

RISE: The African Regional Initiative in Science and Education

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MSI Centers: A Few Examples

Chile (www.mideplan.cl/milenio/)

- Instituto de Ecología y Biodiversidad
- Instituto de Biología Fundamental y Aplicada
- Núcleo Milenio en Biotecnología Celular Vegetal

Brazil (www.cnpq.br/programasespeciais/milenio)

- Rede TB – Estratégias Integradas para Pesquisa e Controle da Tuberculose no Brasil
- Instituto do Milênio de Biologia Estrutural em Biomedicina e Biotecnologia

Uganda (www.uncst.go.ug)

- Malaria Vaccine Studies in Uganda: Site preparation, infrastructure development, & capacity building for clinical trials
- Enhancing Banana Production through Biotechnology Applications

RISE: Required Elements

- PhD Training: at least 10 PhD's and 5 Masters over 4-6 years
- Research Plan
- Minimum of Three Nodes
- Contributions by All Nodes
- PHEA Affiliation (each network to include at least one university supported by the Partnership for Higher Education in Africa)
- Academic Director
- Secretariat
- Retention Strategy
- Communications Plan

RISE Planning Workshop Nairobi, June 2007

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BACK: John Boright, Iba Kone, Samuel Akatch, Amadou Hama Maiga, Wandera Ogana, Nelson Torto, Yonas Yemshaw, K.A. Ako-Nai, Burton Mwamila, Mike Hughes, Stephen Agong / **MIDDLE:** Mike Ehst, Jackie Olang, Alan Anderson, Mohamed Hassan, Shere Abbott, Phillip Griffiths, Aissétou Yayé, Al Watkins, Turner Isoun, Berhanu Abegaz / **FRONT:** Arlen Hastings, Sara Hastings, Terri Givens, Francis Gudyanga, JPR Ochieng'-Odero, Paul Mugambi, Shem Arungu-Olende, John Ssebuwufu, Olusegun Adewoye

RISE: Recommended Elements

- Build on Existing Networks
- Evidence of Government Support
- Plan to Link University Research with Local Industry
- Priority Areas:
 - materials science
 - mathematics
 - chemistry, including natural products and biochemistry
 - information and communication technology, instrumentation, software engineering
 - renewable energy
 - water resources
 - (other areas considered if strong case is made; no agriculture or biomedical)

Faculty Shortages

- Makerere: As of August 2007, 1,052 of 1,796 faculty positions were filled; 666 had PhD's; 554 more needed to fulfill staffing levels.
- UDSM: For first time, teaching positions were being filled in 2007 by staff with only a bachelor's degree – 128 of 512.
- Kenyatta: Of 730 academic staff, only 31 full professors and 48 associate professors.
- University of Nairobi: Because of staff shortages, graduate students in physics are being offered tenure in return for teaching duties.
- Ghana: About 40% of faculty positions in universities and 60% in polytechnics are vacant.
- Nigeria: An estimated two-thirds of the 36,000 faculty positions are vacant.
- Kenyatta: Of 31 full professors, 28 are over age 50.
- Kyambogo (Uganda): Of 417 academic staff, only 22 have PhDs; 9 of them are past mandatory retirement age.
- UDSM: In May 2006, of 512 academic staff, none were under 30, 8 were between 31 and 35, and only 12% were under 40.

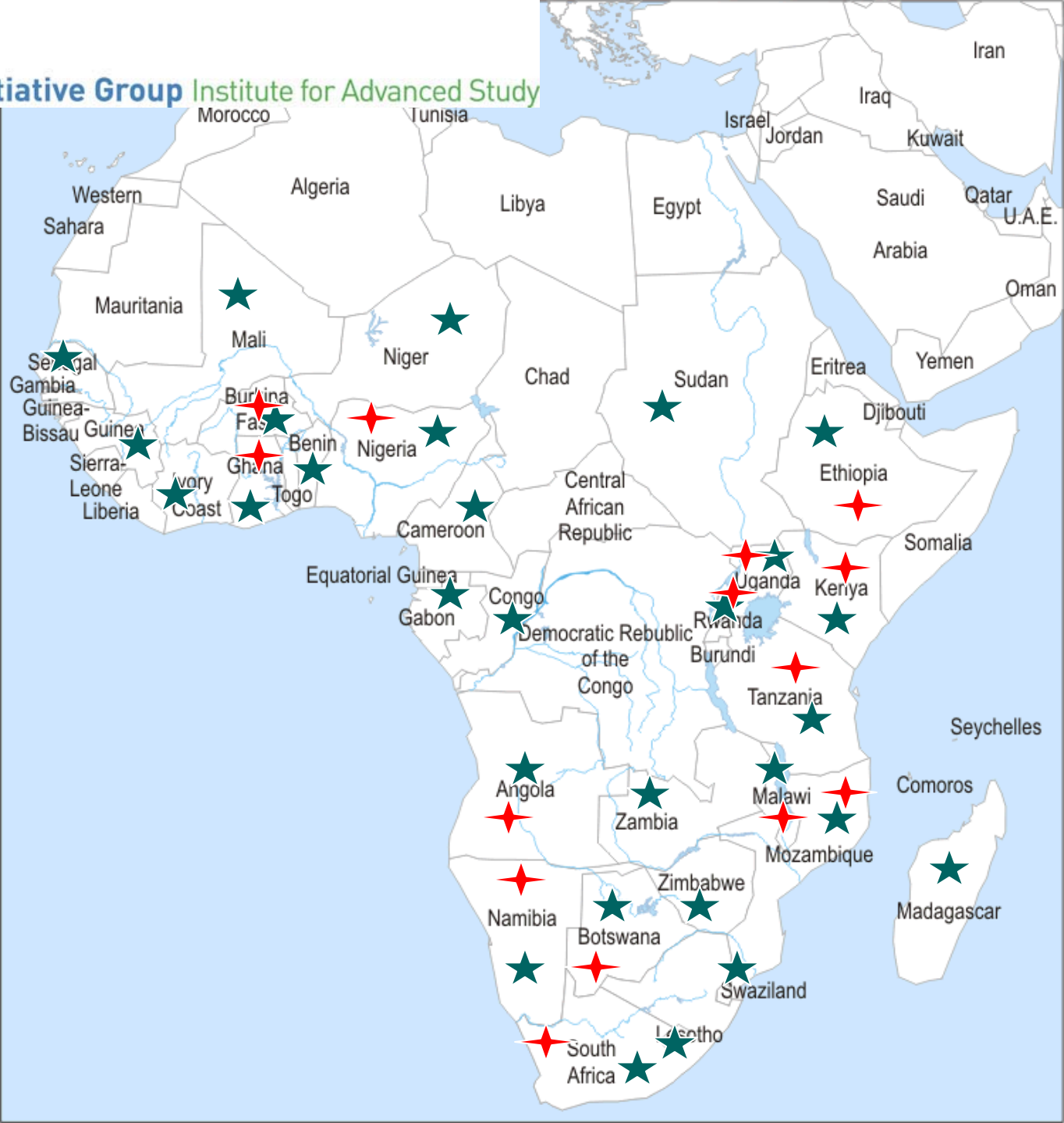
Why Networks?*

- Ability to pool available staff, facilities and equipment
- The realisation of tangible benefits by all institutional participants
- Enlarged scope for exploiting innovations in research, instruction, organisation and financing
- The pioneering of important innovations in doctoral training, which are replicable and scalable
- Multiple use of structures and processes, initially established for doctoral education, for supporting research as well
- Expanded latitude, beyond those available to any single university, for mobilising and utilising financial resources
- Mitigation of risks arising from a concentration of effort in a single institution

*excerpted from *Collaborative Initiatives in African Higher Education*, a study by Jeffrey C. Fine for the Partnership for Higher Education in Africa, June 2006

★
48 concept proposals
involving 29 countries

★
12 finalists
involving 14 countries



RISE: Categories Eligible for Funding

- Graduate training (tuition, stipends, housing, etc.)
- Salary replacement for release time for faculty who serve as mentors for PhD students
- Travel and conferences
- Stipends and expenses for visiting faculty and students
- Equipment (including maintenance and servicing) and supplies
- Books, journals, databases
- Communications
- Secretariat office expenses
- ***Retention incentives*** (in addition to above)
- (Other categories considered)

RISE Partnerships

- Current:
 - African Academy of Sciences
 - TWAS: the Academy of Sciences for the Developing World
 - International Foundation for Science (IFS)
 - The World Bank
 - Scientists Without Borders
 - Partnership for Higher Education in Africa (Carnegie, Ford, MacArthur, Rockefeller, Mellon, Hewlett, Kresge)
 - Global Science Corps
- Potential:
 - NASULGC Africa-U.S. Higher Education Initiative
 - National Science Foundation
 - Individual U.S. universities (discussions underway with University of Texas, Rutgers, Princeton)
 - African Development Bank
 - African Diaspora
 - African governments (critical for sustainability)