



Mainstreaming Gender in the National Science, Technology and Innovation (STI) Policy of Kenya

**African Technology Policy Studies Network
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**Nicholas Ozor
Peggy Oti-Boateng
David Otwoma
Edwardina Ndhine**



United Nations
Educational, Scientific and
Cultural Organization

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pour l'éducation,
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Nicholas Ozor

African Technology Policy Studies Network (ATPS)

Peggy Oti-Boateng

United Nations Educational, Scientific and Cultural Organization (UNESCO)

David Otwoma

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National Commission for Science, Technology and Innovation (NACOSTI)



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Table of Contents

About United Nations Educational, Scientific and Cultural Organization (UNESCO)	4
About the African Technology Policy Studies Network (ATPS)	4
About the National Commission for Science, Technology and Innovation (NACOSTI)	5
Acknowledgment	6
1. Introduction	7
2. Rationale	8
3. Analysis of Gender Issues in Kenya's STI Policy Environment	10
4. Challenges to Effective Gender Mainstreaming in STI Policy	12
5. Proposed Gender STI Policy and Strategies for Implementation in Kenya	13
5a. Proposed Policy Statement and Strategies for Implementation	14
6. Conclusion and Recommendation	15
ATPS Technopolicy Brief Series	16

About United Nations Educational, Scientific and Cultural Organization (UNESCO)

The United Nations Educational Scientific and Cultural Organization (UNESCO) is leading the Global Alliance of science, technology and innovation (STI) in Africa based on its mandate and experience in science education at all levels, TVET and higher education, science for sustainability, as well as in STI policies and capacity building. UNESCO provides guidance to countries and regions to adopt a systemic and integrated approach to STI. UNESCO is committed to support the higher education system and promote STI for youth employment, human capital development and inclusive growth. UNESCO continues to lead and build bridges to enhance synergy, partnerships and collaboration based on best practices and lessons learnt from other continents and; forge alliances between member states and other UN agencies in 'delivering as one'. UNESCO is working with African member states to build capacities and create a critical mass of experts in science, engineering and technology by strengthening programmes and institutions that offer training in these fields to increase member states' socio-economic competitiveness and environmental resilience.

About the African Technology Policy Studies Network (ATPS)

ATPS is a trans-disciplinary network of researchers, policymakers, private sector actors and the civil society promoting the generation, dissemination, use and mastery of Science, Technology and Innovations (STI) for African development, environmental sustainability and global inclusion. ATPS has over 1,300 members and 3000 stakeholders in over 51 countries in 5 continents with institutional partnerships worldwide. We implement our programs through members in national chapters established in 30 countries (27 in Africa and 3 Diaspora chapters in the Australia, United States of America, and United Kingdom). In collaboration with like-minded institutions, ATPS provides platforms for regional and international research and knowledge sharing in order to build Africa's capabilities in STI policy research, policymaking and implementation for sustainable development.

About the National Commission for Science, Technology and Innovation (NACOSTI)

The National Commission for Science, Technology and Innovation (NACOSTI) is the successor to National Council for Science and Technology (NCST) was established after the commencement of the Science, Technology and Innovation Act, 2013 on 24th June, 2013. According to the Act, the objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto. Our Mission is to improve the quality of life of Kenyans by integrating science and technology in social and economic development. NACOSTI is involved in the coordination of activities geared towards development of appropriate policies on various areas of research, science, technology and innovation.

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1. Introduction

If scientific research is to have any meaningful impact in terms of guaranteeing the development gains in Africa, the results must inform and shape policies and programmes as well as contribute towards solving practical societal problems. However, the process of realizing this goal is complex involving multiple actors often having different world views and realities. Their values and ways of processing and using evidence are very different. For instance, the language of the researcher and that of the policymaker or practitioner are so different that unless decoded might not make much sense to each other. As a result, research-based evidence is often only a minor factor when policies for development are formulated and practices shaped. On the other hand, the research sector believes that it is only when the products and processes of research efforts are applied that sustainable development can be achieved. Likewise, tacit knowledge from the practitioners rarely reaches the researchers or those that make decisions. This lack of agreement and poor communication between the development actors has created wide gaps between them hence limiting the realization of development gains.

It becomes imperative to explore options for effectively influencing policy using different approaches and methods so as to achieve desired objectives of putting research into use. However, influencing policy change can be a challenging and daunting task because of the existing wide gap between research, policy and practice which results mainly from the lack of understanding of the policy context/policy processes by the research community, weak demand for research in the policy community, and poor supply of good quality, policy-relevant research. This requires a proper understanding of research communication and knowledge translation tools to facilitate the use of research evidence to influence policies and effect desired changes. Public policy remains a key instrument in influencing development because policy not only shapes and directs the government's development trajectories, but more importantly, directs resource allocation and distribution. For researchers to make impact beyond the publications/patents, they will need to engage with and influence policy change. One such policy influence tool is a Policy Brief.

Policy briefs are one of the most common and effective written communication tools in a policy campaign or outreach. A policy brief outlines the rationale for a

particular policy alternative or course of action in a current policy debate. A policy debate is the 'market place' for competing policy ideas. The purpose of a policy brief is to convince the target audience of the urgency of the current problem and the need to adopt the preferred alternative or course of action outlined, and therefore, serve as an impetus for action. Writing good policy briefs is however one amongst many complex processes that enhances policy influence by policy advisory bodies such as the National Commission for Science, Technology and Innovation (NACOSTI) in Kenya.

The African Technology Policy Studies Network (ATPS) with over two decades of experience in STI policymaking and development, has facilitated the process of developing a policy brief to mainstream gender in the National STI Policy of Kenya. This it has done in partnership with stakeholders including the National Commission for Science, Technology and Innovation (NACOSTI), Kenya, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) Office, Nairobi, and other relevant ministries and agencies in Kenya. The main output from this endeavour is the development, publication and dissemination of a policy brief that will be used to influence the mainstreaming of gender in the National STI Policy of Kenya. Already, UNESCO has supported several consultations aimed at mainstreaming gender into national STI policies in Eastern Africa and Kenya particularly. These supports have however culminated in the development of this policy brief as a public product. The final draft of the policy brief is attached to this proposal.

2. Rationale

The Kenya's Vision 2030 recognizes the critical role that Science, Technology and Innovation (STI) play in raising productivity and efficiency levels across the economic, social and political pillars of national development. Similarly, the Constitution of Kenya 2010 and the 2nd Medium Term Plan (MTP, 2013-2017) documents prioritize STI programmes based on their potential impact and the existing gaps identified in the framework of Vision 2030, and the 1st MTP 2008-2012 and aims to facilitate effective integration of STI into the economy as an urgent issue for redress. In Kenya, the STI institutions and higher education must be seen to play the central role in wealth creation, social welfare, equity,

sustainable development, justice, governance, peace and prosperity, and international competitiveness. Unfortunately, the pursuits of productivity, entrepreneurship and creativity to maintain scientific leadership fail to provide equal participation to both men and women particularly in public service sectors of health, agriculture, energy, environment and industry. Equal participation will be necessary across all Science, Technology, Engineering and Mathematics (STEM) fields to allow both men and women reach their full intellectual potential. However, much remains to be done to achieve this goal.

Gender mainstreaming, defined in the Beijing Platform of Action 1995 as a *strategy for integrating gender concerns in analysis formulation and monitoring policies, programmes and projects* under Millennium Development Goals (MDGs) was identified as one of the most important means for achieving gender equality. Other international and regional ratified treaties, protocols¹, agreements², conventions³ and fora⁴ also express similar views on gender parity in fighting poverty and promoting economic empowerment of women and entrepreneurship, agriculture and food security, health, science, engineering and technology education, leadership and employment.

It is noteworthy that many governments in East Africa region have started addressing gender mainstreaming issues, though at different scales. The region allocates about 0.6 percent of their GDP to gender mainstreaming and pushes to raise it up to 1%. In Kenya, although the new Constitution concludes under Article 2 (6) that any international law ratified shall form part of the laws of Kenya, the coordination, facilitation and advise on gender mainstreaming remains far from implementation to realize equal gender participation in STEM fields. Nevertheless, the attempt by the Kenyan Government to mainstream gender was reinforced in 2000, when the Ministry of Gender and Sports developed the National Gender and Development Policy.

Whilst this commitment is present, there are challenges in allocating adequate funds to ensure efficiency, effectiveness and complementarity in their activities

¹Protocol to the African Charter on Human Rights of Women in Africa (Maputo Protocol) adopted in 2003 and enforced in 2005.

²African Union (AU) Solemn Declaration on Gender Equality in Africa (AUSDGEA) 2004.; Nairobi Declaration on the African Women's Decade (AWD), 2010.

³Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) adopted in 1979 and enforced in 1983

⁴The United Nations Educational, Scientific and Cultural Organization (UNESCO) Forum for African Women Educationalists (FAWE) consultative meeting on girls and women in science and technology held in Arusha in 1997

and to establish mechanisms for gender mainstreaming targets. The implementation of the policy itself has also lagged behind with low participation and under-representation by women, for instance, in institutions of higher learning, research and policy making, gender disparities exist with only few women taking up STI related careers resulting in low representation of women in leadership positions in our academic institutions, scientific, and professional societies compared to men qualified to hold these positions. It is not lack of talent, but unintentional biases and outmoded institutional structures that are hindering the access and advancement of women in STI.

Findings from the National Council for Science and Technology [currently National Commission for Science, Technology and Innovation (NACOSTI)]⁵ reveal that gender disparities exist because most STI institutions lack gender policies and do not allocate resources towards gender mainstreaming. The study recommendations include affirmative actions incorporated within science system to ensure clear articulation of gender-specific needs and goals of the society, the adoption of decision-making techniques such as frequent monitoring and evaluation, technology assessment and analysis to form part of decision-making in the protection and promotion of rights related to principals of equality, and freedom from discrimination. This policy brief therefore proposes specific policy statement on mainstreaming gender in the national STI policy of Kenya and stipulates the gender mainstreaming strategies profoundly dedicated to enhance the country's talent pool.

3. Analysis of Gender Issues in Kenya's STI Policy Environment

The Kenya National Policy on Gender and Development (NPGD), 2000 and Ministry of Gender, Children and Social Development Gender Policy (2011) spells out a policy approach of gender mainstreaming and empowerment of women and clearly states that it is the right of women, men, girls and boys to participate in and benefit equally from the development process. Therefore, it

⁵National Council for Science and Technology (2010) *Mainstreaming Gender in Science and Technology Policies and Programmes in Kenya*

provides a framework to develop and align its policies and programmes to reflect the needs and aspirations of a gender equal society as well as clearly articulate women's specificity issues for mainstreaming gender in Kenya. These strategies are informed by and consistent with the objectives of the flagship projects under the social pillar of the Kenya Vision 2030. The Government of Kenya in its efforts to transform any biased culture and practices in all Ministries, Departments and Agencies (MDAs), has created a mechanism to ensure the auditing and ongoing monitoring and assessment of policies, programmes and procedures for gender-responsiveness in Annual Performance Contract effective from 2009/10.

A review of the draft Kenya STI Policy document reveals that the word 'gender' and 'women' were mentioned only twice each in the entire document without any clear policy statement or means of achieving the policy. This is clearly an oversight especially when compared with similar policy documents from other countries in the region including Uganda, Rwanda and Tanzania where the issue of gender and women were clearly given their rightful places with clear policy statement and strategies for achieving it.

More specifically, Chapter Two of the current draft Kenya STI Policy document covering the vision, mission, philosophy, purpose and goals of the Policy Framework, proposes an “Equity and non-discrimination” clause to ensure that there is equity and non-discrimination in appointments and in recruitment, promotions and human resource management of public STI institutions; and ensure the principle that not more than two-thirds of the members of elective or appointive bodies shall be of the same gender. It aims to “promote the empowerment as well as full participation of women, youth, marginalized communities and disadvantaged persons in all ST&I activities”, among others. Similarly, Chapter Four of the draft Policy document proposes to address policies and strategies that were developed from the analysis of the National Sectoral Priorities. The policy highlights areas meant to create an enabling environment for the growth of STI. One of the strategies for accomplishing it is to facilitate the involvement of women, youth and disadvantaged groups and other stakeholders in national governance and public policies making to ensure policies are all inclusive.

These mere mentions of gender and women in the draft Kenya STI policy document are grossly not enough. In order to achieve gender mainstreaming in

STI policy in Kenya, several consultations⁶ have been carried out by concerned stakeholders. These consultations have culminated in the development of this policy brief.

4. Challenges to Effective Gender Mainstreaming in STI Policy

Some challenges have been identified as being responsible for the difficulty in mainstreaming gender in STI Policy in Kenya and indeed in many other African countries. These include:

- i. Lack of gender disaggregated data in science and technology at county, national and sub-regional levels. Gender disaggregated data is required to help policymakers, programme implementers and development agencies make informed decisions on resolving gender disparities in science and technology;
- ii. Limited participation of gender-oriented stakeholders. Stakeholders with interest in gender issues and scientific creativity rarely participate to articulate gender issues in science and technology policy review and formulation processes thereby allowing most policies that are developed not to be gender responsive;
- iii. Poor enrolment of the girl child in institutions of higher learning to pursue careers in science, technology and engineering. Though enrolments of girls and boys at the lower primary levels have been fairly equal, this figure continues to decrease steadily in girls' enrolment in higher levels of learning and instead opt for social fields of study other than join science and engineering related careers;
- iv. Sexual discrimination. There is observable preference of males over females in African culture which informs social roles and responsibilities of females, access to resources, political power, education, and in all sectors of

⁶UNESCO-ATPS-NACOSTI Capacity Building Workshop in Science, Technology and Innovation Policy Formulation and Implementation for Sustainable Development in East Africa held from 31st October - 1st November, 2011. UNESCO-ATPS-NACOSTI Capacity Building Workshop on Gender Mainstreaming in Science, Technology and Innovation Policymaking held from 5th -6th September 2013.

the human endeavour. At the same time assertiveness and single mindedness are stereotyped as socially unacceptable traits for women and often stay within the socially defined roles and responsibilities largely because of social stereotypes; and

- v. Lack of coordinated approach and collaboration among gender champions. There is lack of coordinated approach among gender champions in sharing knowledge and experiences on gender issues in STI that will be capable of influencing policy decisions. Female to female collaborations in STI are rare as they tend naturally to cooperate with men even in special areas allocated for female in the areas of research, sometimes deliberately but often inadvertently. Limited programmes and projects that are adequately engendered erect barriers for opportunities and encouragement to develop women interests in STI and abilities to the fullest.

5. Proposed Gender STI Policy and Strategies for Implementation in Kenya

The main objectives of STI policy are to create endogenous STI capacities appropriate to national needs, priorities and resources, and to create a science, technology and innovation culture for solutions to socio-cultural and economic problems of the individual, the community and the nation. Engendering STI Policy in Kenya will create the enabling environment to promote the educational and professional success of all people without bias for sex, race, or ethnicity. Institutions must therefore be held accountable and provide evidence that women and men receive equitable opportunities, resources and supports. The policy is based on the guiding principles of relevance, inclusiveness, realism, cost-effectiveness, multi-disciplinarily and synergy, partnerships, environmental protection and conservation, empowerment and participation, equity and non-discrimination, ethical leadership and good governance. NACOSTI is expected to primarily set the national and county STI priorities and coordinate the agenda across all sector ministries and in county governments to ensure that the needs and interests of each gender (men and women, boys and girls) are addressed.

Based on the foregoing, the following gender policy statement and strategies are proposed for inclusion in the Draft Kenya STI Policy Document. This is to be included under Chapter Four: Policies and Strategies for Gender Mainstreaming in STI.

5a. Proposed Policy Statement and Strategies for Implementation:

Policy Statement: *Mainstream and actively involve women and men in all STI related programmes and activities, and in decision making in order to ensure that impacts are spread across all sections of society.*

Proposed strategic actions for the implementation of the above policy statement:

1. Ensure equal participation and equitable distribution of opportunities and benefits of STI for women and men and other disadvantaged groups;
2. Design and initiate affirmative action initiatives to ensure the inclusion of women and men in STI related programmes, activities, and in decision making and planning;
3. Design and implement sensitisation of the general public and key stakeholders (policy makers, research, civil society, local communities, academia, faith based organisations, NGOs, students etc.) on the relevance of gender mainstreaming in STI;
4. Incentivise STI education and training for females at all levels of schooling (primary, secondary and tertiary), including public and private sector institutions in order to facilitate the equal participation of women and men in STI;
5. Review the educational curricula at all levels to build capacity for the achievement of gender mainstreaming and to match the expected gender goals and objectives of government and other institutions;
6. Facilitate entrepreneurship training to women, girls, and men in order to enhance their ability and capacity to innovate, utilise, and commercialise STI;
7. Conduct regular information dissemination and outreach activities to popularise gender mainstreaming in STI through the use print and electronic media that relays information effectively to targeted audiences;
8. Provide financial (through budgets) and material resources towards the realisation of gender mainstreaming in STI through government, institutional and local level arrangements;

9. Integrate a culture of routine gender analysis and gender monitoring and evaluation to ensure that up-to-date statistics, gender disaggregated data and information on gender is generated and applied in planning and decision making;
10. Create forums (e.g. use of TV and Radio) to initiate public debates and dialogues on gender mainstreaming and the role of societal norms in encouraging or discouraging gender equity; and
11. Celebrate deserving women scientists through awards, scholarships, national honours awards to encourage other women to venture into STI fields.

6. Conclusion and Recommendation

This policy brief aims to influence the mainstreaming of gender in the national STI policy of Kenya. Several international fora and consultations have acknowledged the need to integrate gender concerns in the analysis, formulation, implementation, and monitoring of policies, programmes and projects in order to make them more effective and sustainable. Reports show that Kenya is still far from realizing gender equity and equality in practice especially in the areas of science, technology, engineering and mathematics fields even when appropriate institutions have been set to achieve this. A typical case is the Draft STI Policy of Kenya where gender concerns have not been effectively captured.

In order to correct this anomaly, this policy brief has proposed a specific policy statement on mainstreaming gender in the national STI policy of Kenya and identified strategic actions for the implementation of the policy statement. It is therefore recommended that the various government organs including NACOSTI that are responsible for the revision of the Draft STI Policy of Kenya adopt this proposed gender mainstreaming policy statement and strategies and integrate them into the final STI Policy of Kenya.

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Contact the Executive Director at
The Chancery, 3rd Floor, Valley Rd.
P O Box 10081, 00100-Nairobi, Kenya
Tel: (254 020) 2714092, 2714168,
2714498, 2723800
Fax: (254 020) 2714028

<http://www.atpsnet.org>

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