



KENYA NATIONAL ACADEMY OF SCIENCES

FOR THE ADVANCEMENT
OF FRONTIERS OF KNOWLEDGE

ANNUAL REPORT 2006/2007

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1.INTRODUCTION.

The Kenya National Academy of Sciences is an established and recognized institution with the necessary legal and Government support ,enjoying a strategic position as an umbrella body for all professional organizations which embrace Science and Technology including Social Sciences and Humanities in the country .It has linkages with National institutions of Higher Learning ,Research institutions ,International Scientific bodies and other Academies with similar objectives. The Academy is in a strategic position to utilize the opportunities available in achieving its objectives to contribute to the National Agenda on development.

2.ADMINISTRATION.

The Kenya National Academy of Sciences derives its mandate from the members who assemble at the Annual General Meeting (AGM) to review its past activities and plan for the year at the AGM, activities, reports and audited reports are presented for scrutiny and approval. The Governing Council is the supreme body under which the Executive Committee works to ensure the implementation of all its activities approved at the Annual General Meeting.

3.SPECIAL GENERAL MEETING.

At The Special General Meeting held in May 18th,2007 at the University of Nairobi ,a total of 24 new members were inducted to the Academy from Physical Sciences, Biological Sciences and Humanities &Social Sciences..

Membership recruitment is an ongoing process whereby applications received are evaluated by the nominating teams before they are presented to the Governing Council for approval .

4.ACTIVITIES.

The Academy objectives are realized through a wide range of activities including the following:-

A.PUBLICATIONS

i.) Kenya Journal of Sciences.

The Academy publishes high level research papers in the Kenya Journal of Sciences ,twice a year ,in three series covering the scope of the specialist Committees. This year, the Academy has published the following journals:

Series A:-Physical and Chemical Sciences ,Vol.12 NO.1,2007.

Series B:-Biological Sciences ,10 Manuscripts have been received and are awaiting peer review procedure

It is regrettable that no journal in series C was published due to lack of ready peer reviewed articles .All members/Fellows have been encouraged to forward their research articles for publication since funds are now available

ii) Promotion of Science and Technology(POST) Magazine

Through the Magazine "Promotion of Science and Technology" (POST) ,the Academy promotes Science and Technology among young people ,particularly High School students by helping in the inculcation of Scientific attitudes.

The Academy obtains best papers presented at the National Students Science Congress ,which is held annually and publishes them in POST magazine .This year the academy has received 6 papers from scientists who were requested to contribute short papers for publication .The papers are yet to be edited and thereafter be published in the next volume of the magazine.

iii. **Public Lecture Series.**

The Academy organizes public lectures by its Fellows and Members .Besides reviewing and analyzing development in the sciences ,the public lectures address related policy and operational implications and make appropriate recommendations.Distinguished Scholars are invited to participate and proceedings are published

This year a concept paper has been developed by Prof. Joseph O. Malo as part of the implementation plan of the KNAS Strategic Plan 2006-2011.The Public Lectures are to be organized all over the country and will have the following objectives

- To create awareness and visibility of KNAS.
- To demonstrate KNAS capacity to contribute effectively and meaningfully to National Development Agenda which is to create wealth and eradicate abject poverty in our society.

Participants

Participants will be drawn from the following:-

- Government of Kenya Ministries.
- Provincial Administration.
- District Administration.
- Politicians both MPs and Councilors.
- Community leaders at constituency level .
- Scientists and Academies.
- Youth Groups and Students
- Women Groups.
- Teachers.
- NGOs.
- Donor Community.

KNAS plans to assemble together a very strong team of resource persons to address a number of issues including the following:-

- Energy production and Management.
- Water resources and management .
- Rural/Urban Migration.
- Rural Industries.
- Cooperative Farming.
- Street Families and children.
- Transport and communication
- Environment and Biodiversity.
- Healthcare and Diseases.
- Traditional Technology and Knowledge.

The Executive Committee has been asked to study and advise on the Concept Paper
Publication of Conference /Workshop Proceedings.

A. The Role of A Parliamentary Office of Science and Technology (POST) and Pairing Scheme Between Parliamentarians and Scientists in East Africa,

A regional Workshop held on June 29th to 30th ,2007 in celebration of the Scientific Revival Day of Africa.

In support of enhancing Science and Technology capacity and popularization of Science and Technology The African Union[(formerly the Organization of African Unity)] initiated the Scientific Revival Day of Africa to be celebrated on June 30th annually KNAS decided to link some of its activities with this effort and consequently begun celebrating the Scientific Revival Day of Africa Every year since 2004.

This year the Academy hosted a regional Workshop on “The Role of a Parliamentary Office of Science and Technology (POST) and MP Pairing Scheme between Parliamentarians and Scientists in Kenya,Uganda and Tanzania.” This idea was borrowed from the Royal Society model and UK Parliament which had a POST office and an MP Pairing Scheme.

KNAS is convinced that a strong POST and Pairing Scheme would transform our society in terms of Legislation, Policy formulation ,implementation monitoring and evaluation to enable our countries meet their stated development goals .Therefore the goal of this workshop which is a first step in a long journey was closer collaboration between legislators and scientists in ensuring that legislations and policies are evidence-based to the benefit of the people of this region.

i)POST(Parliamentary Office of Science and Technology).

It must be noted that POST is not a replacement to Parliament and Scientific Committees in the National Assembly .Rather POST provides Parliamentarians with objective scientific analysis on a range of policy issues in order to inform parliamentary debates.

ii)The Aims of the Pairing Scheme

1. To help the Scientists recognize the potential methods and structures through which they can feed their scientific knowledge to Parliamentarians and the Government.
2. To help practicing Research Scientists understand the presumes under which to forge direct links with a network of practicing Research Scientists
3. To give MPs the opportunity to familiarize themselves with the process of scientific understanding and topical research and ultimately to be able to bring this new knowledge into better informed discussions and decision making.

The Royal Society supported the Workshop both Financially and Logistically, and were represented at the Workshop.Participants of the Workshop have already received copies of the Workshop Report and their Certificates of Participation.

B Meeting of Kenyan Envoys (Ambassadors) at Windsor Hotel, Nairobi.

Upon learning of the meeting ,the Chairman of the Academy Prof.Malo presented the Ambassadors with copies of the Academy Publications for use in their Libraries.

5.Forthcoming Publications.

KNAS has been requested by the Permanent Secretary ,Ministry of Science and Technology to develop a Concept Paper and Project Proposal for the establishment of a National Physical Science Research Institute.This was a follow up of a workshop held by the Ministry of Science and Technology on 8th to 10th August,2007 in Mombasa to consider the Draft Final Policy Document on National, Science,Technology and Innovational Policy produced through sectoral deliberations covering

1. Agriculture,Rural Development and Related Industries
2. Manufacturing Trade and Industry.
3. Health Life Science
4. Education.
5. Environment and Natural Resources.
6. .Mining and Energy.
7. Infrastructure.

Among the recommendations made at the workshop were projects to be funded that would enable the country achieve the object of MDGs vision 2030 and other Government programmes that aim at uplifting the standard of living of Kenyans.The National Physical Science Research Institute was identified as one of such projects and the following have been requested to prepare concept paper proposals for its core laboratories.

1. National Physical Research Institute
2. Prof. I. O. Nyambok.-water Management
- 3.Prof. B. O. Aduda -Material Science.
4. Prof. J. P. Patel -Earth Science.
5. Dr.K. A. Kaduki & Mr. A.C.K. Musomba -Electronics.
6. Prof. J. O. Malo. & Dr. P. Baki -Space Science.
7. Prof. J. O. Malo -Energy.
8. Dr. George O. Omolo (Moi University)- Laboratory for Computing Science

6.ADMINISTRATIVE MEETINGS.

i) **Executive Committee Meetings.** The KNAS Executive Committee has had an extremely busy period resulting from the launch of The Strategic Plan 2006-2011 and preparations to host a regional workshop on The Role of a Parliamentary Office of Science and Technology (POST)and Pairing Scheme between Parliamentarians and Scientists in East Africa.

ii) Meeting with Dr. Chandrika Nath.

Dr. Chandrika Nath ,Parliamentary Office of Science and Technology (POST) Advisor paid a courtesy call to KNAS on Thursday 4th ,October 2007.Dr.Nath was one of the participants at the Regional Workshop of June 29th to 30th .As a follow up to the courtesy call Dr.Nath introduced to KNAS SUNY Kenya (State University of New York)who currently sponsor 20-30 Kenyan Interns to work in the Kenya Parliament for 9 months after they graduate. She gave the contact for SUNY as Fred Matiangi (fred@sunykenya.org).

b.) REGIONAL MEETINGS.

1. US/Africa Workshop on Frontiers in Material Research and Education Meeting Government Officials Abuja -Nigeria January 25th, 2007.

The Meeting was organized by the Directorate for Mathematical and Physical Sciences of National Science Foundation (NSF).This was in a response to a call for proposals entitled “Materials World Network” cooperative activity in materials Research between investigators and their counterparts abroad.

2. Launching of the Regional Office for Africa(ROA) of World Academy of Young Scientists (WAYS) March 21st to 22nd ,2007 Pretoria -South Africa.

This Launch served to elect the 1st Regional Committee of WAYS-ROA,hold a Scientific Conference with presentations by young scientists and selected mentors and also hold a consultative meeting of the elected Committee in the presence of the delegated where the draft constitution and action plan were tabled for deliberation and ratification.

3. African Science Academy Development Initiative (ASADI III)Planning Meeting ,Dakar-Senegal May 12th to 16th 2007.

The Theme of the Conference was “:Water and Health in Africa” and the principal objective of this meeting was to bring together leading African Scientists and key National Policy makers to Identify Controversies in matters related to food security for which African Academies would be uniquely positioned to identify Evidence-based solutions

The Following represented KNAS at the Conference:

- | | |
|--------------------------------|----------------------|
| - Prof. Joseph O. Malo | Hon .Chairman |
| - Prof .Felix M. Luti | Hon.Secretary. |
| - Prof. Dominic Makawiti | Hon.Treasurer. |
| - Prof. Benson B. A. Estambale | Moderator. |
| - Prof. George O. Krhoda | Speaker/Policymaker. |
| - Eng. Lawrence N. .Simitu | Policymaker. |

4.IAP Programme on Promoting Access to and Use of Digital Knowledge Resources in Countries with Developing and Transitional Economies May 12th to 16th ,2007 Pretoria-South Africa.The Primary Goal of the Programme was to engage IAP and its member Academies to strengthen Scientific Technical Capacity (S & T) capacity in all countries by enhancing access to and use of digital knowledge.

5.Second young Scientist Conference by the Academy of Sciences for the Developing World-Regional Office for Sub-Saharan Africa(TWAS-ROSSA) ,December 3rd to 6th ,2007 Nairobi-Kenya The theme of the Conference was “Mentoring Young Scientists for Innovation Application of Research and Development in Africa.”

c.) **INTERNATIONAL MEETINGS.**

1. International Human Rights Network of Academies and Scholarly Societies April 4th to 6th ,2007 Colombo -Sri Lanka

The Network was created because there are many unjustly imprisoned colleagues around the world whose plights can be ameliorated or whose outright releases can be gained through concerted efforts of Academies working together to achieve these ends.

2.Global Scientific Challenges Perspectives from Young Scientists: An International Conference Celebrating 75 years of ICSU April 4th to 6th ,2007 Lindau- Germany.

The aim of the conference was to bring together approximately two hundred young Scientists from across the globe and from different disciplines to discuss and debate some of the key Challenges of the 21st Century. Dr. Angenyo represented KNAS at the meeting.

3.Low Frequency Array Workshop (LOFAR) Netherlands and Sweden April 21st,2007,May 5th ,2007.. Prof. Malo gave a talk at the workshop(LOFAR) which is a European Consortium on space Science under the auspices of all European Academies.(ALEA)

The Purpose of the workshop was to bring together the prospective user Community of LOFAR to explore current and future Science perspectives for low Frequency Radio Observatories and Emphasize collaboration among users

5.IAMP Programme on Reducing Perinatal Mortality ,14th to 15th December ,2007 Trieste-Italy.

This was a Workshop on reducing perinatal mortality hosted by TWAS (Academy of Science for the Developing World) which houses the IAMP (Inter Academy Medical Panel)

The aim of the Workshop was to discuss in detail how the baseline needs assessment studies should be carried out in the different countries that have been shortlisted for the programme .And to consider the pairing between countries with high and low maternal and prenatal mortality rates since its important to know not only what causes high mortality but also what can be done to reduce it

Prof. Benson B. Estambale Represented KNAS at the workshop.

6. UN-Spider Workshop Bonn –Germany and visit to Vaxjo and Upsala Sweden 28th October,2007 to 7th November,2007.

The aim of the workshop was to promote the access and use of space based technologies and solutions for disaster management and emergency response within the relevant communities .The following Organizations contributed in organizing the workshop:-

- **UNU-IEHS** -United Nations University-Institute for Environment and Human Security.
- **UNESCO** -United Nations Educational,Scientific and Cultural Organization.
- **ISDR /PPEW** -International Strategy For Disaster Reduction Platform for the promotion of Early Warning.
- **GEO** -Group on Earth Observations
- **DKKY** -German Committee for Disaster Reduction.

7. RESEARCH FUNDS.

The Academy administers or helps in administering funds for purpose of Scientific Technological Research and suggests ways in which Scientific Projects in Kenya may be instituted carried out or revised.In Collaboration with the private sector and other Organizations with similar objectives ,the Academy undertakes research projects which address themselves to topical and specific issues in an effort to generate practical solutions.

This Financial year Kshs, 75 Million has reportedly been awarded to (CHE) for research Again KNAS has written to CHE enquiring on the mode of disbursement and the beneficiaries .You are requested to urgently submit research proposals for onward transmission to CHE.

8. WEBSITE DEVELOPMENT

The Academy website <http://www.knascience.org> is already active.The website is hosted by 3Mice Interactive Media Ltd .They also provide e-mail services which has a maximum of thirty (30)accounts in the following format (secretariat@knascience.org). Members of KNAS have been asked to present their profiles for posting on the site.Activities of KNAS and other relevant information e.g opportunities available in Research are already being posted on the site.We urge you to frequently visit the website.Please send us your Profile and passport size photo urgently for posting on the same.

9.APPOINTMENT FOR THE POST OF DOCUMENTALIST/LIBRARIAN.

KNAS advertised the above post in the Daily Nation Newspaper of the 14th October ,2007.We received applications which were forwarded to the Executive committee for consideration of the most appropriate candidate.

10. TWAS PRIZES TO YOUNG SCIENTISTS SCHEME

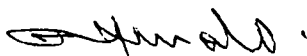
KNAS and TWAS had signed an agreement of collaboration in 2006 in consideration of the necessity to foster Scientific and Technology Cooperation among developing Countries and agreed to work together within the framework of the "TWAS Prize for the Young Scientist Award".

KNAS forwarded a list of four young Scientists to TWAS to be considered for the prize of young Scientists of the year. Dr Nyongesa .F. W. a lecturer of Physics at the University of Nairobi emerged the lucky winner and was awarded USD 2,000 .being the 2007 prize for the Young Scientist Award in Physics.

11. FINANCIAL STATEMENT.

KNAS principal source of income is Government Grants -in -Aid .The other sources of income are research Grants from other Organizations and Institutions that support our Research Proposals. Also KNAS collects annual membership subscription fees and admission fees from its members and newly admitted members

The Financial Committee based on Programmes approved by the Governing Council prepares KNAS Annual Budgets and Annual Statements of income and expenditure. The Committee also plans and executes ways and means of raising funds for the National Academy.



Prof. Joseph O. Malo,
Chairman,
Kenya National Academy of Sciences..

PHOTO GALLERY



Dr Noah Wekesa Minister for Science and Technology delivers the Opening Address at the Post/MP/Scientific Pairing Scheme workshop.



Ambassador Adam Wood, British High Commissioner to Kenya (centre) is welcomed at the POST/MP/Scientist Pairing workshop



Ambassador Adam Wood, British High Commissioner to Kenya ,delivers the Welcome Address at the Post/MP/Scientific Pairing Scheme workshop



From left ,Prof. Joseph O. Malo ,Dr. Noah Wekesa and Prof. R..M. Munavu follow proceedings at the Post/MP/Scientific Pairing Scheme workshop.



Prof. Joseph .O.Malo delivers a speech during the Post/MP/Scientific Pairing Scheme workshop dinner



Prof. David P. Wasawo delivering a keynote address at the opening session of the Post/MP/Scientific Pairing Scheme workshop.



Hon. Anna Snelgrove ,M.P UK Parliament giving a presentation at the Post/MP/Scientific Pairing Scheme workshop.



Prof. Joseph O. Malo ,Chairman KNAS gives a welcome address at the Post/MP/Scientific Pairing Scheme workshop.



Prof. Crispus Kiamba ,Permanent Secretary for Science and Technology presents a token to Hon. Anne Snelgrove during the Post/MP/Scientific Pairing Scheme workshop.



Prof. Dominic Makawiti making a contribution at the Post/MP/Scientific Pairing Scheme workshop.



Prof. Crispus Kiamba ,Permanent Secretary for Science and Technology presents a token to Ms. Joanna Spracket of the Royal Society,U.K



Prof. Crispus Kiamba Permanent Secretary for Science & Technology presents a token to Prof. E. Archampong of Ghana Academy of Sciences.



Prof. Crispus Kiamba presents a token to Dr. Kate Bishop of Kings College London .



Guests during dinner at the POST/MP/Scientist Pairing workshop



Prof. Ruth Oniango' (left), Prof. S. Mulindi and Prof. David Wasawo (right) exchange ideas during a coffee break



Prof. Francis Gichaga makes a contribution during the POST/MP/Scientist Pairing Scheme workshop



Participants follow workshop proceedings during the POST/MP/Scientist Pairing Scheme workshop



Mrs Noel L. Abuodha ,Administrator KNAS with Prof. Ruth Oniango' during the POST/MP/Scientist Pairing Scheme workshop



Prof. Bernard O. Aduda gives a contribution during the POST/MP/Scientist Pairing Scheme workshop



Prof. Dominic Makawiti (left) and Prof. Joseph O. Malo (right) follow proceedings During ASADI III in Dakar-Senegal November, 2007



**Group Photograph of Participants during the
POST/MP/Scientist Pairing Scheme workshop**