Bangladesh Academy of Sciences
NEWSLETTER
Vol. 7 No. 3, September-December 2018

## Condolence of death of Late Prof. Dr. Wahiduddin Ahmed, Fellow, BAS

Late Prof. Dr. Wahiduddin Ahmed
(1923-2018)

The Academy expressed profound shock at the sudden demise of Prof. Dr. Wahiduddin Ahmed who expired on Saturday 03 November 2018 (Inna lillahi wa inna ilayhi raji'un). A distinguished Fellow of the Bangladesh Academy of Sciences, Professor Ahmed was an internationally reputed Structural Engineer.

Prof. Dr. Wahiduddin Ahmed was a renowned scientist and a professional having outstanding contribution in Engineering Sciences. Professor Ahmed will be remembered by his students, colleagues, contemporaries and Fellows of BAS for his contribution to engineering sciences particularly in the area of structural engineering and development of academic, research and development organizations.

The news of his death came as a great shock to the Fellows of Bangladesh Academy of Sciences. The Academy would like to put on record the great services and contributions of Late Prof. Dr. Wahiduddin Ahmed to the cause of science and technology in the country.

In his sad demise, the Academy lost a valued Fellow scientist and the nation a great son. The Fellows of the Academy of Sciences express heartfelt sympathy to the members of his bereaved family. The members of the Academy pray to the Almighty Allah, Most Gracious and Most Merciful, to grant eternal peace to the departed soul and to give strength and courage to the members of his family to bear the loss with fortitude.

## NATIONAL EVENTS

### I. Annual General Meeting (July 2017-June 2018)

The Annual General Meeting (July 2017-June 2018) of Bangladesh Academy of Sciences (BAS) was held on Friday, 19 October 2018 at 3:00 pm in the Seminar Room of the Academy, at the National Museum of Science & Technology Bhaban, Agargaon, Dhaka 1207. Professor Dr. Quazi Abdul Fattah, President, BAS, presided.


*Address by President, BAS*

*Participating Fellows in the AGM*

After detailed discussion, the following decisions were taken in the AGM:

i. Message of Condolence will be sent to the families of Late Prof. Aminul Islam and Late Prof. AKM Siddiq on behalf of all Fellows of BAS

ii. The next BAS Gold Medal Award Ceremony will be held with the Hon'ble Prime Minister as the Chief Guest as soon as the time from her office is obtained

iii. BAS Fellows and scientists nominated by BAS who attend any national and international events will submit report to the Academy after return.

iv. Academy Lectures from the recently inducted Fellows will be arranged as soon as possible.

v. The proceedings of the Annual General Meeting (July 2017-June 2018) was approved.

vi. The Activity Report for the period, July 2017-June 2018 was accepted with some comments and correction.

vii. Total expenditures of the Academy of Tk. 76,15,912.00 (Taka seventy six lac fifteen thousand nine hundred & twelve) only for the year, July 2017- June 2018 was approved

viii. The proposed budget of BAS for the year, July 2018-June 2019 of Tk. 1,13,36,000.00 (Taka one crore thirteen lac & thirty six thousand) only was approved.

ix. The Audit Report of BAS for the year July 2017-June 2018 was accepted.

x. Total expenditures of the BAS-USDA Endowment Program of Tk. 6,71,97,649.00 (Taka six crore seventy one lac ninety seven thousand six hundred & forty nine) only was approved.

xi. The proposed budget of BAS-USDA Endowment Program for the year July 2018-June 2019 as an amount of Tk. 10,46,24000.00 (Taka ten crore forty six lac & twenty four thousand) only was approved.

xii. The Audit Report of BAS-USDA Endowment Program for the year, July 2017-June 2018 was accepted.

xiii. The Academy will henceforth give certificate to all newly elected Fellows with the signature of President and Secretary, BAS.

xiv. The research output and technology developed by the projects under BAS-USDA Endowment Program should be transferred to the farmer's field and finally impact of the research should be evaluated.

xv. The activities and achievement of the Academy should be publicized in the printing and electronic media.

xvi. The budget for purchase of books should be increased reasonably.

xvii. Fellows will prepare write up on new ideas and suggestions for increasing activities of the Academy and will send them to the Academy.

xviii. The proceedings of the AGM should be prepared within a month and sent to all Fellows for comments within a month. If no comments are received the proceedings will be taken as accepted.

## II. AASSA-BAS Workshop, 12-13 September 2018, Dhaka, Bangladesh

The AASSA-BAS Workshop on "Promotion of Excellence in Science Education and Research" jointly Organized by Association of Academies and Societies in Asia (AASSA) and Bangladesh Academy of Sciences supported by InterAcademy Partnership (IAP) was organized during 12-13 September 2018 at the National Museum of Science & Technology Bhaban in Agargaon, Dhaka, Bangladesh. About 100 Participants from diverse organizational background, ranging from academia to industry and Public to For-profit private sector, attended the event.

The Inaugural Ceremony of the Workshop was held on 12 September 2018. Prof. Dr. Quazi Abdul Fattah, President of the Bangladesh Academy of Sciences chaired the Ceremony, and Architect Yeafesh Osman, Honorable Minister, Ministry of Science & Technology, Government of the People's Republic of Bangladesh graced the Occasion as the Chief Guest. The Special Guest of the Ceremony was Prof Yoo Hang Kim, the President of the Association of Academies and Societies of Sciences in Asia (AASSA). Prof. Dr. M. Shamsher Ali, the Chairperson of the Organizing Committee, delivered the address of welcome, and Prof. Dr Mesbahuddin Ahmed, the Secretary of the Bangladesh Academy of Sciences introduced the activities of BAS to the audience. The vote of thanks was delivered by Prof Dr Liaquat Ali, the Organizing Secretary of the Workshop.


*Address by Chief Guest, Architect Yeafesh Osman, Honorable Minister, Ministry of Science & Technology*

*Participating Fellows and Scientists at the workshop*

All the speakers emphasized the need for prioritization of science and technology for the economic and social prosperity of the countries in the Asian region which is now leading the world in many economic and social indices. It was also expressed that time has now come to give more concentration on the quality aspects of science education and research in parallel to their quantitative development. Highlighting the pro-science policies of the Government of the People's Republic of Bangladesh, the Honorable Chief Guest assured his whole-hearted support to the initiatives of BAS, AASSA and any other relevant organizations. At the same time he expressed his desire to get comprehensive recommendations from the Workshop which may serve as guidelines to facilitate the formulation of plans and programs of the Government. In his address the Chairperson expressed the commitment of BAS to work closely with the Government and AASSA for the development of science and technology in the country as well as in the region.


*Address by the Special Guest Prof. Yoo Hang Kim*


*Address by President, BAS, Prof. Quazi Abdul Fattah*

On the first day of the Workshop, 7 invited presentations were delivered around a theme titled as 'Discipline-Specific Science Education and Research in Bangladesh: Current Status and Way Forward'. After the presentations the participants were dispersed in 3 groups according to the areas of expertise and they had detailed discussion on the following 3 broad areas as follows:

i. Physical-chemical-mathematical & related sciences
ii. Biological, agricultural & related sciences
iii. Medical, pharmaceutical & related sciences

A resource person from each of these areas coordinated the respective group discussion.

The group activity was followed by the presentation of the key recommendations by each group and there was a lively discussion on those recommendations. Incorporating the useful feedback and suggestions these recommendations were incorporated in the overall recommendations of the Workshop.


*Address by Prof. M. Shamsher Ali, Chairperson of the organizing committee*


*Address by Secretary, BAS, Prof. Mesbahuddin Ahmed*

On the second day of the Workshop 6 invited presentations were delivered around a Theme titled as 'Governance and administrative issues in science education and research'. After the presentations the Participants were dispersed in 2 Groups according to the areas of expertise and they had close discussion on the following 2 broad areas as follows:

i. Governance issues in science education and research
ii. Administrative issues in science education and research Medical, Pharmaceutical & related sciences

A resource person from each of these areas coordinated the respective group discussion.

The Group Activity was followed by the presentation of the key recommendations by each Group and there was a lively discussion on those recommendations. Incorporating the useful feedback and suggestions these recommendations were incorporated in the overall Recommendations of the Workshop.

*Address by Organizing Secretary, Prof. Liaquat Ali*


*Keynote paper presented by Vice President, BAS, Prof. Naiyyum Choudhury*

The concluding ceremony of the workshop was held on 13 September 2018. Prof. Dr. Quazi Abdul Fattah, President of the Bangladesh Academy of Sciences, chaired the Ceremony, and Mr. Md. Anwar Hossain, Secretary, Ministry of Science & Technology, Government of the People's Republic of Bangladesh attended the Occasion as the Chief Guest. The Special Guest of the ceremony was Prof Yoo Hang Kim, the President of the Association of Academies and Societies of Sciences in Asia (AASSA). Prof. Dr. M. Shamsher Ali, the Chairperson of the Organizing Committee, and Prof. Dr Mesbahuddin Ahmed, the Secretary of the Bangladesh Academy of Sciences addressed the audience and the draft Recommendations of the Workshop were read by the Organizing Secretary, Prof Dr Liaquat Ali. Again a lively discussion followed and, incorporating the useful suggestions, a set of recommendations were finalized.

*Address by the Chief Guest, Mr. Md. Anwar Hossain, Secretary, Ministry of Science & Technology, Government of the People's Republic of Bangladesh*

*Participating Fellows, Scientists and Policy makers*

### III. 3rd Young Scientists Congress (YSC), 14-15 September 2018, Dhaka, Bangladesh

The 3rd Young Scientists Congress organized by the Academy and funded by the Ministry of Science and Technology, National Museum of Science and Technology, Bangladesh Council of Scientific and Industrial Research (BCSIR), BRAC Bank Ltd. and Incepta Pharmaceuticals Ltd. was held on 14-15 September 2018 at the auditorium of the National Museum of Science and Technology, Dhaka1207. The Inaugural Ceremony was chaired by Prof. Dr. Quazi Abdul Fattah, President, BAS and Chairperson of the Advisory Committee. Mr. Swapan Kumar Roy, Director General, National Museum of Science and Technology was the Chief Geust. Mr Selim RF Hussain, Managing Director, BRAC Bank Ltd. was the Special Guest. Prof. Dr. M Shamsher Ali, Chairperson of organizing committee, 3rd YSC delivered the address of welcome. Prof. Dr. Mesbahuddin Ahmed, Secretary, BAS presented the main aims and objectives of the Academy to promote the excellence of science education and research in Bangladesh.


*Address by President, BAS*

*Participating Fellows and scientists*

About 200 participants including BAS Fellows, young scientists form universities and research institutes were present in the congress.

*Organizers with participants*

## IV. Meeting on Bangladesh Dialogue Event on enabling equitable research system, 5-6 November 2018

Bangladesh Academy of Sciences and International Network for Availability of Scientific publications (INASP) organized a meeting on Bangladesh Dialogue Event on Enabling Equitable Research Systems, 5-6 November 2018 at BRAC Centre INN, Mohakhali, Dhaka.

Prof. Dr. Naiyyum Choudhury, Vice President, BAS was the Chief Guest in the opening ceremony, Ms. Sara Gwynn, Associate, INASP and Mrs. Sioux Cumming, Programme Specialist, INASP, were the special guests and Prof. Dr. Mesbahuddin Ahmed, Secretary, BAS Presided over the ceremony.


*Address by Chief Guest*

*Participants of the meeting*

On 5-6 November 2018, representatives from across the research and knowledge system in Bangladesh gathered in Dhaka to share experiences, challenges and ideas for a more equitable research system within the country and for a stronger role in the global research landscape.

Over the course of two days, journal editors, librarians, senior managers in higher education, IT specialists and researchers took part in group activities and discussions to help identify the key issues facing research in Bangladesh.

*Group photo of participants of the workshop and organizers*

**A shared vision:**

The meeting resulted in a shared vision for Bangladesh's research system:

**The vision is a research system that generates the world-class human resources and knowledge that will lead Bangladesh to achieving the Sustainable Development Goals, being an economically developed nation and offering a promising future for all of its people—a future that is safe, healthy, equitable and sustainable.**

The vision for a strong Bangladesh research system is one that is underpinned by:

- **Good leadership** – consisting of functional institutions with effective governance, led by visionary, strong and pragmatic leadership.
- **Effective partnerships** – engaging productively with policymakers, industry media and people of the country, with all stakeholders working together in harmony; and enabling cross-professional and cross-border partnerships to achieve the Sustainable Development Goals.
- **Empowered people** – with equitable access to resources for research, and fair recruitment and recognition, promoting the development of world-class human resources in line with local and global need.
- **Strong research output** – towards a prosperous Bangladesh, with outstanding research outcomes that generate knowledge to lead Bangladesh to an economically developed nation, with a knowledge-based society, ensuring a safe, sustainable and healthy future for all of its people.

Participants from Bangladesh are now working on actions to turn this vision into a reality.

## V. Workshop on using BanglaJOL and Improving Journal Publishing Practices and Standards, 7-8 November 2018

Bangladesh Academy of Sciences and International Network for Availability of Scientific Publications (INASP) organized a two-day workshop on using BanglaJOL and Improving Journal Publishing Practices and Standards (JPPS), on 7-8 November 2018 at BRAC Centre Inn, Mohakhali, Dhaka.

A two-day long workshop on **"Using BanglaJOL and Improving Journal Publishing Practices and Standards (JPPS)"** was held at conference room of BRAC Centre Inn, Mohakhali, Dhaka, from 8-9 November 2018. Facilitators of the event were Mrs Sioux Cumming, Program Specialist, International Network for the Availability of Scientific Publications (INASP), United Kingdom(UK) and Mr Md. Fahmid Uddin Khondoker, Journal Manager, Bangladesh Journals Online (BanglaJOL), Bangladesh Academy of Sciences.


*Address by Ms. Sara Gwynn, Associate, INASP*

*Participants of the workshop*

Prof. Dr Mesbahuddin Ahmed, Secretary, Bangladesh Academy of Sciences conducted the event as Program Chair. Forty editors were invited to attend the program. Facilitators emphasized the latest trends and plagiarism checking, technique and ethics etc. The said pedagogic event was jointly organized by Bangladesh Academy of Sciences (BAS) and International Network for the Availability of Scientific Publications (INASP), UK.

*Group photo of participants and organizers*

BanglaJOL (https://www.banglajol. info/), BanglaJOL is a database of journals published in Bangladesh, covering the full range of academic disciplines. The objective of BanglaJOL is to give greater visibility to the participating journals, and to the

research they contain. There are now 142 journals on BanglaJOL with 1749 Tables of Contents listing 22,503 articles. 21,622 of the articles are available in full text (PDF).

## VI. Academy Lecture on Arsenical and Microbial Health Risk , 29 November 2018

The Academy Lecture on Estimation of Arsenical and Microbial Health Risk for Tracking SDG for Drinking Water in Bangladesh was held on 29 November 2018 at 3:00 pm in the seminar room of the Academy. Prof. Dr. M Feroze Ahmed, Fellow, Bangladesh Academy of Sciences and Emeritus Professor Stamford University, Bangladesh was the speaker.

In absence of President, BAS, Prof. Dr. Naiyyum Choudhury, Vice President, BAS presided over the occasion. Prof. Dr. Mesbahuddin Ahmed, Secretary of the Academy welcomed all Fellows, scientists and students of different R & D organizations, universities and Officers of National Museum of Science Technology. Professor Ahmed introduced the speaker, Prof. Dr. M Feroze Ahmed as a very noted and dedicated researcher highlighted major achievement of his academic and professional career. Professor Ahmed added that the lecture is a very special research of Prof. Firoze Ahmed on drinking water around the world.


*Keynote speech by Prof. Dr. M Feroze Ahmed*

*Participating Fellows and Scientists*

The Chair Prof. Dr. Naiyyum Choudhury then mentioned some special and enlightening achievements of the members of Prof. Dr. M Feroze Ahmed's family and requested Prof. Dr. M Feroze Ahmed to proceed with his deliberation.

Professor Firoze Ahmed developed a Model on Quantitative Health Risk Assessment for Arsenic and Pathogen in drinking water. Professor Firoze applied the model in water supply options. He presented the findings, applications and limitations of the model. Professor Firoze Ahmed also described the status of drinking water supply in Bangladesh and presented the following findings:

1. The viral and bacterial pathogen concentrations dominated the disease burden estimates where the contribution by protozoal pathogen to the total microbial Disease Adjusted Life Year (DALY) was negligible.
2. Skin and lung cancers dominated the arsenic disease burden where lung cancer was the greater contributor to arsenic DALY than skin cancers across the range of values used for the study.
3. Microbial contamination contributed to higher disease burden as compared to arsenic in case of all water supply options sureyed.
4. Deep Tube Well (DTW) offers the best option with regard to public health risks followed by RWHS
5. The levels of risk are greater than the World Health Organization (WHO) reference level of risk
6. The health risks associated with Deep Well (DW) and Pond Sand Filter (PSF) are much higher than DTW and Rain Water Harvesting System (RWHS) and health risk increases in the monsoon. Control of microbial contamination is essential to reduce health risk to acceptable levels.
7. The health risks from the water supplies could be effectively managed in the long-term through implementation of Water Safety Plans.

Professor Firoze Ahmed also presented the limitation of the model.

The Model for Estimation of Disease burden has been proved to be an effective for:

- Comparison of relative health risks of water from different sources;
- Comparison of relative disease burden from arsenic and pathogens in drinking water;
- Quantification of improvement and residual health risk by different interventions ;
- Delineation of most cost-effective interventions in water supplies to reduce disease burden.

After presentation, the floor was open for questions. There was a very interesting and enjoyable questions and answers session. Finally, it was concluded that there was limitation of the updated data on arsenic, contamination. About 100 participants including Academy Fellows, researchers and scientists from Atomic Energy Centre and officer's from National Museum of Science and Technology (NMST) were present.

In fine, the Chairperson, Prof. Mesbahuddin Ahmad expressed thanks to Prof. Dr. Firoze Ahmed for presenting a paper with new research findings on drinking water in Bangladesh and to the participants for being present.

### VII. Seminar on "Science and Engineering Research in US - Role of the Government, National Labs and Universities", 19 December 2018

A special Academy seminar on **"Science and Engineering Research in US - Role of the Government, National Labs and Universities",** by Prof. Dr. Taher Saif, Gutgsell Professor, Mechanical Science and Engineering, University of Illinois at Urbana-Champaign, USA, was jointly organized by Bangladesh Academy of Sciences (BAS) and University of Asia Pacific (UAP) and held at the Central Auditorium of UAP on 19 December 2018 at 3:30 pm. Prof. Dr. Naiyyum Choudhury, Vice President, BAS and Chairman, Bangladesh Atomic Energy Regulatory Authority (BAERA) was the Chief Guest and National Professor Dr. Jamilur Reza Choudhury, Fellow, BAS and Vice Chancellor, UAP Chaired the occasion. BAS Fellows, Members of Board of Trustees, UAP, Faculty Members and students, about 300 participants were present in the seminar.

Dr. Muhammad Mizanur Rahaman, Professor and Head, Department of Civil Engineering, University of Asia Pacific, delivered welcome address and introduced Professor Taher Saif narrating his most bright and colorful academic and professional records and achievements.

Professor Saif's current research includes tumor micro environment, mechanics of neurons and cardiac cells, development of biological machines, and electro-thermo-mechanical behavior of nano scale metals and semiconductors. Prof. Saif's research findings are published in all major scientific journals in his area of research including Science, Proceedings of National Academy of Sciences, PloS One, Journal of Biomedical Materials Research and Journal Nature Communications.

Prof. Saif's research – published in Science - raises the possibility of manufacturing metal components that can heal themselves after being deformed or dented. Widely credited as an initiator of "Biological Robot Revolution", Professor Saif's team developed "smallest robot in the world" – also known as biobot – that can swim themselves through the veins of the human body that will, possibly, be able to search for the cancer cells and destroy them by themselves. Hopefully, this biobots will cure cancer patients in the future without any need of outside medication and/or chemotherapy.

*Presenting the keynote speech by Prof. Dr. Taher Saif*

*A view of the participants*

Professor Saif delivered his lecture on two topics as follows:

a. Science and Engineering Research in US-Role of the Government, National Labs and Universities and

b. Living Robotics and New Field of Research

Professor Saif narrated the unprecedented historic development of universities and research system and facilities in US during last 20 years. In terms of freedom of scientists at their work and appreciation and depreciation of the scientists during their career. Secondly, he outlined how a Bio-bot using human stem cell can move within the body and meet the harmful cell and can destroy them.

The young researchers and students also participated in the open question and answer sessions.

*National Professor Jamilur Reza Chowdhury Presenting a University Memento to Prof. Dr. Taher Saif*

Prof. Dr. Naiyyum Choudhury in his speech as the Chief Guest, expected that Prof Saif, Prof. Zahid and other world renowned Bangladeshi expatriate scientists and researchers in addition to their research work abroad, can collaborate with scientists back home and inprove our academic and research excellence This according to Professor Choudhury, will improve academic and research environment in Bangladesh, particularly confidence building in young scientists.

*Address by the Chief Guest*

*Address by the Chairperson*

Chairperson of the seminar, National Professor Dr. Jamilur Reza Choudhury in his speech expressed thanks to Professor Saif for presenting the classic information in the seminar immediately after long and tedious journey from US to Bangladesh. He also advised and inspired the students present in the audience to follow and develop their careers as Prof. Saif did in US.

## INTERNATIONAL EVENTS

### I. 18th Science Council of Asia Conference, 5 -7 December 2018, Tokyo, Japan

**The Science Council of Asia** (SCA) is an international scientific organisation founded in 2000 by Asian science academies and other national scientific organisations. SCA aims to provide scientists in all fields, including cultural and social as well as natural sciences and technology, with a collaborative platform for promoting scientific exchange and cooperation in Asia, and to develop and promote a holistic vision focusing on sustainable development and improvement in quality of life. At present, SCA is comprised of 31academic organisations in Asia, and SCA Conference has been taking place annually since 2001.

**Science Council of Japan** (SCJ) is the representative organisation of Japanese scientist community ranging over all fields of sciences subsuming humanities, social sciences, life sciences, natural sciences, and engineering. SCJ was established in January 1949 as a "special organisation" under the jurisdiction of the Prime Minister of Japan, operating independently of the government, for the purpose of promoting and enhancing the field of science, and having science reflected in and permeated into administration, industries and people's lives. It represents Japan's scientists both domestically and internationally with the firm belief that science is the foundation upon which a civilized nation is built. The theme of 18th Science Council of Asia Conference was **"Role of Science for Society: Strategies towards SDGs in Asia".**

*Professor Naiyyum Choudhury in a cordial discussion with high officials of SCJ*

*Participants of the 18th Science Council of Asia Conference*

Prof. Dr. Naiyyum Choudhury, Vice President and Prof. Dr. Mesbahuddin Ahmed, Secretary, BAS represented the Academy in the 18th Science Council of Asia Conference, 5 -7 December 2018, Tokyo, Japan. Professor Choudhury spoke in the Inaugural Ceremony on 05 December on behalf of the President, BAS, attended the Management Board Meeting on 06 Meeting in which SCA declaration was finalized and it was endorsed in the General Assemble. Next SCA conference will be held in Myanmar.

**The 18th Conference of Science Council of Asia (SCA) Declaration, 06 December 2019, Tokyo, Japan**

"Role of Science for Society: Strategies towards SDGs in Asia"

Transforming our world: the 2030 Agenda for Sustainable Development" was unanimously adopted at the UN General Assembly in 2015. Under a common principle of "no one left behind" among the nearly 7.4 billion world population, the 2030 Agenda has 17 Sustainable Development Goals (SDGs) and 169 targets to achieve within 15 years from 2016.

About 200 Scientists from research institutions and universities, including representatives of SCA's member academic, participated in the 18th Tokyo Conference of the Science Council of Asia held between 5 and 7 December 2018 and intensively discussed how science and technology could contribute to attain in SDGs. Different perspectives on various issues and rich approaches were presented, taking into account Asia's current situation. The SCA 2018 conference participants reached a common understanding that to attain the SDGs, the initiatives taken in Asia, which accounts for more than half of the world's population, are critical and that science and technology play a significant role.

The SCA hereby declares that it will promote five strategies in which science and technology can play an important role towards achieving SDGs in the region.

1. Realizing A Society in Which Everyone Has Access to Equal Opportunities and Plays an Active Role

   For Sustainable development "with no one left behind," society must enable everyone to have access to equal opportunities and to play an active role. In the 2018 SCA conference, topics related to fostering female leaders in higher education, issues on poverty, employing and educating the people with disabilities and invigorating rural areas with information technology were discussed. It was recognized that support to vulnerable people is necessary to provide them with equal opportunities to access better educational, employment, information and public services.

   SCA will contribute to realizing a society in which everyone has access to equal social opportunities and plays an active role.

2. Creating Sustainable Cities with Resilient Infrastructure

   Urbanization in Asia is progressing at a very rapid pace. According to the UN, it is predicted that the share of urban population in Asia will increase from 48% in 2014 to 64% in 2050. The issues and challenges faced by swelling Asian cities are diverse, and this is evident in topics presented in the conference: (a) building resilient mega cities to prepare them for major earthquakes, (b) risk reduction from natural disasters and global warming, (c) urban planning to reconstruct from wars and (d) securing a living space that is both comfortable and sustainable. Participants recognize that creating cities with resilient infrastructure will improve readiness for natural disasters and adaptation to global warming.

   SCA will support the creation of resilient and sustainable cities to prepare for natural disasters and global warming.

3. Conservation and Sustainable Use of Natural Resources

   For SDGs in Asia, the sustainable use of natural resources, particularly the conservation and appropriate use of terrestrial resources like diverse forest fauna, flora and microorganisms as well as aquatic resources is crucial for development. The SCA participants acknowledge that improving agricultural technologies and securing healthy water are vital in order to ensure that "no one is left behind" in benefiting from a safe and stable water supply.

   SCA will exert efforts in laying out systems to protect, conserve and sustainably use the diverse but limited natural resources in Asia.

4. Realizing Healthy Longevity Society in Asia

   In Asia, the rise in infectious diseases and increasing chronic diseases, the construction of health care systems and residential environments suitable to a rapidly aging society and changing lifestyles, and the promotion of basic researches on people's longevity are becoming major concerns. It is important to facilitate health and medical care systems and residential environments appropriate to the conditions in the Asian countries to make people, including children, women, the elderly and those with disability, lead a healthy life.

   SCA will help support efforts in constructing accessible health and medical care systems so that "no one will be left behind."

5. Strengthening Communities of Scientists in Asia for Contributing to Social Needs

The scientists who participated in this conference discussed various issues and concerns that beset Asian countries. The participants recognize the importance of sharing each country's experiences with others. It is beneficial for scientists from different countries to build networks and to undertake joint projects in the areas of environment, energy and disaster prevention. Furthermore, it is important for SCA to build communication channels with international organizations such as ISC-ROAP and Future Earth to strengthen the capacity of science practitioners to influence the policy making process.

SCA should promote the strengthening of scientists, technologists and social scientists in Asia for more effective contribution in responding to social needs.

## II. BAS nomination for Nikkei Asia Prizes, Japan

Secretariat of Nikkei Asia Prizes, Tokyo, Japan sent an announcement for the Nikkei Asia Prizes to the Academy in August 2018. The announcement was circulated to all Fellows and uploaded in the BAS website.

Prof. Dr. Yearul Kabir, Fellow, BAS sent the nomination of Prof. Dr. Mubarak Ahmad Khan, Scientific Advisor, Bangladesh Jute Mills Corporation, Ministry of Textiles and Jute, Bangladesh for the Nikkei Asia Prizes.

On behalf of the Academy, Secretary, BAS Prof. Dr. Mesbahuddin Ahmed, endorsed and recommended the nomination of Prof. Dr. Mubarak Ahmad Khan, Scientific Advisor, Bangladesh Jute Mills Corporation, Ministry of Textiles and Jute, Bangladesh for the Nikkei Asia Prizes, Secretariat, Tokyo, Japan.

## III. Nomination for 69th Lindau Nobel Laureates Meeting, 30 June-05 July 2019, Lindau, Germany

Bangladesh Academy of Sciences (BAS) nominated the following young scientists to attend the 69th Lindau Nobel Laureates Meeting, 30 June-05 July 2019 in Germany.

| Sl. No. | Name & Address |
|---|---|
| 1. | **Nure Alam Chowdhury (Sujan)**<br>Research Assistant<br>Plasma Physics Lab<br>Jahangirnagar University<br>Savar-1342, Dhaka, Bangladesh<br>Phone: +88-0183-5520726<br>E-mail: nurealam1743phy@gmail.com |
| 2. | **Borak Ur Rahman Rano**<br>62, Elephant Road, Dhaka-1205<br>Bangladesh<br>Mobile: +8801735904399<br>Email: rano167@gmail.com |
| 3. | **Tanvir I. Rajib**<br>Lecturer in Physics<br>National Institute of Textile Engineering & Research (NITER)<br>Nayarhat, Savar, Dhaka, Bangladesh (BD)<br>Cell No.: +88-01719-844051<br>E-mail: tirajibphys@gmail.com |
| 4. | **Ms. Quazi Rushnan Islam**<br>4th Year Student<br>Department of EEE<br>University of Dhaka<br>Dhaka 1000<br>Cell: 8801960612492<br>E-mail: quazi.rushnan@gmail.com |

The Council also instructed the Director, BAS to prepare a report on financial support and nomination of different international events of young scientists like ACM-ICPC, HOPE Meeting in Japan, World Science Forum (WSF), Lindau Nobel Laureates Meeting, Germany and submit a budget to North American Bangladeshi Islamic Community (NABIC) for a grant.

## IV. TWAS Conference and General Meeting, 27-30 November 2018

The 14th TWAS General Conference and 28th General Meeting was held during 27-29 November 2018 in Trieste, Italy.

The meeting included two symposia focused on breakthroughs in science of stem cells and gene editing; and data analytics, social media and sustainability. The annual TWAS-Lenovo Prize and other high-level awards were announced, and new TWAS Fellows were selected.

The Opening Ceremony and Presentation of Prizes, Medals and Certificates was live-streamed on 27 November 2018.

Prof. Dr. M Shamsher Ali, Prof. Dr. Zahurul Karim and Professor Dr. Haseena Khan attended the TWAS conference and General Meeting held during 27-30 November 2018.

## V. Dr. M. A. Hamid Miah rewarded for rice & science development in Bangladesh

Dr. M A Hamid Miah was **IRRI Liaison Scientist for Bangladesh** from 2001-2011. After leaving IRRI he worked as Policy Advocacy Advisor for Harvest Plus project in Bangladesh for five months in 2015 suggesting how to increase production and areas of Zinc rice to support food based nutrition strategy of the Government including popularization of the varieties among farmers. Upon request he reviewed research and institutional management program of all 12 NARS institutions in 2014-2015. He worked as an advisor in 2012 for "Challenge Program for Water and Food" attached to the World Fish for three months to advise on how farmers would be benefited. Retiring in November, 2011, he coordinated international workshop on AWD in December, 2011 in Dhaka.

He facilitated the up scaling of AWD technology and advised Department of Agricultural Extension and National Agricultural Technology Project .Now one project from IRRI,

and one project "International Initiative for Impact Evaluation" are up scaling AWD. He is usually invited in their meetings for advice on his experience gained since 2006. He drafted the Background paper for Seventh Five Year Plan ( FY 2016-2020) of Bangladesh where he included use of GM technology in agriculture, AWD, biotechnology and gene management.


*Dr. M A Hamid Miah receiving the award*

He initiated up scaling of farmers' innovation to grow irrigated Boro rice and mustard as mixed crop producing 2 tons of mustard and 6 tons of rice per hectare, now being demonstrated by Bangladesh Agricultural Research Institute. He first proved the prospect of Boro rice and sugarcane as mixed crop.

### V. Rabindranather Biggyan Chetona, Dhayn O Srosta Bondona

Prof. Dr. M. Shamsher Ali, former President, BAS being invited by the Rabindra Bharati University, Santiniketan, Kolkata, West Bengal visited the university and presented paper on the occasion of 120th Friendship Anniversary of Poet Rabindranath Tagore and Acharya Jagadish Chandra Bose.

Professor Ali said that Rabindranath has always been portrayed as a universal poet, lyrical poet, humanistic poet, spiritual poet etc. But his science mindedness about the working of nature and his keen observations about environmental pollution and symbiotic relationship existing in nature have not been highlighted that much. The paper entitled above explains the reasons for this and then tries to do justice to these topics as reflected by Tagore in his poems, songs and short stories. Talking of the science mindedness of Tagore, one is immediately reminded of "Bisswa Porichoi". But this is only the tip of the iceberg, so to say. The actual realisations of Tagore about the silent and intricate working of nature and about science and scientists goes far beyond "Biswa Porichoi" and are scattered throughout his literary work including "Rabindro Shangeet".

The symbiosis between the bees and the flowers as reflected in the song 'Orey Grihobashi', unnoticed pangs of creation inside a tree and its growth as indicated in the song 'O Nadi Apon Begey Pagol Para', the modern roles of light as envisaged by Tagore in his songs on light, the role of photosynthesis in the growth of plants as described in the poem 'Brikkha Bondona' are only some of the examples highlighted in the paper reflecting the 'Nature study of Tagore'. In this connection, the paper very relevantly brings in the role of the deep bonds of friendship between the celebrated scientist Sir JC Bose and the Nobel laureate Tagore in the unravelling and understanding of some of the work of the Plant Kingdom.


*Prof. M Shamsher Ali presenting the paper*

*Professor Ali showing respect to Poet Rabindranath Tagore with flowers*

Tagore saw science and technology at work in many lands including Japan. The appropriate technology suiting the local needs in Japan attracted the notice of Tagore and has been discussed in his own language in the paper. The interaction between science and religion which also did not escape the poet's attention has also been briefly dealt with along with the attitude of honour and veneration of Tagore towards scientists.

Finally, the paper has highlighted some aspects of Meditation of Tagore. This Meditation can be regarded as consisting of two parts – one, reflecting on the incessant working of nature with its associated wonders and surprises and the other centering the poet's longing to know the attributes of the Creator from a deep spiritual point of view. His love and adoration for the Creator and His Artwork are reflected in the devotional and spiritual unfolding of his mind. Some of these have found expressions in his 'Geetangali' (Song Offering). The potential powers of the expressions for divine love and longing in creating a monumental world literature have also been mentioned.

Finally, the paper appeals to all to look at Tagor's work from an integral and interdisciplinary world view of life and environment.




## Bangladesh Academy of Sciences

National Museum of Science & Technology Bhaban
Agargaon, Dhaka-1207, Bangladesh
E-mail : office@bas.org.bd, website: www.bas.org.bd
Phone : +88-02-8181406
Fax No. : +88-02-8181303