

**Major challenges for research
institutes in Africa - A mini-survey of
opinions from former IFS grantees**

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Presentation outline

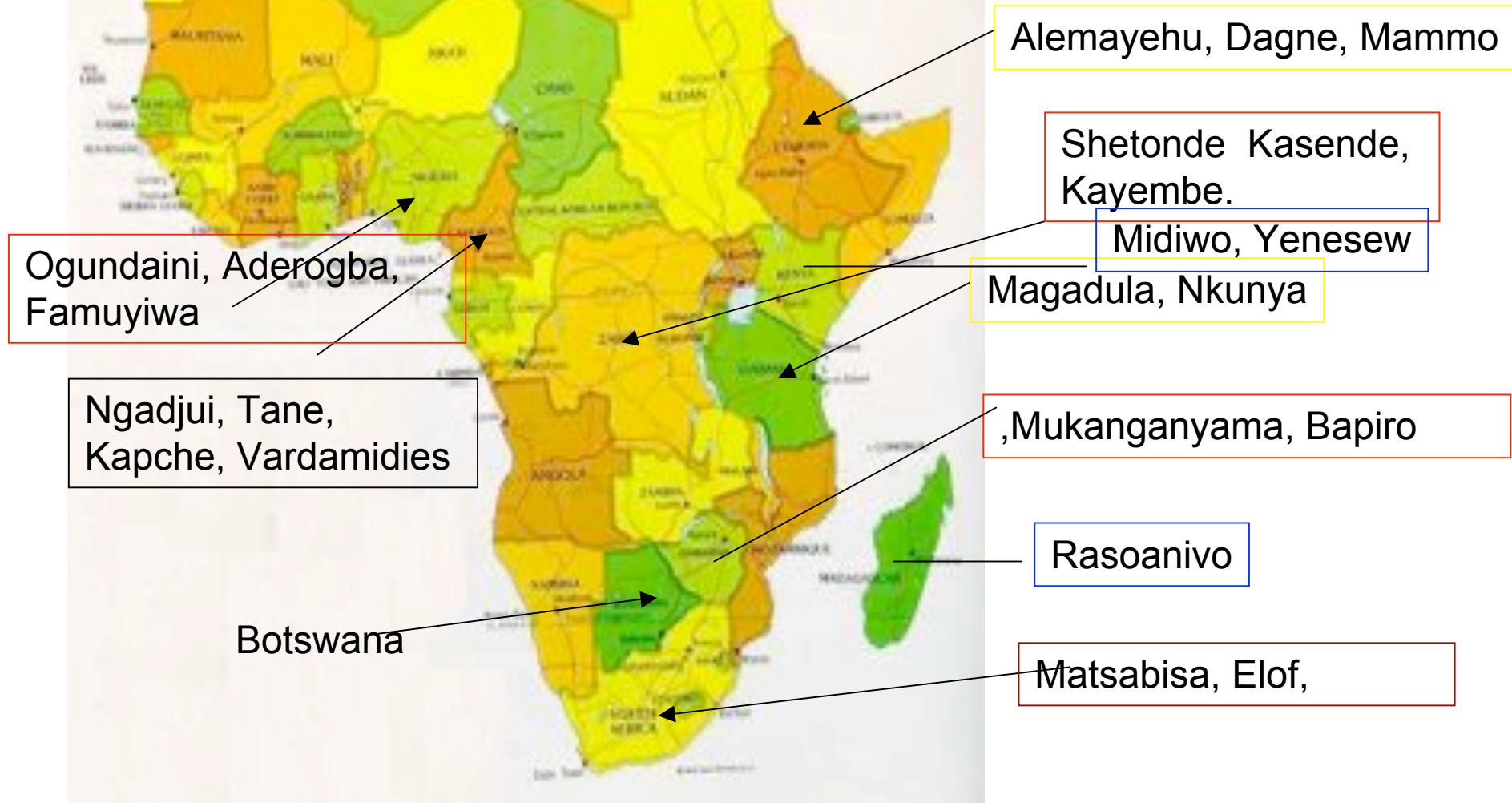
1. Introduction
2. External and internal challenges
3. External challenges
4. Internal challenges – leadership, infrastructure and researchers
5. Survey recommendations
6. Acknowledgements

Some relevant info – about myself

- Higher Education BSc - PhD in Ethiopia and the US (1963-1973)
- 1975/76 got my IFS grant #82
- 1980 started PG training - MSc
1986...trained 1st PhD 1989 in Ethiopia
- 1986 NAPRECA – ISP... 1994
- 1996 – 2009// ISP Support to **NABSA**
- 1999 .. trained 1st PhD in Botswana

Research cooperation with other African Scientists

ISP, TWAS, IFS



600 MHz (LC) NMR – Gaborone, UB



NABSA Publications – Intra-African

Journal	Ethiopia	Tanzania	Cameroon	Zimbabwe	Total
<i>Biochemical Systematics and Ecology</i>			3		3
<i>Bulletin of Chemical Society of Ethiopia</i>	2		4		6
<i>Journal of Ethnopharmacology</i>			3		3
<i>Nat Prod Communications</i>					1
<i>Phytochemistry</i>	6	2	13		21
<i>Pure & App Chem</i>			2		2
Others	6		14	2	22
Total	14	2	32	2	58

Currently member of SAC – Natural Products

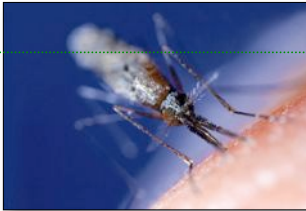


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2. External Challenges

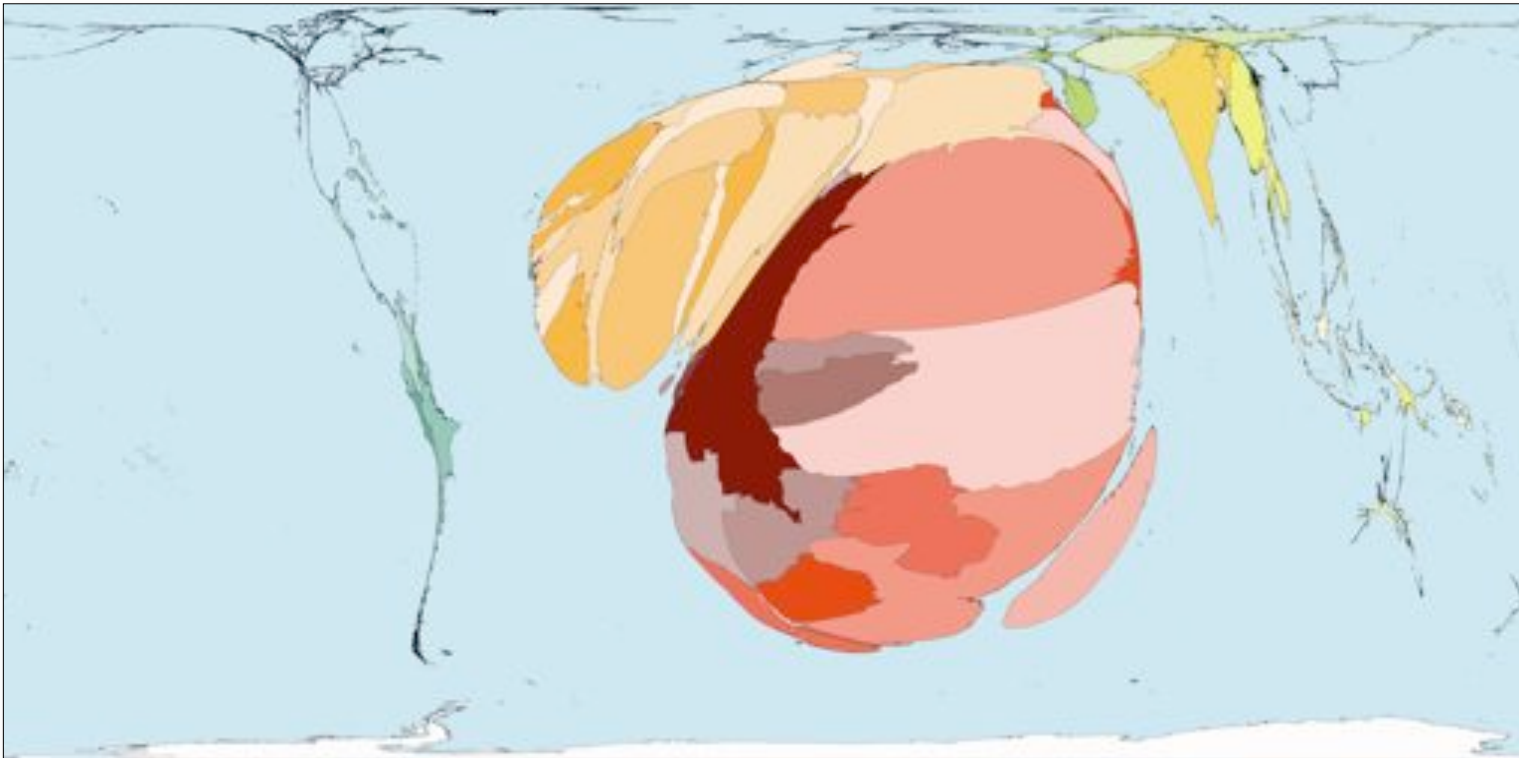
- Lack of real appreciation of Africa's problems
- Short-lived interest of some North partners: diversion of key researchers
- Attraction of professionals away from Africa
- Engaging Diaspora

Malaria kills 900,000 Africans each year



“Each year, it kills more than 1 million people around the world — 90 percent of them in Africa.”

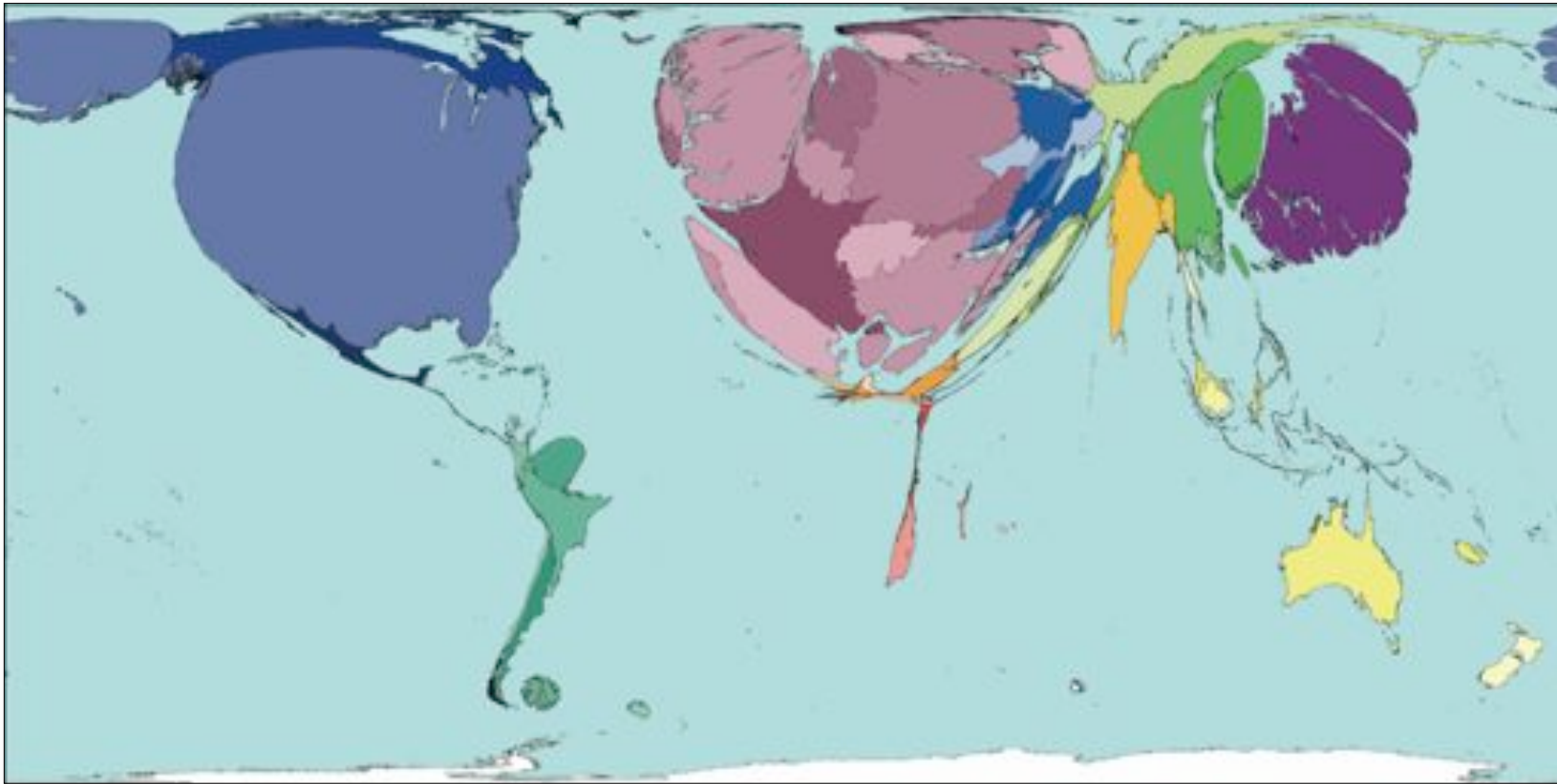
Source: *African Development Indicators 2006*. World Bank



IFS-KFPE-Workshop - Bern, Switzerland 09-10 Nov 2009

Source: Worldmapper. PLoS Medicine | www.plosmedicine.org

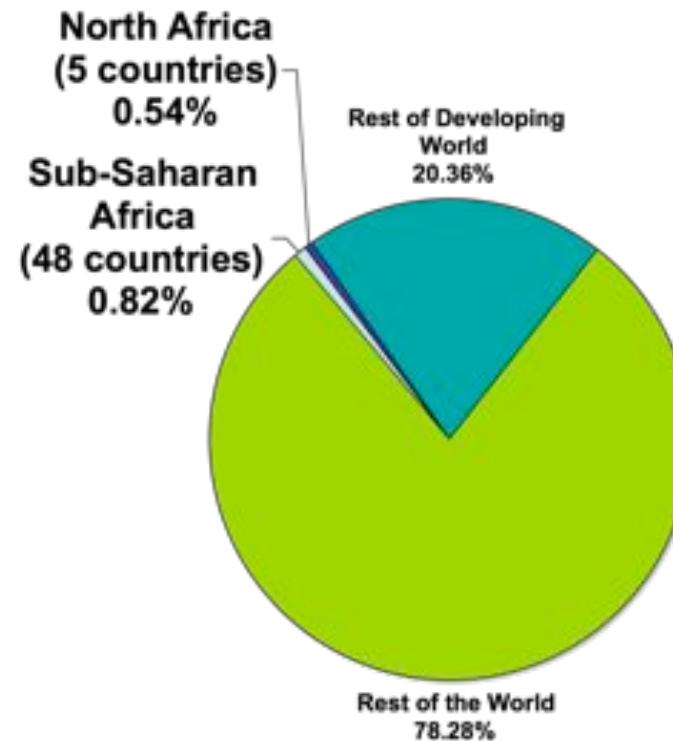
Scientific papers published per million people



Share of Publications

**Africa's world share of
ISI-listed SME papers**

Average 2005-2006



Source: SCI, January 2007

Africa is huge!



The following countries could fit within Africa:

	Area (sq. mi)
China	3,705,390
United States	3,618,770
India	1,266,595
Europe	1,905,000
Argentina	1,065,189
New Zealand	103,736

11,664,680 sq. mi
or 30,211,551 km²

Africa's area: 11,707,000 sq. mi.
or 30,321,130 km²

2. External Challenges

- Lack of real appreciation of our problems
- Short-lived interest of some North partners: diversion of key researchers
- The brain drain Africa
- Engaging Diaspora

2. External challenges

Many overseas development assistance schemes and philosophies are conceived in the North and tried in Africa?

Some programs are short lived

The conception and planning stages of most schemes do not involve the end users, Africans.

If these fail, it is the end users that are the real losers

2. External Challenges

- Lack of real appreciation of our problems
- Short-lived interest of some North partners: diversion of key researchers
- The brain drain Africa
- Engaging Diaspora

2. External Challenges

Brain Drain

- There are more highly qualified medical doctors of Ethiopian origin in Chicago than in Ethiopia.
- There are more highly qualified Sudanese PhD holders in basic sciences working at Sultan Qaboos University in Oman than at Khartoum University in the Sudan.

3. Internal Challenges

- Leadership
- Infrastructure
- Researchers

3. Internal Challenges

- Higher education has expanded dramatically over the last four decades (<100 in the 60s) Now--- Over 400 universities... more than 600 ... counting the colleges

	1975	2009	%
Ethiopia	3	32	1066
Nigeria	27	102	377
Sudan	2	17	850
Tanzania	1	7	700
	33	159	

3. Internal Challenges

- **Leadership**
 - Visionary and enlightened leadership
 - the need for long-term investment in research, innovation, development,
 - Regional programs, addressing broader issues.
Etc.

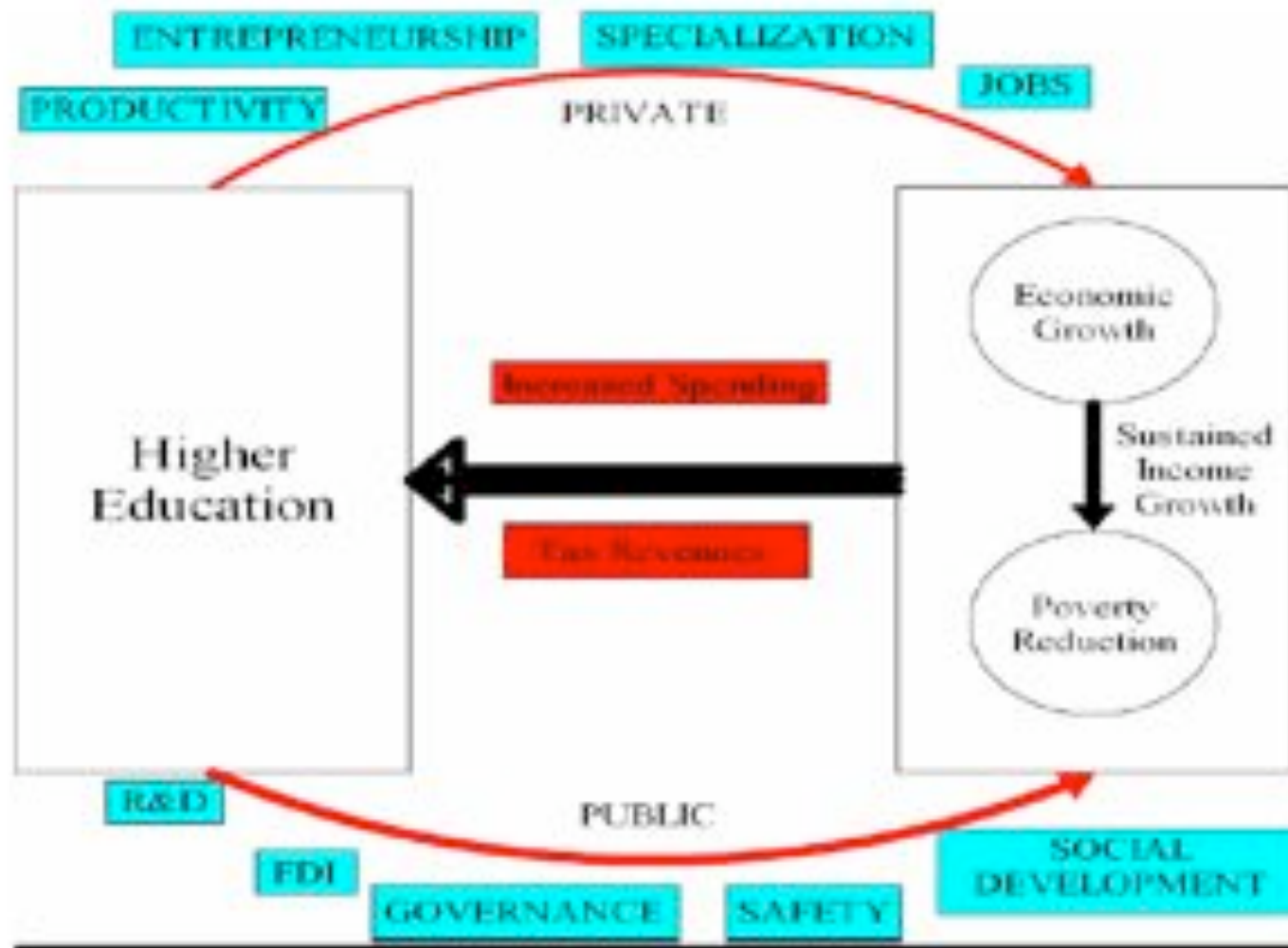
Leadership issues ... in some countries

South Africa – collective view – debate

- Funding for regional activities
- Regional chairs
- Rwanda – popular president, Diaspora involvement – World bank STI programs
- Tanzania - leader's commitment
- Kenya – voices of few individuals, enabling environment.
- Botswana – infrastructure only – more needed on other issues
- Ethiopian experiences

Higher Education and Economic Development in Africa

D.Bloom, D.Canning, K.Chan 2005



3. Internal Challenges

- Leadership
- Infrastructure
- Researchers

Research lab at University of Jos 2008



Internal challenges.. Infrastructure

- Weak infrastructure...
- Facilities,
- Energy, utilities,
- Procurement,
- Workshops for maintenance,
- Access to information, etc.
- Weak national and regional publications

Internal challenges

- Leadership
- Infrastructure
- Researchers
 - Quality and quantity, stabilizing them at home, enabling environment, international quality with a balanced relevance to local and global concerns, solving problems,

The Way Forward

Opinions gathered from a mini-
survey

Way forward – expanding the mandate!!

- ***“to contribute to the strengthening of **capacity** in developing countries to conduct **relevant** and high **quality** research on the **management, use and conservation of biological and water resources**”***

Expanding the IFS - mandate

- *to enable scientists to find solutions to problems of the communities they are in*
- Applied areas

Goes beyond individual researchers

The Way Forward – New areas

New disciplines have emerged – in ICT, nanosciences, etc.

Many global issues have emerged – climate issues, health issues

New areas of engagement based on intensive consultations

Way forward – the need to work with other stake holders – creating synergies

Nationally

- Ministers of Science and technology
- Universities
- Scientific bodies
- Academies

Way forward – the need to work with other stake holders – creating synergies

Regionally

- Pan regional and pan-sub-regional bodies,
- African Union,
- NEPAD initiative

Way forward – the need to work with other stake holders – creating synergies

Other funders and partners

- ISP,
- TWAS,
- GIBEX,
- RISE,
- AWARD,
- *ETC*

The Way forward - Summary

- Focus on individuals – the IFS niche
- Focus on institutions
- Engage national and regional bodies
- Synergistic engagement with other partners (NGOs)
- Shared agendas, priorities and strategies
- Long-term engagement

Acknowledgements

Dagne- Ethiopia

Magdula – Tanzania

Midiwo – Kenya

Mukanganyama –Zimbabwe

Naik- Zimbabwe

Nyasse – Cameroon

Yenesew – Kenya

Yonli – Burkina Faso

Thank you!
Kealeboga!
አመሰግናለሁ:
Merci!
Danke!