



An Overview of COMSATS' Activities in 2018



**Commission on Science and Technology for
Sustainable Development in the South
(COMSATS)**



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(Excerpted from COMSATS’ Annual Report 2018)



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Core Activities of COMSATS Secretariat

COMSATS Secretariat provides secretarial assistance to both the Commission and the Network of Centres of Excellence. It is responsible for regularly holding statutory body meetings as well as following up their deliberations and decisions. The Secretariat also executes COMSATS' programmes and activities in partnership with other inter-governmental agencies, national S&T institutions, R&D organizations, members of academia and scientific community across the world. Other core activities of the Secretariat relate to: pooling and management of financial resources; enhancing the membership of COMSATS and its Network; and dissemination of information to the stakeholders.



21st Meeting of COMSATS Coordinating Council

COMSATS Coordinating Council held its 21st meeting to review the progress and make decisions for the smooth functioning of the Network. The meeting was generously hosted by COMSATS' Centre of Excellence in Kazakhstan, Al-Farabi Kazakh National University (KazNU), in Almaty on April 3-4, 2018.

Apart from officials of COMSATS Secretariat, the meeting was attended by Council members or their representatives from 14 Centres of Excellence; and representatives of the Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC), Turkey, Edibon International, Spain, and the International Centre for Genetic Engineering and Biotechnology (ICGEB), Italy. In addition, Deputy Director-General, Tianjin Institute of Industrial Technology (TIB), China,

also attended the meeting in connection with TIB's request for induction in COMSATS' Network of International S&T Centres of Excellence.

The meeting was inaugurated on 3rd April 2018, by Prof. Dr. G. M. Mutanov, Rector, Al-Farabi Kazakh National University (KazNU), Kazakhstan, in the presence of representatives of diplomatic missions of Pakistan and Egypt in Kazakhstan. Dr. S. M. Junaid Zaidi, Executive Director COMSATS and Prof. Dr. Ashraf Shaalan, President National Research Centre (NRC), Egypt, (Chairperson, COMSATS Coordinating Council) also spoke at the inaugural ceremony.

The technical sessions of the two-day meeting were presided over by Prof. Dr. Ashraf Shaalan. The Council deliberated upon a 15-point agenda.



Major Outcomes of the Council Meeting

- Induction of Tianjin Institute of Industrial Biotechnology (TIB), China, in COMSATS' Network as its 22nd Centre of Excellence;
- Formulation of criteria for the evaluation of nominated Centres of Excellence;
- Upgradation of Centres of Excellence with the support of international partner organizations and funding agencies;
- Possibility of initiating joint projects having regional significance in line with SDGs;
- Offers of scientific and technical cooperation as well as scholarships among Network Members in a number of areas;
- Signing of MoUs between NRC-Egypt and BCSIR-Bangladesh; NRC-Egypt and CIIT-Pakistan; CIIT-Pakistan and KazNU-Kazakhstan; and NRC-Egypt and ICCES-China;
- Approval of administrative and financial matters of COMSATS.

Dr. S. M. Junaid Zaidi, Executive Director COMSATS, was awarded the Al-Farabi Gold Medal by (KazNU) for his outstanding contributions towards fostering international collaboration in science and technology, during the plenary session of the 5th International Farabi Readings held in conjunction with the inaugural ceremony of 21st Meeting of COMSATS Coordinating Council.

The closing ceremony was held on 4th April wherein Executive Director COMSATS paid gratitude to the organizing committees of KazNU and COMSATS for making excellent arrangements for the meeting. The Vice-Rector for Research & Innovations, KazNU, looked forward to active collaborations between KazNU and other Network Members.

Follow-up of the Decisions of the 21st Meeting of COMSATS Coordinating Council

- The Coordinating Council encouraged COMSATS Secretariat to continue its efforts for enhancing the membership of its Network of International S&T Centres of Excellence. In connection with this, COMSATS Secretariat approached renowned R&D centres of Malaysia, Malawi and Morocco.
- The Council advised the Secretariat to approach international donor bodies for the upgradation of laboratories and technical infrastructure of Centres of Excellence. In this regard, COMSATS Secretariat received proposals from Al-Quds University, Palestine; National Research Centre (NRC), Egypt; Al-Farabi Kazakh National University (KazNU), Kazakhstan; COMSATS University Islamabad (CUI), Pakistan; International Centre for Chemical and Biological Sciences (ICCBS), Pakistan; and Industrial Research and Consultancy Center (IRCC), Sudan.
- As per the Council's recommendation to establish new Centres of Excellence in the cutting-edge fields of science and technology, COMSATS Secretariat has planned to set-up a Centre for Climate & Sustainability (CCCS) as a multi-stakeholder institute for bringing innovative approaches to plan, fund and tackle climate change.
- The Coordinating Council encouraged





Member States and Centres of Excellence to strengthen cooperation and facilitate networking among Centres of Excellence. In the light of this, several visits between Centres of Excellence were made during 2018.

- The Council encouraged Network members to conduct capacity building events in accordance with the needs and demands of the scientific workforce of the Centres of Excellence and Member States. In this regard, COMSATS organized four capacity building events in collaboration with ISESCO and its Centre of Excellence in Turkey.
- COMSATS Secretariat invited the member countries and Centres of Excellence to benefit from the offers of scholarships made by the Centres of Excellence.

Enhancement of Membership of COMSATS' Commission

The Republic of Yemen joined COMSATS as its 27th Member State on November 06, 2018, when the accession agreement was signed by H. E. Mr. Mohammed Motahar Alashabi, Ambassador of the Republic of Yemen to Pakistan, and the Executive Director

COMSATS, Dr. S.M. Junaid Zaidi, on behalf of Yemen and COMSATS, respectively. During the calendar year 2018, COMSATS Secretariat extended membership offer to several countries in a series of meetings held with the diplomatic corps of Pakistan including Kenya, Kuwait, Malaysia, Mauritius, Turkmenistan, United Arab Emirates and Uzbekistan. During these meetings, the diplomats were given a briefing on COMSATS along with the benefits and obligations of joining the Commission.

Enhancement of Membership of COMSATS' Network of International S&T Centres of Excellence

During the 21st Coordinating Council meeting (3rd – 4th April 2018), COMSATS welcomed Tianjin Institute of Industrial Biotechnology (TIB), China, to its Network as the 22nd member and second Centre of Excellence from China. The Certificate of Membership was issued from COMSATS Secretariat to TIB on 30th April 2018.

Besides, COMSATS reached out renowned R&D centres in Malaysia, Malawi and Morocco with the view to induct them in the Network.

Strengthening South-South and Triangular Cooperation

One of the functions of COMSATS is to support major initiatives designed to promote indigenous S&T capacity through synergies among relevant Governments in the North and the South. Meetings are held with dignitaries, officials and delegations from a number of countries engaged on regular basis to establish and promote linkages to strengthen triangular cooperation in a number of fields, including education, training and research.



Meetings with Diplomats and Officials from Member States

During 2018, meetings were held with the foreign missions of COMSATS' Member States with a view to apprise them of COMSATS' international programmes and future aspirations. The meetings also aimed to seek the support of diplomatic missions for strengthening cooperation between COMSATS and their countries. Meetings were held with the following officials:

- Prof. Stephen E. Onah, Director National Mathematical Centre (NMC), Nigeria (19th January 2018);
- Prof. Dr. Radwan F. H. Qasrawi, Researcher, Department of Computer Science and Information Technology, Al-Quds University, Palestine (31st January 2018);
- H. E. Mr. Yao Jing, Ambassador of People's Republic of China to Pakistan (6th March 2018);
- H.E. Noordeen Mohamed Shaheid, High Commissioner of Sri Lanka to Pakistan (4th May 2018);
- H. E. Mr. Barlybay Sadykov, Ambassador of Republic of Kazakhstan to Pakistan (10th May 2018);
- H.E. Maj Gen Retd. Waqar Ahmad Kingravi, High Commissioner of Pakistan to Nigeria and Ghana (23rd June 2018);
- H. E. Mr. Ahmed Fadel Yacoub, Ambassador of Egypt to Pakistan (5th July 2018);
- Senior Officials of the Embassy of Jordan in Islamabad (11th September 2018);
- H.E. Mrs. Khadija Mohamed Almakhzoumi, Ambassador of the Federal Republic of Somalia to Pakistan (4th October 2018);
- Mr. Khalil-ur-Rahman Hashmi, Director General (UN), Ministry of Foreign Affairs, Government of Pakistan, (14th November 2018); and
- Mr. Bako Bitrus Nabasu, mni, Permanent Secretary, Nigerian Federal Ministry of





Science and Technology (10th December 2018).

Meetings with Diplomats of Potential Member States

During the reporting period, meetings were also held with the representatives of foreign missions of non-member states with the purpose to explore their potential for becoming COMSATS' Member States. The officials were briefed about the scope, mandate and mission of COMSATS, along with the benefits and obligations of joining COMSATS as a Member State. The financial aspects like Annual Membership Contribution (AMC) made by Member States were also highlighted during the meetings. The meetings were held with the following officials:

- H.E. Alexey Yurievich Dedov, the Ambassador of Russian Federation to Pakistan, (6th March 2018);
- H. E. Mr. Eric Beishembiev, Ambassador of Kyrgyzstan to Pakistan (25th April 2018);
- H.E. Mr. Kim Pham, Ambassador of Vietnam to Pakistan (4th July 2018);
- H.E. Mr. Rashidally Soobadar, High Commissioner of Mauritius to Pakistan (17th July 2018);
- H.E. Mr. Piotr Opalinski, Ambassador of the Republic of Poland to Pakistan (20th August 2018);
- H.E. Dr. Brigitta Blaha, Ambassador of Austria to the Islamic Republic of Afghanistan (Resident in Islamabad – Pakistan) (8th October 2018);
- H.E. Mr. Volodymyr Lakomov, Ambassador of Ukraine to Pakistan (9th October 2018);
- H.E. Stefano Pontecorvo, Ambassador of Italy to Pakistan (15th October 2018);
- H.E. Mr. Kjell-Gunnar Eriksen, Ambassador of Norway to Pakistan (22nd October 2018);
- H.E. Mr. Martin Kobler, the Ambassador of Germany to Pakistan (23rd November 2018); and
- Mr. Michal Bobak, Economic Counsellor, of Czech Republic to Pakistan (11th December 2018).



Collaborations with National and International Organizations

COMSATS has been endeavoring to expand its cohort of national and international partners to foster broader and more effective collaborations in Science and Technology and launch new programmes and activities with its Centres of Excellence for sustainable socio-economic development of the Member States. These partnerships aim to complement the programmes of COMSATS focusing on capacity-building of S&T community in developing countries.



American Institute of Pakistan Studies (AIPS)

A Memorandum of Understanding (MoU) was signed between COMSATS and the American Institute of Pakistan Studies (AIPS) on 4th January 2018, by Dr. S. M. Junaid Zaidi, Executive Director COMSATS, and Dr. Farhat Haq, President AIPS, on behalf of their respective organizations.

The guiding principle of the MoU is to support cooperation in higher education and research, faculty training by foreign scholars, academic placements of faculty, sharing information and the use of resources for COMSATS' member countries and AIPS affiliated centers.

Department for International Development (DFID)

In line with COMSATS' efforts to expand the scope of its programmes and international collaboration, the Executive Director

COMSATS, Dr. S. M. Junaid Zaidi invited Ms. Joanna Reid, Head of Department for International Development (DFID) Pakistan, British High Commission to COMSATS Secretariat. The meeting held on 7th February 2018 was successful in breaking ground for joint cooperative ventures.

The two sides concurred that DFID and COMSATS could collaborate in projects like development of entrepreneurship and SMEs, and could jointly work in areas of health, food security, climate change and SDGs.

Pacific Island Development Forum (PIDF)

On 12th March 2018, COMSATS signed an MoU with the Pacific Islands Development Forum (PIDF) in Islamabad. The Executive Director COMSATS, Dr. S. M. Junaid Zaidi, and the Secretary General PIDF, Mr. Francois Martel, signed the agreement on behalf of their organizations.





According to the agreement, both the organizations will collaborate to promote Science, Technology and Innovation (ST&I) to meet the 2030 Agenda for Sustainable Development.

The World Academy of Sciences (TWAS)

The collaboration between COMSATS and The World Academy of Sciences (TWAS) that was established in 2015 resulted in 2018 through a visit paid by a ten-member delegation of COMSATS. The visit made from 11th to 17th March 2018, was successful in exchange of information and best practices. The visit included a week-long training at The World Academy of Sciences (TWAS) during which interactive presentations were made. These touched upon a number of operations of TWAS, including Fellowships, Exchanges, Research Grants, Prizes, Information and Communications, Finance and Administration and Science Diplomacy.

The Scientific and Technological Research Council of Turkey (TÜBİTAK)

A delegation comprising senior officials of

COMSATS visited COMSATS' Centre of Excellence in Turkey, TÜBİTAK Marmara Research Centre (MAM) from March 22nd – 23rd March 2018. Prof. Dr. Murat Makaraci, Vice President TÜBİTAK MAM gave a briefing to the delegation on the Centre and its departments. A visit to the Genetic Engineering and Biotechnology Institute and the Technology Park (MARTEK) within the same premises was also arranged along with visit of various facilities available with the TÜBİTAK's R&D institutes.

Later on, Dr. Kamran Jahangir, Advisor (TAC), COMSATS Secretariat, paid a visit to TÜBİTAK from 19th September – 8th October 2018. The meetings held resulted in offers of support by TÜBİTAK for sharing resources and services available with the Council; and short-term summer trainings.

Islamic Educational, Scientific and Cultural Organization (ISESCO)

During the reporting period, the collaboration between COMSATS and ISESCO was revived through signing of a Joint Cooperation Agreement on 13th April 2018 in Islamabad. Under the Agreement signed by the Executive Director COMSATS and Director General ISESCO, following two capacity building events



were jointly organized:

- The 4th International Conference on Agriculture, Food Security and Biotechnology (13th – 14th November 2018, Rabat, Morocco);
- The 8th International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards' (23rd – 27th December 2018, Doha, Qatar).

So far, around 660 researchers, scientists, engineers, technicians and industry professionals have benefitted from the proceedings of these events.



United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)

During the reporting period, the collaboration was established between COMSATS and UNESCAP was advanced to promote Science, Technology and Innovation (STI) for sustainable development of the developing region. In this regard, on 20th April 2018, Dr. Laura Altinger, Regional Advisor on Climate Change, UNESCAP, visited COMSATS Secretariat and held a meeting with the Executive Director COMSATS, Dr. S. M. Junaid Zaidi, and his team. The meeting sought to explore the possible collaboration with UNESCAP especially in the field of Climate Sciences and to discuss a roadmap to ensure the establishment of a Climate Change center.

Later on 21st June 2018, the Senior Coordinator of Asia and Pacific Center for Development of Disaster Information Management (APDIM), UNESCAP, Mr. Mostafa Mohaghegh, visited COMSATS Secretariat, Islamabad, with a view to enhance bilateral cooperation in areas of common interest, particularly in the field of Climate Change. UNESCAP and COMSATS' officials agreed to collaborate for facilitating their common member countries in making best use of available resources and platforms



to meet their knowledge and capacity-building needs; assessed success stories, trends, needs, and gaps in knowledge and capacity for advancing sustainable development.

The European Union (EU)

The collaboration with EU continued as a part of COMSATS' strategy to expand the horizons of its undertakings towards North so as to foster North-South Cooperation for achieving excellence in various dimensions of S&T. The cooperation with EU resulted in an awareness seminar, organized to educate the academia and research community on various aspects of applying for the funding under Horizon2020.

Commonwealth Secretariat

The Executive Director COMSATS, Dr. S.M. Junaid Zaidi, visited Commonwealth Secretariat on 22nd May 2018, to hold a meeting with the sixth Commonwealth Secretary General, Rtd. Hon Patricia Scotland QC. The bilateral exchanges resulted in the accreditation of COMSATS to Commonwealth on 26th June 2018. The Secretary General Commonwealth Secretariat, Patricia Scotland, warmly welcomed COMSATS as an accredited organization of Commonwealth Secretariat during a Dialogue with Accredited Organisations, held at Marlborough House,

London on July 31, 2018.

South Center

COMSATS inked an MoU with the South Centre on 3rd September 2018. The Executive Directors of the two organizations, Dr. S.M. Junaid Zaidi and Dr. Carlos Correa, signed the Agreement, respectively. Under this Agreement, COMSATS and South Centre will collaborate to advance South-South and Triangular Cooperation through various regional and cross-regional cooperation initiatives, and exchange of information and technical resources among their common member states.

United Nations Office for South-South Cooperation (UNOSSC)

The Executive Director COMSATS participated as a Panelist in Regional Consultation on South-South Cooperation in Asia and the Pacific: Towards the Buenos Aires Plan of Action 40th Anniversary, held by UNESCAP and UNOSSC held during June 2018.

On 18th October 2018, a delegation of COMSATS visited UNOSSC and held meetings with the senior officials of the Organization in order to explore common grounds of cooperation in the fields of mutual interest





including climate change and sustainable development. As a part of this collaboration, a dedicated page for COMSATS (www.unsouthsouth.org/comsats/) has been established on UNOSSC web-portal so as to promote, coordinate and project South-South and Triangular cooperation globally and within the United Nations system.

To further reinforce the collaboration, COMSATS inked an MoU with UNOSSC on 30th November 2018.

Pakistan Allergy, Asthma and Immunology Society (PAAIS)

COMSATS inked an MoU with Pakistan Allergy, Asthma and Immunology Society (PAAIS). The MoU, signed on 1st November 2018 by Executive Director COMSATS and President PAAIS, aims to serve Pakistani rural population in effective treatment of allergic conditions. Under this Agreement, both sides have also agreed to reach out various fora to initiate courses in allergy and medical immunology, and seek financial or technical assistance to develop products for diagnosis and treatment of allergic conditions.

Welthungerhilfe (WHH)

A meeting was held between officials of



COMSATS and Welthungerhilfe (WHH) on 16th November 2018. The meeting was led by the Ambassador Ms. Fauzia Nasreen, Advisor (SDGs) and Mr. Richard Blane, Country Director, from COMSATS and WHH, respectively. Among other things, the meeting led to a possibility of an agreement on areas of mutual interest with WHH's main office in Bonn, under which collaborations would be established between COMSATS CoEs and WHH regional offices in COMSATS' member countries.

Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC)

In 2018, COMSATS and SESRIC revived their commitment to promote scientific activities in the areas of mutual interest for the socio-economic development of common member states through signing an MoU on 27th November, 2018, in Istanbul, Turkey. The MoU was signed by Ambassador Musa Kulaklikaya, Director General of SESRIC and Dr. Kamran Jahangir, Advisor COMSATS. The MoU paves way for the two organizations to enhance collaboration in view of the earlier association for various cooperation initiatives as well as exchange of information and technical resources among their common member states.



Efforts for Sustainable Development Goals

By virtue of its mandate, COMSATS' operations align well with global agenda like MDGs and, since 2015, the SDGs. Of late, attempts are being made to further tailor COMSATS' plans and activities for the accomplishment of goals and targets relevant to its mandate. An advocacy role in this regard, has also been adopted to help mainstream the SDGs for national and regional development.



Seminar on “Sustainable Development Goals: The Role of Universities”, Islamabad, Pakistan (9th July 2018)

COMSATS in collaboration with the Higher Education Commission (HEC) of Pakistan organized a seminar on 9th July 2018, to facilitate the understanding and response of the academic and research community to the opportunities and challenges in localization of 2030 Global Agenda. The Vice Chancellors and other senior officials from around a 100 universities from all over Pakistan gathered at the event. During the inaugural ceremony, the Executive Director COMSATS, Dr. S.M. Junaid Zaidi, Chairperson HEC, Mr. Tariq Banuri, and UN Resident Coordinator, Mr. Neil Buhne shared their views.

The technical proceedings of the seminar were divided into three sessions centred on the following themes: Promotion and Advocacy for SDGs, chaired by Prof. Dr. John Thwaites, Chair of Sustainable Development Solutions Network (SDSN) Australia/Pacific, SDGs

Implementation: Perspectives on Education, Research & Development, chaired by Dr. Max Paoli, Programme Coordinator, TWAS, Italy; and Frontier Technologies: Scientific Institutions driving Innovations, chaired by Dr. Adil Najam, Dean Pardee School of Global Studies, Boston University, Massachusetts.

A set of recommendations transpired from the dialogues and discussions made during the event. Some key recommendations are as follows:

- To achieve SDGs and other relevant global initiatives, it will be useful for academia to familiarize the future policy-makers and influencers to be aware of the concept and its dimensions.
- The research activities at the universities should be better aligned to the sustainable development agenda and their results should help cater to relevant public policy needs in order to facilitate industrial and economic development.
- The campus operations at the universities should cater to the needs of sustainability,



i.e., conservation of energy, water, paper, material, etc. Proper waste management and good quality of food should be ensured to practically demonstrate the needs for sustainability.

- The universities and think tanks should complement each other's efforts in order to make policy recommendations relevant to SDGs.
- The government should pave way for incubation of ideas and convert data into learning. Data analysis and goal wise availability of data as tool for accountability and policy initiatives should be ensured.
- The incentive structure at the universities should be made relevant to the efforts for achieving SDGs.
- Big role needs to be played by the HEC in research relating to SDGs. Purpose-based research should be promoted rather than emphasis on contributions to high impact factor journals.

The event was closed by Dr. Arshad Ali, Executive Director of HEC.

Seminar on “SDGs Implementation: Collaboration among Universities”, Islamabad, Pakistan (12th December 2018)

The seminar on “SDGs: The Role of the Universities” was followed by a follow-up

seminar on “SDGs Implementation: The Collaboration among Universities”, held on 12th December 2018. The inaugural ceremony was attended by a number of participants from academia and diplomatic community of Pakistan.

His Excellency Sardar Masood Khan, President of Jammu and Kashmir (AJK) graced the event with his presence. Dr. S. M. Junaid Zaidi, Executive Director COMSATS, and Neil Buhne, UN Resident Coordinator, spoke at the inaugural of the seminar.

The technical proceedings of the event were divided into two technical sessions which were moderated by Dr. Aneel Salman, Head of Department of Management Sciences of COMSATS University Islamabad.

The first session included presentations by Mr. Ali Kemal, Economic Policy Advisor, SDGs Support Unit, Ministry of Planning, Development and Reform; Dr. Faisal Ahmed Khan, Pro-Vice Chancellor, Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS), Quetta; and a Video Message by Dr. Azimzhan Khitakhunov, Economics Department, Higher School of Economics and Business, Al-Farabi Kazakh National University, Almaty, Kazakhstan.

The presentations were followed by a



brainstorming exercise, during which representatives from different varsities of Pakistan shared information on the activities undertaken by their institutions for the promotion and advocacy of SDGs. The clusters of universities formed on each of the seventeen SDGs suggested various measures that can be taken at different levels for the implementation of SDGs including strengthening research on Sustainable Development issues; tackling social inequality; increasing employment opportunities for the youth; empowering women; providing quality education to all at every level; waste and flood management; promoting the use of renewable energy; encouraging creativity and innovation; building and enhancing international cooperation; and promoting gender parity, among others.

The event concluded with a note of thanks from Dr. Zaidi and distribution of souvenirs among distinguished speakers.

Talk on “Implementation Status of SDGs in Pakistan”, COMSATS Secretariat (7th November 2018)

A presentation was made by Economic Advisor, Federal SDGs Support Unit, Ministry of Planning, Development and Reform, Government of Pakistan, Mr. Ali Kemal, at COMSATS Secretariat on November 7, 2018. The presentation was arranged with a view to strengthen the capacity of COMSATS’ officials for understanding challenges and opportunities including SDGs in developmental agenda of developing countries, with special reference to Pakistan.



Science and Technology Events Organized

Capacity-building activities make a prominent part of COMSATS' programmes aimed at South-South Cooperation. The organization has been organizing scientific events in areas of importance to Member States. These result in strengthening scientific linkages; build indigenous capacities; and promote Se&T as a tool for development. These events provide a useful platform to the members of the scientific community, development experts, donor and development agencies, and the decision-makers to share their views and experiences on contemporary issues of importance for Se&T-led socio-economic development.



COMSATS-EU Awareness Seminar on Horizon2020, Islamabad, Pakistan (7th May 2018)

COMSATS in collaboration with the Service Facility Wing of the European Union organized an awareness seminar on European Union's Horizon 2020, in Islamabad, on 7th May 2018. The purpose of the seminar was to educate the academia and research organizations on various aspects of applying for the funding under Horizon 2020, which is one of the biggest EU research and innovation programme. The Seminar was attended by a number of vice chancellors and researchers, considering improving chances of benefitting from good funding opportunities. Some representatives of foreign missions in Pakistan were also present on the occasion.

Knowledge-Sharing Seminar on e-Health, Islamabad, Pakistan (5th October 2018)

COMSATS Tele-Health knowledge sharing seminar was held on 5th October 2018 in Islamabad. The Seminar helped create awareness among health community about e-health and its importance as well as to share with the participants, experiences in various e-health domains. The seminar attracted around 50 participants including representatives from Human Development Foundation (HDF), PIMS (ORIC), Heartfile Pakistan, COMSATS University Islamabad (CUI), Centre for Information Technology (CIT), GKAZ HealthCare, CYGNET Technologies, Islamabad Diagnostic Centre (IDC), PEITS, Excel Labs, and American Teleclinic.





International Conference on Agriculture, Food Security, and Biotechnology, Rabat, Kingdom of Morocco (13th – 14th November 2018)

The 4th International Conference on 'Agriculture, Food Security, and Biotechnology' was held from 13th – 14th November 2018 at ISESCO Headquarters in Rabat, Morocco. The two-day Conference was hosted by ISESCO and co-organized by COMSATS and the Inter Islamic Network on Information Technology (INIT), Islamabad, Pakistan. The Conference highlighted the importance of agriculture biotechnology for addressing issues pertaining to hunger, malnutrition and food insecurity in the developing world. Around 50 researchers and subject experts from Algeria, Burkina Faso, Cameroon, Indonesia, Kazakhstan, Morocco, Nigeria, Senegal, Sri Lanka, Sudan, Tunisia and Turkey participated in the Conference.



Workshop on Metrology for the Least Developed Countries, Gebze, Turkey (26th – 27th November 2018)

The Workshop on Metrology for the Least Developed Countries was held at TUBITAK National Metrology Institute (TUBITAK UME) from 26 – 27 November 2018, in Gebze-Kocaeli, Turkey. The primary objective of the workshop was to enhance the knowledge-base, expertise and capacity of the institutions working in the field of metrology in the least developed countries. The workshop, jointly organized by COMSATS and TUBITAK UME, attracted about 30 participants belonging to Tanzania, Senegal, Bangladesh, Gambia, Uganda, Pakistan, Iran, Jordan, Sri Lanka, Kazakhstan, Libya, Turkey and Austria. Apart from the officials of COMSATS Secretariat, the workshop was attended by officials belonging to the World Bank and the United Nations Industrial Development Organization (UNIDO).

International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards', Doha, Qatar (23rd – 27th December 2018)

The 8th International Workshop on 'Internet Security: Enhancing Information Exchange



Safeguards' was held from 23rd to 27th December 2018, in Doha, Qatar. The event was jointly organized by COMSATS, ISESCO and INIT, and was hosted by the Qatari National Commission for Education, Culture and Science. The technical proceedings of the workshop were attended by about 30 researchers, system administrators and cyber security professionals, belonging to Qatar, Pakistan, Malaysia, Kazakhstan, Jordan, Morocco, Bangladesh, Oman and Maldives.

31st Khwarizmi International Award (KIA), Iran

In 2018, COMSATS, a regular partner, sponsored the cash award and certificates to the first and second prize winners of the 31st Khwarizmi International Award which was held on 28th February 2018, in Tehran, Iran. Moreover, message from Executive Director COMSATS was also shared to be published in KIA Bulletin, where the Executive Director congratulated the winners of this year's KIA for making significant scientific contributions in their field of specialization.



Participation in Various Events and Meetings

The senior officials of COMSATS Secretariat undertake international visits from time-to-time to strengthen and expand the membership of COMSATS and its Network of S&T Centres of Excellence, participate in international meetings and develop partnerships and cooperative mechanisms with relevant institutions in different countries.



24th Session of ICGB Board of Governors (Trieste, Italy, May 10, 2018)

The Executive Director COMSATS was invited to participate in the 24th annual session of the Board of Governors of International Centre for Genetic Engineering and Biotechnology (ICGEB), Italy, held on 10th and 11th May 2018. He was among over 100 delegates from more than 50 countries that bore witness to this important statutory meeting of ICGEB.

74th Session of UNESCAP (Bangkok, Thailand, May 11, 2018)

A COMSATS' delegation led by Ambassador Fauzia Nasreen, Advisor (SDGs), visited Bangkok from 10th to 16th May 2018, to attend the 74th Session of United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). The theme of the 74th session

was "Inequality in the Era of the 2030 Agenda for Sustainable Development". A statement of COMSATS was made by Ambassador Fauzia, who highlighted the vision of COMSATS founders with reference to the three pillars: science and technology; sustainable development and South-South cooperation. A highlight of the visit was the call on the Executive Secretary during which matters related to future prospects of collaboration between COMSATS and ESCAP were discussed.

Inauguration of UN-OHRLLS Technology Bank for LDCs (Turkey, June 1, 2018)

A three-member delegation led by the Executive Director COMSATS visited Turkey to attend the Inauguration of the UN Technology Bank for Least Developed Countries (4th June 2019) and to have follow up meetings on possible partnerships/ collaborations. The ceremony marked the achievement of the first target of the 2030





Agenda for Sustainable Development, SDG target 17.8. On the sidelines of the event, COMSATS' officials had a number of productive meetings with counterparts and experts from various international organizations based in Turkey. Opportunities and possibilities for collaborative research were explored with regard to COMSATS' Centres of Excellence, the International Thematic Groups and the Member States categorized as LDCs. The Executive Director offered the Turkish officials facilitation to resources available with COMSATS. Reciprocating his generous offer, the management of these research facilities visited showed keen interest in working closely with COMSATS in areas of mutual interest.

Regional Consultation on South-South Cooperation in Asia and the Pacific: Towards the Buenos Aires Plan of Action 40th Anniversary (Bangkok, Thailand, June 27-29, 2018)

The Executive Director COMSATS participated as a Panelist in the Regional Consultation on South-South Cooperation in Asia and the Pacific: Towards the Buenos Aires Plan of Action 40th Anniversary,

held in Bangkok, Thailand, from 27 to 29 June 2018. The event was organized by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), the United Nations Office for South-South Cooperation (UNOSSC), and the Ministry of Foreign Affairs of the Kingdom of Thailand. As a panelist, Dr. Zaidi deemed lack of good human resource of researchers and scientists, absence of a steady supply of financial and ancillary resources, and political will among the crucial ingredients needing reinforcement for development of the South. He also called for more support from the North, as well as the international organizations and funding agencies to help address relevant challenges. Dr. Zaidi expressed COMSATS' commitment to assist the international community and the governments in the South achieve lasting sustainability for development through science and technology.

On the sidelines of the event, meetings were held with Dr. Vijavat Isarabhakdi, Advisor, Ministry of Foreign Affairs, Thailand; Sikama Sanghirun, Programme Officer, Thailand International Cooperation Agency (TICA); Lorenzo Santucci, United Nations ESCAP; Dr. Subrata Sinha, United Nations Environment Programme; and Srinivas Tata, UNESCAP.

Training workshop on 'Landhydrological processes under changing Climate Observation, Modeling System and Uncertainties' (Beijing, China, September 20-21, 2018)

A two-day training workshop on 'Landhydrological processes under changing Climate Observation, Modeling System and Uncertainties' was organized by the International Centre for Climate and Environment Sciences (ICCES) with the support of Bureau of International Collaboration of Ministry of Science and Technology (MoST), China, from 20th – 21st September 2018. From COMSATS, Maj. Gen (R) Muhammad Tahir, Advisor (China Desk) and, Mr. Tajammul Hussain, Advisor (Programmes) attended the event.

During the visit, the delegation also held meetings with Prof. Zhaohui Lin, Director, International Centre for Climate and Environment Sciences (ICCES), Beijing, China; Prof. Jibin Sun, Deputy Director, Tianjin Institute of Industrial Biotechnology (TIB), Chinese Academy of Sciences (CAS), Tianjin, China; and Ms. Xuemei Yang, Director, Division of International Organizations and Conferences, Department of International

Cooperation, MoST, Beijing, China. Both sides exchanged views on issues of bilateral interest during the meetings. The proposals for the establishment of Earth Centre and a Centre on Climate Change were discussed. Furthermore, matters regarding the establishment of Joint labs, Technology Parks and Technology Transfer Centers were also deliberated upon.

OIC International Symposium on 'Financing For Development: Thinking Innovative Solutions to Persistent Development Challenges' (Istanbul, Turkey, November 22, 2018)

Dr. Kamran Jahangir, Advisor at COMSATS attended the International Symposium on 'Financing for Development: Thinking Innovative Solutions to Persistent Development Challenges', held on 22-23 November, 2018, in Istanbul, Turkey. The event was organized by the Statistical, Economic, Social Research and Training Centre for Islamic Countries (SESRIC), the Organisation of Islamic Cooperation (OIC), and the Islamic Development Bank (IDB). During the meeting, discussions were held with the decision-makers from OIC, SESRIC, and IDB, ECO; and FRiT Funds.



Some Activities of Centres of Excellence

A group of twenty-two R&D institutions from different developing countries, predominantly COMSATS' Member States, is affiliated with COMSATS constituting its Network of International S&T Centres of Excellence. The Network Members serve as COMSATS' technical resource for South-South cooperation, in line with their mandates for programmes of scientific research and development. This section covers reports received from COMSATS' Centres of Excellence, as well as news of some Centres covered in COMSATS Newsletter over the year.



Al-Farabi Kazakh National University (KazNU), Kazakhstan

KazNU launched test mode work in the field of telemedicine in December 2017. A nanosatellite created by Al-Farabi Kazakh National University, Kazakhstan – Al-Farabi-2– was successfully launched into space by SpaceX. This was the second Nanosatellite launched by KazNU into space.

On September 7, 2018, KazNU, the Kazakh Physical Society and JSC “National Center signed an agreement on cooperation with the International Center for Relativistic Astrophysics (ICRANet).

The University approved the proposals made by officials of Asia Oceania Federation of Nuclear Medicine and Biology (AOFNMB) and Japanese Society of Nuclear Medicine for establishing a Central

Asian Centre for nuclear medicine

The major events of KazNU during 2018, included:

- International Farabi Readings held at Al-Farabi KazNU (April 03 to 13, 2018);
- The 2nd day of IEEE 12th International Conference on Application of Information and Communication Technologies (AICT2018) (October 18, 2018).

On 1st June 2018, KazNU entered the top 220 among the 800 best universities in the world by moving up another 16 positions in the international QS World University Ranking.

According to the Times Higher Education (THE) World University Rankings-2019, the University is the only Central Asian





University in the top 801-1000 best universities of the world.

The World Congress of Turkic Peoples awarded the University the title of 'The Best University of the Turkic World'. The Rector of the University, Prof. Galym Mutanov was awarded an Engraved Gold Medal for his contributions as an academician towards the growth of KazNU.

Al-Quds University, Palestine

Dr. Najwa Safadi of the Department of Social Works Al-Quds University, Palestine, and her counterpart from Boston College, USA, Dr. Scott Easton, concluded a joint study entitled "Health and Well-being of Public Sector Social Workers in Palestine". The collaborative study is expected to yield recommendations which will reduce the pressures on social workers, examine the reality of the mental health of Palestinian social workers, and review the working conditions from the perspective of Palestinian social workers.

Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh

During 2018, BCSIR carried out research in

various areas based on Bangladesh's national needs. The Council undertook 101 projects which included 9 Annual Development Projects and 9 Special Allocation Projects. The Academic research output included 174 papers, 21 processes and 12 patents.

BCSIR has renewed an MoU with Commonwealth Scientific and Industrial Research Organization (CSIRO), Australia and Council of Scientific and Industrial Research (CSIR), India, for cooperation in holding joint research, symposia, trainings and exchange of scientific information. BCSIR held sixteen seminars on its R&D projects and four daylong workshops with the stakeholders. Besides, trainings were arranged for 422 scientific professionals on different scientific equipment.

COMSATS University Islamabad, Pakistan

CUI is ranked among 601-800 world best universities, and first among Pakistani Universities, according to the most recent rankings of TIMES Higher Education (THE). It has also been ranked at #301-400 in THE Engineering & Technology; #401-500 in Computer Science and Life Sciences; and #401-500 in Physical Sciences (THE rankings 2019). Also the University





is ranked among 751-800 world best universities as per QS World Universities Rankings 2019.

A Guide to Research Grant Programs of National and International Funding Agencies was developed and distributed among CUI faculty and researchers.

In 2018, 300 research projects, 256 travel grant applications and 17 seminar workshops applications were submitted to different funding agencies, out of which 124 research projects, 131 travel grants and 07 seminar workshops have been approved.

Moreover, 45 out of 62 research proposals, received under CUI's Research Grant Program (CRGP), were approved. The University filed 05 US patents, 01 PCT patent and 11 Pakistan patents based on applied research of its faculty, while 03 US patents and 02 Pakistan patents have been granted.

In 2018, the Professional Development ORIC, CUI, conducted 06 trainings, in which 118 professionals from a number of organizations, industries and universities were trained.

Student Startup Business Center organized 12 training sessions for startups under "SSBC-Business Plan Development Training Program", to enhance the capacity of CUI students' Startups (Batch-IV & V) on development of Business Plans.

A total of 137 renowned researchers, diplomats, delegations, students and faculty members visited CUI. Similarly 57 individuals, delegations and faculty members also went abroad on various projects.

Twenty five fully funded outward mobilities were availed by CUI students, faculty and staff under the European Union funded Erasmus+ program and the Turkish Higher Education Council funded program, the Mevlana Exchange program.

A total of 124 international students (Ph.D 14 (Full Time 11, Sandwich 3) Postdoctoral 1, MS 10, Undergraduate 99) from 10 countries, i.e., Afghanistan, China, Cameroon, Iraq, Nigeria, Palestine, Ghana, Gambia, Sudan and Tanzania were enrolled in various departments.

To enrich its teaching and research

programs, CUI hired the services of seven veteran academicians from US, Thailand, Brazil, China, and UK. Moreover, HEC, Pakistan, has approved four more foreign faculty cases while three are in process.

Council for Scientific and Industrial Research (CSIR), Ghana

On December 14, 2018, CSIR's Institute of Industrial Research (CSIR-IIR) trained 96 electricians on solar installation and maintenance in collaboration with TELSOL. The project is aimed at providing support for the energy needs of the Ghanaian government's One-District One-Factory, One-Village One-Dam Initiative. The project is expected to reduce the country's dependence on foreign electrical contractors.

The Institute of Industrial Research of CSIR was also recognized as the most Energy Efficient Public organization in Ghana, by the Ghana Energy Awards Scheme. This was announced during the annual Ghana Energy Awards held in Accra in November 2018.

EMBRAPA Agrobiologia, Brazil

To improve farmers' ability to identify natural enemies of the pests, scientists from EMBRAPA Agrobiologia developed a mobile application – InNat – guide for identification of pests and their enemies.

Events organized/participated in by EMBRAPA Agrobiologia, Brazil, during 2018, included:

- First Brazil-US-Haiti Family Agriculture Forum held on 25th -27th April 2018;
- Field Day for recognition of natural enemies of agricultural pests in Sao

Paulo on 21st June 2018;

- The XVI Symposium on Biological Nitrogen Fixation with Non Legumes in Foz do Iguaçu, Brazil, from 26th – 31st August 2018.

Industrial Research and Consultancy Centre (IRCC), Sudan

The process of accrediting IRCC laboratories was started under the supervision of Sudanese Council for Accreditation (SADC) and Tunisian Accreditation Council (TUNC) and with the patronage of UNIDO. The Leather Technology Center was the first to be accredited.

The Industrial Waste Management Project was held under the frame work of South-South Cooperation between IRCC, Sudan Cleaner Production Center (SCPC) and Egypt National Cleaner Production Center (ENCPC). It was an international program





financed by the African Development Bank (ADB). It included training courses which were held in Egypt and Sudan, and an industrial waste survey for a number of factories in Khartoum.

In collaboration with Federation of Arab Scientific Research Council (FASRC), IRCC organized the Scientific Symposium on 'Household Industry' in Khartoum from October 15 – 16, 2018.

Industrial Technology Institute (ITI), Sri Lanka

R&D during 2018 at ITI included:

- The technology of two innovative products, i) tree freshness formulation and ii) ITI bio wax, were transferred to Hayley's Agriculture Holdings Ltd.
- Formulation of Ready-To-Serve low added sucrose nutritious scorn/flat bread, nutritional biscuit from minor cereals, whey-based beverage and 100% herbal balm base from transesterified coconut oil;

- R&D sections initiated 16 research and collaborative projects;
- Thirty-seven research articles and two patents were obtained.

The newly established Residue Analysis Laboratory of ITI received ISO/IEC 17025 accreditation as a testing laboratory in the field of Chemical Testing. A Packaging Material Testing Laboratory was initiated with the funds from UNIDO.

ITI's end analytical instruments and accredited facilities for heavy metals and pesticide analysis were used to carry out analysis of heavy metal and pesticides in drinking water.

The awards and honors to ITI scientists came for a number of achievements including work in: Development of Bio Wax Formulation; Agriculture for the Formulation of Environment friendly BASCA; 'Low added sucrose nutritious scorn-Flat bread'; Development of clay filter body with high fluoride binding ability for the remediation of fluoride contaminated



water; patented Inventions for measurement tape calibrating unit; excellence in international collaboration for advancement of S&T.

During 2018, ITI scientists participated in 30 capacity-building events.

International Center for Chemical and Biological Sciences (ICCBS), Pakistan

The collaborations of ICCBS during 2018 included:

- MoU with the Basic Medical Sciences Institute (BMSI), Karachi, for cooperation in basic medical sciences;
- Agreement with Hunan Anbang Pharmaceutical Co. Ltd., China, for cooperation in conducting clinical trials of “Yinhuang Qingfei Capsule” at ICCBS’ Center for Bioequivalence Studies and Clinical Research (CBSCR);
- MoU with Chapman University, USA, for developing and fostering cooperation in academics and research;
- MoU with Brock University, Canada, to cooperate on ‘Scientific Research and Technology Development’ in the fields

of mutual interest; and

- MoU with Health Department, Government of Sindh, Pakistan.

The German Consul-General, Rainer Schmiedchen, inaugurated the latest Cluster Computer machine at ICCBS. Alexander Von Humboldt Organization, Germany, has provided a sophisticated four-socket 4U rack mounted server.

The Dr. Panjwani Center for Molecular Medicine and Drug Research of ICCBS received a grant of Rs. 220 million from the provincial government of Sindh to set up a modern Forensic DNA and Serology Laboratory.

During 2018, ICCBS organized a number of capacity building events which included the following:

- The 3rd International Workshop on X-Ray Crystallography in Structural Biology;
- The 47th public awareness seminar on “Environment, Health, and Development”;
- Four-day 14th International Symposium on Natural Product Chemistry;

Pakistan Council for Science and Technology (PCST) declared Prof. Dr. Muhammad Iqbal Choudhary, Director, International Centre for Chemical and Biological Sciences (ICCBS) as the most productive scientist of Pakistan.

The “Iqbal Choudhary Center for Natural Product Research (ICC-NPR)” was inaugurated in Benin, Nigeria, on December 21, 2018. The naming of the institute was to recognize his excellent contributions to the advancement of drug discovery and natural product research.





International Center for Climate and Environment Sciences (ICCES), China

ICCES currently has more than 60 ongoing research projects, which are mostly funded by the Ministry of Science and Technology (MoST) of China, Chinese Academy of Sciences, and the National Natural Science Foundation of China (NSFC).

During 2018, the institutions and organizations with which ICCES strengthened collaborations included:

- Al-Farabi Kazakhstan National University;
- Thai Institute of Meteorological and Hydro and Agro Informatics Institute (HAI);
- Asian Institute of Technology in Thailand;
- Chiang Mai University;
- Education Funding Committee of the University of Sri Lanka and University of Ruhuna;
- International Center for Chemical and Biological Sciences; and
- COMSATS University Islamabad.

In 2018, ICCES attracted young scholars from Kenya, Tajikistan, Thailand, Nigeria, Sri Lanka, Iran, Nepal, and Pakistan to study for master's and doctoral degrees under CAS President's International Fellowship Initiative (PIFI) and "The Belt and Road" Master Fellowship Program. Their areas of interest include extreme weather events in the GHA (the Greater Horn of Africa) region of Africa; simulating IAP climate models and climate events in South Asia; vulnerability analysis of Pakistan under climate change

Some major events of ICCES during 2018 were:

- ICCES-COMSATS international Training Workshop on "Landhydrological Processes under Changing Climate" (September 20 - 21, 2018);
- Srinakharinwirot University-ICCES International Workshop on "Climate Change Impact and Adaptation for Sustainable Development" (July 21, 2018);
- 17th CTWF International Symposium on "Ecological Hydrology and Climate Change" (September 17-19, 2018);
- Srinakharinwirot University-ICCES





1st International Conference on Geography & Geoinformatics for Sustainable Development (ICGGS) (July 19 - 20, 2018);

- CAS-CSIRO Nanoscience and Climate Change Annual Bilateral workshop (August 30-31, 2018);
- The Founding General Assembly of the Alliance of International Science Organizations (ANSO) in the Belt and Road Region & The Second International Science Forum of National Scientific Organizations on the Belt and Road Initiative; and
- International Symposium on “Earth System Atmosphere-Land-Ocean Interactions” (From July 30 - August 3, 2018).

International Projects

Some major projects undertaken by ICCES during 2018 were:

- China-Thailand (NSFC-TRF) International Cooperation Project “Southeast Asia Regional Inter-annual Climate Variability Mechanism and Prediction Research”;
- Implementation of sub-projects under Pilot Project of the Chinese Academy of Sciences “Short-term and seasonal

predictions of climate disasters” ;

- National Natural Science Foundation of China and Sri Lanka International Cooperation Project; and
- ICCES-Sweden-UK Joint Cooperation and Exchange Project “Future Rainfall Effects on Surface, Hydrology and Livelihoods in Eastern Africa”.

During 2018, researchers of ICCES published 77 papers in the following fields: Air quality/advances in atmospheric science; ocean models; glaciology; climate change; global warming; natural disasters and their management; climate management processes, methods and technologies.

Iranian Research Organization for Science & Technology (IROST), Iran

On 8th January 2018, an agreement was signed for scientific and technological cooperation between Iranian Research Organization for Science & Technology (IROST), and Astan Quds Razavi Institute of Economics. According to the agreement, both parties will collaborate for the projects aimed for promotion of biotechnology, advanced materials and nanotechnology,





electrical and electronic equipment, advanced machinery, water technologies, new energy, blood products, creative industries, development of advanced medical centres for high risk diseases, and food security.

National Mathematical Centre (NMC) Abuja, Nigeria

During 2018, NMC organized some capacity-building activities that include:

- International Conference on Mathematical Modeling on “Militating against Environmental Pollution through Mathematical Modeling for Sustainable Development” (2nd to 6th December, 2018);
- Foundation Postgraduate Course in Computational Mathematics (March, 2018);
- Foundation Postgraduate Course in Statistics in Probability Theory, Distributions and Stochastic Processes (November, 2018);
- NMC-Google Africa Code Week (22-25 October, 2018);
- ‘Girls-Students Olympiad Competition in Mathematics’ is part of new innovation by the NMC and was

approved under the Sustainable Development Goals (SDGs) Project, and is aimed to boost the interest of the Girl-Students in Mathematics; and

- NMC joined the rest of the world in celebrating the Maiden Edition of United Nations Educational Scientific and Cultural Organization (UNESCO) International Day of Mathematics (IDM) on 14 March, 2018.

The Centre undertook a major overhauling of its ICT facilities with some Government Agencies in Nigeria.

National Research Centre (NRC), Egypt

Prof. Dr. Ashraf Shaalan, President of NRC and Dr. Gareth Johnstone, Director General of WorldFish, signed a protocol in the field of ichthyology on behalf of their organizations. The protocol aims to focus on the health of tilapia fish, which is a significant species of fish for Egyptian people due to its cheap price and wide availability in Egyptian waters.

Royal Scientific Society, Jordan

The major projects carried out by RSS



during the reporting period were:

- The MENA Region Initiative as a Model of NEXUS Approach and Renewable Energy Technologies (MINARET);
- Accelerating 0-emission building sector ambitions in the MENA region;
- Clean Technology and Environment Intervention in the Jordan Valley Funded by MEDA/Canada;
- Monitoring the quality of water resources at Jordan valley;
- Ambient Air Quality (AAQ) Monitoring and Assessment in Al-Hashimiyeh Town/ Zarqa;
- Ambient Air Quality (AAQ) Monitoring and Assessment in the Industrial Estates and Ambient Air Quality (AAQ) Monitoring and Assessment in the Industrial Areas;
- The Production of Hollow and Solid Concrete Blocks for Walls and Slabs;
- SWITCH MED TEST II (Transfer of Environmental Sound Technology) with Jordanian Food Industry;
- Roadmap for Scaling-up Resource Efficiency in Jordan;
- Mapping of Aquifer Vulnerability to Contamination at Landfill Sites: A First Step Toward Sustainable Solid Waste Management in Jordan;

- Assessment of Ambient Air Quality in the areas surrounded Al-Abiad and Al-Hasa Phosphate Mines;
- Developing Manual for Jordanian Building Energy Saving Code;
- Developing Manual for Solar System code; and
- Understanding the Risk of Bat-Borne Zoonotic Disease Emergence in Western Asia.

RSS launched six small-medium enterprises (SMEs) as part of the project “Youth Advocates for Improved Environment in Mafraq and Ramtha”, in June 2018.

During 2018, RSS organized nine (09) following capacity-building events and signed agreements and strengthened cooperation with the following organizations:

- Intellectual Property Commercialization Office (IPCO) of the Industrial Research Institute (IRI);
- University of Pisa (UNIPISA);
- National Metrology Institute of the Scientific and Technology Research Council of Turkey (TÜBİTAK);
- TÜBİTAK Marmara Research Centre; and
- International Bank for Reconstruction





and Development (IBRD), World Bank Group.

Two out of four awards of Al Hussein Award for Creativity and Excellence in the Fields of Water, Environment and Energy were won by RSS.

Tianjin Institute of Industrial Biotechnology (TIB), China

TIB has made major breakthroughs in biotransformation and bio-manufacturing, the green biosynthesis of chemicals, the microbial production of plant natural products, the green bioprocessing technologies, delivering important impacts in social-economic sustainable development.

TIB offers technology consulting, technology services, and analysis service such as amino acid analysis, protein analysis, gene sequencing.

During the calendar year 2018, TIB undertook about 200 research projects; including 08 international collaborative projects supported by the National Natural Science Foundation of China (NSFC), Chinese Ministry of Science and

Technology (MoST), Chinese Academy of Sciences, and Tianjin Municipality.

TIB also extended cooperation to some developed countries such as America, Germany, Canada and Denmark in the areas of protein engineering, bioenergy, bio-food, and biotechnology equipment development.

TIB signed a strategic collaborative agreement with the Power Environmental Energy Research Institute of America.

For collaboration in fields of chemical, biological and biomedical sciences, TIB inked an MoU on S&T Cooperation with International Centre for Chemical and Biological Sciences (ICCBS), Karachi.

TIB has established cooperative relationships with more than 100 enterprises from 24 provinces of China with a total contract value of \$140 million, which makes TIB rank as top 10 among the 104 CAS institutes based on technology transfer.

TIB published 142 articles in Science Citation Index (SCI) journals.





TÜBİTAK Marmara Research Center (MAM), Turkey

- TÜBİTAK MAM developed a technology to detect aflatoxin, which is a toxic and carcinogenic matter in food items. Immunoaffinity columns are used for aflatoxin detection.
- A “Passenger Imaging System” developed by the Materials Institute of TÜBİTAK MAM started serving at the Turkish ports of entry.
- TÜBİTAK MAM and DEMİRPOLAT Ltd. Co. signed a license protocol on the first 100% national complementary food for infants.
- TÜBİTAK MAM and MAPA Dried Fruit, Food and Construction Industry and Trade Inc. signed a license agreement for 100% national pectin production.

Projects and Technical Services

The IPA-INNOFOOD Project on the “Development of Research and Innovation Facilities for Improving Regional Competitiveness of Food Industry” was successfully put into practice.

This is the first project approved in the 2nd Term of the Competitive Sectors Program under the financial cooperation between the EU and Turkey. The protocol signing ceremony was held at the premises of TÜBİTAK MAM.

TÜBİTAK MAM expanded its customer service portfolio to Europe after addressing hydrophone calibration request of a Research Center in Italy and PAH analysis request of an Environmental Laboratory in Monaco.

The power plant control system that was developed by TÜBİTAK MAM Energy Institute Power Plant Control Technologies Group was put into service at the first unit of the Deriner HPP operated by the HPPs Department of Electricity Generation Company (EÜAŞ).

The “Biomaterials, Biomechanics and Bioelectronics (3B) Center of Excellence”, as part of TÜBİTAK Marmara Research Center (MAM) Materials Institute aims to develop and produce high-tech materials and devices for health sector through national capabilities. The Centre was established with the purpose to conduct cutting-edge research in the fields of Biomaterials, Bioelectronics and related technologies.

Université Cheikh Anta Diop (UCAD), Senegal

The archeological research of UCAD, Senegal, received a prize at the XVIII congress of Union Internationale des Sciences Préhistoriques et Protohistoriques (UISPP) that was held from 04 to 09 June 2018 at the Université Panthéon-Sorbonne, Paris.



Activity Report of COMSATS' International Thematic Research Groups (ITRGs)

COMSATS' International Thematic Research Groups (ITRGs) are based on research collaboration among clusters of scientific institutions in specific fields of Science and Technology relating to development needs of Member States. Based on their respective expertise, selected Centres of Excellence of COMSATS are designated as the Lead Centres of these Groups while the membership is open to all relevant institutions. The member institutions of a Group are expected to complement one another's scientific capacities for a coherent goal-oriented R&D activity under the guidance of the designated Group Leader from the Lead Centre.



During the reporting period, efforts were continued by COMSATS Secretariat for engaging with ITRGs with an aim to augment the level, and scope of their activities pertaining to research projects and capacity building. In order to review the progress and development of joint research of the respective Groups and to discuss future plans and roadmaps for further actions, meetings were held with group leaders/ members of four ITRGs on 25th September 2018. Some outcomes and discussions of the meetings are as follows.

International Thematic Research Groups (ITRGs) on Climate Change and Environmental Protection

In the Skype meeting held with Dr.

Chenglai Wu, Associate Professor, ICCES, CAS, China, it was informed that data has been compiled from five countries for the Group's project on meteorology. Dr. Wu stated that expansion of the Group to other countries would help in efficient data compilation and analysis. It was proposed that the Group may hold a local workshop for data interpretation and translation into meaningful developments. Moreover, it was communicated that under the umbrella of ITRG on 'Climate Change and Environmental Protection', International Center for Climate and Environment Sciences (ICCES) has provided scholarships to six students from COMSATS' member states.



International Thematic Research Groups (ITRGs) on Renewable Energy

Prof. Nasrin Moazami, Group Leader, and Dr. Foad Farhani, Acting President of International Relations, IROST, Iran, informed that the two projects, one on 'Microalgae' and the other on 'Solar Cells' are being executed under the umbrella of ITRG on Renewable Energy. Further, he notified that the feasibility study of another project on 'Microalgae to Fuel' has been conducted.

International Thematic Research Groups (ITRGs) on Natural Product Sciences

Recent undertakings of ICCBS, the lead centre, including collaborations with other COMSATS' Centres of Excellence, expert exchange, and reverse linkages programmes launched by ICCBS with the support

of Islamic Development Bank (IDB) were learnt from Prof. Iqbal Choudhary, Director ICCBS, and Prof. Dr. Shaheen Faizi, Associate Researcher, ICCBS. It was informed that trainings will be provided to selected post-doctorates from COMSATS Centres of Excellence in Egypt, the National Research Centre (NRC) at ICCBS, Pakistan, as a part of fellowship programme of the latter.

International Thematic Research Groups (ITRGs) on ICTs

Dr. Sajjad A. Madani, Associate Professor, COMSATS University Islamabad (CUI) visited COMSATS Secretariat and informed about several national events and seminars that have been conducted under the ITRG on ICTs. Dr. Madani stated that a strategic plan would be devised by the Group for provision of services in Data and Science Analytics and Cyber Security to COMSATS' member states, including Pakistan.



Special Assignments

For the benefit of its Member States, COMSATS undertakes special assignments, such as conducting scientific studies, undertaking pilot projects, or implementing educational programmes. One of COMSATS' flagship projects has been successfully transformed into full-fledged institutions, i.e., COMSATS Internet Services (CIS), while the project on telehealth is being expanded. The administration related to graduate students from Member States studying at CUI is also a special assignment of the Secretariat. Some of the foreign students after thorough evaluation have been engaged to facilitate in COMSATS' operations.



COMSATS Tele-health (CTH)

During 2018, CTH Clinics established throughout Pakistan continued to give online treatment and advice through doctors available from COMSATS Telehealth Resource Centre in Islamabad. Total number of patients seen during the year through Telehealth exceeded 4000. Around 56 percent of the cases seen were of females seeking Obstetric care, that were provided antenatal and postnatal care assisted by online antenatal Ultrasound scans. Teleconsultations also helped patients with gastrointestinal, respiratory tract, and urinary tract infections, in addition to patients with various nutritional deficiencies.

Two CTH clinics were added to the list of clinics: one through COMSATS-KPK IT board project and the other handed back

earlier to the local health administration was reacquired.

Training and hands-on practice for staff at new Telehealth clinics was carried out to develop and enhance their understanding of telehealth, the standard procedures to carry out teleconsultations and use of telemedicine hardware and software.

Four medical technicians from the two centres were trained while two female health workers got trained in handling ultrasound probe to assist the gynecologist in Islamabad for antenatal ultrasounds.

COMSATS also initiated collaboration with the Health Informatics Department at COMSATS University for a one-day study visit of MS Health Informatics students to the COMSATS Telehealth.



As a part of health expo in Islamabad, CTH organized an awareness seminar with 50 participants, including representatives from NGOs, health organizations and universities (Section 5).

CTH participated in the following capacity building events and demonstrated its telemedicine system at various fora.

- Digitizing the Healthcare Sector – Challenges & Opportunities, November 2018, Colombo, Sri Lanka
- Digital Youth Summit, April 2018, Peshawar, Pakistan
- Tourism Gala, April 2018, Mirpur, Azad Jammu and Kashmir
- International Health Expo, October 2018, Islamabad, Pakistan

- International Students Convention & Expo at Pak China Business Center, December 2018, Islamabad, Pakistan
- COMSATS Carrier & Expo Fall 2018, COMSATS University Islamabad, December 2018, Islamabad, Pakistan

The President of Azad Jammu and Kashmir (AJK), Sardar Masood Khan, visited the facilities of CTH at CIS. The visit resulted in close collaboration between CTH and the Government of AJK leading to proposal submission for set up of telehealth centres in AJK, participation in a Gala in Mirpur and an online medical camp. A total of 286 patients benefited from the medical camp.

Agreements were signed with Khyber Pakhtunkhwa-IT (KPK-IT) Board for establishment of two new Telehealth Clinics in KPK.

Agreements were signed with:

- Baluchistan Research and Development Foundation (BRDF)/Dr Najma Ghaffar Hospital(DNGH)
- International Rescue Committee (IRC)
- Pakistan Asthma Allergy and Immunology Society (PAAIS)



Other possibilities of collaboration were explored with Pakistan Institute of Medical Sciences, Midland Doctors Medical Institute (MDMI), Welthungerhilfe and Commonwealth Centre for Digital Health(CWCDH), and COMSATS' Centres of Excellence, Al-Farabi Kazakh National University (KazNU), Kazakhstan and Industrial Research and Consultancy Centre (IRCC), Sudan.

COMSATS Internet Services (CIS)

CIS currently operates in 19 cities of Pakistan and has more than 12,000 customers in prominent organizations from public and private sectors, well-known national and international companies and firms, software and business companies, foreign missions, consulates and embassies, nongovernmental organizations, universities, and social development and research organizations.

CIS has eight core services branded as 'The Colors of CIS'. These include Tornado® (Wireless broadband), Hawaii™ (Domain, hosting, and VPS) and COMSpeed™ (Optical Fiber Connectivity). CIS' value added services include Hurricane™

(On-demand broadband), Prism™ (Website development), Viacon™ (Video conferencing), and COM meeting™ (web Conferencing Service).

CIS also offers a wide range of training courses, including Cisco®, CCNA and CCNP, Linux Administration, Windows® Administration, Microsoft Office®, Oracle® database administration, Web development, Graphics design, and ITIL® V3 Foundation.

CIS has well-equipped data centers in Islamabad, Lahore, Faisalabad & Peshawar offering a variety of services like Virtual Private Servers, Domain Registration, Website Hosting, Co-location of Servers and Rack space to its customers.

The experts of CIS Software development and IoT section are using Internet for human intelligence and development of useful IoT products, such as those to control water management, building safety & security, etc. This section has successfully developed new products, and upgraded applications for Government, semi-Government, nongovernmental and private organizations.



CIS acquired bandwidth growth from 3.5 GBPS in 2017 to 4.5 GBPS (approximately current bandwidth) in 2018.

CIS added new PoPs in the surrounding areas of Rawalpindi/Islamabad, new offices have been set up at Tarnol, BaraKahu, Wah/Taxila and PWD Colony areas of the Punjab province of Pakistan.

CIS set up stalls at the International Health Expo, Student Convention Expo, University & Colleges Expo for marketing of CIS products and CTH.

Scholarships Available from COMSATS' Platform

COMSATS University Islamabad (CUI), Pakistan, has a standing offer of 100 scholarships for graduate studies and 10 PhD scholarships / postdoctoral fellowships. During 2018, twelve students from Sudan, Jordan, Nigeria and Gambia availed these scholarships by enrolling in MS and PhD programmes.

One student from Pakistan is availing a PhD scholarship (out of 05 PhD scholarships / postdoctoral fellowships) offered by AlFarabi KazNU.

Consultations are being made with NRC, Egypt; IRCC, Sudan; ICCBS, Pakistan; and TUBITAK-MAM, Turkey, regarding scholarships offered by them during 21st Coordinating Council meeting.

Foreign Interns Programme

Under this programme, 16 international students of COMSATS University Islamabad (CUI) belonging to Cameroon, Ethiopia, Nepal, and Nigeria were engaged as interns during the year 2018. While seven students left for their home countries after completing their studies at CUI, nine students are still serving the Secretariat. These interns facilitated COMSATS' operations and helped liaise with ministries and relevant institutions in Member States.

Under their respective supervisors, the interns have performed the following tasks: Assisted in drafting proposals in areas of sustainable socio-economic development of the South; Helped develop proposals for various workshops and seminars that were to be organized by COMSATS, and were also a part of the organizers' team in these events; Prepared reports; Rendered writing, review and editing services for COMSATS' publications.



Publications and Information Dissemination

Information dissemination through publications and other means is an important mechanism of outreach for COMSATS, which is done through four major tools: bimonthly Newsletter, bi-annual journal 'Science Vision', COMSATS' Series of S&T Publications and COMSATS' official website, apart from other promotional material. From time to time, COMSATS also collaborates with different institutions to bring out joint publications.

COMSATS Newsletter

COMSATS Newsletter is not only the means of information dissemination on COMSATS' own undertakings, but is also an effective science diplomacy tool. During the calendar year 2018, the last issue of the 9th volume (2017) and five issues of the 10th volume (2018) of the newsletter documented and presented the activities of COMSATS Secretariat as well as its Centres of Excellence. Apart from the standard sections covering the activities of COMSATS Secretariat and Centres of Excellence, there were Special Reports, Opinion Articles; news on 'Science, Technology and Development', profiles of members of COMSATS' Technical Advisory Committee (TAC); profiles of Centers of Excellence: Al Quds University (AQU), Palestine; Al-Farabi Kazakh National

University (KazNU), Kazakhstan; and Tianjin Institute of Industrial Biotechnology (TIB), Chinese Academy of Sciences (CAS), China. So far, 60 issues of the publication have been published since its resumption in 2009.

The Newsletter is widely distributed to all the member countries, COMSATS' Centres of Excellence and other related organizations. Present and past issues of COMSATS Newsletter are available for viewing and downloading at the following URL: http://comsats.org/?page_id=150.

South-South and Triangular Cooperation – COMSATS' Experience (June 2018)

During the reporting period, a high-level



COMSATS' delegation participated in the 74th Session of UNESCAP (covered in Section 6). A publication titled "South-South and Triangular Cooperation – COMSATS' Experience" was compiled as COMSATS' profile on South-South and triangular cooperation since inception for presentation at the forum. The publication is available online at COMSATS' website on the following URL: http://comsats.org/wp-content/uploads/2018/06/Booklet_South-South-Cooperation.pdf

SDGs Related Publications

In accordance with its renewed thrust towards the promotion, advocacy and implementation of Sustainable Development Goals (SDGs), COMSATS arranged activities for creating awareness about SDGs as well as to engage relevant stakeholders for the institutionalization of the 2030 Agenda for Sustainable Development. In line with this, two events were organized during the reporting period, the details of which are covered in Section 4. These reports were:

- Report on Seminar on Sustainable Development Goals: The Role of Universities (http://comsats.org/wp-content/uploads/2018/10/Report_Seminar_on_SDGs_July2018.pdf)
- Report on Seminar on SDGs Implementation: The Collaboration among Universities (http://comsats.org/wp-content/uploads/2019/01/Report-Inner-Pages_SDGs-Implementation.pdf)

Profiles of COMSATS' Centres of Excellence

A document has been developed bearing brief profiles of the network of COMSATS' Centres of Excellence. These profiles

provide a quick overview of expertise available, sought as well as the existing portfolios of these institutions. All twenty-two (22) centres have been covered in this document with a uniform format. The document can be accessed at the following URL: http://comsats.org/Publications/Profile_of_COEs_January_2019.pdf

Information Dissemination through other Media

As per practice, the official website of COMSATS was kept updated with information on various undertakings and related aspects of the organization. The information made available on the website included: announcements, news and reports of all major happenings of the organization; new and updated information material; and updated contact information of members of major organs of COMSATS.

As part of its advocacy of science and relevant issues, COMSATS engages with the local print media by means of important messages and information on the organization. Two major events of this sort had the participation of COMSATS: Anniversary of Prof. Dr. Abdus Salam (January 29) and World Science Day (November 10).

Moreover, another well reputed journal of Pakistan celebrated its 70th anniversary of advertising in 2018. COMSATS' contribution in the same highlighted the organization's major achievements in ICTs, which include CUI, CIS and tele-health.

COMSATS tele-health contributed an article and advertisement on the significance and impact of telemedicine in Pakistan in a medical periodical.



Financial Affairs

COMSATS Secretariat manages the annual grant by the Government of Pakistan for meeting the recurring expenditure of the Secretariat and the Annual Membership Contributions received from COMSATS' Member States, as well as COMSATS' Endowment Fund.

Apart from the annual contribution of PKR 40.00 million towards the running cost of COMSATS Secretariat, the Government of Pakistan makes the Annual Membership Contribution (AMC) of US\$20,000.

During calendar year 2018, COMSATS received Annual Membership Contributions (AMC) from four (04) member states as shown in the table.

Annual Membership Contribution - 2018	
Country Name	Amount (US\$)
China	51,568
Iran	10,000
Pakistan	20,000
Sri Lanka	20,000
Total	101,568

Since creation of COMSATS' Endowment Fund during the 2nd General Meeting of

COMSATS held on 16-17 April 2012 in Islamabad, Pakistan, the Government of Pakistan has issued US\$ 0.1 million equivalent to PKR 10 million out of the total commitment of US\$ one million (PKR 100.00 million). The balance amount of US\$ 0.90 million (PKR 90.00 million) is expected to be released

The Auditors' Report and Audited Financial Statements for the said year FY 2016-2017 were approved by the Coordinating Council of COMSATS during its 21st Meeting of COMSATS Coordinating Council, 3-4 April 2018, Almaty, Kazakhstan. The accounts for the financial year ended on June 30, 2018. The Auditors' Report and Audited Financial Statements for the year 2018 will be submitted to the Coordinating Council of COMSATS in its 22nd meeting scheduled to be held in China, in April 2019.







COMSATS' Centres of Excellence



BCSIR-Bangladesh



Embrapa Agrobiologia-Brazil



ICCES-China



TIB-China



CIF-Colombia



NRC-Egypt



CSIR-Ghana



IROST-Iran



ICENS-Jamaica



RSS-Jordan



KazNU-Kazakhstan



NMC-Nigeria



CUI-Pakistan



ICCBS-Pakistan



AQU-Palestine



ITI-Sri Lanka



IRCC-Sudan



UCAD-Senegal



HIAST-Syria



TIRDO-Tanzania



CERTE-Tunisia



TÜBİTAK MAM-Turkey



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