



REGIONAL BIOSECURITY WORKSHOP, 28 – 30 MAY 2008

Delivered by: Mr Simon Rambau,

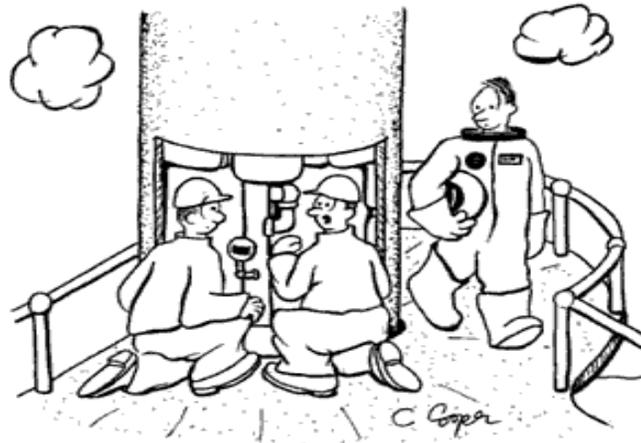
Liaison Manager: National and International Programme

Date: 29/30 MAY 2008

Venue: MISTY HILLS, JOHANNESBURG, RSA

INTRODUCTION

- The achievements in life sciences and technological development has presented the global community with both new opportunities and potential risks.
- The developing and developed countries have different focus areas on biosecurity/biosafety



“Don’t worry about it. This isn’t exactly rocket science, you know.”

BACKGROUND

- Enormous growth in biological sciences
 - Gene engineering,
 - recombinant techniques
 - Modification and transfer of genetic materials
 - Nanotechnology
- Developed countries have made concerted efforts to prevent deliberate misuse of pathogens and apply strict storage procedures
- They realized that entire global community is needed

BACKGROUND CONTINUED

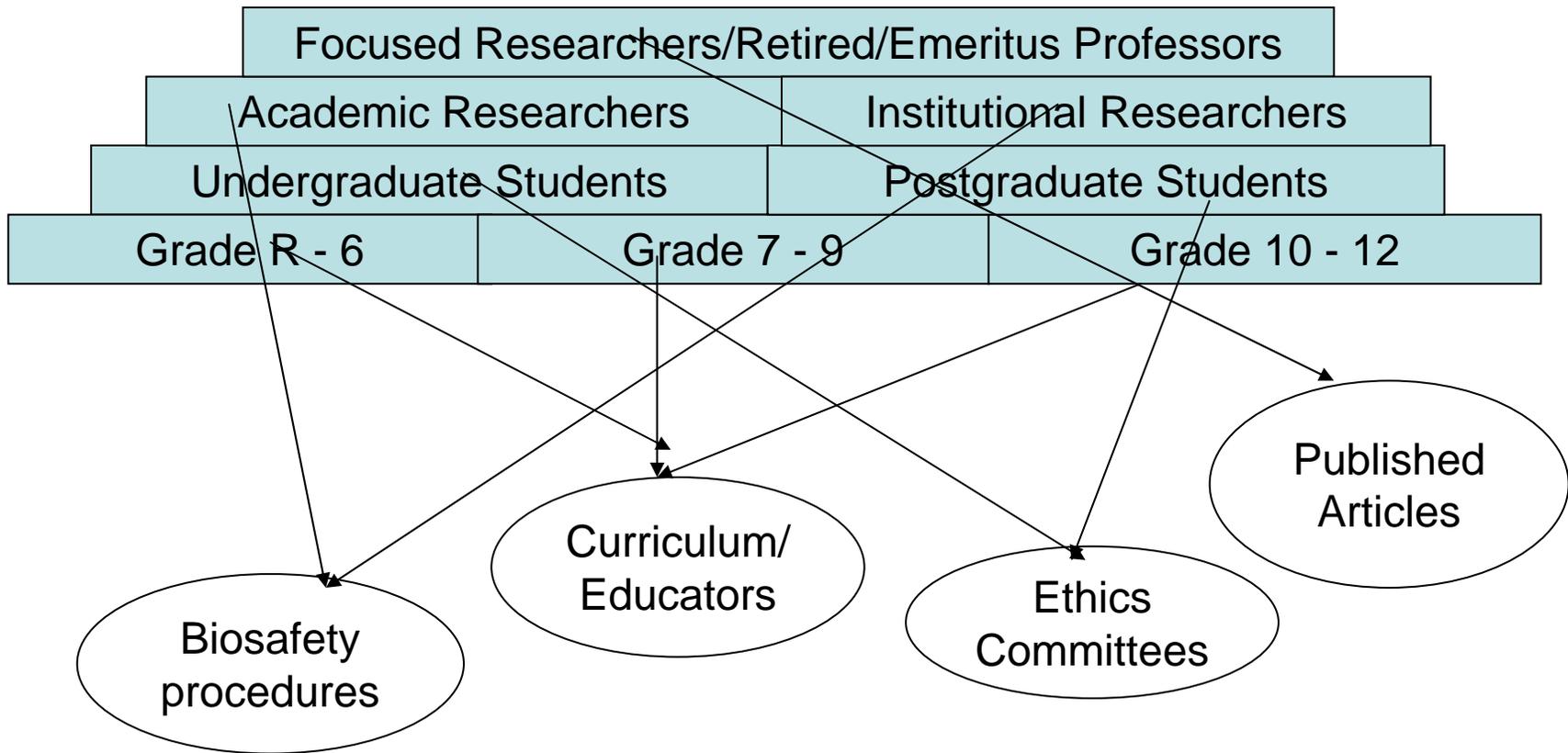
- Developing countries views the technological development as a great break for addressing challenges they are experiencing such as infectious disease, poverty and other social challenges



“Maybe their tribe hasn’t been as remote and isolated as previously believed.”

- **Fungal Mating Pathways: insights into cell signalling and genome evolution**
- **Lorna A. Casselton, Department of Plant Sciences, University of Oxford, UK**
- Sexual reproduction is a familiar feature of most eukaryotic life cycles, playing a crucial role in maintaining genetic diversity and species survival. In fungi, just a few genes, the mating type genes, control the sexual identity of an individual and determine how it attracts and recognises a compatible mating partner, and how cell fusion then initiates the major changes in gene expression that lead to sexual development. It is not surprising that the mating type genes have been such an important focus of attention. The cloning of these genes from model species has identified their function and contributed extensively to our understanding of signal transduction pathways and protein interactions that we now know to be ubiquitous in nature. Whilst fungal mating pathways appear to be highly conserved it is evident also that they have evolved to match different life styles. With ever increasing access to genomic sequence in more and more fungal species we can identify homologues of the mating type genes and the genes they are predicted to regulate, and we can seek to understand how different mating behaviours have evolved.

THE FRAMEWORK FOR ENGAGING SCIENTISTS



WHAT NEED TO BE DONE

- Development of a learning programme for school phase
- Development of Educational Module for tertiary students
- Review biosafety procedures in SA and build-in monitoring system
- Synthesise articles and reports published on biosecurity/Biorisks
- Develop workshop materials for Ethics Committees

ACADEMY OF SCIENCE OF SOUTH AFRICA

- The Academy was launched in 1996
- In 2001, the academy was recognized as the national academy of South Africa through an Act of Parliament
- As of May 2008, the Academy has 292 members across all disciplines
- The Academy has 14 dedicated secretariat consisting of the EO, COO, 2x Editors, 3x Managers, 3x Project Officers, 4x Admin staff
- The staff complement will grow to 16 by the end of the year

ASSAf Visi Statement

ASSAf aspires to be an engine of excellence in scholarship and intellectual cooperation

- ❑ ASSAf aspires to be the **apex organisation** for **science scholarship** in South Africa
 - ❑ **Internationally respected** and connected
 - ❑ Its **membership**, the aspiration of the country's **most active scholars in all fields** of scientific enquiry
 - ❑ Collective resource, making possible the professionally managed **generation of evidence-based solutions to national problems**
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ASSAf Mission Statement Summary

- ❑ To become **increasingly associated** with the **highest levels of scholarly achievement** and excellence in the application of scientific thinking for the benefit of society
 - ❑ To **consolidate its infrastructure and capacity**; and **expand and mobilise its membership** to include scholars from a full disciplinary spectrum
 - ❑ To **proactively** and reactively embark on a programme of **systematic studies** of evidence-based issues of **national importance**
 - ❑ To develop a **sound and robust methodology** for constituting study panels; and **producing authoritative reports** that are well-disseminated and have **significant impact**
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ASSAf Mission Statement Summary cont.

- ❑ To publish science-focused periodicals to promote a national interest in the sciences:
 1. *South African Journal of Science* – multidisciplinary journal of the highest quality and international standing
 2. *Quest: Science for South Africa* – science magazine that showcases the best of South African research to a wide national and international audience
 3. *Strategic Reports* – policy advisory reports that seek to influence national decision- and policy-making
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ASSAf Mission Statement Summary cont.

- ❑ To **promote the development** in South Africa of an **indigenous system of research journals** of internationally recognised quality and usefulness
 - ❑ To **develop and maintain productive partnerships** with the Departments of Science and Technology, Education, Health, Water Affairs and Forestry, Environmental Affairs and Tourism, and Agriculture, and the DST-affiliated NACI
 - ❑ To **develop and maintain collaborative linkages** with science councils; NGOs; higher education institutions, etc. with a view to the building of capacity in science and its applications within the National System of Innovation (NSI)
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ASSAf Mission Statement Summary cont.

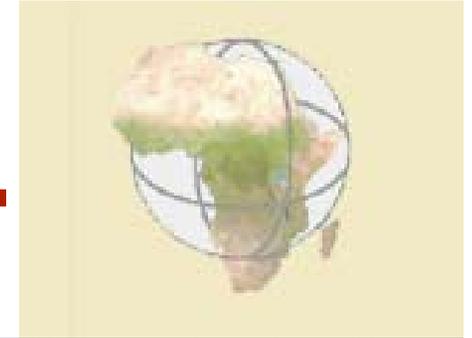
- ❑ To **create new and diversified sources of funding** for the sustainable functioning of an independent national Academy
 - ❑ To **communicate effectively with general and specific publics**, as well as with partners and sponsors
 - ❑ To **expand activities in partnership with national science academies** of other countries, including the contracted partnership with the **US National Academies**
 - ❑ To **play a significant role in the international science system**, particularly in Africa, through organisations such as the IAP and IAC; TWAS; ICSU; and NASAC; all within the context of **NEPAD**
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ASSAf Current Funders

- Department of Science and Technology
- US National Academies (Bill and Melinda Gates Foundation)
- Ad hoc funding from Ford Foundations, TWAS, IAMP

ASSAf Potential Funders

- Shuttleworth Foundation
 - Royal Society of UK (Sloan Foundation and others)
 - Any other donor interested to support evidenced-based policy advice
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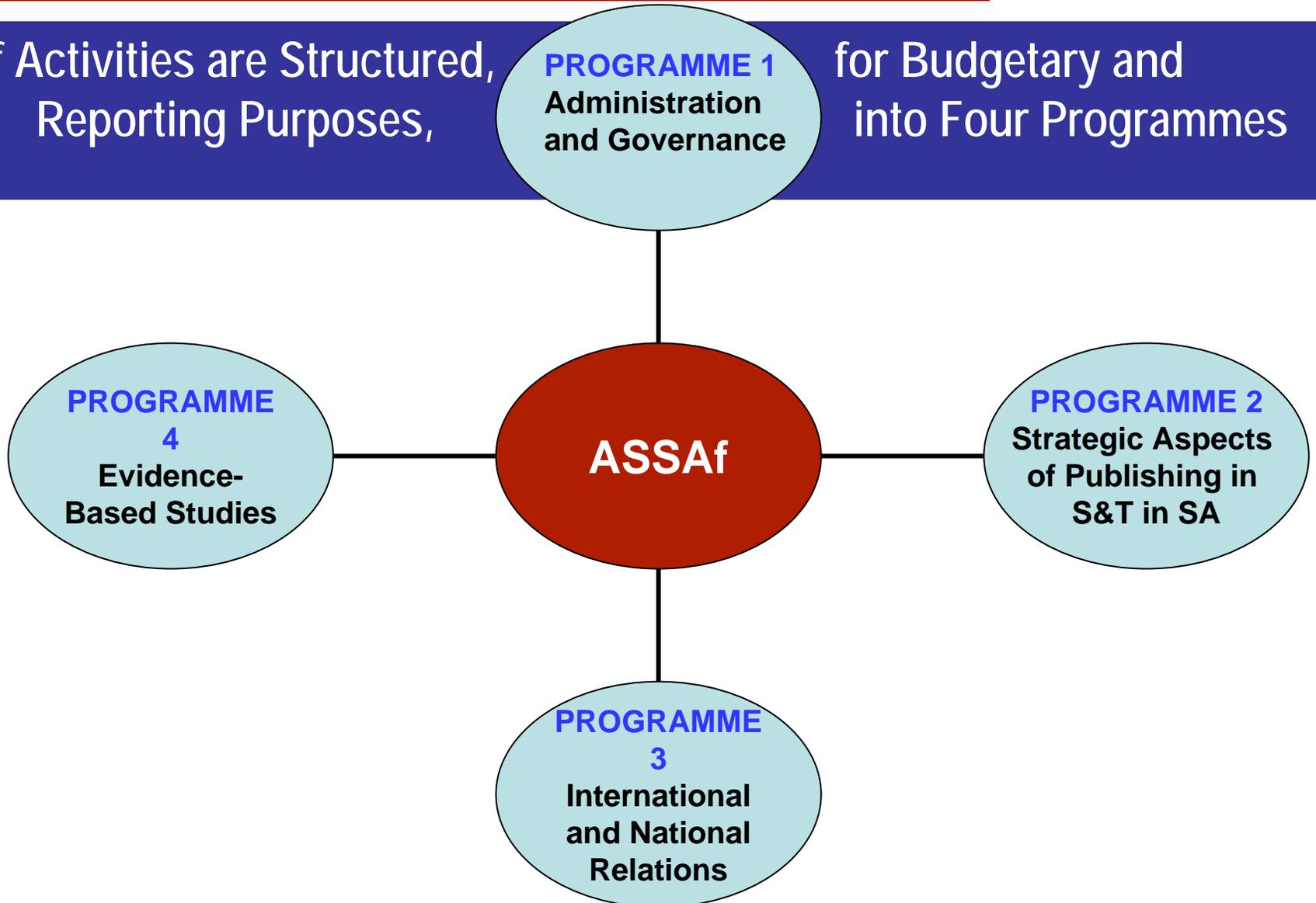
ASSAf Collaboration with USNA

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

- ❑ As per the ASSAf/USNA MoU, USNA will provide ASSAf with the following **general support**:
 - * Pro rata contribution to **staff costs**
 - * **Training** programmes and communal expenditures
 - * **International activities** i.r.t. ASADI

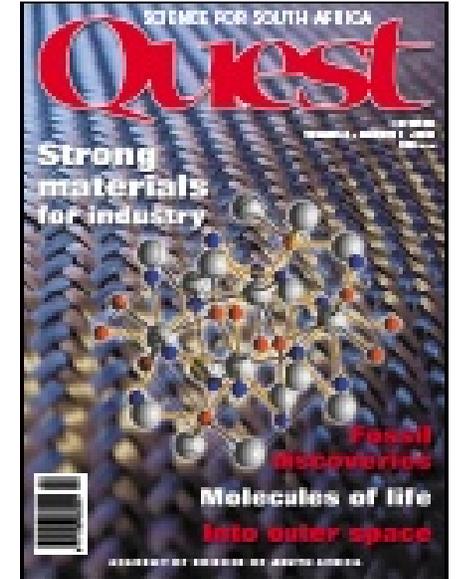
- ❑ In addition, USNA is expected to **sponsor**:
 - * Agreed ASSAf **Consensus Studies**, and
 - * Agreed ASSAf **Committee Activities**

ASSAf Activities are Structured, Reporting Purposes, **PROGRAMME 1 Administration and Governance** for Budgetary and into Four Programmes



Programme 2: Strategic Aspects of S&T Publishing in SA cont.

Quest: Science for South Africa Magazine



- Quarterly, **youth-oriented** science magazine, well-established on editing and production side
 - Publications Officer to drive **public sector programmes**
 - Partnerships** with DST, DoE, SAASTA, science centres, etc. being set up
 - Use and impact research** in teacher training programmes initiated
 - Open access system** under investigation
 - Growing subscription** and retail bases
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Programme 2: Strategic Aspects of S&T Publishing in SA cont.

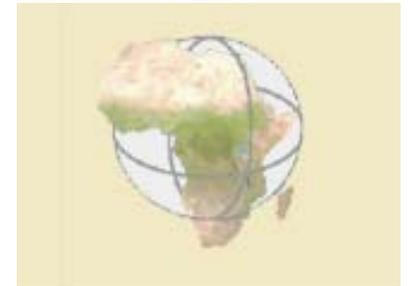
South African Journal of Science

- ❑ Ranked 23rd /50 in world rankings in ISI-indexed multidisciplinary journals
- ❑ Editor retiring end-2008 – **new editorial model** of Editor-in-Chief and Associate Editors
- ❑ Available electronically on *Sabinet*, but **open access system** to be introduced
- ❑ Vision – to be the **flagship national journal** in scholarly publishing programme



Programme 3: International Academy Relations

- ❑ **ASADI:** African science academy development (US National Academies grants)
- ❑ **NASAC:** Network of African Science Academies
- ❑ **IAP:** Water research and science education programmes
- ❑ **IAMP:** Scientific writing programme
- ❑ **TWAS:** Prize for young scientists, etc.
- ❑ **G8 + 5:** ASSAf included in annual meetings of science academy presidents
- ❑ **Uganda National Academy of Sciences:** Bilateral agreement



Programme 3: National Liaison

- National Awards and Activities:
 - * Gold Medals
 - * Sydney Brenner Fellowships
 - * Regional Public Lectures
 - * Annual Visiting Lecturers

 - Committee of Heads of Research and Technology Organisations
 - Increased participation within the National Science and Technology Forum (NSTF)
 - Collaboration with ICSU to set up a South African Chapter of World Association of Young Scientists (WAYS)
 - Building Collaborative relations with Research institutions such as
 - Institutes of theoretical physics, mathematics and centres of excellence
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Committee of Heads of Organisations for Research and Technology

National Research Foundation (NRF)
Human Sciences Research Council (HSRC)
MINTEK
Council for Scientific and Industrial Research (CSIR)
Council for GeoScience (CGS)
National Flagship Institutions (NFI)
Agricultural Research Council (ARC)
Water Research Council (WRC)
South African Weather Service
National Health and Laboratory Services (NHLS)
Council for Higher Education (CHE)
Higher Education of South Africa
South African National Biodiversity Institute (SANBI)
Nuclear Energy Corporation of South Africa (NECSA)
Academy of Science of South Africa (ASSAf)
Department of Education
Department of Science and Technology



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