



ICSU

International Council for Science

strengthening international science for the benefit of society

ICSU Regional Meeting for Africa

Conference Report

9-11 October 2004, Harare.

Hosted by the
Research Council of Zimbabwe



**Innovation, Self-reliance
and Development**

About ICSU

Founded in 1931, the International Council for Science (ICSU) is a non-governmental organization representing a global membership that includes both national scientific bodies (101 members) and international scientific unions (27 members).

Through this international network, ICSU coordinates interdisciplinary research to address major issues of relevance to both science and society.

In addition, the Council actively advocates for freedom in the conduct of science, promotes equitable access to scientific data and information, and facilitates science education and capacity building.

The Council acts as a focus for the exchange of ideas, the communication of scientific information and the development of scientific standards. ICSU's members organize scientific conferences, congresses and symposia all around the world—in excess of 600 per year—and also produce a wide range of newsletters, handbooks, learned journals and proceedings.

ICSU also helps create international and regional networks of scientists with similar interests and maintains close working relationships with a number of intergovernmental and non-governmental organizations, especially UNESCO and the Third World Academy of Sciences (TWAS).

Because of its broad contact with thousands of scientists worldwide, ICSU is increasingly called upon to speak on behalf of the global scientific community and to act as an advisor in matters ranging from ethics to the environment.



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ACRONYMS

AAS	African Academy of Sciences
AICIMO	Scientific Council of the Research Association of Mozambique
ANVAR	Agence Nationale de Valorisation des Resultats de Recherche– Burkina Faso
ARCT	African Regional Centre for Technology
ASSAF	Academy of Science of South Africa
CAETS	Council of Academies of Engineering and Technological Sciences
CAS	Cameroon Academy of Sciences
CAS	Chinese Academy of Sciences
CODATA	Committee on Data for Science and Technology
Costech	Tanzania Commission for Science & Technology
COSTED	Committee on Science and Technology in Developing Countries
DIT	Durban Institute of Technology– South Africa
GIA	GeoSciences in Africa
IAC	Inter Academy Council
IAP	Inter Academy Panel
IBN	International Bio-Sciences Network
IBRO	International Brain Research Organisation
ICSU	International Council for Science
ICTS	Information and Communication Technologies
IES	International of Environmental Studies
IFS	International Foundation for Science
IGCP	International Geo-science Programme
IGU	International Geographic Union
IHP	International Hydrological Programme
INASP	International Network for the Availability of Scientific Publications
INASP	International Network for the Availability of Scientific Publications
IOC	Intergovernmental Oceanographic Commission
IPICS	International Programme in Chemical Sciences
IROA	ICSU Regional Office for Africa
ISSC	International Social Science Council
IUBS	International Union of Biological Sciences
IUCr	International Union of Crystallography
IUFost	International Union of Food Science and Technology
IUG	International Geographic Union
IUGG	National Committee for International Union of Geodesy and Geophysics
IUPAC	International Union of Pure and Applied Chemistry
IUPAP	International Union of Pure and Applied Physics
IUPHAR	International Union of Pharmacology
IUPsyS	International Union of Psychological Sciences
KNAS	Kenya National Academy of Science
MAB	Man and Biosphere programme
MAS	Malaysian Academy of Sciences
MRC	Mauritius Research Council
NASAC	Network of African Scientific Academies
NCST	National Commission on Science and Technology - Botswana
NCST	National Commission for Science and Technology - Botswana

NEPAD	New Partnership for Africa's Development
NISIR	National Institute for Scientific and Industrial Research - Zambia
NRF	National Research Foundation, South Africa
PAAS	Pan African System for Analysis, Research and Training for Global Change
PCDC	Policy Committee on Developing Countries
PERI	Programme for the Enhancement of Research Information
R & D	Research and Development
RCZ	Research Council of Zimbabwe
S & T	Science and Technology
SCOR	Scientific Committee on Research
SIRDC	Scientific and Industrial Research and Development Centre
START	System for Analysis, Research and Training
TWAS	Third World Academy of Sciences
TWNSO	Third World Network of Scientific Organisations
TWOWS	Third World Organisation for Women in Science
UNESCO	United Nations Education Scientific Organisation
WCRP/GCOS	World Climate Research Programme & Global terrestrial Observing System
WFEO	World Federation of Engineering Organisations
WSIS	World Summit on Information Society
WSSD	World Summit on Sustainable Development

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EXECUTIVE SUMMARY

Introduction

The First ICSU Regional Meeting for Africa held from 9 to 11 October 2004 in Harare, Zimbabwe, was organised by the International Council for Science, ICSU, the National Research Foundation (NRF) of South Africa, the Research Council of Zimbabwe, and Zimbabwe's Department of S & T Development in the Office of the President and Cabinet. It was officially opened by Dr. O. N. Muchena, Zimbabwe's Minister of State for the Department of S & T Development in the Office of the President and Cabinet and attended by 45 scientists representatives of ICSU National Members, ICSU Scientific Unions, and other international organisations.

Background

ICSU, founded in 1931, is a non-governmental global organisation representing 101 National Members and 27 International scientific unions. It coordinates interdisciplinary research to address issues of relevance to science and society, actively defends freedom in the conduct of science, promotes access to scientific data and information, and facilitates science education and capacity building.

In 1966, ICSU established a Committee on Science and Technology in Developing Countries (COSTED) to use science and technology to address problems of developing countries. COSTED was evaluated in 2001 and found to be inadequate in meeting the diversity of regional needs. It was dissolved at the ICSU 27th General Assembly meeting in 2002 to be replaced with four ICSU Regional Offices located in Sub-Saharan Africa, the Arab world, Asia, and Latin America and the Caribbean. The Regional Offices would support and promote the activities of ICSU family and its partners such as UNESCO and TWAS thus increasing participation of developing countries in ICSU activities. ICSU Regional Committees will be established to promote the objectives and functions of the Regional Offices through developing and approval of strategic plans, annual work plans, and budgets.

The Regional Offices would assist ICSU provide a better service to developing countries through:

1. Enhancing the participation of developing country scientists and regional scientific organisations in ICSU activities.
2. Assisting ICSU strengthen science and capacity building in developing countries through South-South and North-South collaboration.

At an ICSU meeting held in South Africa in February 2004, African ICSU members proposed that South Africa's National Research Foundation (NRF) be the host of the ICSU Regional Office for Africa (IROA) on the basis of its institutional strength and easy access to resources. The ICSU Executive Board approved the proposal. At the same meeting, Zimbabwe offered to host the first consultative meeting for defining priorities for the ICSU Regional Office.

Objectives of the First ICSU Regional Meeting for Africa

The main objective of the meeting was to deliberate and define practical guidelines for the activities of the ICSU Regional Office for Africa; this took the form of presentations of key issues followed by discussions focused around 6 key themes: (a) Setting the stage, (b) Building on experiences – Strengthening partnerships, (c) Shaping the future – What should the Regional Office do?, (d) The regional dimension, (e) From words to action, and (f) Defining the agenda.

Setting the stage

From the presentation by the ICSU Executive Director the delegates obtained an insight into the processes of the development of an ICSU strategy. He also spelt out the mission of ICSU which is to strengthen and mobilise the knowledge and resources of the international science for the benefit of society. The ICSU Secretary General described the review (2001) of the Committee on Science and Technology in the Developing Countries, COSTED, and the decision of the ICSU General Assembly (2002) to replace COSTED by four Regional Offices. She described the consultative processes for the establishment of the ICSU Regional Office for Africa at the National Research Foundation of South Africa and the holding of this First ICSU Regional Meeting for Africa in Harare. The Global Change System for Analysis, Research and Training (START) experience in Africa described as a successful initiative that addresses the need for involvement of scientists from developing countries in the global change research programmes and fosters the development of capacity building. The programmes of the International Network for the Availability of Scientific Publications (INASP) were described and how people can be enabled to access and contribute information, ideas and knowledge necessary for sustainable and equitable development.

Outcomes of the Meeting

The meeting explored ways of collaborating with regional and international organisations such as UNESCO, TWAS, IFS and NEPAD. ICSU has a long working relationship with UNESCO in the Natural Sciences sector and is also strengthening collaboration with other sectors.

The meeting agreed that the Regional Office should consider capacity building as one of its main functions by promoting the further development and strengthening of science in the context of regional priorities and bringing science of developing countries closer to ICSU.

Strengthening the involvement of African scientists in international programmes can be done by increasing the African scientists' membership composition and posts that African scientists hold in executive bodies of international organisations to make an input in the decision making on international programmes that are relevant to Africa. African countries are encouraged to become members of ICSU and to join the Scientific Unions.

The meeting spent considerable time in discussing the functions of the Regional Office. Activities that should be considered (or undertaken) by the Office include:

- Collecting and circulating information to scientists via a website and e-mail.
- Establishing a database of African experts in all scientific fields or compiling existing databases
- Encouraging and improving capacity building in Africa
- Creating an enabling environment for the progress and contribution to development of indigenous and traditional knowledge
- Promoting establishment of more centres of excellence for research
- Increasing participation of Africa in international programmes through networking of regional scientific organisations with ICSU and its partners such as UNESCO, TWAS, for strengthening of science and its development in the region

The Interim ICSU Regional Committee held a meeting during the First ICSU Regional Meeting for Africa to discuss the way forward with regards to the ICSU Regional Office for Africa. It was agreed that the issue of recruiting a Director be taken as a priority. The Director will be chosen based on terms of reference and merit. The Director for the Regional Office will be appointed by the ICSU Executive Board. The candidate will have a renewable 3 year contract. Nominations for the substantive Regional Committee have to be made to ICSU by African National Members. The selection of the Regional Committee should reflect sub – regional zones and language differences. The Regional Committee will be appointed by the ICSU Executive Board and will consist of 7 members appointed for 3 years with an initial staggered rotation built into the appointment. It was suggested that the first meeting of the Regional Committee be held as soon as the Regional Director is appointed. The meeting should coincide with the official opening of the Regional Office in South Africa.

A **Memorandum of Agreement** between ICSU and the NRF of South Africa was signed by Professor Thomas Rosswall for ICSU and Dr Khotso Mokhele for NRF on 11 October 2004. This was witnessed by Professor Ana Maria Cetto and Dr. Francis Gudyanga, Members of the ICSU Executive Board, for ICSU; To witness for the NRF were Professor Gabriel Ogunmola, the Chairman of the Interim ICSU Regional Committee for Africa, and Roger Zangre, Director of ANVAR of Burkina Faso.

The ceremony took place in the presence of Dr. O. N. Muchena, Minister of Science and Technology Development in the Office of the President and Cabinet of Zimbabwe and delegates to the First ICSU Regional Meeting for Africa. The signing of the Memorandum of Agreement signalled a fresh ICSU initiative for Africa.

The **Zimbabwe Academy of Sciences (ZAS)** was also inaugurated on 9 October 2004, at the reception dinner attended by the ICSU meeting participants, Founding Fellows of the newly established Zimbabwe Academy of Sciences, government officials and other invited guests. The Deputy Chief Secretary to the President and Cabinet, Mr R. Ndhlukula handed over the Constitution of the ZAS to its inaugural President, Professor C J Chetsanga, who made an inaugural address at the occasion.

At the **Closing Session** of the Meeting, the Secretary General of ICSU assured members that other Regional Offices will be established in due course. The host thanked participants for coming to Zimbabwe. Dr Khotso Mokhele thanked RCZ for arranging for the Minister's availability during the signing ceremony and the inauguration of the Zimbabwe Academy of Sciences. The ICSU Executive Director expressed satisfaction that the objectives of the meeting were met. There was a general consensus that the First ICSU Regional Meeting was a success in many respects especially in defining priorities for the Regional Office for Africa.

SECTION 1: SETTING THE STAGE

1.1 Welcoming Remarks

The President of the National Research Foundation, Dr Khotso Mokhele opened the meeting by welcoming all delegates to the “First ICSU Regional Meeting for Africa”. He acknowledged the large turnout of delegates to the meeting, being the first of its kind. He took the opportunity to introduce Professor Ana María Cetto, the ICSU Secretary General, Professor Thomas Rosswall, the Executive Director of ICSU and Professor Christopher Chetsanga, a man who has contributed immensely to science and technology in independent Zimbabwe.

The ICSU Committee on Science and Technology in Developing Countries (COSTED) was established 38 years ago. A review of COSTED was done and a recommendation for its dissolution and the establishment of four ICSU Regional Offices for developing countries was adopted at the ICSU 27th General Assembly in 2002. The offices were to be located in countries in Sub-Sahara Africa, Asia, the Arab Region and Latin America and the Caribbean.

Three ICSU members – South Africa, Kenya and Zimbabwe submitted proposals to host the Regional Office for Africa. South Africa was unanimously recommended by the ICSU African member states in February 2004 to host the regional office for Africa. The recommendation was taken to ICSU Executive Board which decided to accept the proposal from South Africa. An Agreement between ICSU and the National Research Foundation (NRF) of South Africa, the hosting institution for the ICSU Regional Office for Africa, was expected to be signed in the course of the Harare Meeting.

Dr. Mokhele explained that the choice of Zimbabwe as the host country for the First ICSU Regional Meeting was also agreed upon by the ICSU African member states. Represented at this Harare meeting were 19 African countries, 6 Interdisciplinary Bodies, and 9 ICSU Scientific Unions.

Dr. Francis Gudyanga, the Chairman of the Research Council of Zimbabwe, welcomed delegates and hoped that the meeting would meet the expectations of the ICSU Executive Board resolution of 2004. Professor Ana Maria Cetto, the ICSU Secretary General, was impressed by the turn out to the meeting which she felt demonstrated that African countries had taken it upon themselves to do something about science and technology for the continent and for their own countries.

1.2 The Development of an ICSU Strategy – Presentation by Professor Thomas Rosswall (ICSU Executive Director)

Professor Thomas Rosswall was pleased to note that one of ICSU's priorities had come to fruition. He noted that ICSU is a non – political membership organisation that was established in 1931 although the roots for its establishment date back as far as 1899. Its main objective is strengthening international science for the benefit of society. He highlighted some of the major successes of ICSU as follows:

- the International Geophysical Year (1957-1958)
- the International Biological Programme (1964-1974)
- the four Global Change research programmes,
- Freedom in the Conduct of Science.
- Coordinating scientific input to the World Summit on Sustainable Development (WSSD) and the World Summit on Information Society (WSIS).

1.2.1 The Mission of ICSU

ICSU mobilizes the knowledge and resources of the international science community to:

- Identify and address major issues of importance to science and society
- Facilitate interaction of scientists across disciplines and among nations
- Promote participation of all scientists regardless of nationality, race, religion ethnicity or sex
- Provide independent, authoritative scientific advice

ICSU has a membership of 27 Disciplinary International Scientific Unions, 9 of these were represented at the First ICSU Regional meeting: 101 National Scientific Members, of which 15 are from Africa, Interdisciplinary Bodies and Joint Initiatives established by the members e.g. CODATA, DIVERSITAS, INASP, SCOR, WCRP.

In developing a strategy, ICSU is guided by the following:

- ICSU external assessment of 1996
- Committee on Scientific Planning and Review (CSPR) 1998
- ICSU 27th General Assembly resolution for the Executive Board to develop a strategy, (the report to be presented at the 28th General Assembly, in October 2005)
- Foresight Analysis - the summary of foresight studies and the iterative process to identify key issues for ICSU.

In its foresight analysis, ICSU has identified the following key issues:-

- Sustainable development (including water, energy, health, food, bio-diversity)
- Data, information and the digital divide
- Capacity building and the investment in science
- Science, ethics and society
- Nanotechnology, molecular bio-sciences, natural and man-made hazards, cognitive neuroscience, complex systems science

Furthermore, the following priority area assessments were carried out:

- Environment and its relation to sustainable development (report published)
- Data and information (final draft for review)
- Capacity building (final meeting held during the week ending 8th October 2004)

Additional components of the priority areas are:

- Science for sustainable development (final meeting in October 2004)
- Energy and sustainable societies (completed)
- International Polar Year 2007- 2008 (first phase completed)
- Basic science and basic research (completed)
- Roles and responsibilities of science and society (under review)
- Regional Offices (ongoing)
- Review of membership and structure (ongoing)

ICSU has developed and will continue to foster relationships with the following strategic partners:

- Third World Academy of Sciences (TWAS)
- UNESCO
- International Social Science Council (ISSC)
- World Federation of Engineering Organizations (WFEO) and the Council of Academies of Engineering and Technological Sciences (CAETS)
- Inter-Academy Panel (IAP) and Inter-Academy Council (IAC)

ICSU links science to policy through planning and coordinating international scientific programmes, sponsoring global observing systems, involvement in international assessments and speaking for the international science community in an international policy context.

The ICSU Strategy for 2006-2012 includes the following issues:

- Focusing on major issues of importance to science and society
- Promoting multidisciplinary and international collaboration
- Promoting participation of all scientists
- Providing independent, authoritative advice

The draft strategy document for ICSU will be sent out early 2005 and the second draft with feedback will be sent out in May 2005.

1.3 The COSTED Review and the ICSU Regional Offices – a Major ICSU Initiative – Presentation by Professor Ana María Cetto (ICSU Secretary General)

The Committee on Science and Technology in Developing Countries (COSTED) was established in 1966 and it was co-sponsored by UNESCO. The central Secretariat was established in India since 1983. It was merged with International Bio-sciences Network (IBN) in 1994. Regional Secretariats for Africa were in Durban, South Africa and Accra, Ghana. After the review of COSTED in 2002, it was recommended that COSTED be closed down and ICSU Regional Offices be established in Sub-Sahara Africa, Asia, the Arab Region and Latin America/Caribbean. The ICSU General Assembly accepted the report and decided to follow the recommendations made in 2002 with the provisions that ICSU provides small core support with members from the North also assisting individual regional offices financially and technically to complement efforts by the host countries. Close links with TWAS and UNESCO regional offices were to be maintained.

1.3.1 The ICSU Regional Office

All National Members in the regions were invited to offer to host the regional offices. Regional meetings to set the agenda were held. The criteria used for selection of the location were that the host country should:

- be able to have support from the region
- be located in an appropriate environment (National ICSU Member or appropriate regional body involved in science)
- have stable financial support from the host country/institution
- have an efficient communication environment
- be close to international airport with good connections to all parts of the region and
- have no visa restrictions.

1.3.2 The ICSU Regional Office for Africa

The ICSU Office invited offers to host the Office and proposals were received from the National Members in Kenya, South Africa and Zimbabwe. Informal meetings of African National Members in February 2004 recommended that ICSU accepts the offer from South Africa. At the same time, the Interim Committee for Africa was established by the ICSU Executive Board. ICSU and South Africa then drafted a written Memorandum of Agreement (MoA) for the establishment of an office at the National Research Foundation in Pretoria. The position of Director of the Office will be advertised in due course. The official opening for the Regional Office for Africa will be in March 2005 in the presence of the ICSU Policy Committee on Developing Countries (PCDC) and the first meeting of the Regional Committee for Africa.

The Basic Functions of the Regional Office shall be to:

- Promote increased participation of scientists from developing countries and regional scientific organizations in ICSU (including its Unions and Interdisciplinary Bodies)
- Assist ICSU in strengthening science and capacity building in developing countries through South - South and South - North collaboration
- Strengthen collaboration with networks and organizations of relevance in the region.

The Regional Office set-up shall comprise the following:

- A Regional Committee will set the agenda for the office, define the work for the office staff and oversee the regional programme implementation
- Chair of the Regional Committee as *ex officio* member of PCDC
- The Regional Director will be appointed by ICSU after consultations with the Regional Committee
- Two or more scientific staff and support staff will be appointed by the host institution.

The current status of other regional offices is that:

- for Asia and the Arab States, consultations are ongoing
- for Latin America/Caribbean, the office will be established at the Mexican Academy of Sciences, Mexico City supported by CONACYT.

Observations and conclusions made by the participants were that:

- In 1966, the issue was mainly scientific but now close contact and collaboration was required so that Developing Countries science is brought into international science.
- Africa's regional office is the first to be implemented because it is implementing the programmes faster compared to Latin America where in Mexico, the host country, implementation has been slow.
- Participants suggested that the Regional Offices should be moved to other countries in the region after a defined period' the Secretary General assured the participants that South Africa has a 10 year agreement which will be evaluated after 5 years.
- Good projects will always get good funding even if there are limited funds for research and development.
- Decentralization of offices is a good move as regions do not have to wait for directives from Paris' the regional offices had enough flexibility to choose their own path.
- External funding has caused some of the projects to be implemented in modified form to suit the needs of the funding body.
- Because ICSU is a respected body internationally it will support efforts of local scientific communities in engaging Governments.
- Under the maxims, "No science no future" or "Knowledge is power", the role of Governments and the African Union could be brought to bear in support and marketing of scientific work. A marketing strategy about science had to be developed.

1.4 The START Experience in Africa – Presentation by Professor Eric Odada

A presentation by Eric Odada provided an overview of the Global Change System for Analysis, Research and Training (START) programme. The following highlights emerged from the presentation:

1.4.1 The Mission of START

- To develop regional networks of collaborating scientists and institutions
- To enhance scientific capacity in developing countries
- To mobilize the resources for activities in developing countries

The functions of the START regional centres/secretariat are the following:

- Serve as the information and coordinating centre for its networks of regional scientists and their collaborative projects
- Host the regional START secretariats that serve the regional coordinating committees and collaborative research networks
- Manage and archive regional data and other information on global change research, including rosters of regional scientists and projects
- Assist with identification of needs for capacity building and provide facilities for training scientists and policy makers from the region
- Provide a multi-disciplinary setting within which the results gathered from various disciplines and regional institutions can be synthesized into a relevant regional policy framework.

1.4.2 Portfolio of START Activities

- Collaborative Research Networks which involve land use change and its Impacts on terrestrial ecosystems, regional climate variability and change, changes in atmospheric composition and its impacts and global change and coastal zones, land-ocean interactions, and international waters adaptation and vulnerability to global change impacts
- Science-Policy Networks
- Capacity Building activities which have seen the following being done to fulfill this role:
 - ✓ Regional science planning and research workshops (70+)
 - ✓ Collaborative research networks (15+)
 - ✓ Short term Fellowships (112)
 - ✓ Visiting scientists & lecturers (21)
 - ✓ Dissertation/PhD fellowships (20)
 - ✓ Small grants program (46)
 - ✓ Young Scientists Awards (163)

The following criteria are used for measuring success of START:

- Establishment of infrastructure for collaborative regional research
- Enhanced regional cooperation in Global Change Research
- Increase in research initiatives and publications
- Increased understanding of Global Change Issues at regional levels
- Increase in number of trained developing country scientists
- Enhanced resource mobilization
- Dialogue with policy community and
- Impact on policy formulation.

1.5 Providing Access to Scientific Publications – Presentation by Professor Carol Priestly, President of INASP.

The International Network for the Availability of Scientific Publications was established in 1992 as a programme of the CDSI and ICSU and is now an ICSU Interdisciplinary Body. It has the vision of all people able to access and contribute information, ideas and knowledge necessary for sustainable and equitable development. The mission of the organisation is to enable worldwide access to information and knowledge with particular emphasis on the needs of developing and transitional countries. The stakeholders of INASP are the end users made up of researchers and scientists, educators and development practitioners as well as the enablers who are the information and communication managers, enabling institutions and bodies, for example, the ICSU Regional Office for Africa.

INASP pursues its mission by carrying out the following activities:

- improving access to scientific and scholarly information
- catalysing and supporting local publications and information exchange
- strengthening local capacities to manage and use information and knowledge
- fostering in-country, regional and international cooperation and networking
- advising local organisations and funding agencies on ways to utilise information and publishing to achieve development goals

INASP's core activities include advisory and liaison services, links and resources, access to Information and Health Links. It has 3 main types of publications which are INASP Newsletter, directories / reference and manuals / guidebooks. It focuses on the programme areas of research, library support, publishing support initiatives, Health and Rural development.

A Programme for the Enhancement of Research Information (PERI) was developed and piloted throughout 1999/2000. The objective was to support information production, access and dissemination using Information and Communication Technologies (ICTs). Country coordinators or coordinating teams plan and facilitate locally and full time support from INASP staff in the UK is available. The programme has 6 major components:

- Delivering Information through the ICT- enabled national access to international research findings. The content and resources are demand driven. INASP negotiates with publishers and database owners for country-wide access to information resources and databases. Country coordinators request according to priorities. INASP assists in mobilising funding and also works with networks of organisations for example CGIAR. To date over 12,000 full text journals are available.
- Disseminating national and regional research by increasing visibility of national research outputs. This is important to assist the establishment of regional online services (e.g. CARINDEX, AJOL) to enable the results of research undertaken and published to become more widely known and accessible. This will help to increase worldwide knowledge of indigenous scholarships and to assess the impact of using the internet to promote journals through supported projects or sectors.
- Enhancing ICT skills through the use of electronic resources and tools. This focuses on internet training through a 5 series Workshop which involves using the Internet, electronic journals and ICT Library Management, Web Page Design and Authoring, leading to Network & Library Web Pages, ICT Troubleshooting for Librarians and Bandwidth optimisation and management. The courses are in English, French, Spanish and Russian
- Strengthening local publishing by assisting publishers and editors to improve their publishing skills through publishing and information management workshops, online journal publishing projects, study visits and 'mentorship' through partnership for African Crop Science Journal with CABI and handbooks, manuals and resource packs.
- Supporting country collaboration and networking for stronger local mechanisms for information resource sharing.
- Supporting research and development.

The participants made the following comments on this presentation:

- governments should be encouraged to implement research results.
- it is important to involve policy makers in project formulation meetings so that they appreciate the expected benefits to society
- research results should be summarised so that they are easily understood by policy makers and intended beneficiaries
- It is necessary sometimes to approach intended beneficiaries with project proposals who will force politicians to implement the projects.
- local publications in most African countries fail due to lack of basic printing equipment.
- Young scientists should be taught how to write for peer reviewed journals.
- Kenya and Zambia requested both scientific writing and journal editing workshops for their countries.

SECTION 2 : BUILDING ON EXPERIENCES – STRENGTHENED PARTNERSHIPS

2.1 The Role of Third World Academy of Science (TWAS) in Strengthening Science for Africa – Presentation by Professor Christopher Chetsanga on behalf of Professor Mohamed H.A Hassan (Executive Director of TWAS)

TWAS was founded 21 years ago. It has a membership of 705 individuals. TWAS has four affiliated networks, TWNSO founded in 1988 which has a membership of 160 organisations: TWOWS founded in 1989, with current membership of 2 718 individuals; IAP, founded in 1993 with a current membership of 90 individual academics and IAMP, founded in 2000, with a membership of 45 individual academics.

TWAS focuses on five major strategic objectives as it strives to fulfill its role of strengthening science in the South. These objectives are:

- Recognizing, encouraging and awarding the pursuit of scientific excellence in the South. This is done through the election of outstanding scientists into the TWAS fellowship, TWAS prizes for young scientists and the Trieste Science Prize. 350 scientists have been honoured for their achievements to date.
- Addressing the needs of scientists and research groups in the South. Research grants are awarded to young scientists in basic sciences and support extended to research groups in Less Developed Countries (LDCs). 1 600 grants have been awarded so far.
- Promoting South – South cooperation in education, training and research. This is being done through fellowships for postgraduate education & for postdoctoral research and advanced training, associateships at centres of excellence in the South and research professorships in LDCs.
- Fostering South – North cooperation. TWAS organizes programmes for visiting scientists, international scientific meetings are held in the South, there are national/regional centres of excellence and support for young science academies and regional network academies.
- Harnessing Science & Technology for sustainable development through, for example, institutions of excellence which share and disseminate innovative experiences as well as carrying out joint research programmes.

TWAS is in the process of setting up regional offices in Rio de Janeiro, Alexandria, Nairobi, Bangalore and Beijing. The main objectives of these offices are the promotion of TWAS activities in the regions and assessment of their effectiveness, strengthening collaboration between TWAS members and assistance of networking with young scientists in the region as well as the promotion of public awareness and understanding of science in the region.

The proposed activities of the regional offices include:

- Disseminating information about TWAS programmes throughout the region
- Identifying outstanding scientists in the region (especially women) and nominating them for TWAS prizes and membership
- Identifying leading research and training institutions in the region for participation in TWAS South - South exchange programmes
- Organising periodic meetings of TWAS members in the region and scientific events in conjunction with these meetings
- Establishing an award for young scientists in the region in recognition of their scientific achievements
- Establishing a website for the regional office and an electronic newsletter
- Facilitating contacts between TWAS members and young talented scientists in the region.

Participants made the following observations about TWAS:

- Many organisations working towards improving Africa's development by assisting its science and technological efforts should strengthen collaboration to avoid duplication of activities and conflict of interest,
- Young scientists are not getting enough support from established scientists.
- Communication problems in Africa affect information dissemination as research results are not reaching end users.
- The prizes awarded by TWAS do not recognise the social sciences.

Conclusions made based on these comments were that:

- Different organisations have different mandates and it is important to strengthen collaboration between organisations. TWAS focuses mainly on South-South and South-North collaboration in Science and Technology for the benefit of the Third World countries
- Thomas Rosswall will arrange for a meeting between ICSU and TWAS so that they can discuss how their objectives and programmes can be integrated to strengthen science in Africa.
- results from scientific research should be utilised so that they benefit intended people
- Currently the major approach of doing research is the top down method, a bottom up approach should be employed where beneficiaries identify research priorities for discussions with policy makers and scientists.

2.2 The UNESCO Science Programme for Africa – Presentation by Professor Juma Shabani

UNESCO supports and funds various science programmes. The UNESCO regional office for S & T is in Nairobi, Kenya. There are 10 cluster offices and in addition, the Abdul Salam International Centre for Theoretical Physics in Italy and the UNESCO Institute for Water Education in the Netherlands.

Some of the programmes funded by UNESCO include the following:

- Environment and sustainable development – this encompasses water interactions, ecological sciences, earth sciences, sustainable living in small islands and coastal regions and the UNESCO Intergovernmental Oceanographic Commission.
- Capacity building in science and technology for development – the major focus is on capacity building in the basic and engineering sciences and science and technology for sustainable development.
- Intergovernmental programmes –these include the International Hydrological Programme (IHP), Man and Biosphere Programme (MAB), Intergovernmental Oceanographic Commission (IOC) and the International Geo-science Programme (IGCP).
- Flagship programmes for Africa – these programmes include sustainable integrated management and development of arid and semi-arid regions of Southern Africa, regional post-graduate training school on integrated management of tropical forests as well as science policies and investment programmes for poverty reduction in Africa.
- New Initiatives – UNESCO has an international programme on basic sciences.

UNESCO and NEPAD have a partnership which is a NEPAD initiative. NEPAD issues have been integrated in the medium term strategy and bi-annual programmes. UNESCO and NEPAD had a seminar on "from vision to Action" in Ougadougou in 2003.

The following observations and comments were made by the participants:-

- NEPAD and UNESCO should maintain separate mandates and collaborate when necessary
- Participants questioned whether UNESCO was getting ideas from NEPAD or it was the other way round. Others felt that UNESCO was assisting to implement NEPAD agendas. Professor Shabani clarified that NEPAD came up with programmes and approached UNESCO for assistance. Consultations are made at different levels.
- Participants felt that there is need to use NEPAD to access resources.
- There was concern on how UNESCO makes follow ups on scientific programmes that they are implementing.

2.3 The NEPAD Science Focus – Presentation by Robert Kriger

In the absence of a representative from NEPAD Science Desk, Robert Kriger of the NRF reported on recent NEPAD developments. In November 2003, the first NEPAD S&T Ministerial conference was hosted in Johannesburg, South Africa. This meeting, attended by some 36 S&T Ministers or their official representatives, drafted and deliberated on several key documents. These were as follows – in summary:

2.3.1 Science and Technology Declaration

- Governments to channel at least 1% of GDP to research and development
- Equitable and sustainable development of science and technology
- NEPAD Ministerial Commission of Science and Technology chaired by South Africa for the next two years on rotational basis

2.3.2 Outline Plan of Action

- 12 Flagship programmes areas were identified, viz.
- Biodiversity science and technology
 - Biotechnology
 - Information and Communications Technologies
 - Energy technology
 - Materials science
 - Space science and technologies
 - Post-harvest food technology
 - Water sciences and technologies
 - Indigenous Knowledge and Technologies
 - Desertification research
 - Science and technology for manufacturing
 - Laser technology

It was reported that there had been some controversy around these areas, especially regarding the absence of HIV / AIDS, the social sciences and socio-economic issues, for instance.

Key features of the plan of action are that cross-border activities are to be fostered at regional levels, i.e. within the five AU regional economic zones. Centres and networks of excellence within the above-mentioned areas, innovation hubs and speeding up of human capacity development are high on the agenda of the Commission.

Current activities which are coordinated by the NEPAD Secretariat – S&T Office include the planning and hosting of five regional seminars during November 2004 where regional representatives will be making inputs into an overall business plan which is to be finalised in January 2005 at a next Steering Committee

meeting. At this meeting accreditation criteria for NEPAD S&T projects will also be tabled with recommendations made to the Ministerial Commission.

Furthermore, work is underway on developing a set of African S&T indicators: establishing current S&T / R&D infrastructure, facilities, funding mechanisms, etc. per questionnaire and interviews; a feasibility study on NEPAD S&T Fund is being undertaken. At a regional level, regional S&T representatives are currently being appointed.

Participants made the following comments and recommendations about NEPAD in relation to the development of science in Africa:-

- Participants raised concerns on the political alignment of NEPAD. There were fears that if scientists relied on organisations such as NEPAD and the African Union, there might be the danger of politicizing their work.
- The NEPAD science agenda is driven by governments only and this slows down the implementation of programmes.
- Participants wanted to know for how long South Africa will chair the commission and it was pointed out that the chair will rotate every three years to other countries in the region.
- There were questions on how NEPAD will fund projects and mobilize more resources for S and T. The presenter informed the participants that a feasibility study to establish a NEPAD endowment fund will be done, discussions with the World Bank and other financial institutions will be conducted in this regard. However at the moment countries have to bring in their own funding and a business plan is due to be developed in January 2005.
- There were fears that if the World Bank was engaged the grants will have strings attached to them.
- The ICSU Regional Office for Africa should find ways to engage NEPAD in discussions on strengthening S & T.
- There is need through NEPAD to increase the awareness of governments on the importance of research and development.

2.4 International Foundation for Science – Support for Young Researchers in Developing Countries - Presentation by Professor Sara Feresu, a member of the Board of Trustees of IFS

IFS mission is to strengthen the capacity of developing countries to conduct relevant and high quality research on the sustainable management of biological resources. This is done through the identification of young promising researchers through competitive grants meant to support them in their early careers to get them established and recognized as researchers.

Grants may be used to purchase equipment, supplies, literature, local travel, extra personnel and arrange field activities. Proposals may be from natural or social science disciplines. Applicants to this grant must be at the beginning of a research career, attached to a national university or research institution in a developing country and carrying out a research project in a developing country. To date, a total of 1 587 grants have been given to Sub – Saharan Africa and 1 134 grantees have been assisted so far. Sarah Feresu also informed participants that the TWAS programme is similar to the one for IFS.

SECTION 3: SHAPING THE FUTURE – WHAT SHOULD THE REGIONAL OFFICE DO?

3.1 Capacity Building for Science in Africa and How the Regional Office Can Assist – Presentation by Professor Marian Ewurama Addy

According to ICSU, “Capacity building in science consists of activities that lead to the establishment or strengthening of a corps of qualified scientists with supporting infrastructure including facilities and working conditions that enable them to conduct research, education, training and advisory work, particularly in areas of direct social significance”. According to UNESCO, “There can be no peace without development and no development without peace. Science has been used for coping with basic human needs in food, water, energy, healthcare, environmental protection and the alleviation of poverty. It must now be used to promote international cooperation, democracy and peace.”

Scientists from the developing world have been left out of the international science agenda and the establishment of Regional Offices would ensure their contribution to issues that affect development. It is important that Regional Offices develop initial realistic and achievable agendas that would prioritise the needs of the regions and develop programmes that work towards fulfilling these needs.

In developing countries, science is being used, or should be used for coping with basic human needs in food, water, energy, healthcare, environmental protection and the alleviation of poverty. Capacity building in developing countries is likely to have different emphasis from capacity building in developed countries. There is need to invest massive capital in human resources.

The ICSU Regional Office will assist in capacity building as one of its main functions by promoting the further development and strengthening of science in the context of regional priorities and bringing the science of developing countries closer to ICSU. This will be done through networking where countries will share experiences through the internet or other means. Investment in technological capacity in developing countries is a necessity and should be standardized.

Capacity building in human resources will be done through the development of a programme for training, at the pre-tertiary level, for example training the teachers on computational skills. Scientists engaged in topical development issues of interest to the region can develop programmes to include young scientists as apprentices to more experienced “Master Craftsman concept” or mentoring. Joint research programmes, some with African scientists outside the continent to attract them to come home even if for periodic visits can also be arranged.

Gender was noted as another issue of concern, it is necessary to involve women at all levels. Policy makers can give incentives to science students so that a critical mass is developed.

The Regional Office should work towards the improvement of the relationships between governments, the Universities and the private sector. Industries as one of the major beneficiaries of science innovations should be encouraged to plough back some of their profits in capacity building. The government in countries where there is a weak private sector has to provide the funding base for research activities. It is important to ensure the full participation of policy makers and engage them as partners in project orientation meetings where all project aspects are discussed. Government participation in programme formulation enables budget allocations to these research projects. It might also be a better tactic to sell a project idea to the most influential politicians in parliament. Better still, scientists can approach intended beneficiaries with project proposals, who would in turn force politicians to implement the projects.

The Regional Office for Africa could access resources by forming partnerships with institutions that have success stories in projects implemented. Bodies that have a political influence such as NEPAD can be used to access resources since it has an influence on politicians who are responsible for the distribution of resources.

It is important to create regional or national policies to create conducive operating environments for scientists. Scientists would be encouraged to work harder if due recognition of their work is forthcoming and they have the infrastructure to enable them to do their work well capacitated. In the end, it is important to utilise results from scientific research and this requires effective communication with policy makers and the beneficiaries. An anonymous quote is relevant to indicate the importance of information *“all information has potential value, but that value can only be realised if the information is used”*.

In the above context, ICSU has the following major roles:

- Strategic planning and networking through developing programmes in which all (or most) can participate
- To mobilize financial resources for research programmes
- Influence national or regional policy to create conducive environment for scientists through the recognition of their work and the implantation of their recommendations at macro level.
- Advocate for and assist during the formulation of progressive S & T policies for government and finding ways to get such policies adopted and implemented
- Strengthening participation of existing National Members and other networks that are outside ICSU
- Recruiting more members to ICSU.

- Office should act as a reference point for projects and provide information on work that has been done and the quality of results and also advice on what other projects need to be done according to priority.

The following comments and observations were made about capacity building for science in Africa:

- Capacity needs for Africa are known; it is up to each country to define clear policies and implement training programmes for capacity building
- The regional office should engage governments, through the ministries of Science and Technology, research councils and institutions on improving Africa's capacity building initiatives.
- African countries should minimise reliance on external funding and engage in programmes that are domestically funded. External funding is not sustainable as it is normally for defined short periods.
- Institutional capacity building must be done through resourcing scientists working in research institutions and providing funding for running their laboratories.
- On the issue of a 'critical mass' of scientists, there was concern regarding the exodus of scientists to join fields other than research and development. Although it is difficult to quantify how many scientists would make a critical mass, it was agreed that every country/ region must determine how many people they needed to run certain programmes.
- There is need to improve relations with governments, private sector and universities. Industry is important for the application of innovations and should be encouraged to plough back some of their profits in capacity building.
- There is no need to do 'the catching up game' with developed countries. What is necessary is for developing countries to do their own science and take leadership positions so that the North will not dictate the pace to them.
- The Regional Office needs to work on improving communications amongst scientists and ensure access to scientific publications using the services of organisations such as INASP.
- START has demonstrated how good proposals, good researchers, transparency and accountability can lead to successful project implementation.

3.2 Strengthening the Involvement of African Scientists in International Programmes - Presentation by Dr. Francis Gudyanga

Discussions on this topical issue were led by Dr Francis Gudyanga. Participants broke into group discussions on how scientists can participate fully in international programmes. The following were considered as the ways in which this can be achieved.

ICSU needs an African voice in science to increase the participation of Africans in global issues that affect all people but are normally not consulted widely. This can be done by increasing the African scientists' membership composition and the posts African scientists hold in the executive bodies of international organisations to influence decision making on International Programmes that are relevant to Africa. For example, currently only 15 countries are members of ICSU, two of IUPAC and three of IUPAP. Only 10 African countries have established Academies of Science. Thus, it is important for African scientists to increase membership in these international organisations.

The African voice needs to be heard through representation in Unions, introducing students to international programmes and hosting of international events by African countries or organisations. The Regional Office should assist centres of excellence in their bid to host events that would attract participation of scientists from outside the region. These centres would also be used to attract visiting lecturers and scholars to Africa for information transfer.

The creation of awareness of international programmes would be made easier through the creation of a website and a database containing information about the programmes and the scientists involved in different programmes to enable networking and the wide dissemination of information. The Regional Office should therefore acquire the necessary infrastructure for networking with relevant institutions and a framework of how cooperation can take place and instruments for networking need therefore to be developed.

Prizes may be used as an incentive to students so that they attend international conferences. International bodies may be asked to attend workshops that are undertaken in Africa and this will act as a platform for African scientists to give participants more information about their organisations. Scholarships to young scientists may include the payment of membership fees to international scientific bodies. Furthermore, international scientists may have young scientists assigned to them so that they act as mentors to the young scientists.

SECTION 4: THE REGIONAL DIMENSION

4.1 How the Regional Office Can Make a Difference

Dr. Khotso Mokhele led the discussion. The ICSU Regional Office for Africa has continental partners who include ICSU National Members, other National Academies, National Governments, NEPAD, TWAS, AAS and some funding agencies. Participants were asked to reflect on why a regional office is considered necessary.

The Regional Offices would assist ICSU provide a better service to developing countries through:

- Enhancing the participation of developing country scientists and regional scientific organisations in ICSU activities.
- Assisting ICSU strengthen science and capacity building in developing countries through South-South and South - North collaboration.

ICSU expects the Regional Offices to help promote increased participation of developing country scientists in ICSU through increased national membership and stronger participation in Scientific Unions to get the views and contributions of developing countries into agendas of ICSU. Other expected activities of the Regional Office include:

- Collecting information on locally developed strategies and priority needs and scientific expertise within regions and sharing it with ICSU and its partners
- Assisting ICSU and its members in their strategic planning for activities in the regions and ensuring that plans and activities reflecting regional priorities are linked to the scientific community in the regions through networking with relevant organisations
- Developing and maintaining links with national and regional scientific institutions, societies, academies and governments to strengthen ICSU collaboration with them
- Facilitating the adherence to ICSU of new National Members
- Facilitating the free flow of scientists and scientific knowledge across borders
- Providing support and helping with coordination when required of scientific networks in the region and initiate new networks when identified as regional priorities.
- Establishing a database of experts and helping ICSU with identification of scientists for membership of committees and participation in activities with ICSU.
- Acting as focal points for regional programme activities of ICSU and members upon request
- Efficient transfer of information from ICSU and its family members
- Develop collaborative partnerships with UNESCO Regional Offices for science, and major ICSU partners such as Third World Academy of Sciences

(TWAS), the Third World Network of Scientific Organisations (TWNSO), and the Third World Organisation for Women in Science (TWOWS)

The following is a summary of the views expressed by the participants:

- The office will help to identify needs and priorities in Africa and steer events from 'home' and avoid waiting for decisions in Paris.
- The office will act as a facilitator for programmes.
- More coordination of programmes will be possible.
- Networking will be made easier through the availability of an up to date database.
- Membership to ICSU and its Scientific Unions will increase.
- Africa will have more power and control over their programmes.
- The Regional Office might assist to mobilize funds for programmes.
- The Regional Office may have some influence on governments to prioritise and increase funding for Research and Development.
- ICSU needs Africa's contribution to science and the regional office will facilitate this contribution.
- There are global problems which cannot be addressed by developed countries only but which African Scientists have to contribute to as well.
- Africa has to be able to set the agenda for the future without having to be dictated to by developed countries.
- The health sector has been sidelined from many research agendas for a long time, it is necessary for Africa to include it on its research programmes and the regional office is likely to be more responsive to this need as it is based in the environment where the need is felt.

4.2 International Union for Geodesy and Geophysics (IUGG) Initiatives for Africa as an illustrative case – Presentation by Professor Charles Merry

The objectives of IUGG are to assist geo-scientists in Africa to realise their full potential, the promotion of and support of geo-science study programmes, generation of decision making information to improve the quality of life in Africa and using the results in outreach programmes for use in the public and political arena. Geo-sciences in Africa are still in a preliminary planning stage. The IUGG proposes to set up Geosciences in Africa (GIA) programme to be done jointly with other Geo-Unions. The objective is to initiate a programme that is Africa driven and that will develop the full potential of geoscientists in geo-hazards management.

IUGG also intends to use the activities of GIA in outreach programmes in the public and political arena. The initiative will tackle issues of volcanic activities, earthquakes, floods, landslides, water quality and management, health problems related to the environment, and the use of remote sensing in monitoring of geo-hazards. Much wider consultations will take place before the proposal is finalized. It is also hoped the ICSU Regional Office for Africa will be consulted to avoid mistakes and duplication of activities

SECTION 5: FROM WORDS TO ACTION

5.1 Setting the Agenda - Role of the Regional Office for Africa – Presentation by Manuel Luis Chenene

Dr. Chenene began by discussing what Africa needs. He suggested the following as the major needs of Africa if it is to excel in science and technology: capacity building for science at individual and institutional levels, fundraising mechanisms for science from different sources be it public, private or the government, access to scientific publications and strategic partnerships at South –South and North – South levels.

The ICSU mission is to identify and address major issues of importance to science and society, the facilitation of interaction amongst scientists across all disciplines from all countries, the promotion of all scientists without any being marginalized and the provision of independent, authoritative advice to stimulate constructive dialogue between the scientific community and all other sectors of the economy. In the context of the ICSU Mission, the Regional Office will focus on:

- i) Collecting and circulating information about scientific activities in the region and the organisation and coordination of a regional scientific network and connecting it to the ICSU network.
- ii) Assisting ICSU and its members in their strategic planning for activities in the region and developing and maintaining links with national and regional scientific partners.
- iii) Facilitating the free flow of scientific resources across borders for which a data base of experts in the region has to be established.
- iv) Creating an appropriate environment for progress of indigenous and traditional knowledge and the creation of centres of excellence.
- v) Above all, the Regional Office must be the link between regional scientific organisations, ICSU and its partners UNESCO and TWAS.
- vi) Regional priority setting will be necessary for strengthening science in the region and further promotion of science and technology for sustainable development.

The above focus is consistent with the decision of the ICSU Executive Board at its 86th meeting in February 2003 where it was agreed that the ICSU Regional Offices shall:

- Promote increased participation of developing country scientists and regional scientific organisations in ICSU programmes and activities and
- Assist ICSU in strengthening science and capacity building in developing countries through South – South and North – South collaborations.

At this stage, participants went into groups to try and answer the following questions relating to the organisation:

- i) Where are we?

- ii) Where do we want to be?
- iii) How do we get there?
- iv) Date for the establishment of the office and
- v) What needs to be done in the interim?

5.2 Deliberations by Participants on the ICSU Regional Office for Africa

The deliberations in the groups brought up the following issues and recommendations which were shared in plenary:

5.2.1 Group 1

The group suggested that another focus of the Regional Office be included as "**setting-up and enforcing collaboration with existing networks**". While largely confirming the main focus areas of the Regional Office as shared during the presentation, the group expounded on these to include certain specific dimensions as illustrated below.

The Functions of the Regional Office were presented as the following:

- i. Collect information on locally developed strategies and priority needs, and scientific expertise within the regions and share this information with ICSU and its partners (the dimension emphasised was that of locally developed strategies and priority needs...)
- ii. Assist ICSU and its members in their strategic planning for activities in the regions and ensuring that their plans and activities are well linked to the science community in the regions, relevant networks and organizations and reflect regional priorities (emphasis being placed on linkages with the local science community, relevant networks and reflecting regional priorities)
- iii. Develop and maintain links with national and regional scientific institutions, societies, academies and governments, including current National Members, in order to strengthen ICSU collaboration with them (the emphasis being on providing the linkage between ICSU and national and regional entities)
- iv. Help facilitate the adherence of new ICSU National Members. This would preferably be done in close collaboration with the InterAcademy Panel for International Affairs (IAP) and the Third World Academy of Sciences (TWAS) (this being an additional area for mobilization of new members)
- v. Facilitate the free flow of scientists and scientific knowledge across borders
- vi. Provide support and help with co-ordination, if needed, to scientific networks in the region and initiate new networks, where this has been identified as a regional priority (additional focus area)

- vii. Assist the ICSU family in identifying scientists for membership of committees and participation in activities within the ICSU family through the establishment of a data base of experts (this being an element de-linked from focus area (v) above, the two were linked in the presentation)
- viii. Upon request, act as focal point for regional programme activities of ICSU and its members (an additional focus area)
- ix. Ensure efficient information transfer from ICSU and its family members to the scientific community in the region (a more explicit statement of what was in the focus areas stated in the presentation) and
- x. Share information and develop collaborative partnerships with UNESCO Regional Offices for Science as well as with other major ICSU partners such as TWAS, the Third World Network of Scientific Organizations (TWNSO) and the Third World Organization for Women in Science (TWOWS) (an elaboration of what was stated in the presentation).

All in all, the group's submissions added more concreteness to the focus areas and emphasised the need for the Regional Office agenda to be driven by the priorities of local science and the local scientific communities.

In addition, the group delineated a wide range of operational responsibilities for the Regional Office. Because of their operational nature, these can all be considered as key deliverables to which the Regional Office is expected to commit itself:

- o Regional committee to assist National Members to impact on ICSU activities.
- o Office becomes the operational arm of the Regional Committee's strategy.
- o Regional Office will develop priority projects for the region.
- o Office will carry out fund-raising activities.
- o Office will assist with the development of Science Indicators for the region.
- o Office will increase membership of ICSU within the region.
- o Sharing of information should include Science Academies.
- o Office to promote the appropriate environment for science including indigenous and traditional knowledge.
- o Visit national members and non-members aimed at positively influencing policy on funding.
- o Ensure that African scientists are involved in international efforts and open new doors and new opportunities and linkages with other organisations with similar objectives.
- o Engage governments in Africa through dialogue and ministerial round table conference to bring to bear on the policies of government in order to draw maximum benefit of the contribution of S&T on commitment of governments to deploying more resources for S&T initiatives.

5.2.2 Group 2

The group came up with the vision and mission of the Regional Office which they suggested should read as follows:

- **Vision: Africa as part of the world of science.**
- **Mission: To facilitate the creation of an enabling environment for the development and application of science for the improvement of the quality of life in Africa.**

The participants in this group re-ranked and added on to the Regional Office focus areas and suggested the following:

- i) Collect information on strategies, priorities, scientific expertise and share with ICSU and others.
- ii) Develop and maintain links with national and regional scientific institutions, organisations, academies and governments.
- iii) Assist ICSU and its members in the strategic planning of ICSU activities
- iv) Share information and develop collaborative partnerships with UNESCO regional offices, TWAS, TWNSO, TWOWS and other partners.
- v) Facilitate free flow of scientists and scientific knowledge across borders.
- vi) Provide support and help with Coordination to scientific networks and initiate new networks.
- vii) Ensure efficient information transfer from ICSU and its family to the region.
- viii) Helps facilitate adherence as ICSU National members in countries in the region.
- ix) Assist the ICSU family in identifying scientists for membership of ICSU committees and establish a database of experts.
- x) Act as a focal point for regional programmes.
- xi) Create appropriate environment for progress of Indigenous and Traditional knowledge.
- xii) Promote the development of laboratories into Centres of Excellence.
- xiii) Facilitate the strengthening of the Science-Policy interface.

The major addition to the submission from group 1 is that the focus areas have been ranked in order of priority.

5.2.3 Group 3

Group 3 came up with the following recommendations for the Regional Office for Africa:

- i) act as a regional databank in collaboration with national focal points
- ii) brokerage function for scientists in the region into international programmes
- iii) Effective continent-wide electronic communication for information dissemination to end user
- iv) Establishment of new ICSU adhering bodies and member societies of Scientific Unions
- v) Increased coordination with ICSU Inter-disciplinary Bodies/International Scientific Unions on the continent.

The submission by the group also confirmed the essence of the earlier presentations. Therefore, there was consistency in perspectives among all the participants regarding the role of the Regional Office.

5.2.4 Plenary discussions

In plenary discussions, the following comments and recommendations were made by the participants in relation to the office's second mandate which reads

“The Regional Office shall assist ICSU in strengthening science and capacity building in developing countries through South – South and North – South collaboration”.

These recommendations were made after participants felt that the misleading impression created by the statement is that they will be making all their scientific efforts for the benefit of ICSU and not the region:

- It was suggested therefore, that this **“shall”**, should read **“Assist the ICSU family in strengthening...”**. Thus the word family should be added to the regional office's mandate.
- Another suggestion was that the same **“shall”**, should read **“Assist in strengthening”** The word ICSU should be deleted.
- Another suggestion for this same **“shall”** was **“Strengthening science and capacity building...”** The words *assist ICSU* should be deleted.
- Some suggested that it should read **“To operationalise ICSU initiatives in strengthening science and capacity building in Africa through South – South and South – North collaboration.”** Regarding this suggestion, participants felt that it is time the North got ideas from the South and not the other way round.

The Executive Director of ICSU was tasked to take these suggestions to the Executive Board for approval and it was felt highly unlikely that the ICSU Executive Board will not approve these because the first two "shalls" were drafted for all regions and it is unlikely that “one size fits all”.

5.3 Increasing Participation and Strategic Partnerships – Presentation by Professor Opuda – Asibo

Professor Opoda-Asibo could not make it to the meeting due to flight complications. However, he sent his paper for circulation to participants. The presentation described strategies for building partnerships in Africa to enable countries to benefit from economies of scale from alliances, team building and the acquisition of technology for research and development.

The purpose of participation and coalition is to enable scientists in the region to effectively use science to develop the region.

This can be done by defining the science agenda, the continuous identification and monitoring of the problem, best practices, development of national development strategies, developing strategies that are evidence based and the outcomes must be measurable in relation to time frame, goals arrived at and benefits to society. The national development strategies must be developed in relation to structures, funding, capacity building, priorities, active research, publications and policies.

The vision of the Regional Office should be to develop partnerships within Africa and the international community to develop and implement science for development at national and continental levels. This should be complemented by a mission, which enhances partnerships as no single country capacity and resources can do it on its own without the participation of public and private partnerships as well as the South – North and South – South collaboration.

A system must be developed and adopted to attain the application of Science for development. This means that systems must be in place for the following:

- Ownership and partnerships at all levels and the promotion of science education and access.
- Capacity building in human resources, collaborative linkages and infrastructure for use in for example laboratories.
- Resource mobilization to enable the creation of a knowledge society in the region through the use of science.
- ICSU African National Members have to draw up priorities and relevant contexts.
- Lead scientists have to be involved as promoters and mentors of science in universities and other science centres in African countries and formation regional groups.
- The promotion of inter- and multi-disciplinary approaches to attaining desirable human values through science and the
- Development of a five-year rolling plan.

In - country action plans should include an analysis of the following:

- The current state of science and the gaps that are in existence.
- Priority analysis of science.
- Development of strategic plans and a costing of these plans.
- Resource mobilization.
- Development of research funds and results management mechanisms.

Performance will be measured based on indicators defined. These however are dependent on the cost effective support of national initiatives, groups, networks and people working on special topics, supporting leading institutions for training, policy analysis and research, advocacy to support partnerships and progress monitoring.

The following are some of the indicators for measuring performance:

- Responses from the coordination of research/science responses.
- Responses generated and used.
- Linkages established regionally and internationally.
- Communication networks established.
- Best practices evidence shared annually.

There should be voluntary member partnership based on the following principles:-

- Transparency.
- Information sharing and the Regional Office should provide avenues for discussion.
- High resource base to enable partnership to occur.
- A working agreement in support of national strategic plans and cooperation with other partners.

The following are some of the strategic considerations that must be taken into account:

- Building on existing efforts that is each country's existing strategic plans should be expanded and experiences shared and replicated.
- Collective efforts on science for development must be scaled up both locally and internationally.
- Partners must believe in synergy for added impact of individual and national efforts.
- The provision of financial and technical resource support to reduce fragmentation and isolation.
- Strategic plans that are based on comparative advantage.

The outputs and milestones for these partnerships should be based on:

- Intensified country level financial mechanisms, activities and strategic plans, capacity and priorities as well as impact monitoring
- An agreement on time framed goals, outputs and milestones.
- Advocacy and political mobilization in national budget speeches, research in development plans and donor supporters such as SIDA
- Increased financial resources through increased investments by member states, donor aid and resource tracking
- Effective partnerships that are based on what ICSU does best that is worth attracting others to the partnership, what others may do in this partnership, information availability through the Regional Office, monitoring and evaluation.

At sub regional partnerships, the following should be prioritized:

- Identification of leading regional institutions for training, policy analysis, research and information exchange
- Examining cross boarder issues collectively
- Sharing centres of excellence in the sub-region
- Thematic approach to problem-solutions.

ICSU should contribute to the partnerships by doing the following:

- Supporting regional and national initiatives
- Advocacy
- Resource mobilization
- Joint programmes in research, training and publications
- Joint degree awards and research involving north- south collaboration
- Joint licensing for intellectual property rights and patents
- Expansion of research and training facilities and
- Meetings for accountability and progress.

The participation and partnership of the development of science in Africa is dependent on access to resources through ICSU and improved technical and human resources.

SECTION 6: DEFINING THE AGENDA

6.1 Increasing Communication – Presentation by Jude P. Bijoux

The presentation highlighted that Africa has four main communication challenges which are language, technology, access and education. The wide diversity of African languages, the undeveloped information technology in Africa, the inaccessibility of most places and the low literacy levels all hinder communication in Africa. For Africa to be in line with the ICSU agenda there is need to identify and address the major issues of importance to science and society; in addition, networking among scientists across all disciplines should also be prioritized. All stakeholders should be encouraged to participate in the international scientific endeavours. The regional office is expected to create a database on locally developed strategies, scientific expertise and the needs of local scientists and share the information with ICSU and its partners. It will be necessary to develop and maintain links with all relevant institutions. At the same time Regional Office needs to facilitate the free flow of scientists and scientific knowledge across borders and share information from ICSU and its family members to the scientific community in the region. The Regional Office is expected to share information and develop collaborative partnership with UNESCO Regional Office for science and other ICSU partners.

The following questions were put forward by Dr. Bijoux for further discussions:

- How will ICSU reach the larger African audience?
- How will it help in promoting and increasing participation of African scientists in its unions?
- How will it ensure that information dissemination will be an important component of all scientific projects?
- Will the regional office really be the vehicle that will link science to the African society?
- How will the Regional office ensure the development of all branches of science on the continent?
- How will the African office ensure wider scientific consultation?
- How will it empower people that are closely associated to it to communicate and disseminate information more effectively?
- How will it strengthen links between the broader scientific network and association?
- What its role will be with regards to regional political organisations e.g. NEPAD, AU and SADC.
- What methods will be employed to ensure effective information flow?

6.2 Challenges Identified by Participants

Participants identified the following as some of the challenges posed on the development of science in Africa:-

- Communication problems which include lack of proper infrastructure. Information is not reaching the intended beneficiaries of research activities because of communication problems that need to be addressed. These problems include language, undeveloped technology and low literacy levels. The Regional Office has to find the best method to disseminate information so that it reaches all scientists in the region. Participants were also encouraged to respond to mail in time.
- Thomas Rosswall suggested that it might be necessary to create a website with information in English, French and Portuguese.
- Where information transfer is slow and expensive, it was suggested that very important information can be sent on CDs by mail.
- Lack of funding for research projects that are of economic value. Some donors may dictate how the money should be used and may withhold funds until their demands are met.
- The Director of the Regional Office should not be involved too much in politics.
- The Regional Office has to identify a wide range of research programmes and prioritize these when giving grants.
- The Regional Office should develop networks of programmes that include research universities.
- Research findings should be simplified into a language understandable by policy makers and beneficiaries
- Absence of Ministries responsible for S & T leading to problems of engaging governments on matters of science for development
- Lack of infrastructure at research institutes leading to African scientists opting for overseas institutions that are better equipped

6.3 Proposed Activities for Regional Office

According to the participants, a summary of the activities of the Regional Office should be:

- Collecting and circulating information to scientists via a website and e-mail.
- Establishing a database of African experts in all scientific fields
- Encouraging and improving capacity building in Africa
- Creating an enabling environment for the progress and contribution to development of indigenous and traditional knowledge
- Promoting establishment of more centres of excellence for research
- Increasing participation of Africa in international programmes through networking of regional scientific organisations with ICSU and its partners such as UNESCO, TWAS, for strengthening of science and its development in the region

SECTION 7: RECEPTION DINNER FOR THE FIRST ICSU REGIONAL MEETING FOR AFRICA AND THE INAUGURATION OF THE ZIMBABWE ACADEMY OF SCIENCES

7.1 Welcome remarks by the RCZ Chairman Dr. F. P. Gudyanga

The Research Council of Zimbabwe hosted a dinner reception in the Great Indaba Room at the Crowne Plaza Monomotapa Hotel to celebrate the inauguration of the Zimbabwe Academy of Sciences. The function was attended by more than 230 delegates who were amongst them participants of the First ICSU Regional meeting, renowned scientists, government officials and invited guests from academia. The Director of Ceremonies was Dr W. Mbizvo, member of the Research Council of Zimbabwe and Permanent Secretary for Higher and Tertiary Education.

Welcome remarks were given by Dr Francis P. Gudyanga, the Chairman of the Research Council of Zimbabwe and member of the Executive Board of ICSU, who introduced the ICSU Secretary General, Professor Ana María Cetto, and the Executive Director, Professor Thomas Rosswall who in turn gave a brief talk on ICSU and the establishment of the ICSU Regional Office for Africa.

Dr Gudyanga explained to the guests that although ICSU was founded in 1931, it has been making efforts to make itself known throughout the African continent. Therefore the attendance of the Secretary General and the Executive Director at this function would be an opportunity for African scientists to get to know more about ICSU.

Zimbabwe, through the Research Council of Zimbabwe, became an associate member of ICSU in 1989 and was admitted as a full member in 1999 and has been active since then. Dr Gudyanga informed guests that he had learnt that real science of consequence happens within the ICSU Scientific Unions (most of whom were represented at the meeting), and thus he encouraged African Scientific organisations to join many appropriate ICSU Unions. He also noted that the contributions of African science to global issues has been insignificant and hoped that the First ICSU Regional Meeting for Africa will change this and make the efforts of the African Scientists felt. Dr Gudyanga informed guests that the dinner marked the final phase in the founding of the Zimbabwe Academy of Sciences which is the 10th Academy on the continent and encouraged Fellows to make their efforts felt on the continent and internationally.

7.2 Keynote Address by Zimbabwe's Minister of S & T Development

The Minister of State for Science and Technology Development in the Office of the President and Cabinet, Dr Olivia Muchena (MP), was introduced by the Permanent Secretary of the same Department, Dr Vincent Hungwe.

Dr Muchena welcomed all delegates to the First ICSU Regional Meeting for Africa and the inauguration of the Zimbabwe Academy of Sciences. She expressed hope that participants to the First ICSU Regional Meeting would take advantage of this gathering to develop a focused agenda and set priorities that will contribute to the economic development of Africa. She informed the delegates that they should not make this meeting another 'talk shop' as has been the case with other pan-African initiatives in Science and Technology. The setting up of the ICSU Regional Office for Africa will benefit not only Zimbabwe in the achievement of science and technology development, but the whole region. At the same time, the Africa Region will assist ICSU in strengthening South - South and North - South collaboration.

The Minister advised the delegates that the people of Zimbabwe have accepted the important role that Science and Technology plays in the development of the country. Thus in the early 1980s, the Government established the Research Council of Zimbabwe with the broad mandate to promote and coordinate science and technology research in the country. The government supports and encourages linkages with other nations and the international community in order for local and regional science communities to benefit from the international science community.

Africa faces more challenges in Science and Technology than other regions in the globe. The major challenges are the effects of HIV/AIDS, the failure to create a critical mass of Scientists due to the brain drain and the continued academic and research culture that focuses on research for promotion and publication in refereed journals at the expense of relevant applied research. This has continued to create the 'ivory tower' stereotype image of African Scientists.

Dr Muchena warned African scientists to avoid the pitfall that some development activists and NGOs have fallen into of not having a relevant agenda. She encouraged scientists to find solutions to challenges such as ***'How can science and technology be used to address the image of Africa as a continent of hunger, disease and poverty? What do African scientists need to carry out R&D for energy development to propel industrialisation through the beneficiation of our mineral and agricultural products which we export in raw form?'*** The agenda should also focus on strategies for challenging African Governments and international partners to put more resources in R&D for Africa's economic development than has been the case hitherto.

As Zimbabwe celebrates the inauguration of the Zimbabwe Academy of Sciences (ZAS), the Minister informed the delegates that though the formation of the ZAS was catalysed by the RCZ, a government agency, the Academy will enjoy full autonomy with no government interference. The government will support the Academy's objectives and programmes as they are in line with the government's development objectives.

The Minister congratulated Professor Christopher Chetsanga who is a fellow of academies such as TWAS and AAS and has contributed immensely to the development of science not only in Zimbabwe, for being elected the inaugural President of the Academy. The First ICSU Regional Meeting for Africa was then declared officially open with the Minister wishing the participants to the meeting fruitful and relevant outcomes..

7.3 Signing Ceremony for the Zimbabwe Academy of Sciences (ZAS)

The Founding Fellows of the Academy who had not signed the ZAS Constitution on 2nd October 2004, when the Academy was founded, took turns to sign-in their names. The signatures were witnessed by The Honourable Minister, Dr O. Muchena, the Secretary General of ICSU, Professor Ana Maria Cetto, and the Deputy Chief Secretary in the Office of the President and Cabinet, Mr. Raymond Ndhlukula, who later handed over the Constitution of the Zimbabwe Academy of Sciences to the Academy's Inaugural President, Professor Christopher Chetsanga.

7.4 Inaugural Address by the President of ZAS, Prof. Chetsanga

Professor Chetsanga welcomed the entire guests and felt honoured that they were part of the people to witness the “birth” of another academy in Africa, The Zimbabwe Academy of Sciences established on 2 October 2004. The Academy has three constituent colleges which are the College of Life Sciences, the College of Physical Sciences and another for Social Sciences.

Each college is to have a Dean who will be supported by Council members. He indicated that the Academy will work closely with the government on national development programmes to accelerate industrialisation in the country so that it benefits from exporting processed goods as raw materials are now not fetching much income on the world market. The Academy will engage the government to explore possible arrangements for internal funding as is the case with Academies in Malaysia and China who are wholly funded by their governments. The ZAS will affiliate with other academies such as the African Academy of Sciences, Network of African Scientific Academies, Third World Academy of Sciences and the Inter Academy Panel.

7.5 Congratulatory Messages from Zimbabwe's Guests

The following organisations gave their congratulatory messages through their respective delegates:

7.5.1 ICSU – Professor Ana Maria Cetto, the Secretary General of ICSU congratulated both the Government of Zimbabwe and the scientific community at the establishment of ZAS. She expressed the hope that the Academy would also cover the Humanities as well and that the female membership will increase. She urged the Government of Zimbabwe to support the Academy and at the same time encouraged the Academy to strive to be self sufficient.

7.5.2 UNESCO - Professor Juma Shabani noted that this was a very important occasion where important initiatives are being witnessed, the launching of the Academy and that of the ICSU Regional Office for Africa. He expressed the hope that the partnership between UNESCO and ICSU shall be of benefit to the two new institutions.

7.5.3 ICSU Regional Office for Africa - Dr Khotso Mokhele was quick to point out that the task of establishing and running the new institutions will not be an easy one. He called upon the science community to come out in support of the new institutions so that Africa's aspirations in the field of science and technology will be achieved and he congratulated Prof Chetsanga, the Government of Zimbabwe and the science community for the establishment of the Zimbabwe Academy of Sciences.

7.5.4 Interim ICSU Regional Committee for Africa-Chairman, Prof Gabriel Ogunmola, President of the Nigerian Academy of Sciences, congratulated Zimbabwe and ICSU for these developments which are a clear testimony of the fact that Africa was moving forward. He urged the Government of Zimbabwe to support these initiatives by creating an enabling environment as efforts are being made to link science and technology to policy at national level.

7.5.5 One representative African Academy: Professor Marian Addy of the Ghana Academy of Arts and Sciences congratulated the Zimbabweans for the establishment of the Academy and hoped that the new institution will be well supported by the government for its growth.

7.5.6 One representative of ICSU Scientific Unions: Professor Piet Steyn of IUPAC also congratulated Zimbabwe for the establishment of the Academy and pledged the support of scientific unions to work with the ICSU Regional Office for Africa.

SECTION 8: CLOSED MEETING OF THE INTERIM REGIONAL COMMITTEE FOR AFRICA

The Interim Regional Committee for Africa was appointed by the ICSU Executive Board on the advice of the countries represented at the consultation meeting held in Pretoria South Africa on the 3rd of February 2004. The Interim Committee had a meeting during the First ICSU Regional Meeting for Africa to discuss the way forward with regards to the ICSU Regional Office for Africa. It was agreed that the issue of recruiting a Director be taken as a priority. The committee agreed that there is need to have consensus on the advertisement and the media to use as well as other components of the search procedure. **Of major importance is that the Chairperson of the Regional Committee and the Director of the Regional Office should not be from the same sub – regional zone.** The Director will be chosen based on terms of reference and merit. The Director for the Regional Office will be proposed by a search committee consisting of Professor Ogunmola, Dr. Mokhele and Professor Rosswall. The ICSU Executive Board will appoint the Director for a renewable 3-year contract.

Nominations for the Regional Committee have to be made to ICSU as the Regional Committee is still an interim one. The chairing of the committee will rotate so that the 'big man' syndrome is avoided. The committee members will be appointed for 3 years, non-renewable, to allow others the chance to be on the committee. The selection of the Regional Committee should reflect sub–regional zones and language differences. Based on zoning, it was agreed that the following zoning be used Eastern, Western, Central, Southern and the Small Islands states. Francophone, Anglophone and Lusophone are the main languages that will be considered as official and representatives from the same would be appointed to the Regional Committee. The Regional Committee to be appointed by the ICSU Executive Board should consist of 7 members appointed for 3 years with an initial staggered rotation built into the appointment.

Gender will be taken into account and the scientific reputation and disciplinary balance should be considered. Nominated persons can come from countries where there is not an ICSU National Member yet. The Regional Committee will decide on the Chairperson among its members. The Chairperson will also serve as an ex officio on the ICSU Policy Committee for Developing Countries. It was suggested that the first meeting of the Regional Committee be held as soon as the Regional Director is appointed. The meeting should coincide with the official opening of the Regional Office in South Africa.

It was suggested that national members place the advertisement for Regional Office Director in their local press. ICSU will send out the letter through its newsletter and website.

The meeting ended with committee members deliberating on what prevents African countries from participating in Unions. South Africa would sign a Memorandum of Agreement with ICSU for a ten-year period to host the Regional Office. This is renewable and a mid-term review will be done after five years. The ICSU Regional Office would tap into the NEPAD agenda and it is necessary to make sure that there is broad ownership by the whole Sub-Saharan Africa Region.

SECTION 9: SIGNING OF THE MEMORANDUM OF AGREEMENT BETWEEN ICSU AND NATIONAL RESEARCH FOUNDATION OF SOUTH AFRICA

Dr Francis Gudyanga chaired the signing ceremony. He expressed the pleasure that the Research Council of Zimbabwe and Harare had in hosting the First ICSU Regional Meeting for Africa and to be the venue at which this historic agreement would be signed.

The signing of the Memorandum of Agreement signalled a fresh ICSU initiative for Africa. The signatories to this agreement were: Professor Thomas Rosswall for ICSU and Dr Khotso Mokhele for NRF. This was witnessed by Professor Ana Maria Cetto and Dr. Francis Gudyanga, Members of the ICSU Executive Board, for ICSU. To witness for the NRF were Professor Gabriel Ogunmola, the Chairman of the Interim ICSU Regional Committee for Africa, and Roger Zangre, Director of ANVAR of Burkina Faso. This signing ceremony took place in the presence of the Minister of Science and Technology Development in the Office of the President and Cabinet (Republic of Zimbabwe) and the delegates to the First ICSU Regional Meeting for Africa.

Professor Thomas Rosswall was pleased that progress for the establishment of the Regional Office for Africa had been fast and smooth. He indicated that the Office will be opened in March 2005 by which time, it was hoped that the Director of the Office will have been appointed by ICSU.

Dr Khotso Mokhele expressed his pleasure at the signing of this agreement as it was time for Africa to move from talk to action. The Regional Office will be the body that speaks for science and defines science. Conversations for such a relationship started with ICSU late 2003. What was also significant was that Latin America, which was engaged in the discussions before Africa, has not yet signed the agreement. This was because Africa moved faster because it is 'very hungry' for the relationship to start and for benefits to be felt by the African continent. It was also emphasized that the Regional Office is neither a South African office nor a SADC office; it is there to serve the whole region, of Sub-Saharan Africa.

Professor Ana Maria Cetto, the Secretary General of ICSU saw the signing of this agreement as memorable as it signifies a new era of African science. She also told the scientists present that 'being hungry' is not enough. 'You know what you need and what you want', she continued, 'and you are determined to work to achieve your objectives'.

Dr Olivia Muchena also felt honoured to be part of this grand occasion as she felt that up until then, African scientists had not made their influence felt on the globe. It is time that the 'talk show issue' is dropped and more action is done. The signing ceremony ended with all parties agreeing to work towards the success of the new initiative.

SECTION 10 : CLOSING SESSION AND THE WAY FORWARD

The Executive Director of ICSU asked members to send in their nominations for the Regional Committee. All applications for the post of regional director have to be in by the 1st of December 2004. Professor Gabriel Ogunmola, Dr Khotso Mokhele and Professor Thomas Rosswall, will all be involved in the selection committee. The regional Director has to be appointed by February 2005. The ICSU Regional Office for Africa has to be open by March 2005. Members were urged to respond to all correspondence 'to make it happen.' Members of the Regional Committee will be appointed for 3 years and 18 months to allow for rotation and sharing of responsibilities across Africa.

The Secretary General of ICSU assured members that other Regional Offices will be established in due course. The host thanked participants for coming to Zimbabwe. Dr Khotso Mokhele thanked RCZ for arranging for the Minister's availability during the signing ceremony and the inauguration of the Zimbabwe Academy of Sciences. There was a general consensus that the First ICSU Regional meeting was a success in many respects especially in defining priorities for the Regional Office.

**Annex 1: INAUGURATION OF THE ZIMBABWE ACADEMY OF SCIENCE
SPEECHES**

INTERNATIONAL COUNCIL FOR SCIENCE (ICSU): AFRICA REGIONAL
MEETING: HARARE 9 – 11 OCTOBER 2004

**SPEECH BY THE CHAIRMAN OF THE RESEARCH COUNCIL OF
ZIMBABWE, DR. FRANCIS GUDYANGA**

Master of Ceremony and a Member of the Research Council of Zimbabwe, Dr
Washington Mbizvo

Honourable Minister of State for Science and Technology Development in the
Office of the President and Cabinet, Dr. O.N. Muchena, M.P.

Deputy Chief Secretary in the Office of the President and Cabinet, Mr Raymond
C Ndhlukula

Secretary General of the International Council for Science, ICSU, Professor Ana
Maria Cetto

Executive Director of ICSU, Professor Thomas Rosswall

Chairman of the Interim ICSU Africa Regional Committee and President of the
Nigerian Academy of Sciences, Professor Gabriel Ogunmola

President of the National Research Foundation of South Africa housing the ICSU
Africa Regional Office, Dr Khotso Mokhele

President of the Zimbabwe Academy of Sciences, Representative of the Third
World Academy of Sciences, and Representative of the African Academy of
Sciences, Professor Christopher Chetsanga

Director and Representative of UNESCO cluster of countries, Professor Jamu
Shabani

Members of the Research Council of Zimbabwe

Founding Fellows of the Zimbabwe Academy of Sciences

Fellows of the Science Academies, Members of Research Councils and
scientists from other African Countries

Representatives of ICSU Scientific Unions

Representatives of other Regional and International Scientific Organisations

Government of Zimbabwe officials

Distinguished guests,

Ladies and Gentlemen

It is a great pleasure for the Research Council of Zimbabwe to welcome you all
this evening to this reception dinner. We welcome our visitors to Zimbabwe. With
a succession of speeches this evening we will get some insight into International
Science, African Science and Zimbabwe Science.

For many years the International Council for Science, ICSU, has been making
efforts to establish itself more widely in Africa. Although founded in 1931 and
arguably being the most dominant scientific player in the world through its

members, it is amazing that the average scientist in the laboratory, and certainly the ordinary person in the street or in this room does not know what ICSU is, at least as far as this African region is concerned. Tonight we have the Secretary General and the Executive Director to give us a brief description of what ICSU is. Zimbabwe, through the Research Council of Zimbabwe, joined ICSU in 1989 as an Associate Member and was admitted as a full member in 1999. The RCZ has been active since then. The holding of the First ICSU Regional Meeting for Africa here in Zimbabwe is the most conspicuous RCZ involvement yet in the affairs of ICSU. On the basis of my personal involvement with ICSU for the past 11 years my observation is that real science of consequence happens within ICSU Scientific Unions. I am glad to note that most of these ICSU Scientific Unions are represented here. We hope that their interaction with scientists from several African countries will result in their greater presence and activities across the continent. I strongly recommend that African scientific organisations throughout the continent get involved in as many appropriate ICSU Scientific Unions as possible. The inhibitive factor precluding many countries joining the Scientific Unions is the cost of subscriptions. Innovative ways of overcoming this hurdle must be found.

This meeting in Harare provides a unique occasion for introspection by African scientists about the status of science in Africa and what they can and should do about it. Judging by many indicators African contribution to world science is very insignificant. It is, however, a sign of hope that most of the countries in the Sub-Saharan Africa are represented here by their senior scientists with a serious intention to improve the status of science in Africa. There have been numerous previous initiatives to bolster science in Africa. Will this Harare meeting provide a significant incremental in that process?

Tonight we will also witness the final phase marking the Founding of the Zimbabwe Academy of Sciences. The Research Council of Zimbabwe, having played a catalytic role in its formation, wishes the Academy every success. Because its membership will consist of the most eminent and leading scientists in the country, the RCZ hopes that the Zimbabwe Academy of Sciences will be to Zimbabwe what ICSU is to the rest of the world: the reliable and authoritative voice of the scientific community on the emerging issues of importance to science and society. The presence of other African Science Academies here today creates a collegial ambience and a feeling of support for Zimbabwe. ZAS becomes the 10th Science Academy in the continent. Its formation was probably long overdue.

The RCZ welcomes the initiative of the international scientific community in our region, urges our African scientists to seize this opportunity to advance the course of science in the continent, and hopes that the Fellows of the Zimbabwe Academy of Sciences will take their rightful place in the community of scientists in Africa and internationally. I THANK YOU.

**Annex 1: INAUGURATION OF THE ZIMBABWE ACADEMY OF SCIENCE
SPEECHES (Cont...)**

INTERNATIONAL COUNCIL FOR SCIENCE (ICSU): AFRICA REGIONAL
MEETING: HARARE 9 – 11 OCTOBER 2004

**SPEECH BY HON. DR. O. N. MUCHENA (M.P.), MINISTER OF STATE FOR
THE DEPARTMENT OF SCIENCE AND TECHNOLOGY DEVELOPMENT IN
THE OFFICE OF THE PRESIDENT AND CABINET**

Master of Ceremony and a Member of the Research Council of Zimbabwe, Dr
Washington Mbizvo

Deputy Chief Secretary in the Office of the President and Cabinet, Mr Ray
Ndhlukula

Secretary General of the International Council for Science, Professor Ana Maria
Cetto

Member of the Executive Board of ICSU and Chairman of the Research Council
of Zimbabwe, Dr Francis Gudyanga

Executive Director of ICSU, Professor Thomas Rosswall

Chairman of the ICSU Africa Regional Interim Committee and President of the
Nigerian Academy of Sciences, Professor Gabriel Ogmola

President of the National Research Foundation of South Africa housing the ICSU
Africa Regional Office, Dr Khotso Mokhele

President of the Zimbabwe Academy of Sciences, Representative of the Third
World Academy of Sciences, and Representative of the African Academy of
Sciences, Professor Christopher Chetsanga

UNESCO Representative in Zimbabwe, Professor Shabani

Members of the Research Council of Zimbabwe

Founding Fellows of the Zimbabwe Academy of Sciences

Fellows of the Science Academies and Members of Research Councils from
other African Countries

Representatives of ICSU Scientific Unions

Representatives of other Regional and International Scientific Organisations

Government of Zimbabwe officials

Distinguished guests, Ladies and Gentlemen

INTRODUCTION

It is my pleasure this evening to welcome you all to the opening of this First Meeting of the International Council For Science (ICSU), Africa Region today. Zimbabwe is a member of this organisation through the Research Council of Zimbabwe and I would like to sincerely thank the RCZ for inviting ICSU and facilitating the hosting of this historic meeting in Zimbabwe. A special welcome to ICSU National Members from Sub-Sahara Africa and ICSU Scientific Union members who are very well represented at this meeting. I urge you to take advantage of this meeting to dialogue and develop a focused agenda for the initial phase of the African Regional Office and to set priorities that will contribute to Africa's economic development.

I am informed that since its inception in 1931, ICSU has worked to coordinate interdisciplinary research to address issues of relevance to science and society, actively defend freedom in the conduct of science, promote access to scientific data and information, and facilitate science education and capacity building. I am further informed that a Committee on Science and Technology in Developing Countries (COSTED) was established in 1966 to analyse problems of developing countries and how science and technology could be used to address them. On evaluation in 2001, COSTED structure was found to be inadequate to meet the diversity of regional needs, hence the need to establish four Regional Offices for developing countries in Sub-Sahara Africa, the Arab world, Asia and Latin America and the Caribbean. The Regional Offices are to enhance the participation of developing country scientists and regional scientific organisations in ICSU programmes and activities, and to assist ICSU strengthen science and capacity building in developing countries through South-South and North-South collaboration. In February 2004, the African ICSU members agreed that the National Research Foundation of South Africa should host the African Regional office. Zimbabwe has been involved in, and supportive of, all these developments. I wish to express the Government of Zimbabwe's gratitude to the South African Government and its people for offering to host the ICSU Regional Office for Africa.

The Government and people of Zimbabwe have accepted the important role that science and technology plays in the development of economies and the well being of society. That is why early on after our independence in 1980, the Government established a statutory body, the Research Council of Zimbabwe, with a broad mandate to promote and coordinate S&T activities in the country. In the course of time the RCZ formulated a Science and Technology Policy within which essential S&T programmes and activities are undertaken. This policy was accepted by the government and subsequently a Department of Science and Technology Development in the Office of the President and Cabinet was established. The location of both the RCZ and the Department of S&T Development in the Office of the President highlights the centrality that Science and Technology plays in the socio-economic life of the nation.

We have also accepted that Zimbabwe cannot develop all the science it needs on its own and therefore the government encourages the establishing of linkages with both regional and international organisations. We are therefore happy to be active in ICSU. **We feel honoured that Zimbabwe is one of the 4 countries worldwide that represent the 104 other national members on the current ICSU Executive Board.** As I understand it, since ICSU decided to establish 4 Regional Offices, Africa is the first region to hold a comprehensive a priority-setting meeting. That this happens in Harare is a mark of honour to us and again demonstrates Zimbabwe's keenness to participate in global science activities. Having said that, I must add that expectations from the outcome of this meeting are very high. I am aware that there have been previous meetings where pan-African initiatives in Science and Technology have been undertaken.

Is the Harare meeting going to be another talk shop? We hope not. The ingredients seem to be different from those of other initiatives. Today we have the full commitment and engagement of ICSU in partnership with the leading scientists in the region representing the science academies in Africa and other regional organisations. We also have the active participation of the scientific unions who are engaged in the actual science. The recipe for success is there.

SOME AFRICAN S&T CHALLENGES

Presuming to speak on behalf of other African Science and Technology Ministers across the continent I would like to articulate some problems that Africa faces in a more severe way than other regions of the globe. First, Sub-Sahara Africa is being devastated by HIV and AIDS. Second, notwithstanding huge investment in capacity building by African countries, the brain drain to other regions is making it difficult to build a critical mass for Science and Technology to have the desired effect on our economies. Third there continues to be an academic and research culture that focuses on research for promotion and publication in international referred journals at the expense of relevant applied research, thus continuing the ivory tower stereo type image of our scientists. Talking about a relevant agenda, I am reminded of a description of some animals from Guinea Bissau.

The lion is strong, proud and royal like a king but lazy.

The monkey is agile but capricious.

Tortoise is slow but sure and steady.

The hippo is adaptable, able to operate in water and on the land but very territorial.

The giraffe is tall and elegant, able to reach great heights but very clumsy.

If African scientists are to be relevant and able to meet the continent's challenges, they need the strength of the lion without its pride; the agility of the monkey without its capriciousness; the steadfastness of a tortoise but with speed, the adaptability of the hippo without its territoriality so that they can engage in multidisciplinary research. African scientists like the giraffe, need to strive for great heights in their pursuits for knowledge, while avoiding the head in the cloud ivory tower image which can render them irrelevant at ground level.

The last few years have been particularly difficult for Zimbabwe's economy due to economic sanctions, drought and brain drain among other reasons. The Government of Zimbabwe has been encouraging scientists to research on subjects that are relevant and that provide solutions national problems across all sectors.

The issue of relevant research agenda needs to be seriously addressed by the African Regional Office of ICSU. **African Scientists need to take the lead in addressing the serious contradiction of an abundantly endowed, resource rich continent that continues to be deemed poor in perception and reality.** African scientists need to avoid the pitfall of some development activists and NGOs whose agenda is set elsewhere. Prescriptions such as democracy, good governance, human rights to mention but a few are noble but do not provide answers for scientific and technological challenges which could be exploited,

unleashed or harnessed to solve some of Africa's problems. **How can science and technology be used to address the image of Africa as a continent of hunger, disease and poverty? What do African scientists need to carry out R&D for energy development to propel industrialisation through the beneficiation of our mineral and agricultural products which we exports in raw form?** Your agenda should include strategies for challenging African Governments and international partners to put more resources in R&D for Africa's economic development than has been the case hitherto.

COOPERATION IN SCIENTIFIC ENDEAVOURS

This meeting to set priorities for the activities of ICSU Africa Regional Office should see the improvement of cooperation among regional scientists on exchange of information about the problems being experienced in the region and how science and technology could be used to address them. That is why we in Zimbabwe have high expectations from this meeting.

It is fortuitous that the ICSU meeting is taking place in Harare at the same time that Zimbabwean is witnessing the founding of the Zimbabwe Academy of Sciences which is a free association of eminent and leading scientists in the country. This is a development that is very welcome by the Government. I would like to congratulate the Founding Fellows of the Academy and wish you every success. Although the formation of the Zimbabwe Academy of Sciences was catalysed by the Research Council of Zimbabwe, a government agency, the Academy is established outside government structures and will enjoy the full autonomy that its constitution provides. We are gratified to note that the Academy constitution also provides for objectives and programmes that are in harmony with, and complements, developmental efforts of government. We in government, wish to lend our support for those objectives and programmes.

I would like, at this point, to congratulate Professor Christopher Chetsanga for being elected the inaugural President of the Academy. For the Zimbabwean audience, Professor Chetsanga needs no introduction. Some of our visitors have interacted with him already on some of his international positions. He is a Fellow of the Third World Academy of Sciences and of the African Academy of Sciences. He served on the UNESCO Executive Board, being its president in 1999. He is a former Chairman of the Research Council of Zimbabwe, who in fact, initiated RCZ's membership of ICSU in 1989 as an Associate Member, and spearheaded the establishment of Zimbabwe's technology centre, the Scientific and Industrial Research and Development Centre (SIRDC).

I now declare the First ICSU Regional Meeting for Africa officially open and the Zimbabwe Academy of Sciences formally inaugurated. I wish you fruitful deliberations and pragmatic and relevant outcomes.

I THANK YOU

**Annex 1: INAUGURATION OF THE ZIMBABWE ACADEMY OF SCIENCE
SPEECHES (Cont...)**

**ADDRESS BY PROFESSOR CHRISTOPHER J CHETSANGA AT HIS
INDUCTION AS THE INAUGURAL PRESIDENT OF THE ZIMBABWE
ACADEMY OF SCIENCES.**

**AT
THE OFFICIAL DINNER FOR THE FIRST INTERNATIONAL COUNCIL FOR
SCIENTIFIC UNIONS REGIONAL MEETING FOR AFRICA.**

**Monomotapa Hotel, Harare
9 October 2004**

On behalf of the Zimbabwe Academy of Sciences (ZAS) and on my own behalf, I would like to thank the Ministry of Science and Technology in the Office of the President and Cabinet of Zimbabwe, and the Research Council of Zimbabwe for organizing this dinner. For the thirty-five members of ZAS, we can consider this to be the equivalent of our inaugural dinner.

We take cognisance of the fact that the dinner is being held to honour our distinguished visitors who have come to attend the First International Council for Scientific Unions (ICSU) Regional Meeting for Africa (October 9 to 11, 2004). For the ZAS, the holding of this ICSU Regional Meeting for Africa here in Harare, could not have come at a more opportune time.

We recognise that ICSU is made up of a variety of scientific bodies. These bodies can be research councils, academies of science, commissions of science and technology, etc. I note from the list of participants that members of these scientific bodies from all over Africa, Europe and Australia are attending the meeting. I want to greet all of our visitors with our traditional greeting: "Mwauya!" "Welcome!"

1. Organisation of the Zimbabwe Academy of Sciences

The ZAS is one week old. It was established on October 2, 2004 with three constituent colleges:

- College of Life Sciences
- College of Physical Sciences
- College of Social Sciences

Each college is headed by a Dean who is supported by a Council member. In terms of the executive structure, I was honoured by the Fellows of ZAS to be the Inaugural President.

I want to take a minute to introduce the members of the ZAS Executive Committee:

- President: **Prof Christopher J Chetsanga**
- Vice President: **Prof Phineas Makhurane** (Former Vice Chancellor of NUST)
- General Secretary: **Dr Francis Gudyanga**, Chairman of the Research Council of Zimbabwe
- Honorary Treasurer: **Dr Elliot Zvangobani**, Former Chairman of the Research Council of Zimbabwe; Director of Omega Informatics.
- Dean of College of Life Sciences: **Prof Christopher Magadza**
- Committee Member: **Dr Solomon Guramatunhu**
- Dean of College of Physical Sciences: **Dr. Ted Zengeni**
- Committee Member: **Prof Keith Viewing**
- Dean of College of Social Sciences: **Prof Marvellous Mhloyi**
- Committee Member: **Prof Christopher Mutambirwa**

In terms of the composition of the membership of the Academy, I am delighted to announce that ZAS is made up of outstanding scholars and distinguished personalities in the service of Zimbabwe. I feel greatly honoured to lead the Academy whose Fellows are men and women of great scholastic achievements.

2. Profile of the Inaugural President of ZAS

A word about myself. I received my Ph D in Biochemistry and Molecular Biology from the University of Toronto in 1969. I then became a postdoctoral fellow in Professor Paul Doty's laboratory in the Department of Biochemistry and Molecular Biology at Harvard University in Cambridge, Massachusetts from 1969 to 1972.

I accepted a position as Assistant Professor at the University of Michigan in 1972. I progressed through the ranks to become a Full Professor in 1979. I was trained in nucleic acids and have worked on the RNA polymerase system, chemical carcinogenesis and DNA repair.

As Professor of Biochemistry at the University of Zimbabwe, I have worked on the Molecular Biology of hepatitis B virus, including gene cloning. I worked with colleagues to launch the M Sc degree in Biotechnology.

I went into administration at the University of Zimbabwe as:

- Chairman of the Biochemistry Department
- Dean of Science
- Pro Vice Chancellor
- Acting Vice Chancellor

In 1993, I was appointed as the inaugural Director General to establish the Scientific & Industrial Research & Development Centre (SIRDC) which is the technology centre of excellence in Zimbabwe. SIRDC does collaborative projects with a number of partners in the region and in Europe. It has institutes of

- Biotechnology
- Building
- Electronics
- Environment and Remote Sensing
- Energy
- Informatics
- Metallurgy
- Production Engineering
- Metrology.

I retired from SIRDC in July 2003. I am now involved in consultancy projects here and overseas, serving on number of Boards and Committees, and doing some writing.

3. Intellectual Profile of ZAS Fellows

The Fellows of ZAS are delighted that the Academy has finally been launched. We have a substantial number of Zimbabwean scientists, both at home and abroad, to constitute a learned society of some renown. We are now putting the expertise of Fellows at the disposal of our society.

ZAS is going to use all the advice that it can get from experienced, older academics. We would like to stimulate the growth of the intellectual enterprise in our country, with particular emphasis on tertiary levels of education and to strengthen professionalism in our society.

As a learned society, ZAS already has a receptive civil society and government system in matters relating to promoting education. Zimbabwe has attained a high literacy level from which ZAS is going to derive its essence. The literacy rate of Zimbabwe is over 90%.

3. Zimbabwe's Fertile Environment for Nurturing ZAS

In terms of higher education, Zimbabwe now has 8 state universities and 5 private universities. Some of these universities are still small and are in need of more resources, but that can be addressed with time.

I am currently serving as Chairman of the National Council on Higher Education. It is a Council on which all Vice Chancellors of Universities are members. We deal with issues such as considering applications for starting new universities, and quality assurance in higher education. This Council is Zimbabwe's instrument for monitoring and evaluating the performance of universities in the delivery of higher education.

By tradition, academies are national agents for national development. They are autonomous entities which can be contracted to perform certain tasks for government. One of the most active academies in the world is the US Academy of Science. I am told that it derives a large portion of its annual budget from the contracts that the US Government awards to it.

The ZAS will not be involved in the formulation and promulgation of science policy as that is the responsibility of the Research Council of Zimbabwe (RCZ). The RCZ works very closely with Government in the area of science policy.

5. Availability of ZAS Fellows' Expertise to Government

ZAS membership includes some high-powered intelligentsia whose expertise our Government can use. I fully expect to explore with our Government the prudence of their offering the Academy contract projects for which they would otherwise have to recruit experts from elsewhere. For a project in any area of human activity, the Academy will be able to set up teams of experts from among its members, who can undertake the project.

Our country, Zimbabwe, is in the throes of one of the most devastating incidences of HIV/AIDS. I expect our Academy to pronounce itself on this pandemic. The medical experts in the Academy will provide the expertise for the informed pronouncements to be made by the Academy.

In terms of the housing of the Academy, the present arrangements are for the Academy to piggyback on its parent body, the Research Council of Zimbabwe. As the Secretary General of ZAS is the Chairman of the Research Council of Zimbabwe, the basis for this transitional housing arrangement should be understandable. We expect, in due course, to establish a more permanent housing arrangement.

6. Areas of ZAS Intellectual Activities

We expect the Academy to engage itself fully in championing the issues relating to Zimbabwe's economic development, so as to assist in raising the standard of living of our citizenry. The Academy will work to promote research at all of our universities and research institutions.

The Academy will actively promote research and development (R&D) projects in the furtherance of Zimbabwe's industrialisation thrust. Zimbabwe has traditionally relied on the export of its raw mining and agricultural products for generating foreign currency and meeting its balance of payments.

Revenue generated from the sale of raw materials is now increasingly lower than that obtained from selling finished products. This is why value addition to raw materials before marketing them has now become a major aspiration of Zimbabwe and other developing countries. Value addition requires that developing countries acquire modern technology so that they can produce world class products for competition on global markets.

ZAS will work closely with the Ministry of Science and Technology in this area. Such collaboration will strengthen that Ministry's efforts in promoting industrialisation in Zimbabwe. If that Ministry has a project which it wishes to contract out for execution, the Academy will avail its services expeditiously.

7. Models of Operational Funding for Academies of Science

What other funding mechanisms are available for ZAS? I have been investigating the issue widely. I will give two other examples of academy fund-raising. in addition to that of the USA that I cited earlier.

(a) Chinese Academy of Sciences (CAS)

The CAS is almost totally funded by the Chinese Government. In October 2003, the celebration of the 20th Anniversary of the Third World Academy of Sciences (TWAS) was held in Beijing (China) hosted by the CAS. Many of us in this audience attended that impressive anniversary meeting funded by the CAS with a grant from their Government. From Zimbabwe, I went as a Fellow of TWAS and Prof Herbert Chinyanga, Vice Chairman of RCZ, represented RCZ at that meeting.

(b) Malaysian Academy of Science (MAS)

At its inauguration, the MAS received a generous endowment grant from the Malaysian Government. They use the interest from that endowment for their operations.

Now that ZAS has been established, we are going to engage our Government to explore possible arrangements for funding.

8. International Cooperation

ZAS is in the process of introducing itself to other academies globally. Among the bodies that we wish to affiliate with are the following:

(a) African Academy of Sciences (AAS)

AAS draws its Fellows from among the distinguished scientists in all African countries.

(b) Network of African Scientific Academies (NASAC)

It is a network of Academies of Sciences from those African countries that have academies. NASAC held its first conference in Abuja, Nigeria (September 21-25, 2004), hosted by the Nigerian Academy of Sciences.

(c) Third World Academy of Sciences (TWAS)

TWAS draws its membership from all distinguished scientists in all Third World countries. Prof Heneri Dzinotywei and I are the two Fellows of TWAS from Zimbabwe.

(d) (d) Inter Academy Panel (IAP)

IAP can be viewed as a federation of all academies of science in the world. ZAS is going to become a member of IAP in the next few months.

In conclusion, I would like to express my excitement at being elected the Inaugural President of the ZAS, and to thank all the members of ICSU here present, for having organised your meeting in Harare, at this time of the inauguration of ZAS. I want to assure my Zimbabwean Fellow members (colleagues) of ZAS that we have exciting times ahead as we go through the rollout phase of the ZAS programme of activities.

Ladies and Gentlemen, I am most grateful to you all for your attendance and your attention. I THANK YOU.

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Annex 3: Workshop Programme

Saturday 9 October

Session 1: Setting the Stage

Chairperson: Dr. Khotso Mokhele (South Africa)

14:00-14:15

Welcoming remarks

Francis Gudyanga (Zimbabwe)

Ana María Cetto (ICSU)

Khotso Mokhele (South Africa)

14:15-14:35

The development of an ICSU strategy

Thomas Rosswall (ICSU)

14:35-15:15

Discussion

15:15-15:35

Regional Offices – a major ICSU initiative

Ana María Cetto (ICSU)

15:35-16:15

Discussion

16:15-16:45

Coffee and tea break

16:45-17:00

The START Experience in Africa

Eric Odada (START)

17:00-17:30

Discussion

17:30-17:45

**Providing access to scientific publications –
INASP in Africa**

Carol Priestly (INASP)

17:45-18:15

Discussion

19:30

**Reception hosted by the Department of Science and Technology
Development**

And

Inauguration of the Zimbabwe Academy of Sciences

Annex 3: Workshop Programme (cont.)

Sunday 10 October

Session 2: Building on Experiences – Strengthened Partnerships

Chairperson: Dr. Francis Gudyanga (Zimbabwe)

09:00-09:20

The role of TWAS in strengthening science for Africa Christ J. Chetsanga

09:20-10:00

Discussion on strengthened collaboration ICSU-TWAS for Africa

10:00-10:20

The UNESCO science programme for Africa Juma Shabani

10:20-10:40

Coffee and tea break

10:40-11:20

Discussion on strengthened collaboration ICSU-UNESCO for Africa

11:20-11:40

The NEPAD Science Focus Robrt Kriger

11:40-12:30

Discussion on how the ICSU Regional Office can help strengthen the NEPAD science agenda

12:30-14:00

Lunch

Session 3: Shaping the Future – What Should the Regional Office do?

Chairperson: Prof David Mbah (Cameroon)

14:00-14:20

Capacity building for science in Africa Marian Ewurama Addy

14:20-15:00

Discussion on how the Regional Office can assist in capacity building

15:00-15:20

Strengthening involvement of African scientists in International Programmes Francis Gudyanga

15:20-16:00

Discussion on how International Unions can help strengthen African science

16:00-16:30

Coffee and tea break

Annex 3: Workshop Programme (cont.)

Session 4: The Regional Dimension

Chairperson: Prof. Marian Addy (Ghana)

16:30-16:50

How can the Regional Office make a difference? Khotso Mokhele
(South Africa)

16:50-18:00

Discussion

18:00-19:30 (tentative)

Closed Meeting of the Interim ICSU Regional Committee for Africa

Monday 11 October

Session 5: From Words to Action

Chairperson: Professor Gabriel Ogunmola (Nigeria)

09:00-09:15

Setting the agenda – Introductory comments Manuel Luis Chenene
(Mozambique)

09:15-10:30

General discussion

10:30-11:00

Signing MoU between NRF and ICSU

11:00-11:15

**Increasing participation and strategic partnerships -
Introductory comments John Opuda-Asibo**
(Uganda)

11:15-12:30

General discussion

12:30-14:00

Lunch

Annex 3: Workshop Programme (cont.)

Session 6: Defining the Agenda

Chairperson: Dr. Khotso Mokhele (South Africa)

14:00-14:15

**Increasing communication – Introductory comments
(Seychelles)**

Jude P. Bijoux

14:15-15:00

General discussion

15:00-15:30

Coffee and tea break

15:30-17:00

Defining priorities – General discussion

17:00

Closing of the meeting



ICSU

International Council for Science

ICSU Mission Statement

In order to strengthen international science for the benefit of society, ICSU mobilizes the 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.
- Provide independent, authoritative advice to stimulate constructive dialogue between the scientific community and governments, civil society, and the private sector.

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