Communique from the Nigerian Academy of Science (NAS) Women in Science Summit
Women in Science and Nigeria's Development
October 21st-22nd, 2019

The Nigerian Academy of Science (NAS), in partnership with the UNESCO, University of Medical Sciences Ondo, University of Lagos, and Chrisland University, organized a Summit, tagged "*Women in Science and Nigeria's Development"*, at Reiz Continental Hotel, Abuja from 21st to 22nd October, 2019. The overall objective of the summit was to discuss the role of Nigerian women scientists in national development, with a view to identify implementable strategies for effectively engaging women scientists in Nigeria. Participants included Fellows of NAS, Nigerian women in Science, Technology and Innovation (STI) drawn from the academia, industry, government, private sector, and NGOs.

The Summit had a brief **opening session** where the President of the Nigerian Academy of Science - Prof. Mosto Onuoha FAS, declared the workshop open and goodwill messages were received from the Director, UNESCO Regional Office Abuja -Mr. Ydo Yao, and the Honorable Minister of Science and Technology, Dr. Ogbonnaya Onu, (ably represented by the Acting Director-General of the Nigerian Institute of Leather Science and Technology -NILEST-, Dr. Eucharia Oparah). In his message, Mr. Ydo informed participants that gender is a global priority of UNESCO and highlighted the support of UNESCO to Nigeria in the advancement of STI and Science, Technology, Engineering and Mathematics (STEM) especially for girls and women. On another hand, Dr. Oparah extoled the achievements of notable Nigerian Women in STI and affirmed the commitment of the Federal Ministry of Science and Technology in developing the right policies and programmes that will encourage women and girls to take up STEM-based careers. The keynote address was delivered by the Executive Director of the Nairobi-based Network of African Academies of Science, Mrs Jackie Kado, who stressed the need for women scientists to engage in "Science for Science", "Science for Society" and "Science for Policy".

The **technical sessions** comprised *Nigerian women in science - A historical perspective, Women as drivers of economic development, Women scientists for the SDGs, Women in science: policies, programmes and practices, Women in science - challenges and opportunities, Women leaders in science, Mentorship and collaboration among Nigerian women scientists,* and *Way forward: Empowering Nigerian women scientists.*

Issues Identified:
The technical sessions witnessed well-researched presentations on the respective session subject matters and corresponding panel discussions. Overall, the following issues were identified:
  i.   There is a gender gap in STI.
  ii.   There is under-representation of women in STI, which translates into the loss of a critical mass of talent and under-achievement of SDGs.
  iii. There is paucity of gender-disaggregated data in STI and STEM

iv. There are barriers to women engaging in STEM education, STI activities and S&E (Science and Engineering) workforce. These barriers include:
- Inadequate gender-friendly STEM education delivery (pedagogy)
- Learner unfriendly STEM education delivery
- Lack of facilities for learning (laboratories, science kits)
- Gender stereotype in STEM fields
- Research content (Research not translating into products or not need-driven)
- Poor retention of women in STEM careers
- Relatively delayed career progression (discrimination)
- Inadequate support for women in science; especially nursing mothers

v. Inadequate gender-balanced STI policy.
vi. Increasing loss of interest (by girls) in STEM subjects with age.
vii. Gender gaps in STEM education participation become more obvious in higher education. Female students represent only 35% of all students enrolled in STEM-related fields of study at this level globally.
viii. Weak communication of research results.
ix. Inadequate number of need-driven research.
x. Poor networking and collaboration.

Strategies for addressing the above issues

The strategies to address the above issues were categorized into three:

1) Individual
    a. Have self-confidence to step up to responsibilities.
    b. Learn from successful women scientists, who are successfully balancing work and career (seeking for mentorship).
    c. Be diligent and work hard.
    d. Be focused.
    e. Mentor other young women/girls.

2) Institutions (government, private sector, academia):
    a. Institutionalize formal mentoring for female scientists.
    b. If not in existence, gender and sexual harassment policies should be developed.

3) Nigerian Academy of Science (NAS) should advocate for:
    a. Policies which encourage girls to take STEM subjects in primary and secondary schools, including:
        ▪ Capacity building for STEM teachers in appropriate pedagogy for effective delivery (making STEM learner-friendly)
        ▪ Strengthen laboratory facilities and explore the use of science kits to make STEM learning interesting

- Introduce STEM-based clubs, career talks, and counseling in schools
- Tertiary education scholarships should be provided for outstanding girls in STEM

b. Policies which support the recruitment and retention of female scientists, including:
- Research grants targeting female researchers
- Age-flexible PhD training support

c. Celebrate and provide visibility for women and girls excelling in STEM:
- Celebrate the International Day for Women in Science
- Institute awards and prizes (such as the AU Regional Prize for Women)

In order to drive the actions listed in 3) above, the Nigerian Academy of Science could conceptualize a project, that can be developed with the support of UNESCO and jointly implemented with the Federal Ministry of Science and Technology, UNESCO, UN Women, UNIDO and the private sector, for example, "***Advancing STEM education, S&E and STI for Women and Girls in Nigeria***".

The summit was brought to a close with a vote of thanks by the President of the Nigerian Academy of Science.

Professor K. Mosto Onuoha FAS
President

Dr. M. Oladoyin Odubanjo
Executive Secretary

Supported by: