Apart from publishing the legacy book, Prof Dodson pointed out that the group is also contributing chapters to two other books: (i) Earth and Life volume: Climate Change through Earth History; and (ii) Groundwater: Climate and Groundwater.

To create science based sustainability studies in the future, Prof Dodson proposed activities such as publishing brochures and case studies; and providing leadership skill training, among others.

Discussion

It was noted that the Climate Change committee of the IYPE has a member, Prof Mike Meadows (email: Michael.Meadows@uct.ac.za), who is in the Department of Geography and Environmental Science at the University of Cape Town. The NCs on the continent were encouraged to contact him for information and assistance. It was also pointed out that there is need for perspective of

more than a hundred years (the length of measured records) to make informed decision. It was noted that Africa is influenced by different climatic systems which should be brought together and studied in a holistic manner. The use of models to look both at the physical environment and how people manage the environment was encouraged.

1.2 Theme 2: Earth and Health – Representative, Prof T Davies (University of Venda, South Africa)

Prof Davies briefed participants on the Earth and Health SIT initiatives and discussed what had been done to compliment IYPE activities. He noted that the preparation of the legacy book was at an advanced stage and that the manuscripts will be ready for publication by July 2009. The book aims to give a regional overview of medical geology of the entire globe.

On the impacts medical geology has been making, Prof Davies discussed case studies in Africa and outlined the responsibilities of medical geologists while giving examples of their positive contribution to the understanding of the interaction between geo-environmental factors.

In conclusion, he noted that the objectives of Medical Geology are to identify harmful geological agents, to determine the conditions of exposure that promote deteriorating health conditions, and to develop sound principles, strategies, programmes and approaches necessary to eliminate or minimise health risks. He asserted that the inclusion of Medical Geology in higher education curricula would raise awareness of the connection between Geology and Health, and encourage students to pursue a career in Medical Geology.

Discussion

During the discussion, the need for a multi-disciplinary approach involving other researchers such as geo-chemists and bio-chemists was emphasised. It was reported that medical geologists have a global network under the umbrella of the International Medical Geology Association, and at continental level, there is an African Association of Medical Geologists that was launched in 2006. It was suggested that the atmospheric composition changes due to geo-genic sources should also be included in the studies of this Group.

1.3 Theme 3: Mega-cities – Chair, Prof F Kraas (University of Cologne, Germany)

Prof Kraas gave an overview of the challenges of mega-cities and reported on what has been/is being done in line with the IYPE mega-cities activities. She outlined the mega-cities challenges that include population growth, rural to city migration and expansion of cities into agricultural areas. She noted that the growth rate of mega-cities between 2010 and 2020 is projected to be between 3% and 5%. She further discussed the three big programmes directed to mega-cities research that include: (i) mega-cities for tomorrow - whose efforts are directed towards climate change and energy sustainability; (ii) mega-cities – mega-challenge: Informal Dynamics of Global Change; and (iii) Risk Habitat Megacity – which is focused on Santiago de Chile.

Prof Kraas also noted that in line with the IYPE programme, the mega-cities SIT is putting together a book “Mega-cities – our global urban future” with 18 chapters of which 13 are ready. Apart from publishing the book, she also noted that they have contributed several scientific articles to international journals as well as papers for the wider public that have been translated into several languages. For outreach programmes, she pointed out that 12 science TV documentaries on mega-urban topics had been produced and are available in German and English. They have also organized workshops, meetings, lecture series and have created a network of researchers on Mega-cities.

Discussion

Geo-scientists are urged to work together to solve problems of the cities, an issue that has been neglected to date. It was suggested that the mega-cities projects should also encompass aspects such as water quality and distribution as well as air pollution and waste disposal. It was noted that projects being carried out in West Africa on mega-cities focused on the effects on air pollution and public health. It was also pointed out that models are being used to study mega-cities air pollution (both indoors and outdoor).

1.4 Theme 4: Hazards – Chair, Prof T Beer (Australian Commonwealth Scientific and Research Organization, Australia)

Prof T Beer stated that while every nation is subject to some form of natural hazards, the type of hazards and the vulnerability of the population to such hazards depend on region, country and various social networks available. He said that geo-scientists are now working together under the umbrella of the ICSU Geo-Unions, which is made up of eight international unions. Before the IYPE, the Geo-Unions developed science programs and have an existing Geo-Unions project on hazards.

As for outreach initiatives for the IYPE, he reported that several countries ran a number of activities. He gave examples of Australia, which produced a set of commemorative coins, and New Zealand, which issued IYPE postage stamps related to extreme weather events. He noted that the booklets of the hazards theme have been translated into a number of languages. He discussed the key questions of the hazards theme, which include how humans have altered the geo-sphere, the technologies and methodologies used in the assessment of societal vulnerability, as well as capacity to monitor hazards and communicate relevant information to policy makers. He urged the scientific community to work together with policy makers so that they can make informed decisions.

He outlined the activities of the Hazards Group, pointing out that the research involved scientists from all over the globe. He also discussed some of the activities of the hazards theme which included the publication of the Hazards Book Brochure, contributing to the Planet Earth Book, organising IYPE Mega-symposium. He noted that the preparation of the legacy book is ongoing with 16 of the 24 chapters already having undergone a peer-review process.

He pointed out that all the three regional offices of ICSU identified hazards as one of their key research areas and noted that there was potential to bring together the IYPE Hazards projects, the Geo-Unions Hazards Projects and the ICSU Hazards Projects under one umbrella.

Discussion

It was noted that there is a need to collaborate on and coordinate activities among the different groups working on hazards. It was recommended that efforts should be made to bring physical scientists and social scientists together in these hazards projects as both sides have much to offer.

1.5 Theme 5: Groundwater (reporting, Prof S Muhongo)

In his report, Prof Muhongo noted that Prof T Jones (Leader of the IYPE's Science Implementation Team for Groundwater), contributed two short articles for the first official IYPE publication (2008) outlining the main issues facing both surface and groundwater resources. Another article is now in press for the second IYPE book. He reported that Prof T Jones subsequently organised the IYPE Groundwater session at the International Geological Congress in Oslo in August 2008, and is now editing an IYPE Legacy volume devoted to Groundwater.

Prof Muhongo also reported on the preparation of the legacy book of the Groundwater, which should be ready for publication by the end of 2009. He also informed the meeting that the Groundwater Group supports groundwater research projects in West Africa and has organised four international conferences on groundwater as part of its activities.

1.6 Theme 6: Deep Earth (reporting, Prof S Muhongo)

Prof Muhongo reported that the chapters of the legacy book on Deep Earth should have been submitted for publication. He also noted that the Deep Earth Group is requesting collaboration from the African scientists and institutions. He informed participants that the leader of this group has been nominated for a position on the board of the European Science Foundation.

1.7 General Discussion

It was noted that for future initiatives, it is important develop further the inter-linkages between the different topics and fields. Although the IYPE has been successful in bringing young scientist on board, it was noted that the Year has been very weak in engaging them in actual research activities due to constraints in resources. The lack of common language between the physical and social scientists has been identified as an obstacle that inhibits the two groups from working together. The older generation of scientists was encouraged to design university courses where students of physical and social sciences study together, in order to foster a working relationship at an early stage. It was also noted that the contribution of young scientists to the IYPE legacy book was dismal. It was further suggested that the IYPE should come up with one book containing all ten themes.

Participants were urged to put together project proposals that were not only purely academic, but which would produce results directed towards solving societal problems. Reference was made to the Report of the Associated Events of the 29th ICSU General Assembly in which constructive interaction of politicians and scientists was discussed. NC members were encouraged to join/subscribe to the international scientific unions so that they could benefit from the research opportunities available in the unions.

Session 2: National Committee Chairs

2.1 Introduction (IYPE Africa, Dr F Toteu)

Dr Toteu discussed the IYPE outreach activities going on in different African countries and made reference to the special issue of the Journal of African Science, which is under preparation and Africa's Declaration on IYPE. He noted that it is envisaged to get all the NC representatives as well as two students from each country to attend the Lisbon meeting in 2009.

Dr Toteu pointed out that the IYPE NC should be composed of representatives of the founding bodies (IUGS and UNESCO), representatives of relevant governmental bodies, major non-governmental organisations and national geo-scientific organisations. He suggested that the NC should only have three officers: the chairperson, the secretary and the contact person. He noted that to register a NC, the chairperson of the NC and the executive director of the IYPE should sign a Memorandum of Understanding.

2.2 Botswana (Dr R B Mapeo)

Dr Mapeo reported that the NC for Botswana activities are spearheaded by the Department of Geology of the University of Botswana. He further reported that they have embarked on outreach

programmes that focused on secondary schools. Planned activities were geared towards promoting geological knowledge by encouraging the interest of secondary school learners in geological science, providing them with a practical understanding of geo-science concepts and its role in changing the economic landscape of Botswana. The NC has also organized seminars on topical issues around Planet Earth as a way of celebrating IYPE. The IYPE NC in Botswana has received some funds (USD 4,000) from UNESCO (Harare Office) to run some of its activities. The Botswana launch is envisaged to take place on 24-25 July 2009 at the University of Botswana.

2.3 Ethiopia (Prof Y Gezahegn)

Prof Gezahegn reported that the national IYPE activities in Ethiopia commenced in the second half of 2007 after the National UNESCO Commission made a request to the then Ethiopian Science and Technology Agency (ESTA). He noted that the NC is composed of representatives from various sectors across the country. The NC has already prepared its Terms of Reference, and has signed a Memorandum of Understanding with both the ESTA and the Ethiopian Geosciences and Mineral Engineering Association to create the organizational structure necessary to implement national activities.

He mentioned that the NC has prepared a work plan to implement activities under the IYPE that include preparation of brochures, posters, educational materials and a documentary film; organising a scientific conference; organising a televised question and answer programme; proposing the establishment of a National Geoscience Museum and National Geoparks; including an earth science curriculum for secondary schools; and translating the 'Earth Sciences' book into the national Amharic language.

2.4 Lesotho (Dr L Moeti)

Dr Moeti informed the participants that he was not representing the Lesotho NC, but that he is in the National Committee for Climate Change and wished to share the findings obtained in Lesotho with the hope of establishing collaboration with other scientists on the continent.

2.5 Mozambique (Prof L Vasconcelos)

Prof Vasconcelos gave the background of the NC in Mozambique, which was formed in 2007. He reported that the activities of the IYPE in Mozambique have been funded by the Geological Mining Association of Mozambique and the National Museum of Geology. He also discussed the activities of the NC which included running a contest for the participation of a student at the official launch of the IYPE in Paris; organising the commemoration of a Geologist Day where posters were presented; participating during the official launch of the IYPE in Africa held in Arusha, Tanzania in May 2008; organising the 2nd Course and Workshop on Geological Heritage and Geo-conservation held in Maputo in June 2008; organising the Exposition of the Evolution of Earth History; and organising the Environmental Education workshop in Mozambique. He also reported that Mozambique intends to formalise its NC.

2.6 Namibia (Ms K Mhopjeni)

Ms Mhopjeni outlined the activities of the IYPE NC in Namibia and discussed future plans. Activities included designing IYPE educational posters and geological posters for the Ministry of Mines; organising school career fairs; designing geological calendars (2007,2008) with satellite images of popular landmarks of Namibia; designing the IYPE logo in local languages; designing colouring books targeting primary school pupils; and launching a book on the geology of Namibia.

She noted that, in future, the NC plans to distribute posters and colouring books to schools through the Ministry of Education, and organising a poster exhibition at the University of Namibia.

2.7 South Africa (Dr B Mantlana)

Dr Mantlana informed participants that the IYPE launch in South Africa took place in Grahamstown in April 2008 and was attended by the Minister of Science and Technology. He reported that the IYPE NC in South Africa has produced IYPE related materials that were published in Quest Magazine. He also reported that the NC had published the IYPE logo in several South African languages. At schools level, the NC organised national schools debates and annual science festivals. The NC was also involved in the development of a card game - 'Earth Alive Strategies'; a game that highlight the earth, life and cultural heritage, and provides a platform and stimulus for all participating players. Representatives of the South African National IYPE Committee attended the official IYPE Africa launch in Arusha, Tanzania in May 2009.

2.8 Sudan (Dr A M Mohamed)

Dr Mohamed explained that as there is no NC in Sudan, he had come to represent the UNESCO/Cousteau Ecotechnie Chair (UCEC), whose activities are in line with those of IYPE. He noted that the main activities of UCEC aim at promoting interdisciplinary education, research and policy-making in the fields of the environment and development. He also reported that UCEC is an international initiative of UNESCO that operates through networking and which serves as a prime means of capacity building through the exchange of knowledge and promotes N-S cooperation in science and technology. He stated that there are potential areas of collaboration with the IYPE activities and that UCEC would welcome any such initiative.

2.9 YES Conference in Beijing (Miss E Nkhonjera, Malawi)

Miss Nkhonjera outlined the mission of the Young Earth Scientists (YES) and discussed its goals. She emphasised the need for involving and promoting young scientists in research activities. Miss Nkhonjera then gave details of the YES Congress to be held in Beijing, China and outlined the Congress themes, which are along the 10 broad science themes of the IYPE. She requested participants to disseminate the information to universities in their respective countries and to encourage young scientists to submit abstracts for the Congress. She also encouraged participants to work together with the YES National Representatives on fund raising activities that are currently underway.

Discussion

It was suggested that the 2nd Circular of the YES Congress be sent to all participants of the meeting as well as to the Geological Society of Africa (GSAf) who will distribute it through their networks. It was also suggested that the deadline for submission of abstracts be extended to allow more African scientists to submit abstracts. A suggestion was also made that the organising committee should negotiate low budget accommodation for participants.

2.10 Geological Society of Africa (Dr H Mouri, Secretary General)

Dr Mouri briefly discussed the history and objectives of the GSAf, highlighting its organisational structure. She acknowledged, with appreciation, the financial support of the International Union of Geological Sciences and that of Institutional Members. She reported on the activities of the GSAf, which include organising conferences and workshops, and offering/conducting short courses and field excursions. Dr Mouri stated that the Society does not publish its own journal, but encouraged

members to publish in the Journal of African Earth Sciences; Africa Geosciences Review; and in International Union of Geological Sciences (IUGS) Episodes. She pointed out that through its members; the GSAf's is indirectly involved in the preparation the special of Journal of African Earth Sciences on the geology of Africa (IYPE legacy initiative in Africa).

2.11 Mauritius (Prof V B Lalljee)

Prof Lalljee gave a brief history of the NC in Mauritius and discussed its composition. He outlined the proposed NC activities that include, among other activities, sensitising different stakeholders on IYPE science themes relevant to Mauritius; holding a National Workshop on Climate Change Effects in Small Island Developing States; preparing a series of talks on topical matters; and preparing posters, brochures, and other promotional materials for distribution to the general public. He reported that implementation of the activities has involved organising workshops, presenting posters; and introducing climate change modules in tertiary institutions. He pointed out that the University of Mauritius had already introduced a general module on Sustainable Development, which was compulsory for all students in undergraduate programmes offered by the University. Other activities mentioned included the involvement of IYPE NC members in preparation of the chapter on Sustainable Agriculture book and another chapter on Eco-tourism and Biodiversity book.

2.12 Tanzania (Prof J Ikingura)

Prof Ikingura reported that the NC in Tanzania is composed of 18 members and three sub-committees. One of the three sub-committees, the Science Programme sub-Committee, was responsible for coordinating the implementation of the IYPE National Research Programme. He pointed out that the science research programme in Tanzania focuses on 9 of the 10 science themes (except Deep Earth) of the IYPE. Prof Ikingura also pointed out that the activities of the IYPE in Tanzania include generating and disseminating information on the selected 9 research IYPE themes; promoting establishment of Geoparks in Tanzania for national heritage and tourism purposes; improving and modernising the National Earth Resources Museum; and preparing a national earth resources reference book. He informed the meeting that the government of Tanzania is expected to contribute 30% of the total budget of the Science Programme, while the rest comes from other sources.

Prof Ikingura pointed out that the IYPE science programme in Tanzania is expected to support 20 funded projects that will generate new research data and information on 9 IYPE themes. Publicity materials for the outreach programme include brochures, posters, and TV and Radio documentaries.

2.13 Uganda (Dr P Ndemere)

Dr Ndemere discussed the status of the IYPE and its activities in Uganda. He reported that Uganda has been motivated to participate in the formation of a NC because all the 10 IYPE thematic areas are relevant to the country. He also reported that Uganda intends to form an IYPE NC before the end of the 2009. He, however, pointed out that the challenges faced in this endeavour include lack of funding to implement IYPE activities and the time-frame constraints of the Year, which ends in 2009.

2.14 Zambia (Dr O Sikazwe)

Dr Sikazwe discussed the composition of the Zambia NC and the progress made since 2007. He reported that the current President of the Republic of Zambia was identified as the Patron of the NC and efforts are underway to approach him with a formal request.

He also reported on the activities envisaged by the NC that include organizing national conferences and implementing scientific programmes, which would specifically involve mapping groundwater. The outreach programme will focus on marketing of geosciences in high schools; a programme initially supported by the EU. He pointed out that one of the challenges faced by the NC is fundraising since the Government had not yet fully bought into the IYPE idea. He reiterated the need to bring on board key ministries such as Science, Technology and Vocational Training as well as Tourism, Environment and Natural Resources.

He emphasised the need to persuade the President of the Republic of Zambia to become Patron of the NC, and to develop IYPE-related project proposals in line with government priorities for submission to key ministries for funding.

2.15 Senegal (Mr F Mamadou)

Mr Mamadou listed problems faced by Senegal to which implementation of IYPE projects could provide solutions. He explained that the NC is based in the Department of Geology at the University of Dakar and that the key players include several ministries and government departments. The main activities carried out by the NC in Senegal include organising workshops and conferences, participating in cultural days and organising national meetings. He reported that lack of funding was one of the major constraints as ministries were not prepared to release funds.

Discussion

The meeting was reminded that documents were available at the IYPE website in both English and French. On matters related to hazards in Africa, Mr Mamadou was encouraged to keep in constant contact with ICSU ROA staff as well as ICSU ROA project leaders who will link him up with the network of African scientists.

2.16 Africa Alive Corridors (Dr F Toteu)

Dr Toteu discussed the Africa Earth Observatory Network (AEON) initiative where several cross-cutting projects are being conducted. He reported that the epic history of the Earth could be told in a chronological series of book volumes (corridors) where important and well-preserved geological/biological/cultural features represented the chapters (nodes) within each volume. He pointed out that each corridor and each node is geologically and biologically unique, which in turn forged unique human cultural history. He described the 20 known corridors in Africa and discussed in detail the Cameroon Volcanic Line Corridor.

As a way forward, he urged the marketing of the corridors so that people could be attracted to carry out research, thereby improving the lives of the local communities. He emphasised the need to create networks among scientists working in the different corridors and which should involve the Diaspora scientists. He strongly felt that at the end of the Year, the Africa Alive Corridors Project could be endorsed as the legacy of the IYPE.

Discussion

The Africa Alive Corridors project was highly regarded as a remarkable initiative that involves interdisciplinary research efforts. It was recommended that the initiative be continued and the GSAf

was encouraged to be involved the Africa Alive Corridors project. It was noted that the 20 corridors mentioned in his presentation were not the only ones and scientists are encouraged to propose more corridors and submit their proposals to AEON.

Session 3: ICSU Regional Office for Africa Projects (Updates)

In his introduction to the ICSU ROA projects, the Chairperson of the ICSU Regional Committee for Africa (Prof D Makawiti) gave a brief background on activities of the Regional Office that included the publication of the four Science Plans and the subsequent preparation of the ICSU ROA research projects based on these Science Plans.

3.1 Project HD01: Geo-hazards; Prof G Mulugeta (Uppsala University, Sweden)

Prof Mulugeta discussed the objectives of the ICSU ROA project on Geo-hazards and outlined the different types of hazards. Special emphasis was given to those that have the highest impact on Africa, namely geological and hydro-meteorological hazards. He reported that the geo-hazard programme is comprised of the following five themes: assessing and mitigating the earthquake hazard in Africa; volcanic hazards; landslide hazards; pollution and coastal hazards; and integrated modelling of geo-hazards. He outlined the main activities that will be carried out during the implementation of the projects and stressed the need to build broad networks and partnerships. He informed the meeting that research proposals were ready for implementation and that the donor community is being approached for funding. He underlined the need to establish a funding mechanism from within Africa.

3.2 Project HD02: Hydro-meteorological hazards and disasters - vulnerability and resilience Prof A Konare (University of Cocody, Cote d'Ivoire)

Prof Konare discussed the vulnerability of Africa to hydro-meteorological hazards (i. e., drought and floods) which exacerbate misery and poverty on the continent. He presented drought and flood maps for Africa, illustrating their spatial and temporal distribution on the continent. He reported that the severity of these disasters led to an emerging consensus in Africa that hydro-meteorological disasters are major challenges that need to be overcome in order to realize sustainable development and poverty alleviation. He also reported that ICSU ROA designed a project on hydro-meteorological hazards that comprised the following subprojects: Drought in Africa; Floods in Africa; Fires in African savannahs; and Dust events and related hazards in Africa. He pointed out that the key objective of the projects is to strengthen the capacity of communities and institutions of Africa to effectively reduce the impacts of climate-related extreme events. He also emphasised the need to apply contemporary methods and tools as well as lessons from new and ongoing efforts to merge climate-related disaster reduction and climate adaptation approaches in Africa.

3.3 Project SE02: Renewable Energies – Bio-energies in Africa Dr E Seiler (South African Bio-energies Association, South Africa)

Dr Seiler outlined the electricity and transport situation of Southern Africa as well as the activities of the South African Bio-energies Association (SABA). He told the meeting that the energy and transport situation in the region is undermining economic growth as energy supplies are insecure and energy prices are high. He reported on the future need for a variety of fuels and propulsion systems with a sound mix of public and private transport. He pointed out that SABA is working together with the Regional Office in the implementation of ICSU ROA Bio-energy project.

3.4 ICSU ROA Science plans: a) Hazards and Disasters, b) Health and Human Well-being in Africa Dr A Enow (ICSU ROA)

Dr Enow presented the ICSU vision, pointing out that ICSU Regional Offices were established to ensure that the voice of developing countries influences the international scientific agenda and that scientists from the South are fully involved in international research guided by regional priorities. He reported on the ICSU ROA Health and Human Well-being project that is comprised of three themes: HIV/AIDS and public health; modern biomedicine, traditional medicine and indigenous knowledge systems; and food and nutrition security. Dr Enow further discussed the sub-projects of each of these themes and outlined the objectives and activities of each of the sub-projects. He pointed out that task teams have been formed for each of the projects and that the teams are working on the final project proposals.

3.5 ICSU ROA Science plans: a) Sustainable Energy, b) Global Environmental Change (including Climate Change and Adaptation) in Africa Dr D Nyanganyura (ICSU ROA)

Dr Nyanganyura reported on the ICSU ROA projects on Sustainable Energy and Global Environmental Change (including Climate Change and Adaptation) in Africa. He pointed out that the study of ICSU ROA Sustainable Energy theme is focussed on two areas: the development of energy models and scenarios for Africa; and the increase in access to high quality, reliable and affordable energy in a sustainable manner: Bio-energies. He discussed the objectives, activities and expected outcomes of each of the sub-projects related to these themes. Dr Nyanganyura reported that project proposals on Sustainable Energy are at the implementation stage and that task teams have already been formed. He made a call for interested scientists to contact ICSU ROA staff.

On ICSU ROA projects related to Global Environmental Change (including Climate Change and Adaptation), he reported that there are four major projects: land vulnerability assessment and adaptation; impact of climate change on rainfall and water resources; atmospheric composition change; and the impact of climate change on the coast of Africa. He further discussed sub-projects related to each of these projects, outlining their objectives, activities and expected outcomes. He reported that the project proposals are being developed and finalised by the task teams. Dr Nyanganyura highlighted the cross-cutting nature of the ICSU ROA projects in the four Science Plans and pointed out that in the implementation phase, the Regional Office will bring together scientists from all over Africa and from across a wide range of disciplines.

3.6 General Discussion

It was noted that through the implementation of the projects, ICSU ROA will enhance networking of scientists in Africa and abroad (i.e., the African Diaspora) as well as forging links between the scientific community and policy-makers. It was pointed out that ICSU ROA has a huge database of scientists from all over the continent as well as from outside. It was also reported that most of these scientists have been actively involved in the development of ICSU ROA Science Plans and project proposals.

Session 4: Proposed General Agenda

4.1 IYPE after 2009, decisions and suggestions

The need to continue the IYPE initiative beyond 2009 was agreed upon with a consensus to establish national and regional nodal points to facilitate interaction between members. The decisions taken at this meeting are summarised as follows:

1. **Decision:** Africa will continue with the activities of the Year (i.e., the 10 broad themes – Science, Outreach & Fundraising). This is partly because many of the African NCs have just begun to be active and hence they will find themselves having unfinished tasks at the end of the Year. They propose to continue beyond 2009, more specifically, 2009 - 2012.
2. **Decision:** Africa will embark on the mega project initiated by Prof Maarten de Wit and Dr John Anderson (South Africa), on “Africa Alive Corridors.”
3. **Decision:** Africa’s IYPE NCs should operate under the tutelage of Africa’s Ministries responsible for Science and Technology and/or any other national umbrella that is found to be suitable to the country in question.
4. **Decision:** A Regional (Africa) coordinating body/committee should be in place and that this body will be composed of representatives from the five sub-regions of Africa (preferably, of NC Chairs) and a representative from the Geological Society of Africa. They will select their own Chair
5. **Suggestion:** IYPE NCs should be named as National Committees of Planet Earth.
6. **Suggestion:** A request has to be sent to Germany requesting to use the IYPE logo beyond 2009.
7. **Suggestion:** A global coordinating body/committee should be in place, composed of representatives from all the continents active in post IYPE activities. Each continent will have two representatives on this committee.

Session 5: Closing Session remarks

Prof Muhongo thanked participants for attending the meeting and expressed appreciation to ICSU ROA staff for their efficient organisation of the meeting. He also expressed his appreciation to the IYPE and the NRF for the financial assistance to cover the expenses of the meeting. Participants were urged to design project proposals and apply for funding from the AU and foreign donors. He reported that the AU has initiated a Scientific Awards programme aimed at acknowledging the achievements of African scientists. These awards are of three categories: young scientists awards at a national level; female scientists awards at a regional level; and senior scientists awards at a continental level.

Prof Dodson commended the good ideas presented at the meeting and noted the need to engage in science that improves the livelihood of society. On the issue of funding, he reiterated the need to convince politicians that the scientific community can assist them in the development of sound policies.

Prof Beer thanked the organisers for the opportunity to participate in this meeting. He emphasised the need to continue forging linkages within Africa, with international organisations as well as

across disciplines. He noted that there is huge potential in Africa but it requires organised communication, funding, confidence and trust. He further emphasised the need to produce results that can be easily understood and implemented by the policy makers.

Dr Toteu thanked all the participants who attended the 2nd All Africa NC meeting and expressed appreciation to ICSU ROA for organising the event. He noted, with interest, the progress and achievements in the various countries and called on them to continue sharing these experiences. He acknowledged the presence and involvement of the GSAf during the meeting and urged it to accommodate other disciplines within the Society. He noted the activities of the NCs and urged that these continue and governments should be lobbied in such a way that funds from local budgets could be mobilised for NC activities. He also noted that YES is the legacy of the IYPE that should be preserved.

Prof Mouri appreciated the invitation extended to the GSAf, which afforded her the opportunity to meet and interact with IYPE SIT leaders, NC Chairs and ICSU ROA project leaders. She reaffirmed GSAf's commitment to disseminate IYPE material throughout its network.

Miss Nkhonjera thanked the organisers for the opportunity to attend the meeting and for having been given the opportunity to brief participants about YES and its upcoming Congress in Beijing. She also expressed appreciation for the ideas and suggestions put forward during deliberations in the meeting.

Prof Kraas requested participants to inform their colleagues about mega-cities activities and recommended that people visit the mega-cities website where material, links and activities of interest were available. She emphasised that mega-cities research requires the participation of scientists from many different disciplines and offers great opportunities for research. She requested information on activities from the various communities in order that she might mobilise support for inter-disciplinary exchange. She also pointed out the need to approach geographers as partners in the fields of environment and society. She stressed that the collaborative action between the mega-cities team and IYPE needs to continue in order to strengthen international and inter-disciplinary research, as well as capacity enhancement and outreach.

Prof Makawiti, Chair of ICSU Regional Committee for Africa, expressed his delight in hosting the IYPE meeting and thanked participants for their contributions toward making the IYPE programmes take off in their respective countries. He felt that should scientists in Africa double their effort together with those African scientists in the Diaspora, a great deal could be achieved in terms of research in the continent. Prof Makawiti also noted that ICSU ROA would serve as a hub to disseminate information and foster contacts amongst professionals, as well as to facilitate addressing the issues related to science and technology in the continent. He appealed to participants to maintain close contact with the ICSU ROA and check its website regularly for new developments. He urged the scientific community to continue engaging politicians despite the challenges faced in this regard.

In his vote of thanks, **Prof Gezahegn** specially appreciated and recognised Prof Muhongo's commitment and contribution to science in the continent. He also thanked Prof Muhongo and his staff for organising a successful meeting.

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