



**BANGABANDHU**  
**SHEIKH MUJIBUR RAHMAN**  
Commemorative Lecture on Science and Society

INSTITUTE OF REMOTE SENSING  
Jahangirnagar University, Bangladesh

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**Photo credits:**

(Top) Sea of crowd welcome back Sheikh Mujib on 10<sup>th</sup> January 1972 (Bottom) Emotion takes over during speech\_Photo courtesy Rashid Talukder (top) and Marilyn Silverstone (bottom), A preface to Bengali nationhood\_dailyasianage\_comnews111359, Bangabandhu in 10<sup>th</sup> January\_Getty Images, bangabandhu-sheikh-mujib-indra-gandhi\_Daily Star June 19, 2015, bangladesh\_10, bdnews24.com\_26<sup>th</sup> March 2016, Daily-sun-2017-08-15-04-11, FILE - Bangladeshi leader Sheikh Mujibur Rahman (C) is shown during a press conference at the Hotel Claridges in London, England, Jan. 8, 1972.\_Voice of America, Jugantor\_7 january 2018, og-sheikh-mujibur-rahman-6878\_Famous People, Sheikh-Mujib\_theindependentbd.com

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## PRELUDE

The great national leader Bangabandhu Sheikh Mujibur Rahman, the Father of the Nation and the architect of Bangladesh did whatever possible throughout his life for the welfare of the people of this country. His personal charisma, strong commitments, farsighted work plan and great bravery contributed in facing different forms of crisis all over his life while fighting for the people of Bangladesh. Steering political processes towards sovereignty in pre-independent conditions, manoeuvring necessary actions in relation to war of independence, contributions in developing the policy-institutional frameworks of the country in post-independent Bangladesh were the major category of events that encapsulate hundreds of micro activities performed by this great national leader. Bangabandhu closely worked with the common people and the sufferings of people inscribed deep scar in his mind that motivated him to come forward whenever there is a need. The major challenge he experienced was the 24 years political and administrative oppression by Pakistan government on the people of Bangladesh which was coupled with troubles emerged from natural (i.e. floods, cyclone, and droughts) and manmade disasters (e.g. religion riots) causing widespread depression, grief and agony among the people. The public attachments helped Bangabandhu to be aware of the deep roots of societal problems and to collect necessary ingredients that eventually made him to be realistic, firm, committed and visionary political leader. His public addresses always enfolded all these attributes in steady and balanced manner and were delivered in a way that is judiciousness, free from hatred, strong in subtle guidelines and directives; his address on 7th of March 1971 in Dhaka is a testimony of the skills mentioned above. UNESCO's recognition of this address as World's Documentary Heritage is the true

acknowledgement of his brilliance in articulating messages enriched with acumen, morals and deep insights.

Bangabandhu gave people of Bangladesh a free, sovereign nation and at the same time values, visions and dream to build the nation as a country with prosperity. He always search for the novel and innovative alternatives to address the grief of the people. Application of scientific approaches in providing solutions, bring in socialist form in democracy were some of the novelty he showed in his post-independent actions. But unfortunately the young generation of the country are still not fully aware of the values and dreams of the Father of the Nation for various reasons and therefore taking appropriate responsive actions by them to translate Bangabandhu's values and dreams into reality are not taking place as expected. In this backdrop Institute of Remote Sensing, Jahangirnagar University (IRS-JU) took initiative to organize lecture series on Bangabandhu's life, visions, dreams and ambitions in regards to Bangladesh where distinguished national and international personalities will present paper and make atmosphere for analytical discussions. The aim of the lecture series is twofold, firstly to pay tribute to Bangabandhu who sacrificed his life for the wellbeing of people and welfare of Bangladesh and secondly to develop awareness of the new generation so that they can align their works, where appropriate, with the values of Bangabandhu into their actions. This document, in this backdrop, briefly highlights the major actions taken by Bangabandhu in different frontiers mainly in post-independent Bangladesh which may give succinct impression about his foundational actions based on which current Bangladesh has secured her standing with dignity and stability.

# BANGABANDHU AND THE POST-INDEPENDENT BANGLADESH

Bangabandhu played unbelievably efficient roles in building the foundation of post-independent Bangladesh. His extraordinary talent to think ahead of time, prudence in apprehending long term impacts of actions taken, ability to take quick decisions and execute them and overall hard working attitude helped Bangabandhu to construct the most important policy-institutional framework at the early stages of Bangladesh. The actions were based on his political and philosophical understanding that eventually contributed to start functioning the newly born country and today's progress is the results of those early stage actions. On return from exile on 10th of January 1972, Bangabandhu started to play his role which was continued only for three and half years (10 January 1972 to 14 August 1975). The Father of the Nation dreamt in building a nation where people will live free from hunger, in good health, enjoy equality and prosperous life and live in a condition where rights of the people will be sustained. In doing that Bangabandhu Sheikh Muzibur Rahman took actions to develop the society on the basis of scientific understanding that is contextualized with local physical, social, economic and ecological contexts. In an address on the eve of national victory day in 1972 Bangabandhu mentioned that he believes in social transformation that is rooted in native values and should be transcended through scientific-socialist manifesto. His unlimited foundational actions in limited time period paved the way to make gradual progress and contributed in making strong Bangladesh. Bangladesh started her journey in 1971 from extremely depressed conditions where economy was ruined, physical infrastructure remain collapsed, food production hugely disturbed, settlement, health condition,

state of water-sanitation-hygiene, education facilities were broken. Building and rebuilding relations with other countries and international agencies was challenging in the contexts of international atmosphere of the time, but it was immensely important for receiving necessary technical, financial, food-aid support for rehabilitation and reconstruction of the nation. On top of that natural disasters such as flood occurred in 1953, 1954, 1955, 1968, 1969, 1973, heavy and prolonged heavy rainfall in 1974, cyclone Gorki in 1970 causing death of about half a million coastal people put Bangladesh's initial attempts into jeopardy. Bangabandhu and his government struggled to support 10 million home-returned refugees, displaced 20 million people due to war, war-torn and tortured millions of women, men, children, elderly in a domestic and international contexts mentioned above. Above all the degree of hope, aspiration of distressed people to Bangabandhu raised high to get relief from misery and be elevated from extremely vulnerable conditions. Bangabandhu was firm, calm even in such conditions and steered the country as a visionary great leader while addressing all these challenges.

Organizing, directing and performing political movements were the major actions during pre-independent Bangladesh for Bangabandhu but building up of policy institutional framework appeared to be major concerns in post-independent conditions for him. One of the milestone activities in this time was to formulate the National Constitution (1972) which was based on four principles, i.e. nationalism-democracy-socialism-secularism. Many important institutions were established at the very early stage of the country; Bangladesh Atomic



Energy Commission (BAEC), Bangladesh Agricultural Research Council (BARC), Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh Science Academy, Islamic Foundation, University Grants Commission (UGC), establishment of Education Commission (1972) headed by Dr Qudrat-e-Khuda were some of the noteworthy examples in this regard. Bangabandhu paid attention to cooperative movements, started micro-credit schemes for rural development. Appraisal of these actions suggests that Bangabandhu's three-and-half years post-independent efforts and accomplishments were equally important compared to his (pre-independent) four decades long political actions and movements. But his later stage works and contributions remain less discussed which resulted in less understanding of his approach, values and visions in

building the nation. Pre-independent Bangabandhu was a strong protester, campaigner and wise political leader but post-independent Bangabandhu was appeared to be a prudential (in thought and actions) politician, skilled administrator and great national leader. Combining these two dimensions of his life enable us to understand Bangabandhu in complete which cannot be realized by taking his roles in part. But deep examinations and realization of Bangabandhu's values, vision, principles and overarching philosophies were not done adequately, even the universities did not play necessary roles in this regard. The values and visions of this great national leader thus never been properly reflected in different walks of life including teaching and research endeavours at university levels due to this limited exercise and understanding.

## **FARMER-FRIENDLY AND SCIENCE FOCUSED AGRICULTURAL POLICY OF BANGABANDHU**

Bangabandhu believed that the progress of an agrarian society like Bangladesh depends on well-functioning agricultural systems where factors like availability of agricultural inputs (e.g. chemical fertilizers, insecticides, pesticides etc.), good quality seeds, irrigation facilities, access to required credit from relevant institutions play vital roles. All these issues received proper attention from Bangabandhu, even he did not forget to include the rights of farmers in the six-point movement in 1966 that finally led the country towards independence. After independence, the Father of the Nation, Bangabandhu Sheikh Mujibur Rahman introduced scientific instruments and modern equipment so that farmers can gain higher yield; distribution of 16125, 454 and 1037 metric tonnes of good quality seeds of paddy, jute and wheat respectively, supply of 40,000 low lift irrigation pump machines and chemical inputs among the farmers were some of the significant initiatives taken by Bangabandhu immediate after independence. He established Bangladesh Agricultural Research Council (BARC) in 1973 to facilitate agricultural research activities; currently 13 separate institutions are working in different agricultural sub-sectors under the auspices of BARC. He even directed to introduce nuclear experiments in agricultural research at that time and as follow up Bangladesh Institute of Nuclear Agriculture (BINA) was established. Thus Bangabandhu played important roles in transforming traditional agricultural systems into science based, modern agricultural systems. The current volume of crop production is an indicator of the progress made in agriculture sector in Bangladesh as results of the actions taken by Bangabandhu in his times that in turn contributed to attain the dream of Bangabandhu's Bangladesh that is free from hunger and malnourishment.

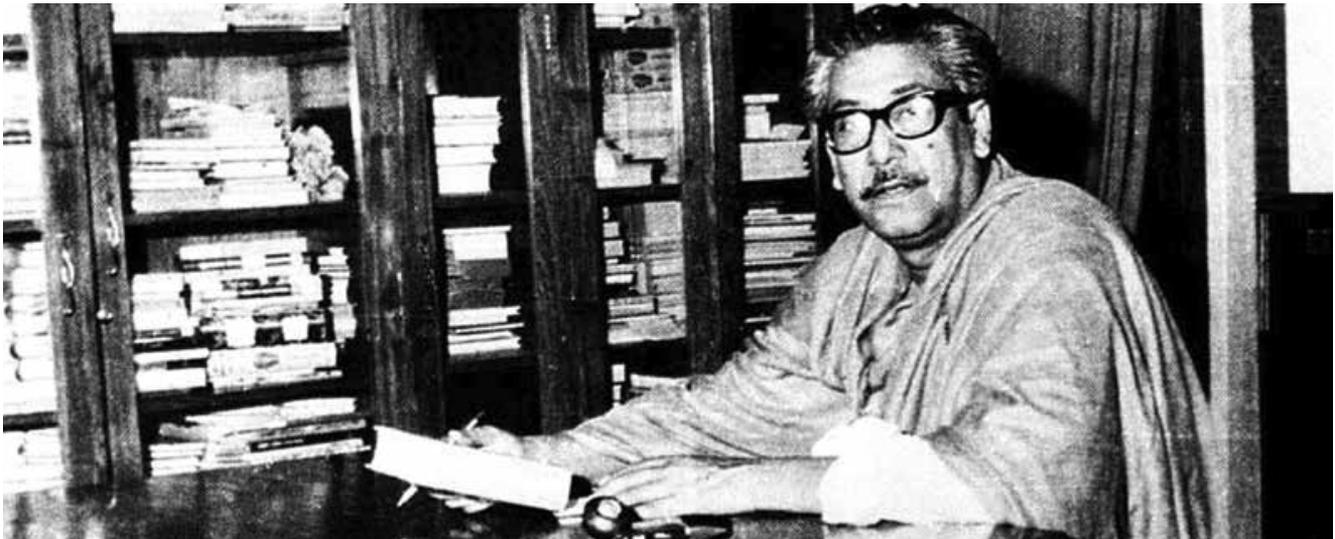




## **BANGABANDHU'S SCIENTIFIC-SOCIALIST ECONOMIC POLICY**

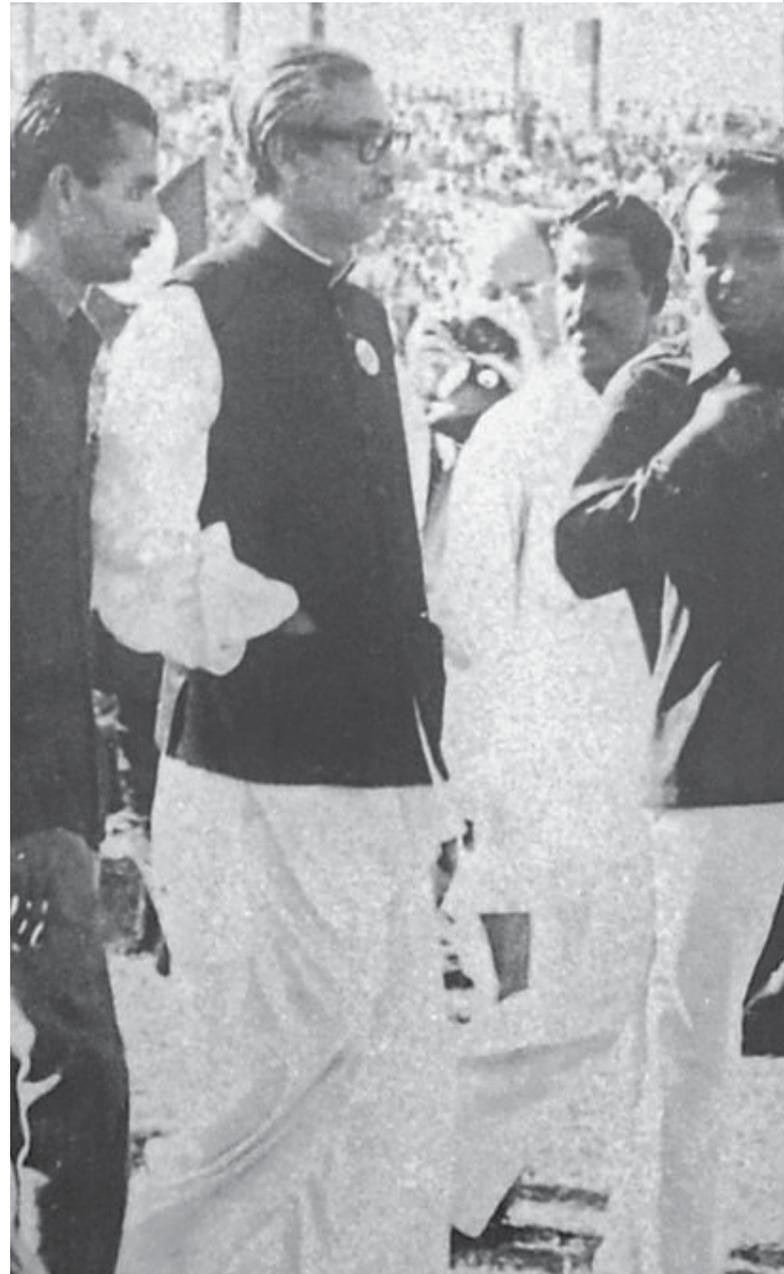
Bangabandhu was critical about traditional economic systems, he was rather interested in developing an economy that is based on native values, home-grown produce where equity will be maintained in both production processes and distribution of benefits. As indicated before the economy of post-independent Bangladesh was incredibly fragile, mending that condition would have been difficult for any political leaders. But Bangabandhu performed significantly well in dealing with the challenges. The statistical accounts of the economy of that time may be taken as testimony to demonstrate the performance of Bangabandhu's government. Bangabandhu brought modern machineries to rehabilitate industrial units aiming to create jobs and accelerate industrial productions. The first Five Year Plan

(1973-78) was developed by Bangabandhu in 1973 as to lay out long term development planning framework in the country. As indicated earlier that the cooperatives movement fostered by the Father of the Nation was the key to social transformation through economic emancipation. Establishment of milk production cooperatives (i.e. Milk Vita enterprise) was one of the examples where he united different actors in the milk production value chain, which turned to be one of the largest milk suppliers in contemporary times. The apparel and neat production industries were also started during his time. Welfare of common people, focus to rural economy, reliance on local products were some of the fundamental principles of Bangabandhu upon which he wanted to build up the national economy.



## **SECULAR AND SCIENCE BASED EDUCATION POLICY OF BANGABANDHU**

Bangabandhu strongly believed that promotion of education is the key strategy to address bundle of challenges at once. He also considered that secular and science oriented literacy is vital to unite the nation based on rationality, mutual respect and self-reliance. He established Education Commission headed by the famous educationist and scientist Qudrat-e-Khuda in 1972 (the Commission submitted the report in 1974). The Commission recommended to introduce science subjects from primary level and suggested to establish technical and engineering colleges in different parts of the country. Bangabandhu took initiatives to nationalize educational institutions so that the institutions do not need to suffer from financial crisis to run the courses. In 1973 Bangabandhu nationalized 37,100 primary schools of the country. Mass education for the illiterate adults and women was in the attention of Bangabandhu. He knew about the importance and necessity of high quality tertiary level education and in this connection he took steps to pass the University Act 1973 aiming to give autonomy to the universities and to create enabling environment to foster academic excellence including performing high quality research works. Thus promotion of individuals through education, building up of physical infrastructure of educational institutions and above all creating an enabling atmosphere for good learning outcomes were the prime premises that Bangabandhu considered in developing a nation that is secular, science-technology oriented and free from bigotry.



## THE HEALTHCARE FACILITIES AND BANGABANDHU

Bangabandhu paid utmost importance to human health issues and extended healthcare services upto the doors of rural poor. He established 375 thana health care complexes throughout the country where this number was only 67 in 1972. A number of medical colleges were established in different regional centres like Barisal, Mymensingh, Chittagong, Sylhet that are still playing significant roles in producing thousands of medical graduates for the country. Bangabandhu

appointed Doctor Nurul Islam to produce a guideline for quality control and production of drugs/medicine. Decentralization of health care services, serving the common people, facilitate domestic production of quality medicine were the main pillars upon which his visions to expand healthcare services was developed. These initial activities of Bangabandhu in healthcare facilities played vital roles to achieve significant achievements in health sector in recent times.



# NATURAL DISASTER MANAGEMENT SPACE SCIENCE PROMOTION AND BANGABANDHU

Disasters have been the main contexts for the communities of Bangladesh within which they have been adapting to the challenges for everyday living and gradually strengthen capacities to thrive. Bangabandhu experienced many natural and man-made disasters in his life and miseries of people deeply touched him. He never turned down from helping the people in need. His life story informs that he acted as a volunteer throughout his life, he was a strong negotiator for arranging support to alleviate people from despairs and griefs. He experienced the Bengal Famine of 1943, severe consecutive floods happened in the years 1953, 1954, 1955, severe cyclone in 1970, food shortage conditions in 1974 due to prolonged seasonal rainfall and Brahmaputra flooding causing crop failure which was also fuelled by food-aid related international conspiracy. Bangabandhu opened *Langarkhana* (centre for distributing cooked food to the unfed people) during 1943 famine at age of 23 years, he went to Patna in 1946 to support riot affected people. In 1972 in a meeting with Bangabandhu donor agency Oxfam representative Julian Francis inquired how Oxfam could help Bangladesh in given post-war conditions. Bangabandhu replied that 'river crossing ferries are and will be the lifelines for my people. Please discuss with officials of the Bangladesh Inland Water Transport Authority (BIWTA) and see what Oxfam can do'. As follow up, Oxfam donated three large ferries (named after the name of three native flowers Kamini, Kosturi, Korobi) and these ferries are still plying in the rivers Padma and Jamuna. This small account informs how a national leader could be broad and visionary to support his people.

The attachments of Bangabandhu with disaster affected people helped him to understand that early warning based on scientific information would be effective to reduce disaster impacts on human lives and assets. Bangabandhu accused Pakistan government for their reluctance in taking protective actions in saving lives and properties from cyclone Gorki (landed on 7 November 1970) which took lives of five million and several millions of livestock. After independence Bangabandhu took initiatives to establish Space and Atmospheric Research Centre (SARC) within Bangladesh Atomic Energy Commission (BAEC) in 1972 that aimed to use satellite imageries for providing early warning messages and natural resources appraisals. He brought the ground station of Automatic Picture Transmission (ATP, set in 1968) under the functions of SARC. The government of the Father of the Nation established Earth Resource Technology Satellite (ERTS) in 1973 which was later renamed as Bangladesh Landsat Programme (BLP). These two space science programmes were merged in 1980 and Space Research and Remote Sensing Organization (SPARRSO) was established. The establishment of Institute of Remote Sensing at Jahangirnagar University (IRS-JU) in 1982 was part of developing complete remote sensing institutional architecture in Bangladesh. SPARRSO was established to support government agencies with state of art remote sensing information for decision support purposes while IRS-JU was established to develop human resources in this regard (following the Indian model of ISRO like SPARRSO and IIRS like IRS-JU). Thus the idea of space based research and development of SPARRSO and IRS-JU are rooted in Bangabandhu's initiatives in establishing SARC and BLP. However, it is important to note that the space science, data acquisition from space-based remote sensors and related processing activities were very new technologies at Bangabandhu's time but he was not at all hesitant to accept new methods that may help the country.

## THE BANGABANDHU COMMEMORATIVE LECTURE

Bangabandhu Sheikh Mujibur Rahman was open, honest and straightforward in expressing his thoughts and opinions. He used to simplify terms if the term requires explanation in order to avoid confusions. He mentioned that secularism does not mean to be irreligious, rather it will give equal rights to every religion to perform (26 February 1973), offering friendship does not mean submission of the weak to the strong, it rather conveys solidarity and harmony to coexist (20th February 1971) and in the similar way he asked the fellow people to admit unintentional mistakes and rectify thyself if necessary. His advice to be good human being, responsible citizen, showing respect to women still remain and will remain as important learning elements for all. His interests in nuclear science for energy, health and agriculture sectors, space science for disaster early warnings showed that Bangabandhu tried to connect new, scientific advancements with the existing functions and processes for serving better to the people. This way Bangabandhu became the visionary political figure, efficient administrator and great national leader and the current Bangladesh that is stable, fast-moving is the result of his groundworks. But the degree of understanding about Bangabandhu is still remain low in the absence of continuous dialogue on his life, beliefs and works. It is expected that the current initiative undertaken by IRS-JU will contribute in filling up some gaps in this regard.





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