



# *STRATEGIES FOR INCREASED UPTAKE OF SCIENTIFIC RESEARCH RESULTS IN EAC*

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# EAST AFRICAN COMMUNITY AND VISION 2050

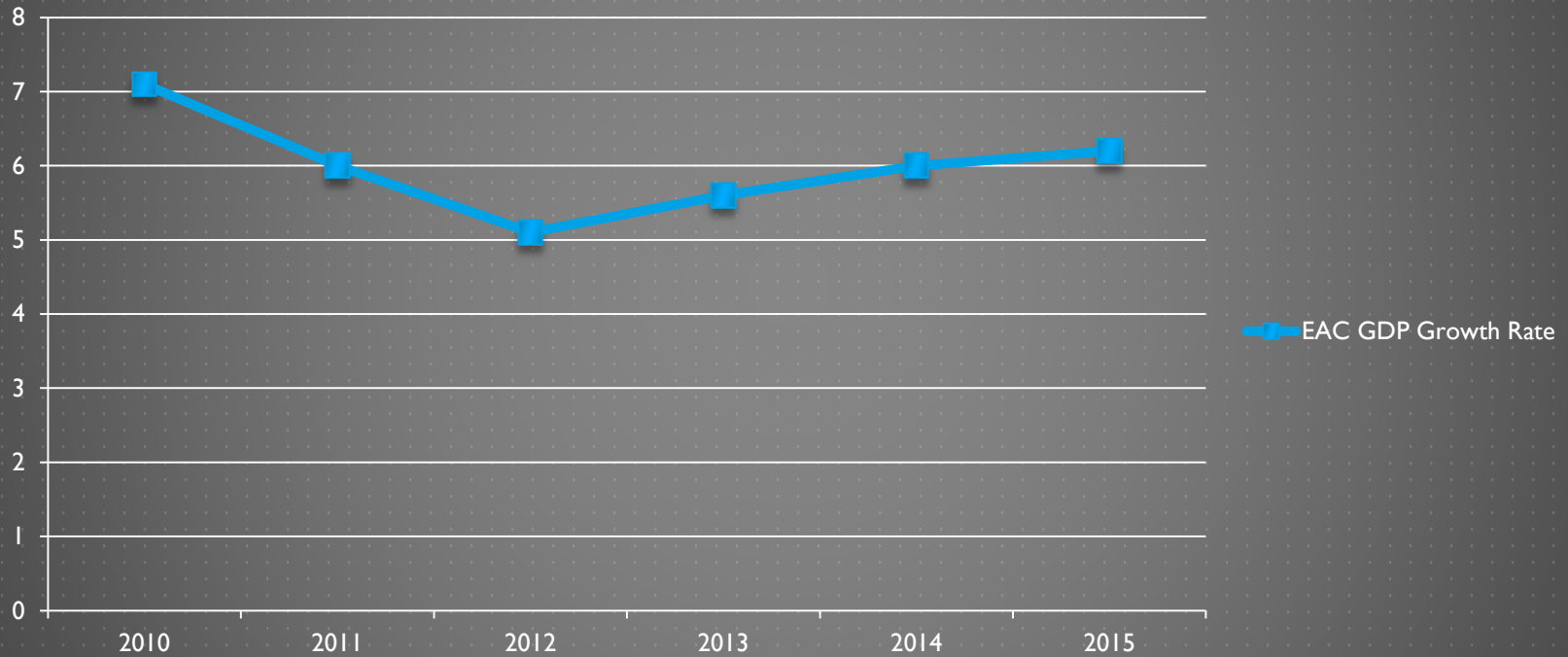
- ▶ East African Community: Rwanda, Burundi, Kenya, Uganda, Tanzania and recently South Sudan
- ▶ “EAC will be transformed into an upper middle income region within a secure and politically united East Africa based on the principles of inclusiveness and accountability by the year 2050”
- ▶ “Establishment of Centers of Excellence in the region will provide a pool of resources that are innovative and competitive globally”
- ▶ Shift from Natural resource based economy to knowledge based economy  
=> Importance of knowledge creation and sharing and innovation in East African Community

# FOUR (4) EAC INTEGRATION MILESTONES

- ▶ Customs union: launched in 2005 and fully operational in 2010 the Customs Union deepened the integration process through liberalization of intra-regional trade
- ▶ Common Market: signed in 2009 and fully operational in 2010, the Common market Protocol provides for the free movement of goods and services, capital, labour and persons plus rights of establishment and residence
- ▶ Monetary Union: **Protocol** signed in 2014, entered into force in 2015, the Monetary Union entails harmonization of fiscal, monetary and exchange policies; harmonization of banking rules and regulations.
- ▶ Political Federation: Ultimate stage of integration where EAC will operate as one political entity. The model and the timing are yet to be set.

# EAC GDP GROWTH RATES

## EAC GDP Growth Rate



# OTHER KEY STATISTICS

- ▶ Population size: 148 million (2015)
- ▶ Gross Domestic Product: 134 billions USD
- ▶ GDP per Capita: 790 USD
- ▶ Total Surface area (with Water): 1.82 millions square Km

# WEAKNESSES IDENTIFIED BY EAC SWOT ANALYSIS

- ▶ Low ratios of specialized skills to the total population
- ▶ Shortage of industrial skills
- ▶ Inadequate capacity for coordination, implementation and M&E mechanisms
- ▶ Widespread unemployment especially among youth
- ▶ Weak accountability in service delivery

# PRE-REQUISITES FOR UPTAKE OF SCIENTIFIC RESEARCH FINDINGS

- ▶ Pre-requisite I: Availability of a Relevant, Owned, Long Term Research Agenda
  - ▶ Relevant: address the most important needs of EAC (industry, business community, citizens, ...)
  - ▶ Ownership: involvement of all stakeholders in the design , implementation and dissemination of **research and consequently utilization** of findings
  - ▶ Long-term: research requires patience, dedication, focus and time
  - ▶ The research agenda should survive the changes of administrative managers of research programmes

# PRE-REQUISITES FOR UPTAKE OF SCIENTIFIC RESEARCH FINDINGS

- ▶ Pre-requisite 2: Availability of Knowledgeable, dedicated, motivated and passionate Researchers
  - ▶ Knowledgeable: Scientific knowledge is needed for identification and formulation of research topics from readings, observation, experience, active listening, etc...
  - ▶ Dedicated: Need for scientists in the region who are committed to improvement of conditions of living of their fellow citizens in EAC
  - ▶ Motivated: competition with other areas of employment as well as green pastures outside the region deprive research in EAC of most skilled human resources
  - ▶ Passionate: pro-active and willing to share their knowledge and findings in understandable way for the layman.



# PRE-REQUISITES FOR UPTAKE OF SCIENTIFIC RESEARCH FINDINGS

- ▶ Pre-requisite 3: Availability of equipment, tools and resources for effective research as well as scientific events and forums
  - ▶ Research equipment and tools: most of scientist are frustrated after they graduate from best schools in Western Universities when they come back to find that they cannot continue their cherished research activities;
  - ▶ Software and reading materials: difficult to access relevant software and journals in the community;
  - ▶ Scientific events and forums: opportunities and facilitation to participate in high quality scientific conferences in the EAC region is still a challenge particularly for young scientists

# PRE-REQUISITES FOR UPTAKE OF SCIENTIFIC RESEARCH FINDINGS

## ▶ Pre-requisite 4: Integrated and Collaborative Research

- ▶ Case of Mosaic free cassava : Focus on Mosaic resistant Cassava. But,
  - ▶ Leaves had high concentration of Cyanic acid that prevents people to eat isombe
  - ▶ Flour from roots was not appreciated by consumers

⇒ Need for comprehensive study with a focus on all sub-products;

⇒ Need for market and sensory analysis for the product

⇒ **Need for Multidisciplinary** collaboration with researchers with different background

# PRE-REQUISITES FOR UPTAKE OF SCIENTIFIC RESEARCH FINDINGS

## ▶ Pre-requisite 5: Research funding

- ▶ Most research activities are initiated and funded by development partners with limited if not short term perspectives;
- ▶ Research funds used more for administrative activities and meetings leaving a small share for tangible research activities and research tools, equipment
- ▶ Little funding for post-publication activities: innovations, patenting, community engagement, policy makers engagement for policy change
- ▶ **Very limited or little funding of research by industry/private sector due to weak Academia-Public-Private/Industry Partnerships/Linkages**
- ▶ **Weak R&D units to translate research findings into tangible usable products by our local industries**

# VISION 2050 TARGETS FOR HUMAN CAPITAL IN RESEARCH

Indicator	Description	2014	2030	2050
2.7 Ratio of Engineers to total population		1:5500	1:3000	1:1500
2.10 Centres of Excellence	Research and Innovation Centers	0	5	8
	Industrial Development Think Tanks	2	5	10
	Medicine and Human Health	2	4	8
	Veterinary Medicine	0	3	6
	Electronics and Space Science	0	4	10
	Technology for development	2	10	20

# ESTABLISHMENT OF CENTERS OF EXCELLENCE IN ESA(2016-2021)

Center of Excellence	Source of Funding	Area of Specialization
African Centers of Excellence in ESA	Governments and the World Bank (24 Ces)	STEM, Health, Agriculture, Applied Statistics and Education
Centers of Excellence in Biomedical Sciences	Governments and African Development Bank	Cancer, Kidney, Heart Diseases, E-health and orthopedics and Nutrition
Center of Excellence in theoretical and Applied Physics	ICTP	Theoretical Physics and related applications
Center of Excellence in Renewable Energy	EAC and other Partners	Renewable energy
Centers of Excellence in Applied Mathematics	SIDA	Pure and applied mathematics and Statistics

# PROPOSED WAY FORWARD

## 1. **Creation and Expansion of Research and Innovation Space**

By designating some existing higher education and research institutions in the region as adequately resourced regional research and innovation hubs that will be linked to business and industry clusters supported through public and private venture capital and business advice, technical assistance, and financing to start-ups for expansion of the space for innovation, growth and development.

## 2. **Creation and Consolidation of the EAC Knowledge Space**

By shaping the academia – private sector partnership research and innovation agenda, and ensuring that (i) the academia has the capacity to generate knowledge, and (ii) the private sector/industry has the reciprocal absorptive capacity of knowledge generated by the academia and from other sources. This requires the Academia, the Private Sector/Industry, and the State to work together to improve conditions for knowledge generation, transfer and utilization.

## 3. **Creation EAC Dialogue and Consensus Space**

To ensure structured and targeted generation of innovative industrial transformation strategies for the systematic development of new small and medium enterprises based on scientific research and innovation activities.

# CONCLUSION

- ▶ A prioritized Long term EAC research agenda owned by all stakeholders is available, disseminated and promoted (scientists, policy makers, Civil society, communities, private sector, and development partners)
- ▶ Research hubs providing conducive environment for researchers and research activities are in place, operational and sustainable
- ▶ Established multidisciplinary teams and Partnership with Public and Private Sector are promoted and supported
- ▶ Sustainable funding strategies for research activities and uptake of research findings are elaborated, adopted and implemented.
- ▶ Enhanced coordination of research activities and interventions for uptake of findings starting by the EAC organs: EASTECO, IUCEA, Health Commission, et,

Thank you for your attention

**MURAKOZE**