

African Universities and Their Role in Development

A decorative horizontal bar consisting of a series of vertical rectangular segments in various colors including black, blue, light blue, teal, yellow, and dark blue, arranged in a slightly wavy pattern across the width of the slide.

Mohamed H.A. Hassan
President, African Academy of Sciences (AAS)
Executive Director, TWAS

University Leaders Forum
Cape Town, 18-21 November 2006



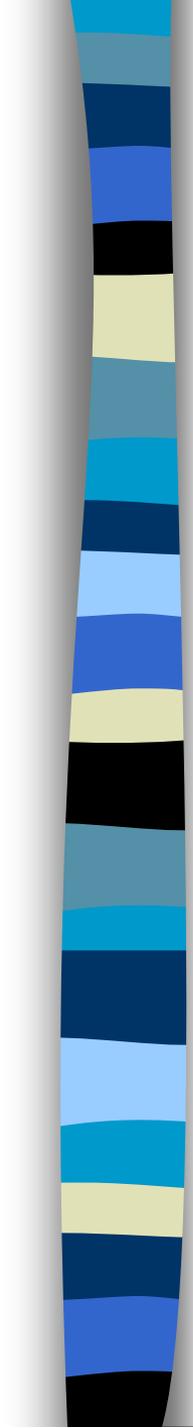
Questions

- What are the current challenges facing Africa's economic development?
- What role can African universities play in generating and applying knowledge for economic growth?



Challenges

1. Democracy and good governance
 - Introducing political reforms based on democratic principles, openness, transparency and accountability
 - Build solid political and financial institutions to attract foreign investment and partnership
 - Examples of promising reforms: Ghana, Mozambique, Nigeria, Senegal, South Africa, Tanzania and Uganda



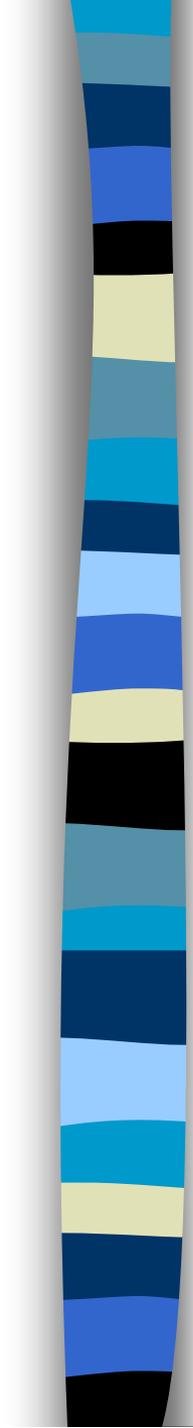
Challenges

1. Democracy and good governance
 - Mo Ibrahim Prize for achievement in African Leadership (*US\$ 5 million to African heads of state for delivering security, health, education and economic development to their nations and democratically transferring power to their successors*)



Challenges

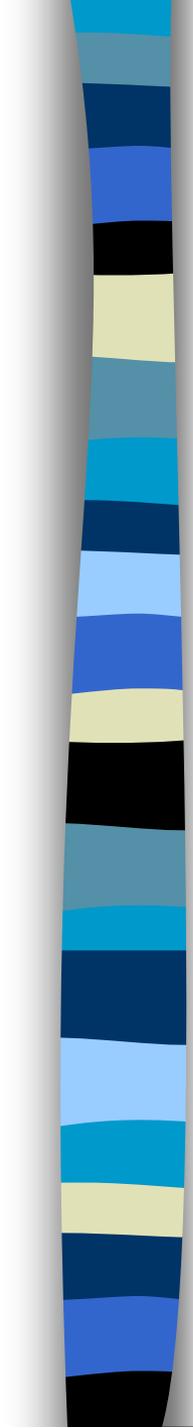
- ## 2. Quality education and research
- Revitalize and reform key universities and upgrade to world-class research universities
 - Promote culture of excellence in education
 - Provide fast track training to best students
 - Reduce brain drain
 - Establish research units and centres of excellence within university departments and faculties to reinforce links between education and research



Challenges

3. Linking research to action

- Build local and regional capacity to address critical issues (WEHAB)
- Strategy to link cutting-edge S&T to Millennium Development Goals (MDGs) and build capacities in emerging technologies
- Participate in global survey to identify recent advances in ICTs, biotechnologies and nanotechnologies that have greatest potential to contribute to attaining the MDGs (Open University, Toronto University)



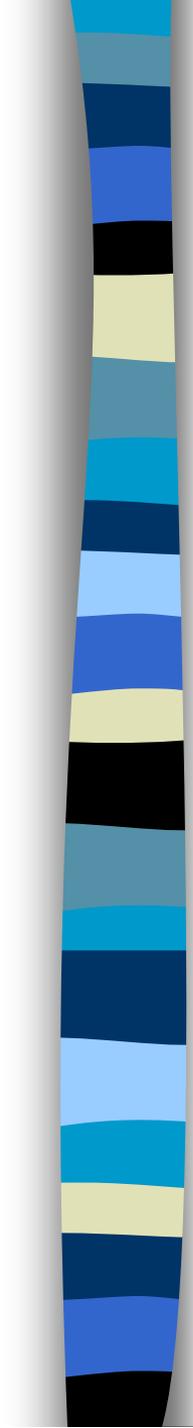
Challenges

4. Funds for research and innovation
 - Secure adequate and sustained funding mechanism to support quality education, research and innovation and to attract, train and retain best and brightest young researchers
 - Establish autonomous, self-governing national and regional research foundations (South Africa, Nigeria; AFRAND? ASIF?)



Challenges

5. Implementation of recommendations/decisions of political leaders
 - Vienna Programme of Action (1979)
 - Lagos Plan of Action (1980)
 - G8 Summit (2005)
 - EC/AU Declaration (2006)
 - AU Summit on S&T: January 2007, Addis Abeba
 - G8/UNESCO World Forum on Education, Innovation and Research: March 2007, Trieste



Questions

- What are the current challenges facing Africa's economic development?
- **What role can African universities play in generating and applying knowledge for economic growth?**



African Universities

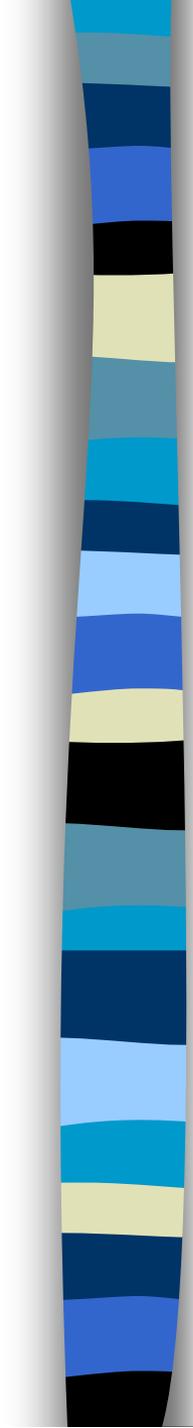
1. Training new generations of scientists
 - Curriculum reforms and ICT-based innovative teaching methods to produce problem-solving scientists, technologists and innovators
 - Regional undergraduate fellowships (AU/AAU?)
 - South-South postgraduate fellowships (TWAS/TWOWS)



African Universities

2. Contributing to problem-solving research

- Collaboration between competent research teams within universities to address critical regional problems (AAU)
- Links between universities and research institutions / parastatals within government ministries
- Partnership between faculties of agriculture and national and international agricultural research centres (CGIAR)
- Links between university research units and NEPAD's networks of excellence
- Participation in recent joint initiatives between Africa and developing countries elsewhere (Brazil, India & South Africa; Brazil, India & Senegal; Brazil, Angola & Mozambique; China & Africa; COSTIS)



African Universities

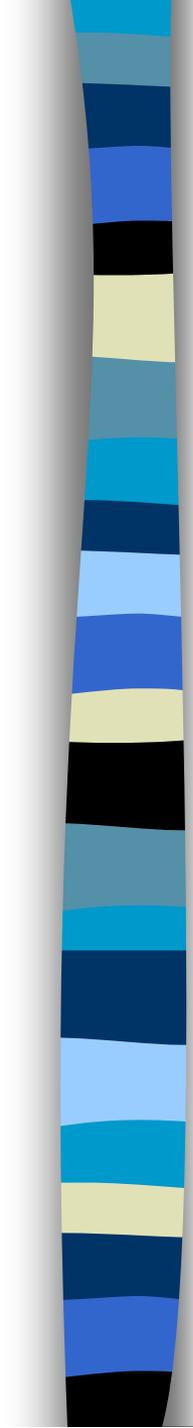
3. Developing closer partnership with academies of science

- 13 merit-based academies of science in Africa (NASAC). 6 are in countries represented in this Forum. Majority of members are professors at African universities
- Academies can provide universities with scientific leadership and advice on curriculum development and quality education and research
- Universities can help accelerate reforms of academies, transforming them into more dynamic organizations by linking them to young researchers



African Universities

3. Developing closer partnership with academies of science
 - IAC reports
 - S&T capacity building: Revitalization of African universities
 - African agriculture: Strengthening of faculties of agriculture
 - Role of African university research in national systems of innovation: Request by NASAC
 - Proposal: Compile, publish and disseminate innovative experiences in various African universities where research has been successfully applied to stimulate economic growth (TWAS/AAU?)



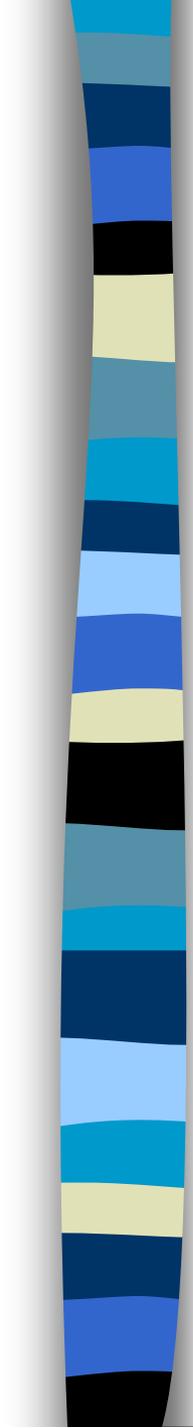
Conclusions

1. Africa needs a new generation of home-grown, problem-solving, world-class scientists to lead science-based development in the continent. This can only be achieved through establishing an effective STI system of world-class research universities.



Conclusions

2. Success stories highlighting achievements of universities in contributing to economic growth need to be identified, published and widely distributed.



Conclusions

3. Increased financial allocations for higher education and STI development in Africa should first and foremost come from African governments. External support from G8 countries, large developing countries (Brazil, China, India) and foundations is critical in developing excellence and relevance in STI.



Conclusions

4. African leaders are increasingly recognizing that science, technology and innovation are essential to lead and implement strategies to achieve the UN Millennium Goals.
The world's rich nations (G8) expressed strong support for strengthening universities and for building STI capacities in Africa.



Conclusions

6. 2006 has been a year of high hopes and political will to save Africa through increased investment in STI.
Let 2007 be the year of explicit commitment, implementation and action.



Conclusions

7. World-class research universities alone will not accelerate economic growth in Africa. But without a sustainable system of world-class research universities Africa's economic growth cannot be accelerated.

Thank you for your attention



Mohamed H.A. Hassan
President, African Academy of Sciences (AAS)
Executive Director, TWAS
mhassan@twas.org