

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. To promote Bangladesh into a middle-income country by 2021 as per the Vision of the Government, Ministry of Science and Technology plays an important role in enhancing women's participation in science and technology, technology innovation, science and technology research, ensuring women's safety and achieving overall socio-economic prosperity.
- 1.2 The government wants to apply science and technology in the interest of 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. Ministry is formulating policy and legislation on science and technology and is taking and implementing development projects related to women development.
- 1.3 One of the main objectives of National Science & Technology Policy-2011 is to promote empowerment of the women in Science & Technology sector and ensure their full and equal participation. (Sec. 5.1 Jha)

2.0 Main Functions of the Ministry of Science and Technology

- ❖ Review the existing policies on science and technology and formulation of new policy keeping consistence with national goals and plans;
- ❖ Coordination between the activities of various ministries to implement the National Policy on Science and Technology;
- ❖ Implementation of the recommendations of the National Council for Science and Technology (NCST);
- ❖ Provide financial support to research and development activities (for R&D) by individuals / organizations / educational institutions / science clubs related to science and technology and offer fellowship for MS, PhD and Post-Doctoral studies in the Country under the Bangabandhu Science and Technology Fellowship Trust;

- ❖ Establish relationship with international organizations related to science and technology and engage in activities related to contract and cooperation in the respective fields; and take appropriate steps to involve Bangladesh in ongoing development activities;
- ❖ Ensure nuclear safety and radiation control as well as peaceful use of atomic energy and provide atomic medical services along with the installation of nuclear power plants;
- ❖ Development, promotion, expansion of Science and Technology and to celebrate National Science and Technology Week for developing awareness amongst the students and popularizing science;
- ❖ Enhance economic development of the country through the management and control of all the related activities concerning marine research and application of research results.

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

- 3.1 **Providing assistance for research work related to science & technology:** There is no direct impact on women's advancement. However, the use of biogas, improved stoves, etc. are contributing to fuel saving and improving living standards of women. Moreover, Mushroom cultivation, fish food processing, candles making and agar products applying innovative technology of BCSIR which is generating self-employment for women and reducing poverty.
- 3.2 **Popularizing of Science & Technology:** Women are encouraged to become science savvy by organizing science fairs, exhibiting digital films and providing incentive .
- 3.3 **Safe and Peaceful use of nuclear energy:** There is an indirect impact on women. Use of radio-active isotope is making it possible to provide medical services specially diagnosis of some critical diseases of women. This will increase the women's access to public services.
- 3.4 **Invention of environment- friendly and sustainable technology for socio-economic development:** It will be possible to play a role in the development of women by conducting research on safe, drinkable and pollution-free (arsenic-free) water supply in the household level, which is usually working area for women. Due to the use of sustainable technology in home work, the work hours will be reduced. By spreading knowledge of science to grassroots level, women's participation and social status will be increased and women will be empowered.

- 3.5 **Development of Scientific and technological infrastructure:** The involvement of women in infrastructure development activities will generate direct employment for them.
- 4.0 **Roles and Responsibilities of the Ministry for Women's Advancement and Rights**
- 4.1 **National Science and Technology Policy 2011:** For implementing National Science and Technology Policy-2011, there is provision of fund creation for special incentives to women involve in research and development (R & D) and science education.
- 4.2 **Women's position in fellowship, higher education and research:** National Science and Technology (N.S.T.) fellowship is provided for the help of research work of students and researchers in various fields of science and technology. 732 female out of 1438 students in FY 2015-16, and 863 female out of 1702 students in FY 2016-17 and 1357 female out of 2358 students in FY 2017-18 were provided grant for science and technology development. Besides there were 48 women researchers from 475 were donated research projects in the FY 2017-18.
- 4.3 **Provision of diagnostic and medical services for some complicated diseases of women by using radioactive isotopes:** Bangladesh Atomic Energy Commission launched the ultrasonography system for the first time at the Atomic Energy Center. Currently through its 1 NINMAS (National Institute of Nuclear Medicine and Allied Sciences) and 14 INMAS (Institute of Nuclear Medicine and Allied Sciences) is providing treatment services to patients with ultrasonography and radio isotope. About 60% of the ultrasonography treatment service recipients and 85% of the medical service recipients through radioactive isotopes are women. In the laboratory of the commission, the students of the university are assisted in research work, 40% of them are women. The Training Institutes of the Commission offers training courses in various subjects of atomic energy; about 35% 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 at the National Museum of Science and Technology. About 45% of the visitors of these galleries are women. By visiting science related galleries of the Museum, women are getting interest in science education. The National Science and Technology Museum has one 6-DVD movie theatre, 6-D mobile movie bus and one modern library. Around 40% of the visitors and readers are women. Besides, the Museum organizes National Science and Technology Week, Science Fair, Science Seminar and Symposium, Science Quiz and Olympiad. The number of women participants in these programs is 50%.
- 4.5 **Creating inspiration for learning space science through amusement:** Bangabandhu Sheikh Mujibur Rahman Novotheatre has been established as an informal science education institute, aimed at providing the right ideas and information about the

aerospace science and encouraging about aerospace science education through entertainment among all citizens and students of the country. Digital Planet Show is shown in Planetarium of Novotheatre. A 30-minute-long digital film on the historic struggle life of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman has been documented. Watching this filmshow, visitors are being informed about the contribution of the Father of the Nation in the history of Bangladesh and other movements including liberation war. Apart from this, 14 Scientific and 16 Digital Exhibitions, 15 Movie Theatre, Capsule Raid Simulator, Smart Games and Smart Step Floor and 5-D advertisement Simulator have been set up. The online ticketing system has been introduced in Novotheater .In addition, in continuation of the establishing the Rooppur nuclear power plant in the country, the Nuclear Satellite-based Nuclear Industry Information Center (NIIC), equipped with the latest 3D technology, has been established to give a correct idea of the public about nuclear power. Every day there are many visitors to Novotheatre, most of who 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.	Ensuring safe and peaceful use of atomic energy	Under the Nuclear Treatment system, it is becoming possible to diagnose and provide medical treatment to some complicated diseases of women. This opportunity increases women's access to public service. Women are being benefitted by enhanced agriculture and non-agriculture production due to increased fertilizer production and uninterrupted irrigation facilities because of electricity production from nuclear power.
2.	Innovative environment-friendly and sustainable technologies for socio-economic development	The use of advanced technology will play a role in reducing the daily working hours of women. It will be possible to play a role in the development of women through conducting research on safe and pollution-free (arsenic-free) water supply. Due to the use of sustainable technology in home work, the working hours will be reduced. By spreading the knowledge of science at grassroots level, women's participation and their social status will be increased and women will be empowered.
3.	Infrastructure development for the development of science and technology	By involving women in infrastructural development activities, direct employment opportunities will be created for them.

6.0 Women's Share in Ministry's Total Expenditure

(Taka in Crore)

Description	Budget 2019-20			Revised 2018-19			Budget 2018-19			Actual 2017-18		
	Budget	Women Share		Revised	Women Share		Budget	Women Share		Actual	Women Share	
		Women	percent		Women	percent		Women	percent		Women	percent
Total Budget	523190	161247	30.82	442541	136036	30.74	464573	136938	29.48	321861	88441	27.48
Ministry Budget	16439	98	0.6	12392	106	0.85	12201	5012	41.08	2690	874	32.5
Development	15908	77	0.48	11900	85	0.71	11720	5006	42.71	2247	800	35.6
Operating	530	22	4.09	492	21	4.3	480	6	1.25	444	75	16.83

Source: RCGP database

7.0 Success in Promoting Women's Advancement

- ❖ "Bangabandhu Science and Technology Fellowship Trust" is running MS, PhD and post-doctoral research programs with a view to create specialized and qualified scientists, technicians, researchers and academicians in various fields of science and technology. Under this trust, 252 people have got the opportunity to take degree in MS, PhD and Post-Doctoral courses in home and abroad. Among them, 126 were women.
- ❖ It is noted that Ministry of Science and Technology, currently implementing 29 development projects. Women officers / employees are engaged in these projects and they have successfully played their role in the implementation of these projects. Besides, women officers/employees working in the Ministry and agencies are making important contributions to their respective posts or as members of various committees in the implementation and management of all development projects of this ministry. The participation of women community in the implementation and management of projects of this ministry will continue in the future.

8.0 Recommendations for Future Activities

- ❖ Development of women's health care through the expansion of modern nuclear medicine;
- ❖ Reflect gender perspective in the field of innovation, import and application of new technology;
- ❖ Promote women's development through the construction of Rooppur nuclear power plant;
- ❖ Initiate the process of freeing harmful substances from innovated technology if it shows negative impact against the interest of women;
- ❖ Enact and reform laws necessary for achieving goals in favor of women's interests in the field of technology.