

Chapter-27

Ministry of Science and Technology

1.0 Introduction

- 1.1 The Ministry of Science & Technology (MoST), as a positive driving force of the society, is working for achieving excellence in science and technology, for the betterment of balanced socio-economic development of science & technology as a part of our national culture. By using science & local technology the ministry is striving relentlessly to take forward Bangladesh. As per the vision of government by 2021, ministry of science & technology is working relentlessly with sustainable technology and also working for achieving the target of becoming middle income country to augment participation of women in science & technology, to ensure social security of the women, to conduct research on science & technology, to innovate technology, development, publicity-expansion and successful application to achieve socio-economic development of the country.
- 1.2 The government of the country want to apply science and technology in the interest of the overall development of women. In line with the government's plan, the Ministry of Science and Technology within the framework of its strategic objectives and main functions has included the thinking of women development; formulating science and technology related policy and acts and implementation of the development projects
- 1.3 One of the main objectives of national Science & Technology policy 2011 is to promote for the empowerment of the women in Science & Technology sector and ensure their full and equal participation.

2.0 Main Functions of the Ministry of Science and Technology

- ❖ To review the existing policies of science and technology in line with the national goals and strategies and formulate new policies;
- ❖ Co-ordinate with different ministries for the implementation of National Science and Technology Policy;
- ❖ Implementation of the recommendations of the National Council for Science and Technology (NCST);
- ❖ Providing overall assistance to agencies, person/educational institutions in the science and technology sector; undertaking research and development activities and Under the Bangabandhu Science and Technology Fellowship Trust, Fellowship for MS, PhD and Post-Doctoral studies abroad;

- ❖ Establishing relationships and getting engaged in contract, cooperation and related activities with international organizations connected to science and technology and taking initiatives for involving Bangladesh in ongoing development activities;
- ❖ Functions related to nuclear security & radiation control and the establishment of nuclear power plants & peaceful uses of atomic energy and providing nuclear medical services;
- ❖ Promote, Publish, extend and popularize science & technology related initiatives and organizing National Science and Technology Week in order to enhance the awareness among students;
- ❖ Ensuring economic development of the country by adopting maritime research activities, applying research results and operating, managing and controlling all related activities.

3.0 Strategic objectives of the Ministry and their Relevance with Women's Advancement and Rights

- 3.1 **Providing assistance for research work related to science & Technology:** No direct impact. However, using energy saving improved stove, which do not spread smoke, is useful for the protection of the health of rural women. Women have to spend plenty of time and labor to collect fuel, using improved stoves and biogas technology both time and labor of women are being saved.
- 3.2 **Popularizing of Science & Technology:** Women are becoming science- sabbing through exhibition of science fairs and exhibition of digital films and different types of exhibitions.
- 3.3 **Peaceful use of nuclear energy:** Have indirect impact in women development. Using radioactive isotopes, it is possible to diagnose and treat some of the most complex diseases of women under the nuclear health system. This will increase access government services for women.
- 3.4 **Invention of environment- friendly and sustainable technology for socio-economic development:** Research on safe and drinkable (arsenic-free) water supply, which is used by women, can contribute to women's advancement. Use of sustainable technology at home, the work hours will be reduced. Providing scientific knowledge at grassroots level will increase women's participation, social status and their empowerment.

- 3.5 **Development of Scientific and technological infrastructure:** Employment opportunities for women will be generated with the involvement of women in infrastructural development activities.
- 4.0 **Roles and Responsibilities of the Ministry for Women's Advancement and Rights**
- 4.1 **National Science and Technology Policy 2011:** There is provision of research and development (R & D) funding for the implementation of National Science and Technology Policy 2011(Section 5.2.4) and in order to provide special facilities (Incentive) for women in the field of profession and science education, the fund is created.
- 4.2 **Fellowship, women's position in higher education and research:** National Science and Technology (N.S.T.) fellowship is being provided for the help of research students and researchers in various fields of science and technology. As grant receiver for the development of science and technology, the number female students are 1,322 out of 1438 students in FY 2015-2016, 863 out of 1702 students in FY 2016-17 and 1357 out of 2355 students in FY 2017-18 years. Besides, there are 48 women researchers out of 475 research projects donated in the financial year 2017-18.
- 4.3 **Provision of diagnostic and medical services for complicated diseases of women by using radioactive isotopes:** First ever ultrasonography system at the Atomic Energy Center of Bangladesh Atomic Energy Commission was launched. Patients are getting medical treatment through ultra-sonogram and radio isotope services from 15 nuclear medicine and ultrasound centres. Of the patients treated through ultra-sonogram service, about 60 percent are women and in case of radioisotope services it is about 85 percent. In the laboratory of the Commission, the students of the university are assisted in research work, of which 40% are women. In the training institute of the Commission, various courses on atomic energy are being provided. About 30% of the trainees are women.
- 4.4 **Encouraging school and college students and members of science club to get involved in innovative activities:** In order to popularize science, there are 7 science exhibition galleries of National Museum of Science and Technology. About 45% of the visitors of these galleries are women. Females are being interested towards science education by visiting galleries of the Science Museum. The National Science and Technology Museum has a 6-D movie theater and 1 modern library. The number of visitors and women readers is around 40%. Moreover, the Museum arranges National Science and Technology Week, Science fair, Seminars & Symposia on science. About 50percent of the participants of those occasions are female.

- 4.5 **Creating inspiration for learning space science through amusement:** Bangabandhu Sheikh Mujibur Rahman Novotheatre has been established as a non-formal Science Education Centre aiming to encourage citizens particularly students to learn space science through entertainment and to inculcate a positive and accurate idea about outer space in their mind. Digital Planet Show is shown in Planetarium of Novotheatre. A 30-minute-long digital film on the historic life and struggle of Father of the Nation Bangabandhu Sheikh Mujibur Rahman has been captured. Through this, visitors will be able to learn about the contribution of the great leader on Liberation War of Bangladesh, history and culture of the country. Apart from this, 14 Scientific and 16 Digital Exhibitions, 1 5D movie theater, Capsule Raid Simulator, Smart Games and Smart Step Floor and 5-D advertisement Simulator have been set up to attract visitors. Moreover, Nuclear Industry information Centre (NIIC) with 3-D projection has been established to provide proper Information to people about nuclear power in line with establishment of Rooppur Nuclear power plant in the country. Most of the visitors to the Bangabandhu Sheikh Mujibur Rahman Novotheatre are women.

5.0 Priority Spending Areas and Benefits for Women's Advancement

Serial No.	Priority Spending Areas/Programmes	Impact on Women Development (direct/indirect)
1	2	3
1.	Ensure safe and peaceful use of nuclear energy	Treatment of complicated diseases of women is now possible through the use of radioactive isotopes under the nuclear medical treatment system. The opportunity of getting government services for women is increasing. The generation of power from atomic sources and its use for fertilizer production and uninterrupted irrigation and other related activities will increase agricultural and non-agricultural production, from which women will be benefitted..
2.	Invention of environment-friendly and sustainable technology for socio-economic development	The use of improved technology will contribute to reduce the daily work hours of women. Researches on the supply of safe drinking water for household use will contribute to women's development. By using of sustainable technology in home work, the work hours will be reduced. By disseminating the knowledge of science to grassroots level, women's participation and social status will be increased and women will be empowered.
3.	Development of infrastructure for expansion of Science & Technology:	Direct employment will be created by involving women in infrastructural development activities.

6.0 Women's Share in Ministry's Total Expenditure

(Taka in Crore)

Description	Budget 2018-19			Revised 2017-18			Budget 2017-18		
	Budget	Women Share		Revised	Women Share		Budget	Women Share	
		Women	percent		Women	percent		Women	percent
Total Budget	464574	136938	29.48	371495	86169	23.2	400266	112019	27.99
Ministry Budget	12201	5023	41.17	9692	4028	41.56	11038	4198	38.03
Development	11720	5017	42.8	9247	3953	42.75	10602	4130	38.95
Operating	480	6	1.25	445	75	16.81	436	68	15.60

Source: RCGP database

7.0 Success in Promoting Women's Advancement

- ❖ Bangabandhu Fellowship on science and ICT have been introduced with a view to creating specialized and qualified scientist, technicians, researchers and academicians in the field of science and technology through M.S, Ph.D. and Post-doctoral research activities. Under this program, 221 scholars have been given foreign fellowship to pursue MS, Ph. D and post-doctoral course. Of the total fellows, 73 are women.
- ❖ It is mentionable that 17 development projects are currently being implemented under the ministry. Women are playing important role in the implementation of the projects under the ministry. Moreover, all female employees are playing an important role in the implementation and administration of the development project, being posted in the ministry and its organization level or being a member of different committee in this regards. The increasing number of women participation will be continued in the future.

8.0 Implementation progress of the past year recommendations about future commitments

Serial No	Recommendation of Last Year	Implementation Progress
1.	Gender issues should be taken into consideration while importing and implementing new technologies.	Gender issues are being considered importantly with regard to innovation, import and its usage
2.	If any invented technology eventually appears to be harmful to women's interest that should be eliminated through further research.	Necessary initiatives are underway.
3.	Formulate new act and rectify old one to align it with the women-friendly technological development	Necessary acts are in the process of consideration in the field of technology, enacting and reforming laws in order to achieve the objective of women interest.

Serial No	Recommendation of Last Year	Implementation Progress
4.	Provision can be made to include women members in different project committees to increase their participation in the implementation and administration of different projects implemented by the ministry of science and technology.	Women members are being included in various committees at different stages of project implementation and management
5.	The ministry should take specific steps to provide special incentives to women in the profession of research and development (R&D) activities as enumerated in National Science and technology policy, 2011 and ensure women's participation as well as empower them in every sphere of science and technology related education and research.	Incentives for women are being provided in case of scientific research and development, and education of science. Financial incentive to the students is being given through science and technology programs along with national fellowship implemented by the Ministry of Science and Technology, out of which a significant part are women.

9.0 Recommendations for Future Activities

- ❖ Development of women's health care through the expansion of modern nuclear medicine.
- ❖ Gender issues should be taken into consideration while importing and implementing new technologies;
- ❖ Improving women's development through the construction of Rooppur nuclear power plant
- ❖ If any invented technology eventually appears to be harmful to women's interest that should be eliminated through further research;
- ❖ Formulate new act and rectify old one to align it with the women-friendly technological development;
- ❖ Provision can be made to include women members in different project committees to increase their participation in the implementation and administration of different projects implemented by the ministry of science and technology;
- ❖ The ministry should take specific steps to provide special incentives to women in the profession of research and development (R&D) activities as enumerated in National Science and technology policy, 2011 and ensure women's participation as well as empower them in every sphere of science and technology related education and research.