

## Grant No. 23

## 126 - Ministry of Science and Technology

## Medium Term Expenditure

(Taka in Thousands)

Description	Budget 2023-24	Projection	
		2024-25	2025-26
Operating Expenditure	627,42,00	690,17,00	759,18,00
Development Expenditure	12980,13,00	14278,14,00	15705,96,00
<b>Total</b>	<b>13607,55,00</b>	<b>14968,31,00</b>	<b>16465,14,00</b>
Recurrent	1513,11,80	2067,71,61	5601,99,38
Capital	12094,20,20	12900,35,39	10862,89,62
Financial Asset	23,00	24,00	25,00
Liability	0	0	0
<b>Total</b>	<b>13607,55,00</b>	<b>14968,31,00</b>	<b>16465,14,00</b>

**1.0 Mission Statement and Major Functions****1.1 Mission Statement**

To Assist in achieving the overall socio-economic prosperity of the country and the nation through peaceful use, propagation, expansion and successful application of nuclear energy including Science and technology research, technology innovation, development and nuclear power production.

**1.2 Major Functions**

- 1.2.1 Review the existing policies on science and technology and formulation of new policy keeping consistence with national goals and plans;
- 1.2.2 Coordination between the activities of various ministries to implement the National Policy on Science and Technology;
- 1.2.3 Implementation of the recommendations of the National Council for Science and Technology (NCST);
- 1.2.4 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;
- 1.2.5 Establish relationships 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;
- 1.2.6 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;
- 1.2.7 Development, promotion, expansion of Science and technology and to celebrate National Science and Technology Week for developing awareness amongst the students and popularizing science;
- 1.2.8 Enhance economic development of the country through the management and control of all the related activities concerning sea research and application of research results.

## 2.0 Medium Term Strategic Objectives and Activities

Medium-Term Strategic Objectives	Activities	Implementing Departments/Agencies
1	2	3
1. Capacity building in research work in the field of science and technology	<ul style="list-style-type: none"> <li>• Provide fellowships and opportunity for higher study and research to researchers</li> </ul>	<ul style="list-style-type: none"> <li>• Secretariat</li> <li>• BCSIR</li> <li>• Bangabandhu Science and Technology Fellowship Trust</li> <li>• Bangladesh Reference Institute for Chemical Measurements (BRICM)</li> </ul>
	<ul style="list-style-type: none"> <li>• Provide grants to the researchers, concerned organizations and non-government scientific organizations and societies for scientific research</li> </ul>	<ul style="list-style-type: none"> <li>• Secretariat</li> </ul>
	<ul style="list-style-type: none"> <li>• Conduct training on science and technology</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Atomic Energy Commission</li> <li>• BCSIR</li> <li>• National Institute of Bio-technology</li> <li>• National Science and Technology Museum</li> <li>• Bangabandhu Sheikh Mujibur Rahman Novo Theatre</li> <li>• Bangladesh Atomic Energy Regulatory Authority</li> <li>• BANSDOC</li> <li>• Bangladesh Reference Institute for Chemical Measurements (BRICM)</li> </ul>
2. Popularizing of Science & Technology	<ul style="list-style-type: none"> <li>• To arrange Seminar and workshop for Science affairs</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Atomic Energy Commission</li> <li>• BCSIR</li> <li>• National Institute of Bio-technology</li> <li>• BANSDOC</li> <li>• Bangladesh Atomic Energy Regulatory Authority</li> <li>• Bangabandhu Sheikh Mujibur Rahman Novo Theatre</li> <li>• Bangladesh Reference Institute for Chemical Measurements (BRICM)</li> </ul>

Medium-Term Strategic Objectives	Activities	Implementing Departments/Agencies
1	2	3
	<ul style="list-style-type: none"> <li>• Arrange science fairs/exhibitions/Olympiad at district and national level with permanent science exhibitions</li> <li>• Creation of space research and observation facility by establishing space observation center at the junction of Tropic of Cancer and 90 degrees east longitude</li> </ul>	<ul style="list-style-type: none"> <li>• National Science and Technology Museum</li> </ul>
	<ul style="list-style-type: none"> <li>• Collect, process, preserve, edit and distribute information in all fields of natural science, agricultural science, medical, engineering, industrial technology, scientific research and research development</li> </ul>	<ul style="list-style-type: none"> <li>• BANSDOC</li> </ul>
	<ul style="list-style-type: none"> <li>• Developing Navotheatre as a center of excellence through recreational science education and aerospace research.</li> </ul>	<ul style="list-style-type: none"> <li>• Bangabandhu Sheikh Mujibur Rahman Novotheatre</li> </ul>
	<ul style="list-style-type: none"> <li>• To set up network with people including educational institutions for providing accurate information and information about aerospace science</li> </ul>	
	<ul style="list-style-type: none"> <li>• Conducting educational programs related to Chemical Metrology, Laboratory Quality Management System, Accreditation and Instrumentation etc. and providing related training and consultancy services and providing research assistance in higher degree.</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Reference Institute for Chemical Measurements (BRICM)</li> </ul>
3. Ensure safe and peaceful use of nuclear energy	<ul style="list-style-type: none"> <li>• Providing medical care using nuclear technology</li> <li>• Production and supply of ammonia tissue bone grafts</li> <li>• Determine amount of radiation exposure to imported and exported food.</li> <li>• Determination of the radiation dose received in the body of the radiation worker</li> <li>• Food preservation by application of radiation</li> <li>• Sterilization of medical equipment by application of radiation</li> <li>• Chemical analysis of air/water/soil/food stuffs/vegetables etc. samples/other substances</li> <li>• Culture and qualitative analysis of blood samples in nuclear medicine care centers</li> <li>• Calibration of radioactivity monitors</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Atomic Energy Commission</li> </ul>
	<ul style="list-style-type: none"> <li>• Research assistance/supervision in preparation of thesis/report</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Atomic Energy Commission</li> <li>• National Institute of Bio-</li> </ul>

Medium-Term Strategic Objectives	Activities	Implementing Departments/Agencies
1	2	3
	<ul style="list-style-type: none"> <li>• Approval of the management of nuclear and radiation installations</li> <li>• Certification of Radiation Control Officers</li> <li>• Regulatory inspection of nuclear and radiation facilities</li> <li>• Conducting educational programs in chemical metrology and providing research assistance in higher degrees</li> <li>• Measurement and Reference Measurement Services, Proficiency Testing, Inter-Laboratory Comparison and Calibration Services, Chemical Measurement System Development, Validation and Transfer</li> </ul>	<p>technology</p> <ul style="list-style-type: none"> <li>• Bangladesh Atomic Energy Regulatory Authority</li> <li>• Bangladesh Reference Institute for Chemical Measurements (BRICM)</li> </ul>
<p>4. Environment friendly and sustainable technology innovation for socio-economic development</p>	<ul style="list-style-type: none"> <li>• Conduct research on non-conventional and renewable energy and transfer of innovated technology.</li> <li>• Conduct research and transfer technology invented to ensure public health and quality of food.</li> <li>• Innovation and expansion of technology for industrialization through the use of domestic raw materials.</li> <li>• Provide technological service in trade, industrialization and economic development by examining and creating research facilities to calibrate and ensure the quality of local product and export-import goods.</li> <li>• Publish basic and applied research work and papers to provide main technological service in trade, industrialization and economic development by creating research facilities.</li> <li>• Inform the research result to stakeholders</li> <li>• DNA sequencing service</li> <li>• Production of Taq DNA polymerase enzyme</li> <li>• Production of aloe vera sapling following tissue culture method and development of farming system applying biotechnology.</li> <li>• Isolation, identification and molecular characterization of the Lumpy skin disease virus</li> </ul>	<ul style="list-style-type: none"> <li>• BCSIR</li> <li>• Bangladesh Atomic Energy Commission</li> <li>• National Institute of Biotechnology</li> <li>• National Institute of Biotechnology</li> </ul>

Medium-Term Strategic Objectives	Activities	Implementing Departments/Agencies
1	2	3
	with an aim to invent vaccine	
	<ul style="list-style-type: none"> <li>Innovation of environment-friendly germs for rice</li> </ul>	
	<ul style="list-style-type: none"> <li>Molecular characterization of pathogenic bacteria causing hornworm disease (MAS)</li> </ul>	
	<ul style="list-style-type: none"> <li>Isolation and characterization of microorganisms capable of producing antimicrobial substances</li> </ul>	
	<ul style="list-style-type: none"> <li>Undertake marine science research activities</li> </ul>	<ul style="list-style-type: none"> <li>Bangladesh Oceanographic Research Institute</li> </ul>
	<ul style="list-style-type: none"> <li>Support marine science research</li> </ul>	
	<ul style="list-style-type: none"> <li>Popularization of marine science activities</li> </ul>	
	<ul style="list-style-type: none"> <li>Taking steps to sustainably use marine resources for socio-economic development</li> </ul>	<ul style="list-style-type: none"> <li>Bangladesh Reference Institute for Chemical Measurements (BRICM)</li> </ul>
<ul style="list-style-type: none"> <li>Undertake, manage and implement basic and practical research activities related to chemical metrology, application of research results and management and coordination of all related activities.</li> </ul>		
5. Development of infrastructure for expansion of science and technology	<ul style="list-style-type: none"> <li>The main construction work of Rooppur Nuclear Power Plant</li> </ul>	<ul style="list-style-type: none"> <li>Bangladesh Atomic Energy Commission</li> </ul>
	<ul style="list-style-type: none"> <li>Modernization and expansion of services and research facilities of the Institute of Tissue Banking and Biomaterials Research</li> </ul>	
	<ul style="list-style-type: none"> <li>Establishment of Institute of Nuclear Medicine and Allied Sciences (INMAS) at 8 Medical College Hospital's campus of the country</li> </ul>	
	<ul style="list-style-type: none"> <li>Capacity building of Institute of Nuclear Medicine and Allied Sciences (INMAS) Dhaka, Chittagong, Rajshahi, Khulna, Sylhet, Dinajpur and Rangpur</li> </ul>	
	<ul style="list-style-type: none"> <li>Labcom office and Gene Bank building under the development project titled "Establishment of National Gene Bank".</li> </ul>	<ul style="list-style-type: none"> <li>National Institute of Biotechnology</li> </ul>

### 3.0 Poverty, Gender and Climate Change Reporting

#### 3.1 Impact of Medium Term Strategic Objectives on Poverty Reduction, Women's Advancement and Climate Change

##### 3.1.1 Capacity building in research work in the field of science and technology

**Impact on Poverty Reduction:** No direct impact. However, the standard of living is improved by utilizing the biogas and fuel efficient cook stove technologies. It is possible to bring financial prosperity through production of quality food products and establishment of small scale industries through the use of technologies such as nutritious baby food, nutritious paparazzi, readily available fruit jelly-jelly-pickles, juices, hyprotein biscuits, diabetic flour etc. Moreover, self-employment is being created and poverty is being alleviated by using mushroom cultivation, fish meal, candles, lakshya and agar products etc. using the technology invented by BCSIR. Cultivation of orchids, neem and other medicinal plants through tissue culture is financially profitable and thereby alleviates poverty and improves living standards.

**Impact on Women's Advancement:** No direct impact. However, more energy is saved by using improved stove. **Again**, since smoke is not spread out, this technology is useful for the protection of rural women. Generally, women have to spend plenty of time and labor to collect fuel. However, by using improved stoves and biogas technology, both time and labor of women are being saved. In addition, women's self-employment is being created by making mushroom products, candles, lacquer and agar products, perfumes and nutritious baby food, nutritious paparazzi, gem-jelly-pickles etc. using the invented technology and making significant contribution to women's development.

**Impact on Climate Adaptation and Mitigation:** Introduction of new climate-resilient technologies is contributing to reducing the loss of disaster which, in turn helps to increase people's adaptability.

### 3.1.2 Popularizing of science and technology

**Impact on Poverty Reduction:** Poor people will be trained and motivated to get involved in science education and modern technology by organising Science Olympiads, Documentaries on science, exhibitions, etc.

**Impact on Women's Advancement:** Women are encouraged to become science sabby by organizing science fairs and exhibiting digital films and exhibitions.

**Impact on climate adaptation and mitigation:** There is no direct impact.

### 3.1.3 Ensure safe and peaceful use of nuclear energy

**Impact on Poverty Reduction:** By generating electricity from nuclear sources, continuing the activities of fertilizer production, irrigation etc., it is possible to play a role in poverty reduction by increasing agricultural production and other electricity dependent non-agricultural production. It will be possible to protect the people from the harmful effects of imported food by radioactivity tests and various initiatives to control nuclear radiation. Support is being provided to poor people in providing better quality of Nuclear Medicine and health care and determining the quality of food. Receiving services at the nearest and relatively close locations will reduce the relative costs of medical care. Also, medical treatment for poor people will be available through the discovery of the drug processing system.

**Impact on Women's Advancement:** 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.

**Impact on climate adaptation and mitigation:** There will be no carbon emissions due to the production of electricity from the atomic source; this will help to achieve the goal of nationally-determined carbon emissions level.

### 3.1.4 Environment friendly and sustainable technology innovation for socio-economic development

**Impact on Poverty Reduction:** Efforts will be made to ensure the best use of unused, less-used resources by inventing advanced technologies in solar power, biogas etc. As a result, it will be possible to increase their income and improve the living standards by ensuring the possible maximum utilization of available resources for the poor.

**Impact on Women's Advancement:** 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.

**Impact on Climate Adaptation and Mitigation:** Introduction of advanced technologies in solar power, biogas etc., is contributing to achieve climate resilient livelihood.

### 3.1.5 Development of infrastructure for expansion of science and technology

**Impact on Poverty Reduction:** Jobs and enhanced income opportunities will be created for poor people in the infrastructure development work.

**Impact on Women's Advancement:** The involvement of women in infrastructure development activities will generate direct employment for them.

**Impact on climate adaptation and Mitigation:** There is no direct impact.

### 3.2 Poverty Reduction, Women's Advancement and Climate Change Related Spending

(Taka in Thousand)

Description	Budget 2023-24	Projection	
		2024-25	2025-26
Poverty Reduction	2881,42,54	3426,07,21	2870,22,42
Gender	297,28,25	139,80,45	122,37,40
Climate Change	1571,46,00	1728,60,60	1901,46,66

#### 4.1 Priority Spending Areas/Scheme

Priority Spending Areas/Scheme	Related Medium Term Strategic Objectives
<p><b>1. Construction of Rooppur nuclear power plant infrastructure:</b> To add approximately 2400 MW of electricity to the national grid by 2023-24, Rooppur nuclear power plant has been given priority in the development of appropriate infrastructure.</p>	<ul style="list-style-type: none"> <li>Development of infrastructure for expansion of science and technology</li> </ul>
<p><b>2. Expand peaceful use of nuclear energy</b> The provision of nuclear technology-based medical treatment facilities at different parts of the country contributes significantly towards the protection of health of the people in Bangladesh. Further, nuclear power is considered a cost effective option than any hydrocarbon-based power and this sector is given top priority.</p>	<ul style="list-style-type: none"> <li>Ensure safe and peaceful use of nuclear energy</li> </ul>
<p><b>3. Research and development on sustainable environment friendly technology suitable for the poor</b> It is necessary to create mass awareness for the environment-friendly new high yielding varieties through application of genetic engineering for increased production in agriculture and non-agriculture sector, as well as for use of non-conventional energy for energy savings and of biotechnology. In addition, this sector has been given priority considering the need for research and development for a food processing system that produces food items free of poisonous/harmful materials, pure drinking water, water purification filters and development of balanced and nutritious food varieties.</p>	<ul style="list-style-type: none"> <li>Invention of environment-friendly and sustainable technology for socio-economic development</li> </ul>
<p><b>4. Expansion of research in the area of scientific technology</b> Grants have been provided to the different universities and science, technology related institutions from the research allocation for ministry, and its attached departments as well as their different projects/Scheme for work on science and for encourage and inspire people.</p>	<ul style="list-style-type: none"> <li>Capacity building in research work in the field of science and technology</li> </ul>

#### 4.2 Medium Term Expenditure Estimates and Projection (2023-24 to 2025-26)

##### 4.2.1 Expenditure by Department/Agencies/Institutional Units

(Taka in Thousands)

Description	Budget	Revised	Budget	Projection	
	2022-23		2023-24	2024-25	2025-26
Secretariat	16609,37,30	12816,97,96	13601,27,00	14961,41,00	16457,55,00
Nuclear Power Wings	4,51,70	4,23,33	6,28,00	6,90,00	7,59,00
<b>Grand Total :</b>	<b>16613,89,00</b>	<b>12821,21,29</b>	<b>13607,55,00</b>	<b>14968,31,00</b>	<b>16465,14,00</b>

#### 4.2.2 Expenditure by Economic Group Wise

(Taka in Thousands)

Economic Group	Description	Budget	Revised	Budget 2023-24	Projection	
		2022-23			2024-25	2025-26
	<b>Recurrent Expenditure</b>					
3111	Wages and salaries in cash	16,07,75	13,10,67	15,34,83	32,59,54	17,21,45
3211	Administrative expenses	8,64,23	4,77,47	10,43,37	12,21,31	11,48,97
3221	Fees, charges and commissions	1,26,10	87,94	53,64,00	32,43,92	56,40,12
3231	Training	3,65,98	1,36,00	4,47,00	3,68,11	1,47,00
3243	Petrol, oil and lubricants	85,50	58,50	1,12,75	1,09,41	53,75
3244	Travel and Transfer	92,20	69,50	2,36,75	2,26,00	2,22,10
3251	Agriculture supplies	4,50	0	0	0	0
3253	Public order and safety supplies	0	0	4,00	3,00	3,00
3255	Printing and stationery	87,48	53,00	73,40	85,55	82,99
3256	General supplies and materials	3,00,10	4,00	4,00	4,00	4,00
3257	Professional services, honorariums and special expenses	11,31,40	10,16,10	12,38,41	10,95,17	6,44,50
3258	Repairs and maintenance	3,17,63	1,58,60	3,08,50	3,14,45	3,07,25
3631	Current grants	521,62,30	513,65,41	457,97,99	503,00,29	550,35,31
3632	Capital grants	21,77,00	12,37,05	20,28,51	22,86,71	28,97,69
3821	Current transfers not elsewhere classified	27,47,73	27,22,00	31,76,00	34,19,00	34,64,50
3823	Current transfers for projects	353,03,76	420,72,54	329,75,90	581,00,54	572,88,93
3911	Reserve	313,37,64	13,46	569,66,39	827,34,61	4315,37,82
	<b>Total : - Recurrent Expenditure</b>	<b>1287,11,30</b>	<b>1007,82,24</b>	<b>1513,11,80</b>	<b>2067,71,61</b>	<b>5601,99,38</b>
	<b>Capital Expenditure</b>					
4111	Buildings and structures	295,43,75	10,00,88	333,38,00	306,81,95	0
4112	Machinery and equipment	600,86,50	2,53,15	919,87,00	1191,60,53	36,64,05
4113	Other fixed assets	7,65,50	50	91,20	1,80	2,92
4141	Land	38,75,00	1,28,12	6,00,00	471,00,06	41,00
4211	Capital expenditure for project	1319,70,60	2186,49,89	1502,50,06	846,15,58	807,09,81
4911	Reserve	13064,16,35	9612,90,11	9331,53,94	10084,75,47	10018,71,84
	<b>Total : - Capital Expenditure</b>	<b>15326,57,70</b>	<b>11813,22,65</b>	<b>12094,20,20</b>	<b>12900,35,39</b>	<b>10862,89,62</b>
	<b>Assets</b>					
7215	Loans	20,00	16,40	23,00	24,00	25,00
	<b>Total : - Assets</b>	<b>20,00</b>	<b>16,40</b>	<b>23,00</b>	<b>24,00</b>	<b>25,00</b>
	<b>Grand Total :</b>	<b>16613,89,00</b>	<b>12821,21,29</b>	<b>13607,55,00</b>	<b>14968,31,00</b>	<b>16465,14,00</b>

#### 5.0 Key Performance Indicator (KPIs)

Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
			2021-22		2022-23		2023-24	2024-25	2025-26
1	2	3	4	5	6	7	8	9	10
1. Provided Fellowship	1	No.	2590	2590	3400	3552	3400	3400	3500
2. Annual growth rate of technological innovation	4	% (Number of technological Innovations)	100 (12)	0.25 (15)	108.3 (25)	-0.04 (15)	4 (26)	3.9 (27)	-0.26 (20)
3. Annual growth rate of technology transfer	4	% (Number of technology transfer)	100 (15)	0.06 (16)	33.33 (20)	-0.2 (16)	5 (21)	4.5 (22)	-0.09 (20)
4. Arranged Seminar and Workshop	2	No.	260	276	290	281	322	325	326



Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
			2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10
5. Radioactivity measurement of Radiation worker and imported & exported food items	3	% (The number of services provided during the base year in 2018-19 is 19500)	0 (13000)	0.36 (17800)	0.77 (13100)	0.37 (18000)	0.76 (13200)	0.75 (13300)	0.65 (22000)
6. Annual Growth Rate of Medical Services Using Nuclear Technology	3	% (In 2018-19 the number of service recipients during the base year is 3.80 lakhs)	-0.26 (300000)	0.32 (396275)	0.16 (300500)	0.36 (410000)	0.17 (301000)	0.17 (301500)	0.06 (320000)

## 6.0 Recent Achievements, Activities, Output Indicators and Targets and Expenditure Estimates of the Departments/Agencies

### 6.1 Secretariat

**6.1.1 Recent Achievements:** Among the achievements of the Ministry of Science and Technology are research grants and fellowships to 13,266 researchers and students, Bangabandhu Fellowships to 375 people under Bangabandhu Science and Technology Fellowship Trust, Honorable Prime Minister inaugurated the 1st Concrete Pouring of 1st Unit and 2nd Unit of Rooppur project. At Rooppur Nuclear Power Plant, Reactor Pressure Vessel has been installed at the designed position at a height of 26.3 meters and 4 Active Core Cooling System (ACCS) and 8 Passive Core Cooling System (PCCS) have been installed in the Reactor Building of Unit-1. Apart from this, the construction of project site protection embankment and an artificial channel has been completed. The construction of the first cooling tower has been completed up to a height of 173.5 meters. Construction of 389 structures for Rooppur Nuclear Power Plant has been completed.

### 6.1.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
1. Provide fellowships and opportunity for higher study and research to researchers	Fellowship	1	No. (Person)	2490	2490	3350	3452	3400	3400	3400
			TK. (core)	15.89	21.64	22.47	22.32	23.41	24.43	26.69
2. Provide grants to researchers, concerned organizations and non-government scientific organizations and societies for science related research	Grant for research project	1	No.	661	882	700	682	710	720	720
	Grant for other societies and institutions		No.	848	728	850	490	860	870	870
	Grant for Educational Institute and Science Club		Tk. (Lac)	594.50	681.00	680.50	490.00	823.50	865.00	870.00

### 6.1.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23	2023-24	2024-25	2025-26	
1	2	3	4	5	6	7	8
<b>Operating Activities</b>							
<b>General Activity</b>							
1260101 - Secretariat	1-2	11,79,61	23,71,00	17,67,35	109,02,00	119,92,00	131,92,00
1260102 - Nuclear Power Wings	-	1,43,66	4,51,70	4,23,33	6,28,00	6,90,00	7,59,00
<b>Total : General Activity</b>		<b>13,23,27</b>	<b>28,22,70</b>	<b>21,90,68</b>	<b>115,30,00</b>	<b>126,82,00</b>	<b>139,51,00</b>

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23		2023-24	2024-25	2025-26
1	2	3	4	5	6	7	8
<b>Special Activity</b>							
120000801 - Loans to Government Employees	-	1,45	20,00	16,40	23,00	24,00	25,00
120003600 - National Science & Technology Council	-	3,44,25	6,44,00	5,81,50	8,35,00	9,00,00	9,50,00
120005100 - National Fellowship Programme	1	19,58,95	22,78,00	22,73,50	23,84,00	26,00,00	28,00,00
120005300 - Grants for Science Serving and Science Based Professional Organizations	2	94,39	1,96,00	1,94,75	2,45,00	2,70,00	3,00,00
120005400 - Science & Technology Programme	2	15,38,58	19,93,00	19,86,50	23,80,00	26,00,00	28,00,00
120005500 - Research Activities	2	1,84,84	2,88,16	2,86,66	3,08,00	3,30,00	3,60,00
127001001 - Asia and Pacific Centre for Transfer of Technology	-	5,94	7,00	7,55	8,00	8,00	8,00
127001401 - Asia Pacific Network of Science and Technology Centres (ASPAC)	-	0	1,00	1,00	2,00	2,00	3,00
127004501 - Commonwealth Science Fund	-	0	10,00	9,45	9,50	10,50	12,00
127007201 - International Council of Museums (ICOM)	-	0	1,00	1,00	2,00	2,00	3,00
127007901 - International Center for Genetic Engineering and Bio-technology	-	4,24	6,00	6,00	6,50	6,50	7,00
127010001 - Association of Science-Technology Centers (ASTC)	-	0	1,00	1,00	2,00	2,00	3,00
127013101 - Organization of Islamic Conference Standing Committee on Scientific and Technological Cooperation (COMSTTECH)	-	0	10,00	10,00	10,00	10,00	11,00
<b>Total : Special Activity</b>		<b>41,32,64</b>	<b>54,55,16</b>	<b>53,75,31</b>	<b>62,15,00</b>	<b>67,65,00</b>	<b>72,82,00</b>
<b>Total : Operating Activities</b>		<b>54,55,91</b>	<b>82,77,86</b>	<b>75,65,99</b>	<b>177,45,00</b>	<b>194,47,00</b>	<b>212,33,00</b>
<b>Development Activities</b>							
<b>Annual Development Program</b>							
221000126 - Reserve for unapproved project Ministry of Science and Technology	1-2	0	154,60,00	0	311,78,00	488,43,00	3999,63,00
224295300 - Establishment of Physical Protection System of Rooppur Nuclear Power Plant (PPS)	-	85,33,96	795,13,00	17,01,00	1164,00,00	1936,00,00	0
224360900 - Establishment of External Telecommunication Network for Rooppur Nuclear Power Plant		0	0	6,00,00	169,50,00	100,00,00	100,00,00
<b>Total : Annual Development Program</b>		<b>85,33,96</b>	<b>949,73,00</b>	<b>23,01,00</b>	<b>1645,28,00</b>	<b>2524,43,00</b>	<b>4099,63,00</b>
<b>Total : Development Activities</b>		<b>85,33,96</b>	<b>949,73,00</b>	<b>23,01,00</b>	<b>1645,28,00</b>	<b>2524,43,00</b>	<b>4099,63,00</b>
<b>Total :</b>		<b>139,89,87</b>	<b>1032,50,86</b>	<b>98,66,99</b>	<b>1822,73,00</b>	<b>2718,90,00</b>	<b>4311,96,00</b>

## 6.2 Bangladesh Atomic Energy Commission

**6.2.1 Recent Achievements:** National Institute of Nuclear Medicine and Allied Sciences (NINMAS) and Institute of Nuclear Medicine and Allied Sciences (INMAS) in Dhaka have set up 3 PET-CTs with high-quality equipment and advanced technology for cancer diagnosis to modernize medical care and "Cyclotron-equipped stomach" at NINMAS Sahbagh PET-CT is established. Radio isotopes produced from the cyclotron installed at NINMAS have been delivered to PET-CT at INMAS, Dhaka and NINMAS to provide patient care. Apart from the infrastructural development of the Institute of Food and Life Sciences of the Atomic Energy Research Institute under the Commission, the laboratories have been modernized. To increase the scope of research on nanotechnology, the Atomic Energy Centre, Dhaka has been modernized as well as equipped with modern equipment. Meanwhile, the capacity of Institute of Nuclear Medicine and Allied Sciences (INMAS) Dhaka, Chittagong, Rajshahi, Khulna, Sylhet, Dinajpur and Rangpur has been increased, among which 3 new buildings have been constructed in Rajshahi, Khulna and Dinajpur. The first phase of the survey for the selection of possible sites for the construction of a nuclear power plant in the southern part of Bangladesh has been completed and the technical survey project for the establishment of a high capacity nuclear research reactor in Bangladesh has been completed. Establishment of 8 Institutes of Nuclear Medicine and Allied Sciences (INMAS) is underway in the country. Under the project titled Prevalence of Congenital Hypothyroidism in Newborns (Phase II), Umbilical Cord screening is currently being conducted in 63 districts of the country in about 839 public and private hospitals, maternal and child health centers, maternity centers for the diagnosis of congenital

thyroid hormone deficiency. Neonatal blood samples are currently being collected through Blood and Heel Prick sampling. Neonatal TSH screening of blood samples of about 4,20,881 newborn babies collected from public and private hospitals outside Dhaka and outside Dhaka under the project has already been done and so far 190 babies born with thyroid hormone deficiency have been identified and their treatment programs are available. The project for development and modernization of laboratory facilities of the Institute of Electronics was completed in December 2022.

## 6.2.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22		2022-23		2023-24	2024-25	2025-26
1	2	3	4	5	6	7	8	9	10	11
1. Research assistance/supervision in preparation of thesis/report	Edited Thesis/Report	3	No	40	40	41	41	44	46	48
2. Conduct training on Science and technology	Trained Manpower	1	No	200	220	210	205	215	220	225
3. Organizing seminars and workshops on science	Organized seminars and workshops	2	No	25	25	26	26	28	29	30
4. Providing medical care using nuclear technology	Service takers	3	No	300000	396275	300500	310000	312000	315000	320000
5. Production and supply of ammonia tissue bone grafts	Ammonium Graphite supplied	3	No	3500	3500	3550	4500	4600	5500	5600
	Provided bone graphite		Amount (c.c)	11000	14379	11500	12900	14500	16000	16500
6. Determine amount of radiation exposure to imported and exported food.	Radioactivity levels are determined	3	No	13800	17800	18000	18000	19000	20000	22000
7. Determination of the radiation dose received in the body of the radiation worker	TLD service provision	3	No	8000	12000	8150	8150	8250	8300	8400
8. Food preservation by application of radiation	Radiation applied food products	3	No	100	214	105	105	100	155	160
9. Sterilization of medical equipment by application of radiation	Amount of radiation therapy applied	3	No	2500	8600	2000	2000	3500	5000	5500
10. Chemical analysis of air/water/soil/foodstuffs/vegetables etc. samples/other substances	Different samples/substances analyzed	3	No	3200	4124	3300	3500	4200	4300	4500
11. Culture and qualitative analysis of blood samples in nuclear medicine care centres	Analyzed blood sample	3	No	50000	73500	55000	55000	60000	6500	70000
12. Calibration of radioactivity monitors	Calibrated instrument	3	No	90	90	92	92	94	95	95
13. Notification of stakeholders for research results	Articles and books published in scientific journals	4	No	80	96	85	85	100	110	120
	Organized seminars and workshops	4	No	4	4	5	5	6	7	8
14. The main construction work of Rooppur Nuclear Power Plant	Physical progress	5	%	15	14	15	15	18	20	22
15. Establishment of Institute of Nuclear Medicine and Allied Sciences (Imran) at 8 Medical College Hospitals Campus of the country	Expenditure against the budget allocated for implementation of the project	5	%	34	30	38	-	-	-	-
16. Enhanced capacity of the Institute of Nuclear Medicine and Allied Sciences (INMAS) Dhaka, Chittagong, Rajshahi, Khulna, Sylhet, Dinajpur and Rangpur	Expenditure against the budget allocated for implementation	5	%	15	18.60	20.00	18.50	20.00	21.00	22.22

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
	of the project									
17. Modernization and expansion of services and research facilities of the Institute of Tissue Banking and Biomaterials Research	Expenditure against the budget allocated for implementation of the project	5	%	-	2.47	28.04	27.50	28.00	30.00	13.96

### 6.2.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23	2023-24	2024-25	2025-26	
1	2	3	4	5	6	7	8
<b>Operating Activities</b>							
<b>Support Activity</b>							
131005700 - Bangladesh Atomic Energy Commission	1-17	241,19,00	256,09,50	250,06,50	207,90,00	228,90,00	252,00,00
<b>Total : Support Activity</b>		<b>241,19,00</b>	<b>256,09,50</b>	<b>250,06,50</b>	<b>207,90,00</b>	<b>228,90,00</b>	<b>252,00,00</b>
<b>Total : Operating Activities</b>		<b>241,19,00</b>	<b>256,09,50</b>	<b>250,06,50</b>	<b>207,90,00</b>	<b>228,90,00</b>	<b>252,00,00</b>
<b>Development Activities</b>							
<b>Annual Development Program</b>							
224019500 - Construction of Rooppur Nuclear Power Plant (Main Phase) (01/07/2016- 30/12/2025)	14	10403,26,11	13395,60,00	11139,15,00	9706,76,00	10481,78,00	10481,78,00
224126100 - Establishment of INMAS at Eight Medical College Hospital Campus of the Country (01/07/2017-30/06/2021) Approved	1-5,16	61,00,00	255,80,00	253,52,00	0	0	0
224236600 - Establishment of Calibration and Quality Control Facilities for Radiotherapy, Diagnostic Radiology and Neutron	7-9	8,70,00	10,71,00	10,08,00	0	0	0
224237700 - Establishment of Cyclotron & PET-CT at INMAS Mymensingh and Chattogram and Cyclotron facilities at INMP, Savar (01/07/2018 - 30/06/2023)	1-5	54,57,00	352,00,00	109,09,00	352,11,00	89,40,00	0
224242800 - Modernization and development of Laboratory Facilities of Institute of Electronics. (01/07/2018 - 31/12/2021)	4-13	2,35,00	6,24,00	4,70,00	0	0	0
224247100 - BMRE of Safety Facilities of 3 Megawatt Research Reactor of AERE, Savar (01/07/2018 - 30/06/2024)	4-13	6,13,00	18,29,00	18,29,00	10,22,00	0	0
224326800 - Strengthening of existing Gamma Source of the Bangladesh Atomic Energy Commission	7-9	16,00	20,86,00	20,86,00	29,90,00	0	0
224342000 - Modernization and Strengthening of Service and Research Facilities of the Institute of Tissue Banking and Biomaterial Science	4-5	0	48,72,00	25,53,00	37,46,00	105,55,00	0
224347000 - Modernization of Laboratories and Enhancement of Service Capacity of 3 Divisions (Chemistry Division, Health Physics Division, Experimental Physics Division) of Atomic Energy Center, Dhaka	7-10	0	24,14,00	13,42,00	18,72,00	11,10,00	0
224366300 - Enhance Capacity of Institute of Nuclear Medicine and Allied Sciences (INMAS) at Mitford, Cumilla, Faridpur, Barishal and Bogura	4	0	0	10,20,00	132,00,00	56,28,00	0
<b>Total : Annual Development Program</b>		<b>10536,17,11</b>	<b>14132,36,00</b>	<b>11604,84,00</b>	<b>10287,17,00</b>	<b>10744,11,00</b>	<b>10481,78,00</b>
<b>Total : Development Activities</b>		<b>10536,17,11</b>	<b>14132,36,00</b>	<b>11604,84,00</b>	<b>10287,17,00</b>	<b>10744,11,00</b>	<b>10481,78,00</b>
<b>Total :</b>		<b>10777,36,11</b>	<b>14388,45,50</b>	<b>11854,90,50</b>	<b>10495,07,00</b>	<b>10973,01,00</b>	<b>10733,78,00</b>

## 6.3 Bangladesh Council for Scientific Industrial Research (BCSIR)

**6.3.1 Recent Achievements:** In the last 03 (three) years, BCSIR has implemented 504 R&D projects and 08 (eight) Annual Development Projects (ADPs), 51 science related seminars and demonstrations in 126 upazila's to make the people science-minded. In order to advance the science education of school going students, BCSIR has been given opportunity to visit the laboratories by the students of various schools. In

addition, BCSIR has organized 8 science fairs for young scientists from universities, colleges and schools. BCSIR has promoted 33 new technologies, acquired 20 patents and transferred 84 technology to industrialists, awarded 200 fellowships, supervised the research work of 305 students and published 347 research papers. At present BCSIR analysis 16430 product-sample of various industrial/industrial establishments, import-exporting establishments and various governmental and non-governmental organizations and at individual level. BCSIR has obtained ISO-IEC-17025 accreditation certificate of 88 analysis parameters, 04 new laboratories have been set up and labs have been modernized and 3 central laboratories have been set up to speed up the research work. The Genomic Research Lab has discovered the whole genome sequence of 1350 Corona virus samples and 863 data submitted to the International Data Bank in Full Form (GISAID) and dengue virus genome sequencing. BCSIR has developed an RT-PCR kit called "BCSIR-COVID Kit" for the detection of Corona Virus which has recently approved for production by the Directorate of Drug Administration.

### 6.3.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
1. Conduct research on non-conventional and renewable energy and transfer of innovated technology.	Published research articles in the local and international journal	4	No.	25	22	25	25	25	26	27
	New technologies invention		No.	3	3	4	3	4	4	4
	Accept patent		No.	3	3	3	3	3	4	5
	Commercialization		No.	3	3	4	3	4	4	5
2. Conduct research and apply technologies innovated through this research to ensure, preserve quality of food and public health.	Published articles in the local and international journal	4	No.	35	35	35	35	35	35	35
	New technologies discovered		No.	3	3	4	3	4	4	5
	Accept patent		No.	3	3	3	3	3	3	4
	Commercialization		No.	4	4	4	4	4	4	4
3. Facilitate innovation of technology for using domestic raw materials for industrialization.	Published articles in the local and international journal	4	No.	55	53	60	55	60	60	60
	New technologies invented		No.	9	9	9	9	9	10	11
	Accept patent		No.	5	5	6	5	6	7	7
	Commercialization		No.	9	9	9	9	9	10	10
	Arrange meetings / seminars to Disseminate appropriate technology in District or Upazila level.		No.	66	55	66	66	66	66	66
	Number of science fair held in various centers.		No.	4	4	4	4	4	4	4
	Number of participating school/colleges in the fair.		No.	145	145	150	145	150	155	160
	Number of participate in the fair with Invented technology.		No.	480	480	480	480	480	500	520
4. Provide technological service in trade, industrialization and economic development by examining and creating research facilities to calibrate and ensure the quality of local product and export-import goods.	Analysis of industrial/ commercial products/ Material analysis/service provided.	4	No. (Thousand)	5500	5316	5500	5500	5500	5800	6000

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
5. Publish basic and applied research work and papers to provide main technological service in trade, industrialization and economic development by creating research facilities.	Number and rate of implementation of project on new research lab	4	No.	3	3	4	3	4	4	4
	Number and rate of implementation of project on modernization research lab		No.	3	3	3	3	3	3	3
	Memorandum of understanding (MoU) signed in local and abroad.		No.	15	15	17	15	17	18	20
	Number of project under foreign fund assistance.		No.	0	0	1	0	1	1	1
	Students completed thesis MS/M.phil/Ph.D under supervised by scientists		No. (Person)	185	180	185	180	185	190	195
	Number of national/ International seminar/ workshop.		No.	20	20	25	20	25	28	30
6. Conduct training on Science and technology	Basic training for officers	1	No. (Person)	40	38	40	40	40	40	40
	Number of students/ trainees from in-house		No. (Person)	1100	1100	1120	1100	1120	1150	1160
	Number of trainees in a variety of training institutions within the country.		No. (Person)	90	90	95	90	95	100	110
	Participation in meeting/seminar in abroad.		No. (Person)	30	35	30	30	30	30	32
	Participation in meeting/seminar within the country.		No. (Person)	25	25	30	25	30	30	35
	Number of supervisors for achieving research degree students.		No. (Person)	180	180	185	180	195	190	195
	Number of Officer/scientists completed higher education (Ph.D, M. Phil, MS)		No. (Person)	12	12	13	12	13	14	15
	Organization of scientific meetings /seminars		2	No.	15	20	15	15	15	16
7. Provide fellowships and opportunity for higher study and research	Provided fellowship for researcher	1	No. (Person)	100	100	100	100	100	100	100

### 6.3.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23	2023-24	2024-25	2025-26	
1	2	3	4	5	6	7	8
<b>Operating Activities</b>							
<b>Support Activity</b>							
131005600 - Bangladesh Council of Scientific and Industrial Research (BCSIR)	1-7	141,56,45	148,27,55	144,94,05	120,01,00	132,30,00	145,70,00
<b>Total : Support Activity</b>		<b>141,56,45</b>	<b>148,27,55</b>	<b>144,94,05</b>	<b>120,01,00</b>	<b>132,30,00</b>	<b>145,70,00</b>
<b>Total : Operating Activities</b>		<b>141,56,45</b>	<b>148,27,55</b>	<b>144,94,05</b>	<b>120,01,00</b>	<b>132,30,00</b>	<b>145,70,00</b>

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23		2023-24	2024-25	2025-26
1	2	3	4	5	6	7	8
<b>Development Activities</b>							
<b>Annual Development Program</b>							
223012200 - Establishment of Institute of Bio equivalence Studies & Pharmaceutical Sciences. (01/07/2017-30/06/2021) Approved (01/07/2017-30/06/2023)	4-5	20,61,48	21,95,00	10,19,00	19,31,00	0	0
224148400 - Augmentation of Chemical Metrology Infrastructure (01/01/2018-31/12/2021) Approved	5	30,39,00	28,57,00	24,04,00	0	0	0
224236300 - Strengthening of Institute of Glass and Ceramic Research and Testing (IGCRT) of BCSIR (01/07/2018 - 30/06/2021)	5	7,88,50	96,00	82,00	0	0	0
224250200 - Establishment of Hydrogen Energy Laboratory (01/10/2018 - 30/06/2021)	1	11,84,00	7,47,00	7,42,00	0	0	0
224287700 - Establishment of Research Facilities on processing of safe and healthy dry Fish and Indoor Farming at BCSIR centre Dhaka and Chattogram. (01/04/2019 - 31/12/2021)	2	14,99,64	35,41,00	31,13,00	8,09,00	0	0
224305200 - Mobile Science Exhibition-BCSIR	6	1,61,75	6,24,00	1,87,00	6,91,00	0	0
224337600 - Augmentation of Technical Competency for Food Product Processing Research of IFST	2	0	30,24,00	25,84,00	12,65,00	0	0
224356900 - Establishment of Facilities for Light Engineering Sector and E-Waste Processing	5-6	0	0	21,78,00	27,52,00	0	0
<b>Total : Annual Development Program</b>		<b>87,34,37</b>	<b>130,84,00</b>	<b>123,09,00</b>	<b>74,48,00</b>	<b>0</b>	<b>0</b>
<b>Total : Development Activities</b>		<b>87,34,37</b>	<b>130,84,00</b>	<b>123,09,00</b>	<b>74,48,00</b>	<b>0</b>	<b>0</b>
<b>Total :</b>		<b>228,90,82</b>	<b>279,11,55</b>	<b>268,03,05</b>	<b>194,49,00</b>	<b>132,30,00</b>	<b>145,70,00</b>

#### 6.4 Bangladesh National Scientific and Technical Documentation Centre (BANSDOC)

**6.4.1 Recent Achievements:** As a national information service organization, BANSDOC is enriching and modernizing the existing information services through the use, application and website of modern information technology, collecting, storing and distributing updated information on science and technology related to the country and abroad supporting research and development activities according to the needs of researchers, technicians, educators, students and the collected scientific data, biodata, etc. are being provided online services for all by uploading them to 10 (ten) databases. In last 03 (three) years data collection 17,818, information dissemination 25,005 pages, beneficiaries 1,00,944, scientific seminars/workshops/awareness 35 meetings, internship to 224 students in 12 batches and e-book preparation training provided to 265 people.

#### 6.4.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
1. Collection, processing, preservation, editing and distribution of information in all fields of natural science, agricultural science, medical, engineering, industrial technology, scientific research and diagnostic development.	Information Collection	2	No.	6500	6737	7000	7000	7200	7400	7600
	Information Dissemination		Page	8000	9190	8000	8000	8200	8400	8600
	Beneficiaries		No.	16500	16735	17000	17000	17500	18000	18500
2. Organizing seminar and workshop on science.	Awareness Meeting, Seminar & Workshop	2	No.	13	13	14	14	15	16	17
3. Arranging training on science and technology.	Internship Courses	1	No.	110	105	120	120	125	130	135
	E-book training		No.	110	115	110	110	115	120	125

### 6.4.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23		2023-24	2024-25	2025-26
1	2	3	4	5	6	7	8
<b>Operating Activities</b>							
<b>Support Activity</b>							
131005900 - Bangladesh National Scientific & Technical Documentation Centre (BANSDOC)	1-3	7,17,08	7,45,60	7,22,40	6,55,00	7,20,00	7,85,00
<b>Total : Support Activity</b>		<b>7,17,08</b>	<b>7,45,60</b>	<b>7,22,40</b>	<b>6,55,00</b>	<b>7,20,00</b>	<b>7,85,00</b>
<b>Total : Operating Activities</b>		<b>7,17,08</b>	<b>7,45,60</b>	<b>7,22,40</b>	<b>6,55,00</b>	<b>7,20,00</b>	<b>7,85,00</b>
<b>Total :</b>		<b>7,17,08</b>	<b>7,45,60</b>	<b>7,22,40</b>	<b>6,55,00</b>	<b>7,20,00</b>	<b>7,85,00</b>

### 6.5 National Museum of Science and Technology (NMST)

**6.5.1 Recent Achievements:** During the last three financial years (2019-20, 2020-21 and 2021-22) 105000 visitors visited the Science Exhibition of National Science and Technology Museum Permanent Gallery and 3588088 (thirty five lakh eight thousand eighty eight) people made virtual visits. During this period, 1553 science fairs and 349 science seminars were organized in 64 districts of the country and at the central level in Dhaka, including the National Science and Technology Week. During this period 161 state-of-the-art exhibits were collected and placed in museums and 523 traveling science exhibitions were organized with the help of museum buses and 4D movie buses. The number of visitors to these exhibitions was around 7,28,585 Organized 525 popular science lectures/workshops/seminars. Upazila Science and Technology Clubs have been formed in 493 Upazilas and Union Science and Technology Clubs in 40 Unions. 35 winners of the central level quiz competition have been sent on an educational tour outside Bangladesh. 26 officers and employees of this organization have been sent to UK, Romania, India, Sri Lanka, Malaysia, Indonesia, Sweden, Germany and Philippines to visit Science Museums of different countries including participation in International Astrolympiad. Apart from this, 37 Science Olympiads and 3 International Science Conferences have been organized jointly by this institution with some of the reputed scientific organizations of the country.

### 6.5.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22		2022-23		2023-24	2024-25	2025-26
1	2	3	4	5	6	7	8	9	10	11
1. Conduct training on Science and technology	Internal Training	1	Man hour	138	-	138	-	-	-	-
	Foreign training		No.	23	23	23	23	23	23	23
2. Arrange science fairs / exhibitions / Olympiad at district and national level with permanent science exhibition	Science fair/seminar/workshop /Olympiad/Popular Science Subject Lecture Series	2	No.	1695	1695	1695	1695	1695	1695	1695
	Visitors to the Science Museum (including virtual)		No.	2500000 (including virtual)	120000 (physically)	3000000 (including virtual)	73123 (physically)	80000 physically	100000 physically	120000
	Mobile Science Exhibition		No.	250	260	230	154	290	300	310
	Number of districts hosting fairs		No.	64	64	64	64	64	64	64
3. Creation of space research and observation facility by establishing space observation center at the junction of Tropic of Cancer and 90 degrees east longitude	Space observation by acquiring 10 acres of land and setting up a main observatory and other exhibits of about 10 meters in diameter	2	Tk (Lac)	517	17.80	8500	649	5419.45	15252.99	-



### 6.5.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23		2023-24	2024-25	2025-26
1	2	3	4	5	6	7	8
<b>Support Activity</b>							
131006200 - National Museum of Science & Technology	1-3	20,75,00	22,10,85	20,01,41	22,52,00	24,80,00	27,30,00
<b>Total : Support Activity</b>		<b>20,75,00</b>	<b>22,10,85</b>	<b>20,01,41</b>	<b>22,52,00</b>	<b>24,80,00</b>	<b>27,30,00</b>
<b>Total : Operating Activities</b>		<b>20,75,00</b>	<b>22,10,85</b>	<b>20,01,41</b>	<b>22,52,00</b>	<b>24,80,00</b>	<b>27,30,00</b>
<b>Development Activities</b>							
<b>Annual Development Program</b>							
224339900 - Establishment of Bangabandhu Sheikh Mujibur Rahman Space Observatory	2-3	0	85,00,00	6,49,00	54,20,00	152,51,00	0
<b>Total : Annual Development Program</b>		<b>0</b>	<b>85,00,00</b>	<b>6,49,00</b>	<b>54,20,00</b>	<b>152,51,00</b>	<b>0</b>
<b>Total : Development Activities</b>		<b>0</b>	<b>85,00,00</b>	<b>6,49,00</b>	<b>54,20,00</b>	<b>152,51,00</b>	<b>0</b>
<b>Total :</b>		<b>20,75,00</b>	<b>107,10,85</b>	<b>26,50,41</b>	<b>76,72,00</b>	<b>177,31,00</b>	<b>27,30,00</b>

### 6.6 Bangabandhu Sheikh Mujibur Rahman Novotheatre

**6.6.1 Recent Achievement:** With aim to encourage all citizens and students of the country to learn space science through entertainment and to inculcate a positive and accurate idea about cosmic space in their mind, the upgradation of existing Opto-mechanical system at Planetarium of Novotheatre and ultra-modern digital and Hybrid system with synchronization has been established. A 30-minute-long digital film has been developed on the historic life struggle of Father of the Nation Bangabandhu Sheikh Mujibur Rahman. Watching this film, the people of Bangladesh have been receiving the knowledge about the contribution of Father of the Nation in the history and heritage of Bangladesh and other movements including the liberation war. Besides, 14 scientific and 16 digital exhibits, 1 40-seat 5-D movie theater, smart game and smart step floor and 1 12-seat VR have been installed. Online ticketing has been launched for the convenience of Novotheater visitors. Bangabandhu Karnar, Sheikh Russell Karnar and 1 Scientific Library have been set up here. A children's park (Novopark) has been constructed in the empty space on the eastern side of Bangabandhu Sheikh Mujibur Rahman Novotheater. As part of the establishment of Bangabandhu Sheikh Mujibur Rahman Novotheater in every department of the country as per the instructions of the Honorable Prime Minister, the project of establishing Bangabandhu Sheikh Mujibur Rahman Novotheater in Rajshahi, the project of establishing Bangabandhu Sheikh Mujibur Rahman Novotheater in Barisal, the project of establishing Bangabandhu Sheikh Mujibur Rahman Novotheater in Rangpur, and the project of establishing Bangabandhu Sheikh Mujibur Rahman Novotheater in Khulna, The installation project has been approved and the project work is in progress. Apart from this, a state-of-the-art "Nuclear Energy Information Center" with 3D technology has been set up in Novotheater to give the public a proper understanding of nuclear power in the wake of the establishment of Rooppur Nuclear Power Plant. Bangabandhu Sheikh Mujibur Rahman Novotheater has been brought under National Web Portal and Apps have been opened.

#### 6.6.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22		2022-23		2023-24	2024-25	2025-26
1	2	3	4	5	6	7	8	9	10	11
1. Conduct training on Science and technology	Internal training	1	No.	53	52	55	51	55	55	55
2. Arrange Science related seminar and workshop	number of saminer/ workshop	2	No.	8	4	8	3	8	8	8
3. Developing Navotheatre as a center of excellence through science education and space research through aerospace science education.	Visitor in Planetarium	2	Person (Thousand)	40	60	160	150	160	160	160
	Visitor in exhibits and Rides			10	36	110	100	110	110	110

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
4. To provide accurate ideas and information about aerospace sciences, establish a network with public institutions including educational institutions	Letter for communication with the educational institution	2	No.	20	20	70	70	70	70	70
	Number of educational institutions coming to show the novoaster		No.	20	20	70	60	70	70	70
	Letter / leaflet distribution		No. (Thousand)	25	15	80	25	80	80	80

### 6.6.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23	2023-24	2024-25	2025-26	
1	2	3	4	5	6	7	8
<b>Operating Activities</b>							
<b>Support Activity</b>							
131005500 - Bangabandhu Sheikh Mujibur Rahman Novotheatre	1-3	5,71,00	7,10,00	5,81,00	8,97,00	9,90,00	11,00,00
<b>Total : Support Activity</b>		<b>5,71,00</b>	<b>7,10,00</b>	<b>5,81,00</b>	<b>8,97,00</b>	<b>9,90,00</b>	<b>11,00,00</b>
<b>Total : Operating Activities</b>		<b>5,71,00</b>	<b>7,10,00</b>	<b>5,81,00</b>	<b>8,97,00</b>	<b>9,90,00</b>	<b>11,00,00</b>
<b>Development Activities</b>							
<b>Annual Development Program</b>							
224019800 - * Establishment of Bangabandhu Sheikh Mujibur Rahman Novo Theatre at Rajshahi (01/07/2017 - 30/06/2021)	2-3	17,46,00	79,48,00	107,51,00	2,72,00	0	0
224315600 - Establishment of Bagabandhu Sheikh Mujibur Rahman Novotheatre, Barisal	2-3	35,52,00	116,48,00	52,60,00	175,00,00	84,54,00	50,40,00
224346200 - Establishment of Bangabandhu Sheikh Mujibur Rahman Novo Theatre at Rangpur	2-3	0	56,00,00	20,00,00	188,95,00	100,00,00	100,00,00
224366400 - Establishment of Bangabandhu Sheikh Mujibur Rahman Novotheatre, Khulna.	2-3	0	0	35,00	35,00,00	100,00,00	418,49,00
<b>Total : Annual Development Program</b>		<b>52,98,00</b>	<b>251,96,00</b>	<b>180,46,00</b>	<b>401,67,00</b>	<b>284,54,00</b>	<b>568,89,00</b>
<b>Total : Development Activities</b>		<b>52,98,00</b>	<b>251,96,00</b>	<b>180,46,00</b>	<b>401,67,00</b>	<b>284,54,00</b>	<b>568,89,00</b>
<b>Total :</b>		<b>58,69,00</b>	<b>259,06,00</b>	<b>186,27,00</b>	<b>410,64,00</b>	<b>294,44,00</b>	<b>579,89,00</b>

### 6.7 National Institute of Bio-technology

**6.7.1 Recent Achievements:** Stress tolerant transgenic brinjal varieties have been developed at NIB. Whole genome sequence of 2 SARS-CoV-2 (COVID-19) viruses found in Bangladesh and new vaccine have been developed to develop new drugs and vaccines. Enzyme producing bacterial strain for use in textile and leather industry is currently being used in NIB's laboratory which will play an important role in preventing environmental pollution. Animal model experiments have been started by creating new drug models at NIB with the aim of discovering new drugs as an alternative to insulin. Also molecular structures of four (4) anti-diabetic compounds obtained from medicinal plants were determined by NMR. 286 DNA sequencing services have been provided in various educational institutions and research institutions of the country including the research department of NIB. A total of 485 people have been provided hands on training from NIB through 11 training programs to create skilled human resources in biotechnology including publishing a national database of researchers and biotechnology research..

## 6.7.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
1. Research assistance/supervision in preparation of thesis/report	Edited Thesis/ Report	3	No.	4	4	9	4	10	11	12
2. Conduct training on Science and technology	Trained Manpower	1	No.	120	192	163	0	163	163	163
3. Arrangement seminar and workshop relating science	Arranged seminar and workshop	2	No.	2	2	2	1	3	4	4
4. The result of the study is the integration of steak holders	Published scientific journals and books	4	No.	6	7	6	5	9	9	10
	Organized seminars and workshops		No.	1	1	2	1	3	3	3
5. DNA Sequencing services are provided	Given DNA sequencing Service	4	working day	110	-	120	5	120	130	140
6. TAK DNA polymerase enzyme production	Generated TNA DNA Polymerase Enzyme	4	No.(iu)	31000	32000	32000	15500	33000	34000	35000
7. Development of the cultivation method for the production of Eco-seed plants and application of biotechnology in tissue culture method.	Elohera seed production and production of pest feeding through tissue culture and performance assessment of the field of organization	4	No.	25	-	1000	450	-	-	-
8. Innovative environment-friendly germs for rice	Isolation and preservation of nitrogen fixing bacteria	4	No.	32	42	56	26	-	-	-
	Identification of nitrogen fixing bacteria		No.	32	42	31	15	-	-	-
	Determination of nitrogen fixation activity of identified bacteria and selection of suitable strains		No.	10	16	15	7	-	-	-
9. Isolation, identification and molecular characterization of the Lumpy skin disease virus with an aim to invent vaccine	Collection of specimens from infected animals (blood, swabs, pus, skin scrapings etc.)	4	No.	*	*	70	33	70	-	-
	Isolation of DNA from blood samples		No.	*	*	70	33	70	-	-
	Polymerase Chain Reaction (PCR)		No.	*	*	70	33	70	-	-
	Molecular characterization		No.	-	-	10	5	10	-	-
10. Molecular characterization of pathogenic bacteria causing hornworm disease (MAS)	Horn fish Sample collection	4	No.	45		50		55	60	
	Isolation and preservation of bacteria		No.	135		150		165	175	
	Identification of bacteria		No.	135		140		165	175	
11. Molecular characterization of pathogenic bacteria causing hornworm disease (MAS)	Isolation and characterization of microorganisms capable of producing antimicrobial substances	4	No.	60	60	48	25	-	-	-
	Isolation and characterization of microorganisms capable of producing antimicrobial substances		No.	60	60	48	25	-	-	-
	Isolation and characterization of microorganisms capable of producing antimicrobial substances		No.	25	25	19	9	-	-	-

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
12. Labcom office and Gene Bank building under the development project titled "Establishment of National Gene Bank"	Physical progress	5	%	31	-	21.6	28	-	-	-

### 6.7.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23	2023-24	2024-25	2025-26	
1	2	3	4	5	6	7	8
<b>Operating Activities</b>							
<b>Support Activity</b>							
131006000 - National Institute of Biotechnology	1-12	10,93,35	12,67,14	12,07,23	13,54,00	14,90,00	16,50,00
<b>Total : Support Activity</b>		<b>10,93,35</b>	<b>12,67,14</b>	<b>12,07,23</b>	<b>13,54,00</b>	<b>14,90,00</b>	<b>16,50,00</b>
<b>Total : Operating Activities</b>		<b>10,93,35</b>	<b>12,67,14</b>	<b>12,07,23</b>	<b>13,54,00</b>	<b>14,90,00</b>	<b>16,50,00</b>
<b>Development Activities</b>							
<b>Annual Development Program</b>							
224247600 - Establishment of National Gene Bank (01/03/2018 - 30/06/2021)	1,3,4,5,6,8,12	57,99,00	209,28,00	122,06,00	105,44,00	1,00	0
224337500 - Establishment of Center for Next Generation Sequencing and Analytics	2-11	0	35,64,00	26,72,00	8,91,00	0	0
224340000 - Establishment of advanced laboratory facilities for transgenic and space research	2-11	0	15,25,00	11,44,00	9,38,00	0	0
<b>Total : Annual Development Program</b>		<b>57,99,00</b>	<b>260,17,00</b>	<b>160,22,00</b>	<b>123,73,00</b>	<b>1,00</b>	<b>0</b>
<b>Total : Development Activities</b>		<b>57,99,00</b>	<b>260,17,00</b>	<b>160,22,00</b>	<b>123,73,00</b>	<b>1,00</b>	<b>0</b>
<b>Total :</b>		<b>68,92,35</b>	<b>272,84,14</b>	<b>172,29,23</b>	<b>137,27,00</b>	<b>14,91,00</b>	<b>16,50,00</b>

## 6.8 Bangladesh Atomic Energy Regulatory Authority

**6.8.1 Recent Achievements:** The Design & Construction License of Unit-1 and Unit-2 has been awarded as part of the regulatory supervision activities of Rooppur Nuclear Power Plant under construction which is a major achievement of Bangladesh Atomic Energy Regulatory Authority. In order to control the radiation risk by complying with the existing laws and regulations in favor of various radiation installations using radiation producing equipment including radioactive materials in industrial plants, health, agriculture, education and research in the last 03 (three) years by the Bangladesh Atomic Energy Authority, the said radiation source import/ 1012 (one thousand twelve) radiation installations were inspected including 1,373 (one thousand three hundred and seventy three) approvals for export and use and A total of 1125 (one thousand one hundred and five) trainees have been provided training on radiation safety by organizing 35 (thirty five) training courses for the radiation workers of all these institutions in the last 03 (three) years. .

### 6.8.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
1. Approval of the management of nuclear and radiation installations	Import for installation/ Approval granted to exported radiation sources	3	working days*	*	*	*	30	30	30	30
2. Certification of Radiation Control Officers	RCO certificate issued	3	working days*	*	*	*	45	45	45	45
3. Regulatory inspection of nuclear and radiation facilities	Regulatory inspection	3	No.	144	161	151	166	173	180	185

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
4. Conduct training on science and technology	training held	1	No.	6	6	7	7	8	9	10
	Trained manpower			150	190	175	210	220	230	240
5. Organizing seminars and workshops on science	Training courses organized	2	No.	5	4	6	4	5	6	7

### 6.8.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23	2023-24	2024-25	2025-26	
1	2	3	4	5	6	7	8
<b>Operating Activities</b>							
<b>Support Activity</b>							
131005800 - Bangladesh Atomic Energy Regulatory Authority	1-5	1,98,52	5,47,50	2,63,60	5,00,00	5,50,00	6,50,00
<b>Total : Support Activity</b>		<b>1,98,52</b>	<b>5,47,50</b>	<b>2,63,60</b>	<b>5,00,00</b>	<b>5,50,00</b>	<b>6,50,00</b>
<b>Total : Operating Activities</b>		<b>1,98,52</b>	<b>5,47,50</b>	<b>2,63,60</b>	<b>5,00,00</b>	<b>5,50,00</b>	<b>6,50,00</b>
<b>Development Activities</b>							
<b>Annual Development Program</b>							
224295200 - Development of Nuclear Regulatory Infrastructure for Bangladesh Atomic Energy Regulatory Authority to Supervise the Nuclear Safety of Rooppur Nuclear Power Plant	-	110,70,00	201,40,00	130,50,00	181,26,00	450,60,00	450,60,00
<b>Total : Annual Development Program</b>		<b>110,70,00</b>	<b>201,40,00</b>	<b>130,50,00</b>	<b>181,26,00</b>	<b>450,60,00</b>	<b>450,60,00</b>
<b>Total : Development Activities</b>		<b>110,70,00</b>	<b>201,40,00</b>	<b>130,50,00</b>	<b>181,26,00</b>	<b>450,60,00</b>	<b>450,60,00</b>
<b>Total :</b>		<b>112,68,52</b>	<b>206,87,50</b>	<b>133,13,60</b>	<b>186,26,00</b>	<b>456,10,00</b>	<b>457,10,00</b>

## 6.9 Bangladesh Oceanographic Research Institute

**6.9.1 Recent Achievements:** This institute has been working on maritime affairs research and skilled manpower with the aim of developing the Sunil economy by utilizing this huge resource of the sea border belonging to Bangladesh. Currently, this institute is conducting its own research as well as conducting joint research and providing research assistance with other domestic and foreign organizations, colleges and universities. In addition, marine consultancy services and sample analysis services are provided to various public and private organizations. Meanwhile, short, medium and long-term plans for the development of blue economy, election manifesto 2018, SDG Goal-14 and vision plans are in progress. Currently determining the geological and physical parameters of the sea area from Qutubdia to Feni, separating five types of heavy minerals from sea sand such as rutile, ilmenite, zircon, garnet, magnetite etc., commercialization of agar and carraginan produced from seaweed, identification of well spills in port areas, collection of medicinal chemicals from horse crab (king crab), coral restoration in St. Martin's Island, phytoplankton and zooplankton cataloging in the Bay of Bengal and Research activities are underway to publish books on taxonomic studies of marine seaweeds and corals. A budget of Rs.132450.00 lakhs is available for running the institute in the current financial year 2022-23. The Bangladesh Oceanographic Research Institute (Phase 2) project was approved in the ACNEC meeting held on April 4, 2022 for the purpose of procurement of laboratory equipment, development of infrastructure, establishment of data center and purchase of own research vessel. Moreover, reconstruction of a DPP is underway with the aim of setting up an international standard marine aquarium on 29.30 acres of land adjacent to Marine Drive Road in Cox's Bazar.

### 6.9.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
1. Undertake marine science research activities	Undertake and carry out research projects on physical, chemical, geological, biological, environmental aspects of the ocean.	4	No.	*	8	*	7	10	12	12
2. To support marine science research	Providing training to scientists and related officials	4	No.	*	10	*	12	15	15	20
	Organizing follow up program of training activities		No.	*	1	*	1	1	2	3
3. Popularization of marine science activities	Organizing workshops on marine science	4	No.	*	1	*	1	2	2	3
	Promotion and creation of various marine related facilities		No.	*	2	*	3	4	5	6
4. Taking steps to sustainably use marine resources for socio-economic development	Dissemination of research findings to stakeholders in socio-economic development.	4	No.	*	1	*	1	2	2	3

### 6.9.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23	2023-24	2024-25	2025-26	
1	2	3	4	5	6	7	8
<b>Operating Activities</b>							
<b>Support Activity</b>							
131018300 - Bangladesh Oceanographic Research Institute	1-2	10,63,50	11,94,50	11,34,22	14,54,00	16,00,00	18,00,00
<b>Total : Support Activity</b>		<b>10,63,50</b>	<b>11,94,50</b>	<b>11,34,22</b>	<b>14,54,00</b>	<b>16,00,00</b>	<b>18,00,00</b>
<b>Total : Operating Activities</b>		<b>10,63,50</b>	<b>11,94,50</b>	<b>11,34,22</b>	<b>14,54,00</b>	<b>16,00,00</b>	<b>18,00,00</b>
<b>Development Activities</b>							
<b>Annual Development Program</b>							
224359400 - Bangladesh Oceanographic Research Institute (2nd Phase) Project	1-2	0	0	14,66,00	212,34,00	121,94,00	105,06,00
<b>Total : Annual Development Program</b>		<b>0</b>	<b>0</b>	<b>14,66,00</b>	<b>212,34,00</b>	<b>121,94,00</b>	<b>105,06,00</b>
<b>Total : Development Activities</b>		<b>0</b>	<b>0</b>	<b>14,66,00</b>	<b>212,34,00</b>	<b>121,94,00</b>	<b>105,06,00</b>
<b>Total :</b>		<b>10,63,50</b>	<b>11,94,50</b>	<b>26,00,22</b>	<b>226,88,00</b>	<b>137,94,00</b>	<b>123,06,00</b>

## 6.10 Bangabandhu Science and Technology Fellowship Trust

**6.10.1 Recent Achievements:** In the memory of Bangabandhu Sheikh Mujibur Rahman, the father of the nation, the greatest Bengali of all time, the visionary of Golden Bengal, with the conviction of building a science-minded nation, developing science-related research and building a digital Bangladesh, the Ministry of Science and Technology has implemented a project titled Bangabandhu Fellowship on Science and ICT. The main objective of this project is to create skilled and specially qualified scientists, technicians and researchers at the national level by obtaining degrees in research and higher education, especially MS and PhD programs conducted in renowned universities, laboratories and institutes of the developed world. The researchers who complete the course are able to make special contributions in the field of research and higher education in the country by innovating new technologies and methods. Fellows are selected by an expert committee consisting of senior professors from various public universities, representatives of relevant ministries and executives of national level institutions. From the financial year 2017-2018, the total number of fellowship recipients under the trust is 423, the number of fellows who have completed the

course is 243 and the number of ongoing fellows is 180. Through regular circulars, fellowship awarding activities are ongoing in various programs every year.

### 6.10.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
1. Providing fellowships, higher education and research opportunities to researcher	Grant of fellowship	1	No.	77	90	60	80	100	110	120

### 6.10.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23	2023-24	2024-25	2025-26	
1	2	3	4	5	6	7	8
<b>Operating Activities</b>							
<b>Support Activity</b>							
132011800 - Bangabandhu Science and Technology Fellowship Trust	1	35,00,00	42,88,00	42,74,25	44,46,00	48,90,00	54,00,00
<b>Total : Support Activity</b>		<b>35,00,00</b>	<b>42,88,00</b>	<b>42,74,25</b>	<b>44,46,00</b>	<b>48,90,00</b>	<b>54,00,00</b>
<b>Total : Operating Activities</b>		<b>35,00,00</b>	<b>42,88,00</b>	<b>42,74,25</b>	<b>44,46,00</b>	<b>48,90,00</b>	<b>54,00,00</b>
<b>Total :</b>		<b>35,00,00</b>	<b>42,88,00</b>	<b>42,74,25</b>	<b>44,46,00</b>	<b>48,90,00</b>	<b>54,00,00</b>

### 6.11 Bangladesh Reference Institute for Chemical Measurements (BRICM)

**6.11.1 Recent Achievements:** BRICM has developed/developed various in vitro molecular diagnostic devices (VTM, PCR Kit, Antibody test, Sanitizer etc.) under government management for the first time in the country. Which has been used throughout the country by the Ministry of Health during the Corona period. Apart from laboratory instrument calibration service, calibration service of 32 types of medical equipment has been introduced for the first time in the country. Chemical Metrology Olympiad is organized every year with the participation of students across the country for the purpose of promotion and public awareness. Domestic laboratories are being actively supported by providing proficiency testing, certified reference materials, method validation, calibration services along with training to meet the prerequisites for achieving accreditation as part of international standards promotion. Besides, 150 student-researchers have been supervised. Already a fully online based service has been launched following 4IR.

### 6.11.2 Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
1. Providing fellowships, higher education and research opportunities to researcher	Grant of fellowship	1	No.	10	10	10	20	20	20	22
2. Conducting educational programs in chemical metrology and providing research assistance in higher degrees	Supervised Thesis	3	No.	10	10	12	10	15	15	15
3. Conduct training on science and technology	Trained manpower	1	No.	100	100	120	120	150	155	160
4. Conducting educational programs related to Chemical Metrology, Laboratory Quality Management System,	Organized scientific seminars and workshops	2	No.	04	04	05	05	06	06	06

Activities	Output Indicator	Related Strategic Objectives	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
				2021-22	2022-23	2023-24	2024-25	2025-26		
1	2	3	4	5	6	7	8	9	10	11
Accreditation and Instrumentation etc. and providing related training and consultancy services and providing research assistance in higher degree.	Chemical Metrology Olympiad		No.	01	01	01	01	01	01	01
5. Undertake, manage and implement basic and practical research activities related to chemical metrology, application of research results and management and coordination of all related activities.	Ongoing and completed R&D projects	4	No.	25	25	30	25	30	30	35
	Published books in scientific journals		No.	20	20	25	20	25	25	30
	Domestic capacity building in product/service development (product development)		No.	04	04	05	01	01	02	02
	Commercialization of products/services rich in indigenous technology (Product Commercialization)		No.	01	01	02	01	01	02	02
	Service Agreement, Memorandum of Understanding (MoU) and Joint Research Agreement signed		No.	1010	10	12	10	12	15	15
6. Measurement and Reference Measurement Services, Proficiency Testing, Inter-Laboratory Comparison and Calibration Services, Chemical Measurement System Development, Validation and Transfer	Analysis services	3	No.	1200	1200	1500	4500	4600	4700	4800
	Calibration service		No.	150	150	180	180	200	220	220
	Conduct of Proficiency Testing		No.	04	04	06	20	20	20	20
	Method validation		No.	10	10	12	10	10	10	12

### 6.11.3 Medium Term Expenditure Estimates by Institutional Unit, Scheme and Projects

(Taka in Thousands)

Name of the Institutional Unit/Scheme/ Project	Related Activity	Actual 2021-22	Budget	Revised	Medium Term Expenditure Estimates		
			2022-23	2023-24	2024-25	2025-26	
1	2	3	4	5	6	7	8
<b>Support Activity</b>							
131019501 - Bangladesh Reference Institute for Chemical Measurements (BRICM)	1-6	3,35,23	5,64,50	5,43,64	6,48,00	7,30,00	8,00,00
<b>Total : Support Activity</b>		<b>3,35,23</b>	<b>5,64,50</b>	<b>5,43,64</b>	<b>6,48,00</b>	<b>7,30,00</b>	<b>8,00,00</b>
<b>Total : Operating Activities</b>		<b>3,35,23</b>	<b>5,64,50</b>	<b>5,43,64</b>	<b>6,48,00</b>	<b>7,30,00</b>	<b>8,00,00</b>
<b>Total :</b>		<b>3,35,23</b>	<b>5,64,50</b>	<b>5,43,64</b>	<b>6,48,00</b>	<b>7,30,00</b>	<b>8,00,00</b>