UNESCO Regional Offices in Africa

Building the critical mass in science and engineering - Gas Competencies in Africa

Peggy Oti-Boateng (PhD) in Africa
Africa Regional Science Advisor – S&T
Coordinator of ANSTI

Gas Competency Conference
22-23 September, 2015
p.oti-boateng@unesco.org
The World's economies are undergoing transformation or accelerating to knowledge-based industries.

The role of government is changing. The democratic process is making the decision-making process more complex.

Africa’s economies are growing but need agility and inclusivity.

Skills development is wise investment to increase economic growth.

Africa must innovate using SETI to transform its rich human and natural resources into capital goods, processes and services through value addition for sustainability and shared prosperity.

African needs transformational change requiring paradigm shift.

New Sustainable Development Goals. (SDG 17 Goals)
1. Has 17 Goals with 169 targets
2. Overarching goal 1 is: End poverty in all its forms everywhere
3. End Goal 17 is: Strengthen the means of implementation and revitalise the global partnership for sustainable development
4. 9 out of 17 goals require direct input of science technology and innovation (2, 3, 4, 7, 9, 11, 13, 14, 15)
5. Food, Health, Water, Energy, Resilient structures, Human settlements, Climate change impact, Oceans and marine resources, Ecosystem and biodiversity
6. Goal 5: Achieve gender equality and empower all women and girls
• Over 50% of the world’s population is in Africa

• 51% are females

• Africa has the world’s lowest 2nd school enrolment of 40% with only 11% in technical skills programmes in 2010

• 81 out of 146 countries (20% in Africa) have more women being illiterate with very few reaching the target by 2015

• Low gender parity at primary school with Angola and Eretria not meeting the EFA goal in 2015

• Many governments have neglected skills S&T training and the disadvantaged lose out most

• Less than 20% of African countries have nation STI policy and governance strategy

• Skills for urban youth provides opportunity for a better future
Few women scientists, even fewer engineers and women in leadership positions in the management of S&T institutions. ANSTI/DAAD Alumni only 9% over 21 years (1983-2014), despite affirmative action.
Investment in skills development and economic growth in Korea and Ghana 1970-2010 UNESCO-2013

A. Economic Growth

B. Secondary school enrolment ratio 1971-2012
• What can Africa do to meet the demands for quality science and engineering education?

• What strategies and actions are needed to accelerate women’s access and participation in science, engineering and technology.

• How can African countries increase the number of women in science, engineering and technology in readiness for post 2015 SDG agenda?

• What policies at community, national, Regional and international are required?
Africa’s capacity to compete on the global market depends on her ability to innovate using STI to transform its natural and human resource capability into value added goods, processes and service.

Africa requires a well-educated, innovatively-trained and resilient critical mass of experts in STI with equal access.

Strategic policies and actions for promotion of women in STEM to enhance value addition for human capital development, economic transformation and shared prosperity.

Africa’s biodiversity must be preserved to enhance sustainability and climate change mitigation.
UNESCO’s 5 Action Response

Laboratory of Ideas

Catalyst International Cooperation

Standard Setting

Capacity Builder

Clearing House
SO 4: Strengthening science technology and innovation and policies- nationally, regionally and globally

SO5: promoting international scientific cooperation on critical challenges to sustainable development

The plan of action for MP 2 including IOC is around six main line of actions with special emphasis on Africa, Gender LDCs and SIDS, youth and indigenous people; S_S, N-S cooperation, partnerships MBDP and UN DaO
1. Create the platform for debate and interact to identify niche areas for Africa’s capacity development in readiness for SGDs.

2. Strengthen governance structures and enhance foresight planning relating to biodiversity ecosystem and oceans

1. Create needed human capital in judicious exploitation or conservation of the continent’s natural resources

2. Monitor and evaluate trends in Africa to advise governments on effective utilisation of its natural and human resources

3. Link up experts in Africa and globally to share ideas and develop partnerships for promotion of sustainability science post 2015.
Building institutional capacity in science and engineering

Human and institutional capacity development through awards of postgraduate scholarships and short courses

Promoting knowledge and capacities for protecting and sustainably managing the oceans and coasts
UNESCO STEM - KEY

* STI Policy Design and Implementation
  * Mapping STI System and Governance
  * Mainstreaming gender in national STI Policies

* Strengthening Capacity in teaching, learning and research in STEM
  * Workshops

* Mentoring Female STEM in schools and Universities
UNESCO- ANSTI –IGU Partnership

* Award of scholarships for postgraduate training (PhD, MSc)

* Capacity building in emerging new technologies

* Travel grants

* Thematic conferences
* Staff exchange
* UNESCO-IGU partnership
Synergy of Actors to Advance Gas Competencies in Africa

Policy makers and Development Partners

Society

Scientists and Private sector

Science communicators/Advocates
Thank you in various languages.