

# Regional Office for Africa

**Annual Report 2009/2010** 





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# Acronyms

AMMCOST African Ministerial Council on Science and Technology  AMMMA African Monsoon Multidisciplinary Analysis  ANSTI African Network of Scientific and Technical Institutions  ANSTI African Network of Scientific and Technical Institutions  AU African Union  AUC African Union Commission  BMBF Federal Ministry of Education and Research (Germany)  IBundesministerium für Bildung und Forschung!  CARS Centre for African Renaissance Studies  CODATA Committee on Data for Science and Technology  CODIST Committee on Development Information, Science and Technology  CTDC Congress of Toxicology in Developing Countries  COVIDSE Conference of Vice Chancellors and Deans of Science, Engineering and Technology  Department of Science and Technology  Department of Science and Technology  Department of Science and Technology  DEST Department of Water Affaires  LOC Local Organising Committee  GY Electronic Geophysical Year  LEVADAD NAMA Partgarspin for African Space Union  NEWAP Department of Science Academies  NEWAPAD NAMA Partgarspin for Africa' Development	AEON	African Earth Observation Network	FP6	Sixth Framework Programme of the	
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<b>EUROTOX</b> Association of European Toxicologists and framework Programmes)	ESF	European Science Foundation	NC	National Committee	
Association of European Toxicologists and	EU	European Union	NCP-NET		
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### Acronyms - continued

NRF National Research Foundation of South Africa

**NWO** Netherlands Organisation for Scientific Research

[Nederlandse Organisatie voor Wetenschappelijk

Onderzoek]

**PACN** Pan Africa Chemistry Network

**REC** Regional Economic Community

**SAAFoST** South African Association of Food Science and

Technology

**SADC** Southern Africa Development Community

**SARUA** Southern Africa Regional University Association

**SIDA** Swedish International Development Agency

SIT Science Implementation Team (of IYPE)

Stience, Technology and Innovation

**TOXSA** Toxicology Society of South Africa

**UN** United Nations

**UNECA** United Nations Economic Commission for Africa

**UNESCO** United Nations Educational, Scientific and

Cultural Organisation

**UNFCCC** United Nations Framework Convention on

Climate Change

**UNISA** University of South Africa

WHO World Health Organisation

YES Young Earth Scientists

**ZAR** South African Rand

# Mission

ICSU endeavours to strengthen international science for the benefit of society. To achieve this, ICSU mobilises knowledge and resources of the international science community to: identify and address major issues of importance to science and society; facilitate interaction amongst scientists across all disciplines and from all countries; promote the participation of all scientists—regardless of race, citizenship, language, political stance, or gender—in the international scientific endeavour; and provide independent, authoritative advice to stimulate constructive dialogue between the scientific community and governments, civil society, and the private sector.









### Message from the ICSU Executive Director



I would like to begin by thanking Prof. Sospeter Muhongo, not only for his efforts as the Director of the ICSU Regional Office for Africa in 2009/2010, but also for all his energy and commitment to the ICSU mission, ever since the establishment of the office in 2005. On behalf of the ICSU family, I wish him all the best in his new undertakings!

The year 2009/2010 was another rich year in terms of activities and events for the office. Guided by the Regional Committee and supported by the host, the staff of the office worked hard to ensure the success of the works for Africa.

One of the major highlights of 2009/2010 was the Review of the ICSU Regional Office for Africa, carried out in accordance with the agreement signed in 2005 between ICSU and the host institution, the National Research Foundation (NRF) of South Africa, when the office was initially established. The objective of the review was to assess the performance of the Regional Office, examining in particular its activities, its governance and operational structure, its communication

channels and its strategic role within ICSU, and to make recommendations for its future.

The findings of this review confirmed the importance of having a Regional Office in sub-Saharan Africa and the need to continue its work. The report highlighted the achievements of the Regional Office over the last four years, with particular emphasis on the establishment of contacts with different African countries and science organisations and on the development of the four Science Plans for Africa, covering Global Environmental Change, Health and Human Well-Being, Sustainable Energy and Hazards and Disasters.

Looking ahead, the report also made some very useful recommendations on how the Regional Office could move to a new level in its operations. In particular, it recommended putting more emphasis now on science programmes and capacity building in core areas, as well as developing more institutionalised networks and working more closely with ICSU members and bodies.

I would like to take this opportunity to thank the review panel for their dedicated and professional work which provides future directions for ICSU. I am sure that by following their recommendations, we will be able to build on what has been put in place in the first years of this office, to the benefit both of the Region and of ICSU as a whole.

#### Deliang Chen, Prof. PhD

Executive Director: International Council for Science (ICSU)

### Statement from the NRF President and CEO



I commend ICSU for the decision to establish this Regional Office, we at the NRF continue to believe in the value of this decision and remain committed to the partnership in trying to achieve the objective of establishing this and the other Regional Offices. The partnership and closeness with overseeing the Regional Office has been valuable in advancing NRF's own efforts at expanding its own engagements across Africa. I thank the staff of the Regional Office in the part they played in strengthening this relationship and assisting with fulfilling the role that the NRF has accepted in the hosting of the Office.

This was a tough year given the global economic downturn. As the accounting officer for the NRF, under whose financial systems and controls the Regional Office operates, I regret the end-of-year deficit which resulted from the fact that contract negotiations between the NRF and the DST were not finalised before the end of the financial year. The deficit is now being managed cooperatively between the Regional Office, ICSU-Paris and the NRF, both with a view to recover

all or most of the deficit and to prevent such outcomes in the future. Whatever the outcomes of the negotiations to recover deficit, the NRF commits to make up the remaining shortfall over a maximum period of three years. Moving forward, the NRF will continue to support the Regional Office in negotiations for growing the number of sources of income and the levels of contributions from these.

It is pleasing that the panel findings from the mid-term review of the Regional Office, essentially endorses that the decision to establish the Office was a great idea, and that they recommend that it should be maintained. The recommendations for changes that should improve the achievement of the objectives of establishing the Office are also noted and the NRF looks forward to playing its role in effecting these.

#### Dr Albert van Jaarsveld

President and CEO: NRF

### **Executive Summary**

The ICSU Regional Office for Africa is mandated to promote and facilitate the work of the ICSU family in Africa. In this regard, the Regional Office seeks to fulfil ICSU's mission of strengthening international science for the benefit of society on the continent. It also aims to promote and facilitate the utilization, strengthening and advancement of science, technology, and innovation (STI) for the socio-economic development of the continent in the context of regional priorities; as well as striving to bring the scientific activities of the ICSU family closer to the African scientists through collaborative ventures. Through its activities, the mission of ICSU ROA would be realised by harnessing the experience, knowledge, skills, and research infrastructure found within the ICSU community.

The 2009/10 financial year was the fifth year of operation of ICSU ROA since its launch on 01 September 2005. In accordance with the ICSU/NRF Agreement, the Regional Office was subjected to a mid-term review during this financial year. This review constitutes one of the major events of ICSU ROA in 2009/10.

In line with the ICSU Strategic Plan of 2006-111, and guided by the priorities of the continent, ICSU ROA, on the recommendation of the ICSU Regional Committee for Africa (ICSU RCA) has prepared and published science plans in four selected priority areas: Sustainable Energy<sup>2</sup>; Health and Human Well-being<sup>3</sup>; Natural and Human-induced Hazards and Disasters<sup>4</sup>; and Global Environmental Change

(including Climate Change and Adaptation<sup>5</sup>). These science plans have been widely distributed around the globe and ICSU ROA is now focusing on their implementation through large-scale multi-disciplinary projects. Hence, preparation of project proposals from the science plans began during the 2008\09 financial year and is expected to continue through 2010/11 year. The scientific activities of ICSU ROA for 2009/10 focused on preparing project proposals from its science plans on Health and Human Well-being, and on Global Environmental Change (including Climate Change and Adaptation).

Bearing on ICSU's principle of Universality of science, and in pursuit of equitable access to scientific knowledge and information, ICSU ROA also embarks on information gathering and dissemination through various channels. The focus in this regard, during the 2009/10 financial year was to continue with the dynamism of producing book volumes, an initiative born during the preparations for the 29th ICSU General Assembly. Hence two additional book projects were launched during 2009/10, in addition to publishing and distributing the first book.

ICSU ROA's efforts to bring the scientific activities of the ICSU family closer to Africa have been geared towards fulfilling three fundamental principles of ICSU as enshrined in its Strategic Plan 2006 – 2011, namely: (i) International Research Collaboration; (ii) Universality of Science; and (iii) Science for Policy. In fulfilment of these principles,

www.icsu.org/Gestion/img/ICSU\_DOC\_DOWNLOAD/863\_DD\_FILE\_ICSU\_Strategic\_Plan.pdf

www.icsu-africa.org/sustainable\_energy\_rep\_2007.pdf

www.icsu-africa.org/sp\_hh\_rep\_2007.pdf

www.icsu-africa.org/hazards rep 2007.pdf

<sup>5</sup> www.icsu-africa.org/docs/sp\_gec.pdf

ICSU ROA has, during the year under review, promoted and facilitated the activities of several ICSU Unions and Affiliated Bodies in Africa, and has encouraged and facilitated the adherence of African institutions and organisations to these international professional bodies.

Regional Office has also established new partnerships and networks on the continent, while also strengthening its relations with existing ones. ICSU ROA promotes international research collaboration through these networks and partnerships, including South-South and North-South partnerships.

In addition to sustaining its relationship with traditional partners such as the AU/NEPAD, UNECA, and the United Nations Educational Scientific and Cultural Organisation (UNESCO), ICSU ROA has also established new partnerships with international organisations and agencies, to collaborate in the implementation of projects being developed from its 4 science plans.



Highlights

Management and Governance

ICSU ROA Mid-term Review

Activities









### Highlights

#### ICSU ROA Mid-Term Review

The primary event that marked the 2009/10 financial year was the mid-term review of the ICSU Regional Office for Africa (ICSU ROA). The review was conducted by an international panel jointly set up by the ICSU Secretariat and the National Research Foundation (NRF). The aim of the review was to assess the performance of the Regional Office against key principles and objectives of ICSU, and in relation to the roles of ICSU ROA and the purpose for which Regional Offices were created by ICSU. The report of the review exercise has been published as an internal document of ICSU, available in the member zone of the ICSU website to members of the organisation.

#### ICSU ROA Research Projects

During the 2009/10 financial year, ICSU ROA focused its activities on the preparation of project proposals to implement its published science plans, and source funds for their implementation. Four project proposals that had been prepared during the 2008/09 financial year were submitted to potential funding agencies during 2009/10. Some of these agencies have expressed willingness to contribute in funding the projects. The following projects on Sustainable Energy and Hazards and Disasters were submitted:

- i. Project SE01: Development of energy models and scenarios for sub-Saharan Africa.
- ii. Project SE02: Increase in access to high quality, reliable and affordable energy in a sustainable manner in sub-Saharan Africa: Renewable Energies – Bioenergies for sub-Saharan Africa.
- iii. Project HD01: Geo-hazards in sub-Saharan Africa, to be implemented within the framework of the UNproclaimed International Year of Planet Earth (IYPE).

iv. Project HD02: Hydro-meteorological hazards and disasters in sub-Saharan Africa: vulnerability and resilience.

During the 2009/10 financial year Task Teams of African experts in the respective disciplines, in collaboration with their international counterparts, embarked on preparing proposals for the following projects on Health and Human Well-being and on Global Environmental Change (including Climate Change and Adaptation):

- i. Project WB01: HIV/AIDS and public health
- ii. Project WB02: Modern biomedicine, traditional medicine and indigenous knowledge systems
- iii. Project WB03: Food and nutrition security.
- iv. Project GC01: The impact of land degradation and biodiversity loss on human well-being in Africa
- Project GC02: Impact of climate change on rainfall and water resources in Africa
- vi. Project GC03: Air pollution and health impact in urban areas in Africa
- vii. Project GC04: Monitoring strategies for adaptive management and governance within the coastal zones and large marine ecosystems.

#### ICSU ROA Book Projects

As part of its outreach activities, ICSU ROA has embarked on an effort to publish a series of books that showcase the scientific research and achievement on the continent. The first book titled "Science, Technology and Innovation for Socio-Economic Development: Success Stories from Africa" was launched by the Regional Office during the one-day symposium at the 29th ICSU General Assembly. This book is a compilation of some exemplary research achievements by African scientists. It reports a selection of success stories

### Highlights - continued

in science and technology innovations as applied to solving some of the developmental and societal challenges that Africa faces in the areas of health, the environment, and energy sustainability.

A second book project titled "Chemistry for sustainable development in Africa" launched during the financial year under review was initiated in partnership with Springer-Verlag GmbH Berlin Heidelberg, Germany, which has undertaken to publish the book. Several manuscripts have been received from African scientists and the book is expected to be published during 2010/11. The scope of the book will include environmental chemistry; renewable energies; health and human well-being; food and nutrition; and bio-prospecting and commercial development.

In partnership with the United Nations Economic Commission for Africa (UNECA), ICSU ROA is preparing to produce a third book on the science of climate change in Africa. The purpose of the book is to showcase the quality of research carried out by African climate experts in the various areas of climate change. The target date for publication of the third book is March 2011



#### Diaspora Project Phase I

The first phase of the ICSU ROA/NRF African Diaspora project was completed during 2009/10. The project produced the initial database of African scientists in the Diaspora, and proposed feasible and realistic ways of involving the African Diaspora in the development and application of science, technology and innovation in Africa for the benefit of society. The outcome of this first phase of the project provides the basis for the second phase which is anticipated to be launched during the 2010/11 financial year.

#### Partnership with Inter-Governmental Bodies

ICSU ROA continued its engagement with the African Union Commission (AUC) and its programme implementing body, the New Partnership for Africa's Development (NEPAD); as well as with UNECA. Most remarkable among these engagements is the involvement of ICSU ROA in the African Union (AU) Scientific Awards Programme, participation at the conference of the African Ministerial Council on Science and technology (AMCOST), and partnership with UNECA in organising, in March 2010, a consultative workshop on the science of climate change and socio-economic prosperity in Africa, to reflect on the outcomes of the Copenhagen Climate Change conference (UNFCCC/COP15).



### Management and Governance

#### ICSU ROA Secretariat

The complete ICSU ROA organogram comprises six positions, namely: Regional Director, Personal Assistant to the Regional Director, two Programme Specialists, a Communications Officer, and a Liaison Officer. However, due to financial constraints, the Office operated with five staff in 2009/10. The position of Communications Officer has remained vacant since January 2007 (see Annex A).

ICSU ROA operates in accordance with the terms of the ICSU/NRF Memorandum of Agreement signed on 11 October 2004 in Harare (Zimbabwe) and according to the policies, procedures, conditions of service and guidelines of the NRF. It also operates in compliance with the policies, principles, requirements and expectations of ICSU under the guidance and recommendations of ICSU RCA. In an effort to maximize alignment with expectations from the signatories to the MoA and to clarify roles and responsibilities for the key players in the governance and management of ICSU ROA, operational guidelines were drafted but still need to be formally signed-off by the relevant authorities. It is the intention to give priority attention to sign-off of this operational guidelines document to enable smooth and effective management of ICSU ROA.

#### ICSU Regional Committee for Africa

The ICSU Regional Committee for Africa (ICSU RCA) is mandated to provide guidance, support and oversight to the Regional Office in achieving its mission and goals. The ICSU RCA is made up of distinguished scientists representing the five sub-regions of the continent (west, central, east and southern Africa, and the Small Island States) and should reflect some balance in the three "European" languages spoken across Africa (English, French, Portuguese) as well



ICSU ROA Staff

as in gender representation. In addition to these statutory members are 4 Ex-Officio members, namely: the ICSU ROA Director; a representative of the ICSU Secretariat in Paris; a representative of the NRF; and a representative of the ICSU Executive Board (ICSU EB). The full composition of the ICSU RCA during the 2009/10 financial year is given in Annex B. The term of office of three members of the Committee (Prof. Vincent Titanji, Prof. Ayite-Lo Ajavon and Mrs. Mary Stravens) ended in December 2009.

The standard practice is for the ICSU RCA to hold two meetings per annum. During the 2009/10 financial year, the Committee held its regular meeting (9th meeting held in Buea, Cameroon, from 30 March to 02 April 2009) as well an extra-ordinary session in August 2009 to avail itself to the mid-term review panel. The meeting scheduled for December 2009 was called off for various reasons. The decisions of the 9th and extra-ordinary meeting of ICSU RCA are available from the ICSU ROA Secretariat

### ICSU ROA Mid-term review

Launched in September 2005 (2005/06 financial year), ICSU ROA entered its 5th year of operation in 2009/10. In accordance with the ICSU/NRF Agreement, the mid-term review of the Regional Office (scheduled to take place after five years of operation) was organised during this financial year. The aim of the review was to assess the performance of the Regional Office against key principles and objectives of ICSU, and in relation to the roles of ICSU ROA and the purpose for which Regional Offices were created by ICSU.

The review was conducted by an international panel jointly set up by the ICSU Secretariat and the NRF. To guide the review exercise the review panel had terms of reference jointly prepared and agreed to by ICSU and NRF. As expressed by the ICSU Executive Director in his message, the findings of the review confirmed the importance of having this Regional Office and the need to continue its work. The report highlighted the achievements of the Regional Office over the last four years, with particular emphasis on the establishment of contacts with different African countries and science organisation and on the development of the four Science

Plans for Africa, covering the four thematic areas of the Regional Office

The full report of the review exercise has been published as an internal document of ICSU, available in the member domain of the ICSU website.





### **Activities**

#### Implementation of ICSU ROA Science Plans

The main focus of ICSU ROA activities during the 2009/10 financial year was implementation of its four science plans. ICSU ROA engaged African experts, in collaboration with the African Diaspora, the ICSU family and other international partners to prepare research project proposals from its four science plans. The project proposals on Sustainable Energy and on Hazards and Disasters were finalised during the 2009/10 financial year and have been submitted to various funding agencies. Implementation of the projects in these two areas will begin as soon as the necessary funds are made available. The various detailed project proposals which have already been prepared are available from the ICSU ROA Secretariat.

### ICSU ROA Projects on Sustainable Energy in sub-Saharan Africa

Two project proposals on Sustainable Energy were finalised in June 2009 by the Task Teams and edited by ICSU ROA Secretariat before submission to the funding agencies. The titles of these are: (i) Development of energy models and

ICSU Regional Office for Africa
SCIENCE PLAN

Sustainable Energy
in sub-Saharan Africa

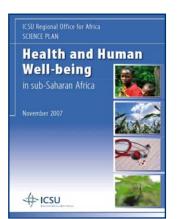
July 2007

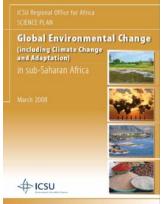


scenarios for Africa; and (ii) Increase in access to high quality, reliable and affordable energy in a sustainable manner:
Renewable energies – bio –energies. The AU/NEPAD agency and UNECA have expressed interest in these projects and their willingness to collaborate and contribute to their implementation.

#### ICSU ROA Projects on Hazards and Disasters in sub-Saharan Africa

The two project proposals developed from the Hazards and Disasters science plan were submitted to ICSU ROA by the Task Teams in May 2009 and edited by ICSU ROA before submission to potential funding bodies. The titles of these are: (i) Geo-hazards in sub-Saharan Africa; and (ii) Hydrometeorological Hazards and Disasters in sub-Saharan Africa: Vulnerability and Resilience. The Swedish International Development Agency (SIDA) has expressed interest and willingness to provide partial funding for these projects. A Geo-hazards subproject titled "Assessing and mitigating seismic hazards" will be implemented in collaboration with the Global Earthquake Model (GEM) partnership and Africa Array.





ICSU ROA science plan on Sustainable Energy, Hazards and Disasters, Health and Human Well-being and Global Environmental Change

### Activities - continued

### ICSU ROA Projects on Health and Human Well-being in sub-Saharan Africa

To address some of the challenges of health and human well-being in the region, ICSU ROA developed three projects form the Health and Human Well-being science plan. Task Teams were formed to develop the project proposals based on the recommendations made during the August 2008 international workshop of experts in Health and Human Well-being in sub-Saharan Africa, which was held in Pretoria, South Africa. The Task Teams are expected to finalise the proposals by June 2010, after which ICSU ROA plans on submitting these to its partners for funding. The general objectives and expectations from these projects are described in the project summaries available on the ICSU ROA website (www.icsu-africa.org)

# ICSU ROA Projects on Global Environmental Change (including Climate Change and Adaptation)

Four project proposals were identified from the ICSU ROA science plan on Global Environmental Change (including climate change and adaptation) in sub-Saharan Africa. Task Teams were formed composed of African experts in the relevant disciplines, to prepare the detailed proposals. The proposals are expected to be finalised by June 2010. UNECA has expressed interest and willingness to collaborate in the implementation of these projects. The general objectives and expectations from these projects are described in the project summaries available on the ICSU ROA website (www.icsu-africa.org).

#### African Diaspora Project

The first phase of the ICSU ROA/NRF African Diaspora project was completed during 2009/10 financial year. The product of this first phase of the project is an initial database of African scientists in the Diaspora, and proposed feasible and realistic ways of involving the African Diaspora in the development and

application of science, technology and innovation in Africa for the benefit of society. The outcome of this first phase of the project provides the basis for the second phase which will be a partnership with UNISA to generate a more comprehensive and complete database of African scientists outside of Africa. This is anticipated to start during the 2010/11 financial year. The full report of the project is available from the ICSU ROA Secretariat.

Several potential partners have been identified for Phase II of the African Diaspora project. These include the Centre for African Renaissance Studies (CARS) at the University of South Africa (UNISA), AU/NEPAD, UNECA and South Africa's Department of Science and Technology (DST).



African graduates absorbed in the Diaspora

#### International Year of Planet Earth

The UN-proclaimed International Year of Planet Earth (IYPE) activities in Africa were coordinated by ICSU ROA. A significant outcome of this was the establishment of IYPE National Committees (NCs) in 26 African countries, with the help of ICSU ROA. In May 2009, ICSU ROA organised a meeting of IYPE Science Implementation Team (SIT) leaders and African National Committee Chairs in Pretoria South Africa. The meeting provided a constructive platform for SIT leaders, NC Chairs and ICSU ROA project leaders to discuss the progress made in the implementation of the 10 broad science themes of the IYPE in Africa. The meeting also provided an opportunity for the ICSU ROA Project/Task Team leaders to interact with the IYPE NCs and SIT leaders as well as harmonising the ICSU ROA projects with the IYPE scientific objectives where relevant.

During this meeting, the National Committee Chairs presented progress reports of what was happening in their respective countries. As the IYPE activities were scheduled to terminate by end of 2009, it was agreed at this workshop that the IYPE initiative should continue beyond 2009 with a consensus to establish national and regional nodal points to facilitate interaction between members. It was decided that Africa should embark on the mega project on "Africa Alive Corridors" and that 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. It was also resolved that beyond 2009, the IYPE NCs should be called National Committees of Planet Earth and that a request has to be sent to Germany asking for permission to use the IYPE logo beyond 2009.

An important legacy of the IYPE is the special publication of 10 volumes, one on each of the 10 science themes. African scientists were invited to contribute chapters or parts thereof in these legacy publications. The books are expected to be published during 2010/11.

#### **Capacity Building**

#### **Young Earth Scientists for Society**

Through the coordination of IYPE activities in Africa, ICSU ROA committed to promoting investment in the future generation of scientists. In this regard, ICSU ROA supported and facilitated the organisation of a World Congress of Young Earth Scientists for Society (YES) in October 2009 in Beijing, China. The congress brought together young earth-scientists of different backgrounds from all over the world, to discuss future trends in earth-system science, and compare future research opportunities in respective countries. The Congress aimed at establishing a strong network of young professionals and researchers in different disciplines of earth science and from different countries; providing an opportunity for young scientists to present their concerns and solutions regarding earth-science challenges (energy, water, climate change, etc.) to leading politicians, decision makers and media; establishing a network of young geo-scientists - leaders - policy makers, capable of working together to discuss and propose creative solutions to many important questions involving earthsciences, and at building a better future for a new generation of geoscientists.

### Activities - continued

ICSU ROA mobilised financial resources from its partners and facilitated the participation of African young earth scientists at the congress. The ICSU ROA Director was a member of the YES Senior Advisors Council and was invited to give a keynote lecture at the academic pathways roundtable session entitled "Issues facing global geoscience education and research"

#### **Capacity Building in Health Risk Assessment**

ICSU ROA partnered with the Toxicology Society of South Africa (TOXSA) in organising the 7th Congress of Toxicology in Developing Countries (7CTDC), held in Sun City, South Africa on 06 – 10 September 2009, under the auspices of the International Union of Toxicology (IUTOX). Pre-congress workshops were organised to train young African scientists on various toxicology-related subjects namely: (i) "The Science of Risk assessment and Risk Communication" presented by the African Society for Toxicological Sciences; (ii) "Public Health Management of Chemical Incidents and Emergencies" presented by the World Health Organisation (WHO); (iii) "Ethics in Clinical trials and pre-clinical testing in developing countries" presented by the African Malaria Network Trust; (iv) "Biomarkers and Biological monitoring" presented by the Association of European Toxicologists and European Societies of Toxicology (EUROTOX); and (v) "Monitoring exposure and effects of pesticides in surface waters -a hands-on approach" presented by the Resource Quality Services, Department of Water Affairs and Forestry (DWAF), South Africa.

ICSU ROA also supported IUTOX in its project proposal on "Building Capacity in Health Risk Assessment in African Countries" funded through the 2009 ICSU grants programme. ICSU ROA will partner with TOXSA in implementing this project through training workshops in Africa. The project implementation is expected to start during the 2010/11 financial year.

#### Publications and General Communication

#### **Publications**

ICSU ROA Book Project I

ICSU Regional Office for Africa published a book titled "Science, Technology and Innovation for Socio-Economic Development: Success Stories from Africa" during 2009/10 financial year. This book was prepared by ICSU ROA as part of its outreach activities, to showcase the achievements of STI in Africa. The emphasis of the book is on the importance of STI for the socio-economic development of Africa and aims to support Africa's science education and research as well as highlighting the continent's contribution to the development of science and technology in the world. The book also gives a measure of recent advancements in science education and research (such as the use of natural



ICSU ROA published its first book: Success Stories form Africa

resources) on the continent, and also serves as an attempt to urge African countries to make a dramatic shift from resources-based to knowledge-based economies.

The book gives an account of modern scientific developments that may contribute significantly to the realization of the objectives of some of the Millennium Development Goals on the continent. It brings together, under one cover, research reports from different African scientists and institutions. It also gives the reader a selection of scientific success stories that cover science and technology innovations as applied to solving some of the chronic developmental and societal challenges that Africa faces in the fields of health, the environment, and energy sustainability.

The book is edited by Sospeter M Muhongo, Francis P Gudyanga, Achuo A Enow and Daniel Nyanganyura. It is composed of 11 chapters arranged in 4 sections. All contributions to the book are made by renowned African

scientists. Copies of the book can be obtained from the ICSU ROA secretariat.

#### ICSU ROA Book Project II

A second book project about "Chemistry for sustainable development in Africa" is under preparation and should be published during the 2010/11 financial year. The proposed topics of the second book include environmental chemistry (including air, water and soil pollution; water resources, harvesting & sanitation); renewable energies (particularly new bio-energies and improved production of existing bio-energies); health and human well-being (HIV/AIDS, public health, modern medicine, traditional medicine and indigenous knowledge); food and nutrition (food production systems including crop pest and livestock disease and vector management, alternative and traditional foods); and bio-prospecting and commercial development (medicinal, antipest, anti-disease vector, and other agents).



Bongani Mahlalela exhibiting ICSU ROA materials during CODIST-1 in April 2009

### Activities - continued

This book will be published by Springer-Verlag GmbH Berlin Heidelberg and will be edited by the following African scientists: Prof. Ameenah Gurib-Fakim of the University of Mauritius, and Prof. Kobus Eloff of the University of Pretoria, South Africa.

#### ICSU ROA Book Project III

ICSU ROA has partnered with UNECA to produce a book on the science of climate change in Africa. The purpose of the book is to showcase the quality of research carried out by African climate experts in the various disciplines related to climate change. A call for manuscripts was sent out in March 2010 and the book is expected to be published by March 2011.

#### Workshop reports

During the 2009/10 financial year, ICSU ROA organised several workshops and conferences. These include: (i) the IYPE workshop of Science Implementation Team leaders and

African National Committee Chairs on 18 – 19 May 2009 in Pretoria, South Africa; and (ii) the IUTOX 7CTDC on 06 – 10 September in Sun City, South Africa (iii) the "knowledge on the Move" Seminar on 15-16 March 2010 in Centurion, South Africa; and (iv) the "consultative conference on the science of climate change and socio-economic prosperity in Africa: post-Copenhagen (UNFCCC/COP15)" co-organised in collaboration with UNECA on 17–19 March 2010 in Addis Ababa, Ethiopia.

The proceedings of these events have been published in separate documents and widely distributed electronically. Soft copies of these documents are available at http://www.icsu-africa.org. Hard copies are available from the ICSU ROA Secretariat.

#### **General Communication**

Apart from reaching out to the general public through



Participants of the PACN, ICSU ROA was represented by BM and DN



Bongani Mahlalela exhibiting ICSU ROA materials during PACN in August 2009

publications, ICSU ROA also reached out to the international scientific community through: exhibiting its materials at regional and international scientific meetings; its website; electronic mailing; and oral presentations at different forums.

#### **Exhibitions**

Through exhibitions, ICSU ROA distributes hard copies of its publications and disseminates information about its activities at different regional and international scientific events. At the First Session of the Committee on Development Information, Science and Technology (CODIST-1) organised by UNECA in April 2009 in Addis Ababa, Ethiopia, ICSU ROA mounted an exhibition booth where it displayed and distributed its science plans, summary of project proposals, book brochure, as well as information flyers. ICSU ROA also exhibited and distributed its publications at the International Council of Association for Science Education (ICASE) in Abuia. Nigeria in May 2009: and at the 'Sustainable Water Conference' organised by the Pan Africa Chemistry Network (PACN) in August 2009, in Nairobi, Kenya. In March 2010, during the Consultative Workshop on the Science of Climate Change and Socio-Economic Prosperity in Africa: Post-Copenhagen, ICSU ROA distributed its first published book titled "Science, Technology and Innovation for Socio-Economic Development: Success Stories from Africa".

#### ICSU ROA Website

Through its website (http://www.icsu-africa.org), ICSU ROA continuously publicises general information about its activities as well as about activities of its partners and those of the ICSU family. The website also contains information gathered by ICSU ROA from various sources, which is relevant to the African scientific community. This includes important announcements of events, grants and awards on the continent; and calls for participation in international

projects and programmes, or for nominations to special committees of ICSU and other international scientific bodies.

#### Electronic mailing

ICSU ROA developed an extensive and a continuously growing electronic mailing list which is used to reach out to the regional and international scientific communities. This electronic mailing list covers several networks and disciplines throughout the continent and beyond. The Regional Office also gathers information through electronic mailing from its numerous contacts, including its partners and networks from around the world and makes it available to the African scientific community via the electronic mailing list.

#### Scientific Collaboration and Networking

#### Activities of the ICSU family in Africa

During the 2009/10 financial year, ICSU ROA continued to support activities and initiatives of the ICSU family in Africa. A few examples are outlined below:



Achuo A Enow presenting at IUTOX Congress

### Activities - continued

#### ICSU Grants Programmes

ICSU ROA supported two applications for the 2010 ICSU Grants Programme: (i) African School Series on Electronic Structure Methods and Applications by the International Union of Pure and Applied Physics (IUPAP) Commission on Physics Development; and (ii) Biophysics Capacity Building in Africa by the International Union of Pure and Applied Biophysics (IUPAB). Only the latter was approved and granted funding of €30,000. The training course envisaged in the project is planned to take place in Brazil in September 2010. ICSU ROA, represented by Daniel Nyanganyura, is involved in the implementation of the project.

#### International Union of Pure and Applied Physics (IUPAP)

ICSU ROA supported the IUPAP bid to host the 4th International Conference on Women in Physics in Cape Town, South Africa in 2011. The preparation for this conference is underway and ICSU ROA is fully involved in the conference organisation. Daniel Nyanganyura serves on the conference Local Organising Committee.

#### Committee on Data for Science and Technology (CODATA)

On 24-27 October 2010, CODATA and the National Research Foundation, South Africa, will be co-hosting the 22nd International CODATA Conference on the theme "Scientific Information for Society: Scientific Data and Sustainable Development". The conference will take place in Stellenbosch, South Africa. ICSU ROA is involved in the planning and organisation of the conference. Daniel Nyanganyura serves on the Local Organising Committee (LOC) and functions as the contact person for the committee. ICSU ROA will organise two special sessions during the conference, specifically addressing issues related to the implementation of the ICSU ROA science plans.

#### International Union of Food Science and Technology (IUFoST)

In the 2008/09 financial year, ICSU ROA supported the South African Association for Food Science and Technology (SAAFoST) in its bid to host the 15th World Congress of Food Science and Technology in 2010. The Congress will be held in Cape Town on 22 – 26 August 2010 under the auspices of the International Union of Food Science and Technology (IUFoST) and ICSU ROA is involved in the organisation of this event.

#### International Union of Toxicology (IUTOX)

ICSU ROA continued to work closely with IUTOX, particularly through its South African affiliate, the Toxicology society of South Africa (TOXSA). ICSU ROA joined TOXSA in organising the 7CTDC in Sun City, South Africa on 06 – 10 September 2009. Achuo Enow sat on the Local Organising Committee for the Congress.

ICSU ROA also supported TOXSA in its grant application in the framework of the ICSU grants programme 2009 for the project "Building capacity in health risk assessment in African countries". The grant was approved and the project implementation is envisaged to start by mid 2010.

#### International Association for Quaternary Research (INQUA)

ICSU ROA continued to collaborate with INQUA and contributed to facilitating the creation of an INQUA regional branch in West Africa (WAQUA), which was launched in Ibadan, Nigeria in October 2009. The launch was combined with an inaugural workshop on 26 – 30 October 2009 on "The West Africa African Quaternary Paleoclimatic/Sea Level Changes and human responses: Evidence from marine and terrestrial sources." Achuo Enow represented ICSU ROA at these events and gave a keynote lecture at the launch workshop on "The evidence and implications of climate change in Africa and the strategies for adaptation".

#### **Activities with other Partners and Networks**

ICSU ROA maintained a good working relationship with its traditional partners but also established new partnerships and networks in the course of 2009/10.

Interlink Project (European Union 6th Framework Programme)

ICSU ROA was involved in the EU FP6 Interlink project which was aimed at raising awareness and facilitating partnership between European researchers and those from developing countries for participation in projects of the European Union Framework Programme. The project focused on establishing partnerships for research on the environment theme of FP7. One of the major achievements of the project was the inclusion of African priorities identified by the continent's researchers among the themes considered for FP7. These and other contributions gave rise to a special EU FP7 Africa call in September 2009 for 2010. The project officially ended in September 2009 with a workshop in Vienna, Austria. The final project report is available from ICSU ROA secretariat.

partners in the consortium established a network of African environmental scientists. This network, consolidated at a workshop held in Pretoria, South Africa in July 2009 has established links for collaboration with European counterparts. The first achievement of this research partnership was the putting together of a Europe – Africa consortium to prepare a project proposal in response to the EU FP7 Africa call and the FP7 2010 Environment call. More of such initiatives are expected in the future.

#### African Monsoon Multi-disciplinary Analysis (AMMA) Project

The partnership between AMMA and ICSU ROA began in February 2009 and since then the two bodies have been fully involved in activities of each other. During the 2009/10 financial year, ICSU ROA was invited to attend workshops of AMMA in order to establish synergies between the ICSU ROA proposed projects and the research programmes of AMMA. In return, AMMA researchers, drawing from their experiences with the Monsoon, have made valuable contributions to the ICSU ROA project proposal on Hydro-



Daniel Nyanganyura networking at an AMMA conference



Participants at GEM Africa Workshop

### Activities - continued



Achuo A Enow making a point at the Europe – Africa Frontier Research Conference

meteorological hazards. They are also involved in preparing some of the ICSU ROA projects on Global Environmental Change.

#### Global Earthquake Model (GEM)

Early in 2009 ICSU ROA established a new partnership with the Global Earthquake Model (GEM). The GEM partnership aims at using all the available data, information and technologies to harmonise global standards, techniques and procedures for monitoring and predicting earthquakes, and assessing the risks associated with them. An African Regional component of the initiative (GEM-Africa) was launched at a workshop in Nairobi Kenya on 11 – 13 November 2009. ICSU ROA was represented at the workshop by Achuo Enow. One of the outcomes of the workshop was the setting up of a management structure for the region. Three levels of management were set up namely: three sub-regional steering committees (Eastern Africa, Southern Africa and West and Central Africa); a scientific planning committee and

a regional management committee comprising a Committee Chair, a Scientific Coordinator, an Administrative Coordinator and coordinators of the sub-regional committees. ICSU ROA (represented by Achuo Enow) was elected to take the responsibility of Administrative coordination of GEM- Africa. Through the GEM partnership ICSU ROA hopes to facilitate the implementation of its Geo-hazards sub-project on earthquakes. The Project proposal has already been submitted and a response is expected before the end of 2010.

#### Electronic Geophysical Year (eGY)

The Electronic Geophysical Year (eGY) is a voluntary organization and collaboration whose purpose is to focus on a 21st Century e-Science approach to issues of data stewardship (open access, preservation, discovery and rescue of data; capacity building; and outreach). The initiative is intended to achieve a major step in geoscience capability, knowledge, and usage throughout the world for the benefit of humanity by accelerating the adoption of modern and visionary practices for managing and sharing data and information.

The African component of the initiative (eGY-Africa) is particularly concerned with improving internet capabilities in African universities and institutions; and reducing the digital divide for the scientific community in Africa.

The eGY activities focus on organising workshops and meetings to stimulate and provide a focus for bottom-up action by scientific communities; promote communication and networking among scientists, educators and policy makers; and establish links between the international scientific community and funding bodies.

ICSU ROA is committed to this course and is collaborating with eGY to achieve its goals. Daniel Nyanganyura represents ICSU ROA on the eGY-Africa Committee.

#### Strategic Partnerships

During 2009/10 ICSU ROA maintained a good working relationship with its strategic partners, while establishing new partnerships. In particular, the Regional Office was engaged in joint activities with the following partners during this financial year:

#### **European Science Foundation**

ICSU established a partnership with the European Science Foundation (ESF) to organise a series of Frontier Research Conferences alternately in Africa and in Europe. ICSU is represented by the Regional Office for Africa in the planning and organisation of these conferences.

The first Conference was held in Cape Town, South Africa on 04 – 09 April 2009, on the theme: "Infectious Diseases: from Basic to Translational Research". ICSU ROA, with the support of ICSU RCA, facilitated the identification of the African Conference co-Chair, Prof. Iqbal Parker (South Africa). The European co-Chair of the Conference was Prof. Monique Capron (France). ICSU ROA was represented at the conference by Achuo Enow, and ICSU RCA by Prof. Vincent Titanji. Achuo Enow gave an introductory presentation on the ICSU ROA science plan and projects on health and human-well-being while Prof. Titanji presented an invited paper on "Molecular and epidemiological approaches to vaccine candidate identification in onchocerciasis and malaria". Both





of them also attended and took part in discussions during the post-conference EU FP7 brokerage event on "Health NCP-NET".

#### The German Federal Ministry of Education and Research

Through the German Embassy in Pretoria, ICSU ROA established a partnership with the German Federal Ministry of Education and Research (BMBF). BMBF has shown great interest in, and willingness to promote ICSU ROA activities. It provided financial support for the printing of 4,000 copies of the ICSU ROA book "Science, Technology, and Innovation for Socio-economic Development: Success Stories from Africa".

#### WOTRO

ICSU ROA established a new partnership with WOTRO in 2009. WOTRO is the science division within the Netherlands Organization for Scientific Research (NWO). Within the context of a new approach taken by the government of The Netherlands to revitalise international collaboration in research for development, WOTRO commissioned ICSU ROA to organise a seminar on "Knowledge on the Move: African Perspectives". This seminar, held in Pretoria on 15 – 16 March 2010, brought together African senior researchers, R&D managers, and policy makers, to reflect on the outcome of a conference on Knowledge on the move held in The Hague in February 2008, and to consider Africa's perspectives on the subject. A full report of the seminar is available at the ICSU ROA secretariat.





### Activities - continued

As part of its mandate to promote science for global development, WOTRO prepared a new strategic plan for the period 2011 – 2014. The draft plan was presented to stakeholders and partners for review. On behalf of ICSU ROA Achuo Enow was invited to take part in the review which was concluded at a WOTRO strategy meeting held in Utrecht. The Netherlands on 23 March 2010.

#### Interaction with Intergovernmental Bodies

ICSU ROA continued interacting with national government institutions as well as intergovernmental bodies to influence the integration of science into policy development and that relevant policies and decision-making processes take into account both scientific knowledge and the needs of science. Some activities carried out in 2009/10 in this regard are highlighted below.

#### African Union (AU)

One of the most significant activities of the African Union Commission involving ICSU ROA was the Scientific Awards Programme. This programme is designed to celebrate the achievements of African scientists on national, regional and continental levels as well as to promote all efforts to transform scientific research into entrepreneurship, attract investments to Africa, and create research centers of excellence. The programme contributes to raising the profile of the science and technology sector and building a scientific culture amongst African citizens. The Award programme covers three categories in two major groups of disciplines: (a) basic science, technology and innovation; and (b) Earth and life science. The three categories are: (i) National awards for young scientists; (ii) Regional awards for female scientists; and (iii) continental awards, open to both male and female scientists.

ICSU ROA was nominated as a member of the Advisory Committee for the Award Programme and through its Director, the Regional Office played an instrumental role in raising 1 Million US Dollars for the three categories in the 2009 Awards Programme. The Director of ICSU ROA also served on the panel for selecting the award winners.

### United Nations Economic Commission for Africa (UNECA)

ICSU ROA has continued to work closely with UNECA during the 2009/10 financial year. The two offices have been working together in areas of science and development in Africa as well as on the issue of climate change.

ICSU ROA in collaboration with UNECA organised a consultative workshop on the science of climate change and socio-economic prosperity of Africa in Addis Ababa, Ethiopia on 17 – 19 March 2010. The purpose of the workshop was to reflect on the outcomes of the Copenhagen Climate Change conference (UNFCCC/COP15) and to work out a continental strategy on the way forward. The report of this workshop has been widely distributed electronically. An important outcome of this workshop was the undertaking by ICSU ROA and UNECA to produce a book on Climate change science in Africa.

ICSU ROA participated in the first meeting of the Committee on Development Information, Science and Technology (CODIST-I), organised by UNECA on 28 April – 01 May 2009 in Addis Ababa, Ethiopia. At this meeting, the ICSU ROA Director, Sospeter Muhongo, delivered a keynote lecture on "Challenges and Opportunities for Science, Technology and Innovation in the Changing Global Economy". ICSU ROA also staged an exhibition which was manned by Daniel Nyanganyura and Bongani Mahlalela.

#### **UNESCO**

UNESCO is a historic partner of ICSU and the African Regional Offices of the two organisations have been involved in many joint activities.

In November 2009, ICSU ROA joined UNESCO and ANSTI in organising the Third African Regional Conference of Vice Chancellors, Provosts and Deans of Science, Engineering and Technology (COVIDSET 2009) in Kampala, Uganda. Daniel Nyanganyura represented ICSU ROA at the event and he presented the ICSU ROA proposed research projects as well as the book project on Chemistry for sustainable development, and the African Diaspora project. The meeting was also a forum to strengthen links between ICSU ROA and the heads of African Higher Education Institutions.

ICSU ROA also participated in the series of workshops organised by UNESCO on Earth Science Education in Africa. One of these workshops was organised in collaboration with the African Earth Observation Network (AEON) on 26 – 27 November 2009 in Cape Town, South Africa on "Earth science education initiative for Africa". ICSU ROA was represented at the event by Achuo Enow who gave a presentation on "The Status and Needs of Earth Science Education in Africa". At a similar workshop organised in Angola on 12-13 November 2009; ICSU ROA was represented by Daniel Nyanganyura who gave a presentation titled "Earth Science Education Initiative in Africa: the role of ICSU Regional Office for Africa".

#### **Regional Economic Communities**

ICSU ROA also interacts closely with Regional Economic Commissions (RECs) on the continent, particularly the Southern Africa Development Community (SADC). The Regional Office is a valuable resource for these RECs as it is often called upon to provide advice and information on relevant issues for regional development. For example, at

the SADC regional workshop for National Academies and Universities organised by the Southern African Regional University Association (SARUA) in May 2009, in Pretoria, South Africa, Sospeter Muhongo was invited to deliver a lecture on "The role of ICSU in fostering regional networks".

The purpose of the workshop was to explore ways in which SADC can strengthen the role of universities and scholars in the national and international arena in terms of linkages with national science and technology organizations, SADC, ICSU, and AU/NEPAD, amongst other organizations; strengthen existing national academies, and create new ones or establish networks to cater for countries without capabilities to establish academies; and strengthen the role of the Network of African science Academies (NASAC) in the African policymaking arena.



Financial Report
Annexes









# **Financial Report**

#### National Research Foundation

ICSU Regional office for Africa

Income and expenditure statement for the year ended 31 March 2010

		Year ended 31 March 2010	Year ended 31 March 2009
	Note	ZAR	ZAR
INCOME RECIEVED			
Department of Science and Technology	1		2 000 000
ICSU Secretariat, Paris	2	766 787.00	422 303
International Year of Planet Earth Inc		80 100.00	
DAAD - German Academic Exchange Service			71 035
UNESCO			103 887
IFS			110 191
Geological Society of Uganda			19 382
Other income - workshop contributions			12 622
NRF CONTRIBUTION		1 453 372.00	1 378 157
UNCOMMITTED FUNDS FORM PREVIOUS YEAR		480 474.93	540 288
FUNDS AVAILABLE FOR YEAR		2 780 733.93	4 666 865
TOTAL EXPENDITURE	3	3 973 699.69	4 186 390

# Financial Report – continued

#### National Research Foundation

ICSU Regional office for Africa

Income and expenditure statement for the year ended 31 March 2010

	Year ended 31 March 2010	Year ended 31 March 2009
Note	ZAR	ZAR
RUNNING EXPENSES		
Audit Fees	14 680.00	17 100
Bank Charges	2 930.30	3 254
Computer Consumables	306.55	541
Conferences and Workshops	127 006.14	278 954
Exchange control less	15 698.06	
Fees for Services	275 361.68	244 937
Marketing Costs	429.34	1 254
Medical Expenses		2 053
Office repairs and maintenance		1 665
Postage and Courier	27 545.18	3 774
Printing	182 773.67	114 649
Recruitment and Training		49 999
Refreshments	3 606.91	6 712
Stationary	12 578.98	18 309
Telephone	67 347.97	29 236
Travel and Subsistence - international	746 888.80	1 111 629
Travel and Subsistence - local	154 108.01	1 982 503

## National Research Foundation ICSU Regional office for Africa

Income and expenditure statement for the year ended 31 March 2010

SALARIES		2 265 483.24	1 982 503
CAPITAL EXPENSES			
Computer Equipment		76 704.86	19 152
DEFICIT AT END OF YEAR	4	-1 192 966.76	480 475

#### Notes to Income and Expenditure Statement

- 1. The Department of Science and Technology of South Africa is the main funder of the ROA. This has generally been based on a multi-year funding commitment made to the NRF. The last multi-year commitment was for 2008/09. Negotiations for renewal of a further multi-year commitment has been triggered but has not yet been secured.
- 2. ICSU makes an annual contribution to the ROA. The apparent significant increase in contribution for 2009/10 is a case of ICSU having transferred its 2010/11 contribution before the ROA's 2009/10 financial year ended.
- 3. Given historical pattern and practice of contributions from the DST, the ROA proceeded to incur costs on the assumption and confidence that the contribution from the DST would be forthcoming.
- 4. The deficit is a consequence of the explanations above. Discussions to recover this from the DST are ongoing. In the case of failure to recover this, the NRF will absorb this deficit. In parallel, expenses in ROA are being managed down as part of the effort to reduce the deficit.

### Annexes

#### Annex A: Staff of ICSU ROA Secretariat

Name	Position	Date of appointment
Sospeter Muhongo (Tanzania)	Regional Director	01 June 2005
s.muhongo@icsu-africa.org		
Kathy Potgieter (South Africa)	Personal Assistant	01 October 2005
k.potgieter@icsu-africa.org		
Achuo Enow (Cameroon)	Programme Specialist	27 March 2006
a.enow@icsu-africa.org		
Bongani Mahlalela (South Africa)	Liaison Officer	01 October 2007
b.mahlalela@icsu-africa.org		
Daniel Nyanganyura (Zimbabwe)	Programme Specialist	01 August 2008
d.nyanganyura@icsu-africa.org		

#### Annex B: Composition of the ICSU Regional Committee for Africa

#### Statutory Members

#### Dominic W. MAKAWITI - Chairman

(2005-2007: 2008-2010)

Deputy Vice Chancellor – Academic

Maseno University Kisumu, Kenya.

Tel. +254 57 351622

(Ext 3197); (0)57 351589

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dmakawiti@maseno ac ke

#### Ayite-Lo N. AJAVON

(2005-2006; 2007 - 2009)

Atmospheric Chemistry Laboratory

FDS/Faculty of Sciences

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Tel. +228 225 50 94 x 1305

Fax. +228 221 8595 noajavon@tg.refer.org sossiayite@hotmail.com

#### Francis P. GUDYANGA

(2005-2007; 2008 - 2010)

Permanent Secretary, Ministry of Science and Technology Development;

Chairman, Research Council of

Zimbabwe

P.O. CY294, Bank Chambers Building

Harare, Zimbabwe

Tel. +263 4 860 32 Fax. +263 4 860 350 fpgudyanga@zarnet.ac.zw

#### **Mary STRAVENS**

(2005-2006; 2007-2009)

Seychelles Centre for Marine Research and Technology - Marine Park Authority

P.O. Box 1240

Francis Rachel Street

Victoria, Mahe, Seychelles Tel. Office (248) 225114/115

stravens@seychelles.net

#### Gabriel B. OGUNMOLA

(2005-2007; 2008 - 2010)

Chairman: Institute of Genetic

Chemistry and

Laboratory Medicine

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University of Ibadan,

PO Box 22376 Ibadan, Nigeria

Fax: +234 2 810 7131

Tel: +234 805 8861 474

Mobile: +234 802 307 9510

presidentnascience@yahoo.com

aboqunmola@yahoo.com

#### Vincent Pryde Kehdingha TITANJI

(2005-2006; 2007-2009)

President: Federation of African Societies of Biochemistry and Molecular Biology

Vice Chancellor University of Buea,

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#### **Manuel Luis CHENENE**

(2005-2007; 2008 - 2010)

Coordinator, Scientific Council of the

Scientific

Research Association of Mozambique

(AICIMO)

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### Annexes - continued

#### Annex B: Composition of the ICSU Regional Committee for Africa

#### Ex-Officio Members

#### Patricia Ocampo-Thomason

(representing ICSU)
Science Officer: ICSU
5 rue Auguste Vacquerie
FR-75016 Paris, France
Tel. +33 1 45 25 03 29

Fax. +33 1 42 88 94 31

patricia@icsu.org

#### **Sospeter MUHONGO**

(representing ICSU ROA) Director: ICSU ROA PO Box 13252 0082 HATFIELD

Republic of South Africa
Tel: +27 12 481 4139
Fax: +27 12 481 4173
s.muhongo@icsu-africa.org

#### **Robert Kriger**

(representing the NRF)

Executive Director, International

Relations,

NRF

P.O. Box 2600 Pretoria 0001 South Africa

Tel: +27 12 481 4144 Fax: +27 12 481 4044

rskriger@nrf.ac.za

#### **Uri Shamir**

(representing ICSU EB) Water Research institute, Fac. of Civil & Environmental

Engineering

Technion – Israel Institute of Technology

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#### Annex C: ICSU Members and Associates in Africa

#### Annex C1 - ICSU national members in Africa

**Angola:** Foundation of Science and Development (Member since 2010)

Botswana: Ministry of Communications, Science and Technology of Botswana (Member since 2006)

Burkina Faso: Centre National de la Recherche Scientifique et Technologique (Member since 1981)

**Cameroon:** Cameroon Academy of Sciences (Member since 1999)

Côte d'Ivoire: Académie des Sciences, des Arts, des Cultures d'Afrique et des Diasporas Africaines (Member since 1992)

**Egypt:** Academy of Scientific Research and Technology (Member since 1925)

**Ethiopia:** Ethiopian Science and Technology Agency (Member since 2006)

**Kenya:** Kenya National Academy of Sciences (Member since 1980)

**Lesotho:** Department of Science and Technology (Member since 2007)

Malawi: National Research Council of Malawi (Member since 2006)

**Mauritius:** Mauritius Research Council (Member since 2005)

**Morocco:** Centre National de la Recherche Scientifique et Technique (Member since 1925)

**Mozambique:** Scientific Research Association of Mozambique (Member since 1999)

Namibia: Ministry of Education: Directorate of Research, Science and Technology (Member since 2008)

Nigeria: Nigerian Academy of Science (Member since 1963)

**Senegal:** Association des Chercheurs Sénégalais (Member since 1993)









**Seychelles:** Seychelles Centre for Marine Research and Technology (Member since 1983)

South Africa: National Research Foundation (Member since 1919)

Swaziland: National Research Council (Member since 1993)

**Tanzania:** Tanzania Commission for Science and Technology (Member since 2004)

**Togo:** Chancellerie des Universités du Togo (Member since 1993)

Uganda: Uganda National Council for Science and Technology (Member since 1995)

Zambia: Zambia Academy of Sciences (Member since 2006)

Zimbabwe: Research Council of Zimbabwe (Member since 1989)

#### Annex C2 - ICSU national scientific associates in Africa

Madagascar: Ministère de l'Enseignement Supérieur et de la Recherche Scientifique (Member since 1970)

**Tunisia:** Université Tunis El Manar (Member since 1931)

#### Annex C3 - ICSU national scientific associates in Africa

**Ghana:** Ghana Academy of Arts & Sciences (Member since 1961)

**Rwanda:** Kigali Institute of Science and Technology (Member since 2006)

**Sudan:** National Centre for Research (Member since 1974)









# Strengthening international science for the benefit of society



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