

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

# Annual Report 2017





















































# ANNUAL REPORT 2017

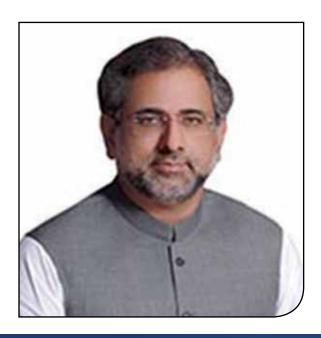


Commission on Science and Technology for Sustainable Development in the South (COMSATS)



## Hon. Nana Addo Dankwa Akufo-Addo President of Ghana Chairperson COMSATS

Hon. Nana Addo Dankwa Akufo-Addo became the 13th President of the Republic of Ghana after winning the country's Presidential Election 2016. On 7th January 2017, he took charge as the President of Ghana, by virtue of which he is an ex-officio Chairperson of COMSATS. The Chair of COMSATS was rotated in 2012 from Pakistan to Ghana through consensus among the members of COMSATS' Commission at its 2<sup>nd</sup> General Meeting held in Islamabad. The Chair was later passed on to Mr. Akufo-Addo by his predecessor, Mr. John Dramani Mahama. As a lawyer, Mr. Akufo-Addo worked to champion the cause of human rights, rule of law, justice, freedom, and democracy in Ghana.



H.E. Mr. Shahid Khaqan Abbasi Prime Minister of Pakistan Head of the Host Country, Pakistan

Mr. Shahid Khaqan Abbasi is the incumbent Prime Minister of Pakistan. He has been holding the office since 1<sup>st</sup> August 2017. Prime Minister Abbasi plans to bring reforms in the education, health, and developmental sector to help Pakistan progress socially and economically. His Excellency has taken steps for cementing bilateral relations with other countries as well as devised effective policies for the reinforcement of Pakistan's economy.

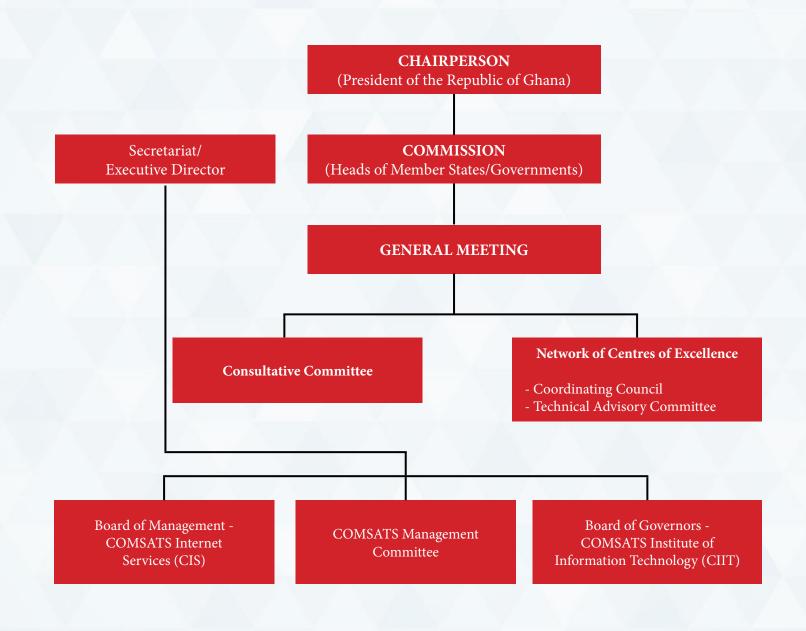
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#### **ORGANOGRAM**







#### **COMSATS' PROFILE**

The Commission on Science and Technology for Sustainable Development in the South (COMSATS) was established in October 1994 as an international/intergovernmental organization to act as a global forum of developing countries for their sustainable socio-economic uplift through the applications of science and technology. COMSATS' current membership includes 26 countries located in the continents of Africa, Asia, Latin America (and Eurasia), representing a population of over one-third of the world's total.

These countries have diverse social, cultural, economic, political, educational and religious backgrounds, and also differ greatly in their scientific and technological potentials. Their common aspirations for development through cooperation in S&T capacity-building is the *raison detre* of their membership of COMSATS.

The Secretariat of COMSATS is permanently located in Islamabad, Pakistan, which is supported by the generous grants from the Government of Pakistan. The membership of COMSATS is open to all developing countries. However, the organization now aspires to broaden its horizons to all countries and institutions from the North.

#### **MISSION**

The mission of COMSATS is to 'help create a world where all nations/states are at peace with one another and capable of providing a good quality of life to their populations in a sustainable way, using modern scientific and technological means'.

#### **OBJECTIVES**

The major objectives and functions of COMSATS as given in its Statutes are:

- To sensitize the countries in the South to the centrality of science and technology in the development process, to the adequate resource allocation for research and development, and to the integration of science and technology in the national and regional development plans;
- To support the functioning and activities of the Network of International Science and Technology Centres for Sustainable Development in the South, established at the foundation meeting of the Commission;
- To support other major initiatives designed to promote indigenous capacity in science and technology for science-led sustainable development, and to help mobilise long-term financial support from international donor agencies and from Government/Institutions in the North and the South to supplement the financing of international scientific projects in the South;
- To provide leadership and support for North-South and South-South cooperative schemes in education, training and research, such as the proposal to set up programmes of scholarships for research at centres of excellence in the South; and
- To support the relevant programmes and initiatives of major scientific organisations working for the development and promotion of science and technology in the South.





**Dr. S.M. Junaid Zaidi**Executive Director COMSATS

Dr. S. M. Junaid Zaidi assumed the charge of Executive Director in February 2017, by virtue of which he is also the ex-officio Secretary to the Commission, Coordinating Council and the Consultative Committee. He has rich and diverse experience spanning over forty years, ranging from his work for international and national organizations, educational-institution building, and research and teaching to foreign collaborative ventures. He has been the founding Rector of a Centre of Excellence of COMSATS, the COMSATS Institute of Information Technology (CIIT), which has phenomenally grown in operations and reputation both nationally and internationally. He is a recipient of two prestigious national awards of Pakistan, Sitara-i-Imtiaz and Hilal-i-Imtiaz.

#### **FOREWORD**

The development gap between the North and the South is attributed to a variety of reasons. These, inter alia, include lack of scientific education and technological expertise, and the resultant inability of the people in the South to benefit from the modern day scientific advancements taking place around the world. The situation calls for enhancing indigenous capacities of the countries in the South and a greater integration and cooperative use of scientific and technological resources to accelerate their pace of economic development.

Evidently, the North has outpaced by gaining excellence in science and technology and benefiting from their appropriate application in the development process. The fact that the South has lagged far behind in this process is the cause of concern for the world at large and which draws the focus of development agencies to narrowing the development gap between the North and South.

Realizing the need for sensitizing the countries of the South to the need for prioritizing and integrating science and technology in their development plans and allocating adequate resources to research and development, COMSATS was conceived and established as an inter-governmental organization to serve as a catalyst in the process of South-South cooperation for sustainable development.

It is a matter of great pride for COMSATS to have sustained its endeavors for over 23 years in line with the call of its mandate. The organization has so far achieved a number of milestones in terms of bringing together many developing countries to a common platform for cooperative efforts to improve the lot of their populations. Today, the membership of COMSATS stands at 26 member states from Africa, Asia (and Eurasia), Latin America. This number in expected to grow manifold, as a number of countries have shown their readiness to join the organization. We believe that the keen interest and increasing active support of member states will greatly help COMSATS bring about the desired upturn in the developing world. During 2017, COMSATS continued to pursue its

agenda of spawning a positive change in the attitude and approach towards greater South-South and North collaboration for sustainable development in line with the United Nations agenda of diminishing the North-South Divide. While a good number of achievements were made during the reporting year 2017, the highlights of the year, inter alia, are the expansion in the membership of the Network. We are happy to report that due to our persistent efforts, we were able to persuade Somalia, Turkey and the Al-Quds University, Palestine, to join COMSATS. Other key achievements include signing of MoUs for mutual collaboration with OCERT, UNESCAP, and IPD. Besides, breaking the ground for incorporating the European Union and institutions from the UK provided the Organization a renewed impetus. The good working relations with existing partners like ISESCO and UNESCO were further strengthened through mutual consultations.

Be it financial constraints, dearth of human resources or other pressures, we at COMSATS have not wavered in our pursuit of science-led sustainable development in the Member Countries.

I would like to extend my sincere gratitude to all the member states for their continued patronage and support that motivates us to work towards the achievement of the Organization's objectives. I am greatly indebted to the Chairpersons of the Coordinating Council and Consultative Committee, as well as the Heads of the Focal Ministries and the Centres of Excellence for their backing. I also thank all the partner organizations for their support and sharing of resources. I am extremely grateful to my colleagues at COMSATS Secretariat for their devotion, diligence and commitment to their work for COMSATS. Needless to say that without the hard work of the editorial team, the publication of this report would have not been possible.

I am confident that the readers will find the report informative and useful. Suggestions for improvement in undertakings of the Organization as well as the contents of this report are highly welcome.

# COMSATS' Focal Ministry in Pakistan Ministry of Science & Technology, Government of Pakistan

The Ministry of Science and Technology (MoST) has been functioning since 1972. It is the national focal point and enabling arm of Government of Pakistan for planning, coordinating and directing efforts; to initiate and launch scientific and technological programs and projects as per national agenda for sound and sustainable S&TR base for the socio-economic development, to achieve the vision for a better Pakistan, in terms of the mandate contained in Schedule-II of the Federal Government Rules of Business 1973.

From the areas of industrial development to renewable energy and rural development, the Ministry suggests technological development for higher growth-rates and to improve standards of living. Its principal focus is on building Pakistan's technological competence in the 21st century as we enter new markets, developing a larger pool of human resources to reverse brain drain, and for integrating the existing technological infrastructure for strengthening of technology institutions, effective governance of S&TR and enhancing the capacity of indigenous innovation systems.

URL: www.most.gov.pk



H.E. Rana Tanveer Hussain

Federal Minister for Science and Technology, Pakistan Head of COMSATS' Focal Ministry in the Host Country

H.E. Mr. Rana Tanveer Hussain is the current Minister for Defence Production and the Minister for Science and Technology, Government of Pakistan. Mr. Hussain has been an elected member of the National Assembly of Pakistan since 1985. In addition to briefly holding the cabinet portfolio of Minister for Defence Production in 2008, he has previously served as Parliamentary Secretary to Ministry of Finance, Special Assistant to the Prime Minister on Finance, as well as Parliamentary Secretary to the Prime Minister.

#### **MESSAGE**

In the current age of unprecedented scientific and technological advancements, the world remains divided into the prosperous and struggling, to put it simply. It makes one wonder as to why the farreaching nature of the benefits of the wonders of S&T does not actually reach as far as it should. As a government functionary of a developing country myself, I have seen up-close the challenges faced in this regard. One truth remains undeniable amidst all the relevant debates that serious consideration and pursuit of S&T for development at the highest levels of the governments is indispensible.

Functioning since 1972, the Ministry of Science and Technology (MoST) has been conscious of such development needs. One of the ministry's mandates pertains to initiating and launching S&T programmes and projects for socio-economic development.

The Government of Pakistan went a step ahead in this regard in 1994 when it hosted the International meeting that led to founding of the Commission on Science and Technology for Sustainable Development in the South (COMSATS). For over 23 years now, the MoST prides itself in hosting the Secretariat of a Head of State level International organization – working for something as important as S&T Cooperation.

MoST, Pakistan, appreciates the organization's aspirations to augment the South-South cooperation by triangulating it with the involvement of the North during the year 2017. It is satisfying to note the new avenues of cooperation in this connection. Through COMSATS, the Government of Pakistan is ready to play its due role for international cooperation in S&T and urge other Member States to make similar commitments for helping to achieve the mission of COMSATS.

My best wishes to the organization and hope that it will succeed in its efforts of transforming the landscape of science and technology in the member countries to help them prosper.

#### **Focal Ministries in Member States**



Technology



Pakistan Ministry of Science and Technology



Palestine Ministry of Education and Higher Education



**Philippines** Department of Science and Technology



Senegal Ministry of Higher Education, Universities, Regional University Centres and Scientific Research



Somalia Ministry of Education, Culture and Higher Education



Sri Lanka Ministry of Science, Technology and Research



Ministry of Science and Communications



Syria Ministry of Higher Education



Tanzania Ministry of Communication, Science and Technology



Tunisia



Ministry of Higher Education and Scientific Research



Turkey The Scientific and Technological Research Council of Turkey (TUBITAK)



Uganda Uganda National Council for Science

& Technology



**Zimbabwe** Ministry of Higher and Tertiary Education, Science and Technology Development



**Mrs. Yasmin Masood**Federal Secretary, Ministry of Science and Technology,
Government of Pakistan

By virtue of her current position, Mrs. Yasmin Masood has been the ex-officio Chairperson of COMSATS Consultative Committee since September 14, 2017. In the past, Mrs. Masood has held the office of Secretary of Benazir Income Support Programme (BISP).

# FROM THE CHAIRPERSON CONSULTATIVE COMMITTEE

The importance of consensus building in crucial affairs of national, regional and global levels is undeniable. Be it climate change or clean energy, water scarcity or food security, from novel solutions to important issues facing the masses, influencers and decision-makers need to be brought to agreement for sustainable and durable fixes.

The Government of Pakistan through its generous support to COMSATS is making its due contribution towards global advocacy for cooperation in S&T for development. The organization is not only striving for its mission but also working to expand its scope, mandate and membership. In 2017, Turkey and Somalia becoming the 25<sup>th</sup> and 26th member state, respectively, is a very welcome sign for the expanding horizons of the organization.

The activities of the organization in the reporting period are testimonials of commitment to its mission. International collaborations that the organization seeks to expand are now touching the North, while enhanced interactions with the countries of the South are strengthening its long haul efforts for South-South Cooperation.

The organization is now gearing up for more focused efforts for realizing achievement of Sustainable Development Goals (SDGs) in member states. As the Chairperson of COMSATS Consultative Committee, I would like to urge all the COMSATS focal points to make available their due support to the organization in this regard.

I wish the organization a fruitful 2018 and more successes in the future.

## Members of COMSATS Coordinating Council



**Mr. Md. Faruque Ahmed** Chairman, BCSIR, Bangladesh



**Dr. Gustavo Ribeiro Xavier** Director General Embrapa Agrobiologia, Brazil



**Prof. Lin Zhaohui** Director ICCES, China



**Dr. Eduardo Posada F.** Director CIF. Colombia



**Prof. Dr. Victor Agyeman**Director-General CSIR, Ghana



**Dr. Fathollah Moztarzadeh**President IROST, Iran



**Mr. Charles N. Grant**Director General ICENS, Jamaica



**HRH Princess Sumaya bint El Hassan** President RSS, Jordan



**Prof. Dr. G. M. Mutanov** Rector KazNU, Kazakhstan



**Prof. Stephen E. Onah** Director NMC, Nigeria



**Prof. Dr. M. Iqbal Choudhary** Director ICCBS, Pakistan



**Prof. Dr. Raheel Qamar** Rector CIIT, Pakistan



**Prof. Dr. Imad F. S. Abukishek**President AQU, Palestine



**Dr. G.A.S. Premakumara** Director General ITI, Sri Lanka



**Dr. Widad H. A. H. Hassan**Director General IRCC, Sudan



**Prof. Ibrahima Thioub** Rector/President UCAD, Senegal



**Dr. Maher Suleiman**Director HIAST, Syria



**Prof. M. M.A. Mtambo**Director General TIRDO, Tanzania



**Prof. Ahmed Ghrabi**Director General CERTE, Tunisia



**Dr. Orkun Hasekioglu** President TUBITAK MAM, Turkey



**Prof. Dr. Ashraf Shaalan** President National Research Centre (NRC), Egypt.

Prof. Ashraf H. Shaalan is the President of Egypt's prestigious research institution, the National Research Centre. He was elected as the Chairperson of COMSATS Coordinating Council, during its 19th Meeting held in Islamabad, Pakistan, in May 2016. As an academic, Prof. Shaalan has published his work mostly focused on child growth and development, child nutrition and assessment of nutritional status. He is also the Editor of the Egyptian Medical Journal of NRC (MJNRC) and member of scientific board of many other scientific journals.

# FROM THE CHAIRPERSON COORDINATING COUNCIL

It is a matter of great pride and honour for me as Chairperson of COMSATS Coordinating Council to present to the readers COMSATS Annual Report 2017, covering the organization's main activities during the calendar year 2017. This report highlights many notable achievements which reflect the organization's continued progress in pursuit of improved programs and programmes, research activities, and knowledge-sharing for the millions of our citizens.

As the year ends, we are pleased to share our achievements over the past 12 months or so with you. This year marked an incredibly active period for COMSATS' performance, including new affiliated centre of excellence in Palestine in early 2017. In December 2017, we celebrated induction of Somalia as the 26th Member State of the Commission on Science and Technology for Sustainable Development in the South (COMSATS).

As you read the report, I hope you will gain insight into the breadth and depth of COMSATS'

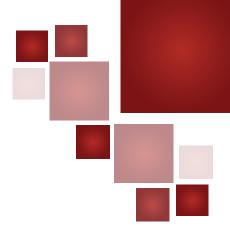
outstanding activities. As the Chairman of COMSATS Coordinating Council, I pledge to continue the quest for greater cooperation among COMSATS Centres of Excellence by means of spreading knowledge, launching better programs, and enhancing capacity. The accomplishments over the past year and the work ahead depend on the support and contributions of the Centres of Excellence and dedicated staff, for which I am thankful.

Our aim for next year is to focus on scaling up of our work together, strengthening strategic partnerships among our member states as well as other entities.

We welcome and appreciate the continued support of COMSATS member states in helping us make our vision a reality.

Thank you and I look forward to another amazing year with COMSATS.





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# Section 1: Activities of COMSATS' Statutory Bodies

	•	20th Meeting of COMSATS Coordinating Council	
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- Second Meeting of COMSATS Technical Advisory Committee 11
- 41st Meeting of COMSATS Management Committee 13

## 20th Meeting of COMSATS Coordinating Council

The Coordinating Council of COMSATS comprises the Heads of its 21 International S&T Centres of Excellence. The Council meets once annually to decide on matters relating to the membership of the Network, in consultation with the Consultative Committee. The Council also approves the programmes and budget of the COMSATS' Network, as well as makes rules for governing its own procedures.



The Coordinating Council, COMSATS' most active technical cooperation forum, continued its tradition of annual meetings to make decisions for smooth functioning of the Network enabling it to duly contribute towards the organization's mandate. The Network presently has 21 S&T, R&D, and higher education institutions from 20 developing countries. In 2017, the Council met for the twentieth time in Egypt on 14-15 May 2017.

This meeting was generously hosted by COMSATS' Centre of Excellence in Egypt, the National Research Centre (NRC) in Cairo.

The meeting had representation from 14 Centres of Excellence of COMSATS: BCSIR-Bangladesh, ICCES-China, NRC-Egypt, CSIR-Ghana, KazNU-Kazakhstan, NMC-Nigeria, ICCBS-Pakistan, CIIT-Pakistan, ITI-Sri Lanka, IRCC-Sudan, UCAD-Senegal, TIRDO-Tanzania, CERTE-Tunisia, and TUBITAK MAM-Turkey, as well as the honorary life time member of the Council, Prof. M.H.A.

Hassan, Executive Director TWAS. A representative of UNESCO also attended the meeting as observer. The meeting was also attended by a two-member delegation of Al-Quds University (Palestine) led by its President, in connection with the university's request for induction in COMSATS' Network of International S&T Centres of Excellence.

#### Inauguration

The meeting was inaugurated on 14th May 2017 by H.E. Prof. Khaled Kassem, Senior Assistant Minister for Strategic Plans and Supporting Systems, Ministry of Higher Education and Scientific Research, Arab Republic of Egypt. In addition to the senior officials of NRC and COMSATS, the ceremony was attended by senior officials of the diplomatic missions of Jordan, Pakistan and Kazakhstan in Cairo; and representatives of universities, R&D institutions, ministries and government departments of Egypt.

H.E. Prof. Khaled Kassem opened the two-day meeting with a warm welcome to the participants. He considered COMSATS a potent platform for facilitating networking and scientific collaborations among developing countries. Keeping in view the limited financial resources in the developing countries, Prof. Kassem stressed the need for determining research priorities according to national developmental needs. Appreciating the ongoing programmes and activities of COMSATS, he urged the organization to continue providing opportunities for exchange of human and technological resources among the developing countries. Prof. Kassem also updated the participants on the ongoing activities of his Ministry.

In his inaugural message, Prof. Dr. Ashraf Shaalan, President NRC, Egypt, and Chairperson of the Council, welcomed the participants and congratulated Dr. S. M. Junaid Zaidi on his appointment as the Executive Director COMSATS. He expressed pleasure over hosting this year's Council meeting that made NRC





the only Centre of Excellence to have hosted three Council meetings. He stated that in the present knowledge-based era, science and technology is the primary factor of production and development, as the global competitiveness depends on the ability to create, develop, and practical utilization of new scientific discoveries and innovations. He stated that innovation is at the heart of any country's ability to finding economically, socially, and environmentally sustainable solutions to the challenges faced by societies today, such as climate change, energy crisis, health problems and shortage of water,

etc. He hoped that the present meeting would succeed in enhancing scientific collaborations among the Network members for jointly addressing these challenges.

Speaking on the occasion, Dr. Zaidi expressed gratitude towards NRC for its generous hospitality and excellent arrangements of the meeting. He thanked the honourable Senior Assistant Minister, MHESR, for gracing the ceremony with his presence, which indicated the Government of Egypt's solidarity with COMSATS. He stated that science and technology is

the most effective tool for improving the socio-economic conditions of developing countries. Therefore, developing countries must pay attention to devising effective national policies and action plans for development of adequate infrastructure and facilities that are indispensable for research and development. He believed that these efforts could be catalyzed through international cooperation in science and technology, particularly South-South cooperation. In this regard, the Executive Director highlighted the past and ongoing programmes and activities of COMSATS, including its



"COMSATS is an effective platform for facilitating networking and scientific collaborations among the developing countries."

H.E. Prof. Khaled Kassem, Senior Assistant Minister for Strategic Plans and Supporting Systems, Ministry of Higher Education and Scientific Research, Egypt

flagship projects in Pakistan. He also announced the Turkish Parliament's then recent endorsement to ratification of the Accession Agreement for joining COMSATS, which was earlier signed by the Ambassador of Turkey to Pakistan. In his message, Prof. Mahmoud Sakr, President of the Academy of Scientific Research and Technology (ASRT), Egypt, stated that COMSATS is an excellent platform for internationalization of



"Our global competitiveness depends on our ability to create, develop and make practical use of new scientific discoveries. In brief: our capacity to innovate... innovation is at the heart of our ability to find solutions that are economically, socially, and environmentally sustainable."

> Prof. Dr. Ashraf Shaalan, Chairperson COMSATS Coordinating Council

research efforts being made by various Member States/Centres of Excellence. He expressed interest in developing collaboration between ASRT and COMSATS in capacity-building and joint research projects.

#### **Technical Deliberations**

The technical sessions of the two-day meeting were chaired by Prof. Shaalan.



"Adequate investment for capacity building of scientific human resources is of paramount importance. The developing countries must also pay attention to devising effective national policies and action plans for development of adequate infrastructure and facilities for productive research and development."

> Dr. S. M. Junaid Zaidi Executive Director COMSATS

The participants deliberated on a 13-point agenda.

Under one of the agenda items, the Advisor (Programmes) COMSATS presented COMSATS' Annual Activity Report (May 2016 – April 2017), while the Executive Director presented the future plans of the organization. Moreover, the heads/representatives of the Centres of Excellence presented scientific activities























of their respective Centres since the last Council meeting, in order to identify areas of potential cooperation among the Council members. The Advisor (Programmes) COMSATS also briefed the Council about the implementation status of the decisions taken by the Council in its previous meeting, while Director (Finance and Accounts) presented the administrative and financial matters of COMSATS.

The Council unanimously approved the proposed induction of Al-Quds University, Palestine, in COMSATS' Network as its 21<sup>st</sup> member. The approval was made in response to the University's application in this regard and a detailed presentation by the President of the University.

Under another agenda-item, progress reports of the International Thematic Research Groups (ITRGs) on 'Climate Change and Environmental Protection', 'Information and Communication Technologies', 'Natural Products Sciences', 'Mathematical Modeling', and 'Agriculture, Food Security and Biotechnology' were presented by the Group Leaders/representatives of the Lead Centres.

During discussion on the possible offer of PhD scholarships/post-doctoral fellowships by each Centre of Excellence to COMSATS' Member States, ICCBS-Pakistan and CIIT-Pakistan, offered

#### Scholarships offered by COMSATS' Centres of Excellence

Students from COMSATS' Member States are welcome to benefit from the following offers from COMSATS Centres of Excellence:

- Hundred scholarships for students/researchers for postgraduate studies and ten scholarships for post-doctoral fellowships at all campuses of COMSATS Institute of Information Technology (CIIT), Pakistan.
- Seven Ph.D scholarships [4 fully paid and 3 partially paid (50%)] and five-postdoctoral fellowships at the Iranian Research Organization for Science and Technology (IROST), Iran.
- Ten doctoral scholarships/post-doctoral fellowships at the International Center for Chemical and Biological Science (ICCBS), Pakistan.
- Five post-doctoral fellowships at the National Research Centre (NRC), Egypt, and International Centre for Climate and Environment Sciences (ICCES), China, each.
- One post-doctoral fellowship at Bangladesh Council for Scientific and Industrial Research (BCSIR), Bangladesh.

Contact for more information: Mr. Tajammul Hussain, Advisor-Programmes (tajammul@comsats.org)

ten (10) PhD scholarships/postdoctoral fellowships each, while NRC-Egypt offered five (05) PhD scholarships/postdoctoral fellowships to COMSATS Member States. Other Centres of Excellence also expressed readiness to offer such fellowships to COMSATS Member States and agreed to send relevant details to COMSATS Secretariat soon. In this regard, ICCES-China offered 5, BCSIR-Bangladesh 1, and KazNU-Kazakhstan 5 PhD scholarships/post-doctoral fellowships.

The Council also deliberated upon reconstituting COMSATS' Technical

Advisory Committee (TAC), as the existing members had completed their three-year tenures. It was agreed that each Centre of Excellence would submit 2-3 nominations of renowned scientists/ experts from their respective countries to COMSATS Secretariat. The decision regarding induction of suitable candidates in TAC was later jointly made by the Chairperson Coordinating Council, Executive Director TWAS and Executive Director COMSATS, as authorized by the Coordinating Council.

During discussions on the new initiatives













for collaboration and the way forward, it was agreed that COMSATS' ministerial Consultative Committee shall be activated to hold regular meetings at appropriate level, and their agenda would be prepared in consultation with the Coordinating Council.

The Executive Director emphasized the need for strengthening the existing Centres of Excellence with adequate human and technical resources, as well as inducting new state-of-the-art Centres in the Network. It was recommended that following the successful example of CIIT-Pakistan, COMSATS may establish a few new Centres of Excellence in Member States. This proposal constituted a key discussion point for the meetings held with delegates and representatives of foreign missions of developing countries held during the year (Section 5).

The Centres of Excellence were urged to

enhance mutual networking to share their human and technical resources for mutual benefit of the Member States. It was agreed that opportunities of fellowships available at TWAS shall be examined and availed by the Centres of Excellence. The Council desired to have representatives of Member States/Centres of Excellence at COMSATS Secretariat for enhancing the efficacy and impact of its programmes and activities.

The meeting also issued a Communiqué that encourages the Centres of Excellence to:

- enhance cooperation with other Network members for launching new projects and programmes for the benefit of Member States;
- become creators of knowledge in addition to being users;
- launch the remaining two ITRGs on 'Materials Science' and 'Construction Materials', and arrange funds for the

activities of existing ITRGs from their respective governments;

- sensitize their respective governments regarding benefits of regularly making Annual Membership Contributions for financial sustainability of COMSATS;
- keep COMSATS Secretariat updated on new developments and major achievements of their organizations; and
- contribute scientific articles for publication in COMSATS' bi-annual journal, 'Science Vision'.

The meeting appreciated the efforts being made by COMSATS Secretariat in fulfilling the objectives of the organization. The Coordinating Council also welcomed Dr. S. M. Junaid Zaidi as the new Executive Director of COMSATS, and hoped that COMSATS would make further progress under his leadership, achieving the objectives of the organization. The Council also expressed gratitude to all of the previous Executive Directors of COMSATS for their sincere efforts and contributions in stewarding the programmes of the organization.

#### TAC Members Approved as Authorized by the Council

- Prof. Huadong Guo, Professor, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China.
- Dr. Yin Li, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China
- Dr. Amal Al-Aboudi, Department of Chemistry, University of Jordan, Amman, Jordan
- Dr. Sabah AlMomin, Research Scientist, Biotechnology Program, Kuwait Institute for Scientific Research (KISR), Safat, Kuwait
- Dr. Sok Ching Cheong, Cancer Research Initiatives Foundation (CARIF), Selangor, Malaysia.
- Prof. Sahalu B. Junaidu, Dept. of Computer Science, Ahmadu Bello University, Zaria, Nigeria.
- Prof. Talgat Inerbaev, Research Fellow, National University of Science and Technology (MISIS), Moscow, Russia
- Prof. Mustafa Omar Nawari, Professor of Dynamical and Information Systems, Khartoum, Sudan
- Dr. Jalila Ben Salah-Abbas, Higher Institute of Biotechnology of Monastir, Monastir, Tunisia.
- Prof. Dr. Richard Catlow, Head of Department of Chemistry, University College London
- London, United Kingdom.

#### Conclusion

Speaking at the closing ceremony of the meeting held on the evening of 15<sup>th</sup> May 2017, the Executive Director COMSATS hoped that the decisions of the meeting shall be actively followed-up by the concerned Centres of Excellence for enhancing meaningful collaborations within the Network. The President NRC thanked the foreign delegates for their participation in the meeting. He also thanked the local organizing committee members for their efforts for organizing the meeting.



#### Participants of the 20th Coordinating Council Meeting, Cairo, Egypt

- Prof. Dr. Ashraf Shaalan, National Research Centre (NRC), Egypt (Chairperson)
- Dr. S. M. Junaid Zaidi, Executive Director COMSATS (Secretary to the Council)
- Dr. Md. Sarwar Jahan, Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh
- Prof. Lin Zhaohui, International Center for Climate and Environment Sciences (ICCES), China
- Ms. Wencheng Chen, International Center for Climate and Environment Sciences (ICCES), China
- Prof. Hosam El-Sayed, National Research Centre, Egypt
- Prof. Dr. Victor Kwame Agyeman, Council for Scientific and Industrial Research (CSIR), Ghana
- Dr. Eugene Atiemo, Council for Scientific and Industrial Research, Ghana
- Prof. Tlekkabul Ramazanov , Al-Farabi Kazakh National University (KazNU), Kazakhstan
- Prof. Ejugwu Stephen Onah, National Mathematical Centre (NMC), Nigeria
- Prof. Dr. M. Iqbal Choudhary, International Center for Chemical and Biological Sciences (ICCBS), Pakistan
- Prof. Dr. Farzana Shaheen, International Center for Chemical and Biological Sciences (ICCBS), Pakistan
- Prof. Dr. Raheel Qamar, COMSATS Institute of Information Technology (CIIT), Pakistan.
- Prof. Izhar Hussain, COMSATS Institute of Information Technology (CIIT), Pakistan
- Prof. Dr. Imad F. S. Abukishek, Al-Quds University, Palestine
- Prof. Dr. Radwan F. H. Qasrawi, Al-Quds University, Palestine
- Dr. Sirimal Premakumara Galbada Arachchige, Industrial Technology Institute, Sri Lanka
- Dr. Einas Elmughira Hamad Mohamed, Industrial Research & Consultancy Center (IRCC), Sudan
- Prof. Ibrahima THIOUB, University Cheikh Anta Diop of Dakar (UCAD), Senegal
- Prof. Mkumbukwa Madundo Angelo Mtambo, Tanzania Industrial Research and Development Organization (TIRDO), Tanzania
- Mr. Mohamed Ben Amor, Water Researches and Technologies Centre of Borj-Cedria (CERTE), Tunisia
- Dr. Orkun Hasekioglu, TUBITAK Marmara Research Centre (MAM), Turkey
- Prof. Dr. Mohamed H. A. Hassan, The World Academy of Sciences (TWAS), Italy
- Mr. Nazar Hassan, UNESCO Office, Egypt
- Mr. Tajammul Hussain, COMSATS Secretariat, Pakistan
- Mr. Amanullah Khattak, COMSATS Secretariat, Pakistan
- Mr. Farhan Ansari, COMSATS Secretariat, Pakistan

The Al-Farabi Kazakh National University (KazNU), Kazakhstan, was selected as the host for the 21st Coordinating Council Meeting scheduled for April 2018. Moreover, TUBITAK Marmara Research Centre (MAM), Turkey, and the International Center for Chemical and Biological Sciences (ICCBS), Pakistan, were selected as alternative venues.







#### Communiqué of the 20<sup>th</sup> Meeting of COMSATS Coordinating Council (14 – 15 May 2017, Cairo, Egypt)

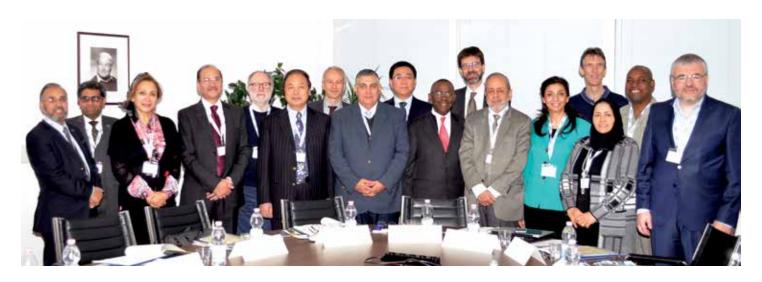
The participants of the 20<sup>th</sup> meeting of COMSATS Coordinating Council, including the representatives of fourteen Centres of Excellence, deliberated upon the thirteen-point agenda of the meeting on 14-15 May 2017, and are pleased to unanimously adopt the following statement:

- 1. The Coordinating Council pays gratitude to the National Research Centre (NRC) for making excellent arrangements for the meeting and for providing warm hospitality to its participants. The administrative support of COMSATS Secretariat to NRC for the successful organization of the meeting, including active correspondence with the invitees and preparation of necessary documentation, is highly appreciated.
- 2. The excellent moderation of the discussions during various technical sessions of the meeting by the Chairperson Coordinating Council, Prof. Dr. Ashraf Shaalan, President NRC, is lauded.
- 3. The Coordinating Council is immensely pleased to welcome Dr. S. M. Junaid Zaidi as the new Executive Director of COMSATS, who has previously made outstanding contributions towards the organization as the founding Rector of COMSATS Institute of Information Technology (CIIT). It is hoped that under the leadership of Dr. Zaidi, the programmes of COMSATS will be further enhanced in order to achieve the objectives of the organization. The Council also expresses gratitude to all of the previous Executive Directors of COMSATS for their sincere efforts and contributions towards fostering the programmes and activities of the organization.
- 4. The Coordinating Council is pleased to welcome the Al-Quds University (Palestine) as a member of COMSATS' Network of Centres of Excellence. It is hoped that Al-Quds University will actively participate in the programmes and activities of COMSATS and will establish strong collaborative ties with other members of the Network.
- 5. The Council is pleased to learn about the nomination of the National University of Science and Technology (Zimbabwe) for induction in COMSATS' Network of Centres of Excellence. It is desirable that the necessary formalities for induction of the Mohamed V University (Morocco) and the National University of Science and Technology (Zimbabwe) in COMSATS' Network are completed before the next Council meeting. COMSATS Secretariat is encouraged to continue its efforts to extend the membership of COMSATS' Network to all Member States.
- 6. The Council highly appreciates the contributions made by the members of COMSATS' Technical Advisory Committee (TAC) who have served the organization on voluntary basis during the period 2014-17. The Technical Advisory Committee shall be reconstituted since the three-year tenure of its members has been completed. The decision regarding the induction of new members shall be taken jointly by the Chairperson Coordinating Council, Executive Director TWAS and Executive Director COMSATS. The Council looks forward to the valuable advice and guidance of the new members of the Technical Advisory Committee regarding various programmes and activities of the organization.
- 7. The Council gratefully acknowledges the financial and in-kind contributions by the Member Countries towards COMSATS' activities. The payment of Annual Membership Contribution (AMC) by China, Jordan, Kazakhstan, Nigeria, Pakistan, Sri Lanka and Sudan, is noted with appreciation.

- 8. The Council is pleased to learn about the high quality of research and academic activities being undertaken at the Centres of Excellence, including NRC. The offers of collaboration and exchange of scientific and technological resources made by various Centres of Excellence are highly appreciated. The Network members are encouraged to make the best utilization of these offers with a view to contribute towards the socioeconomic development of the South.
- 9. The offer of scholarships and post-doctoral fellowships to COMSATS' Member States by various Centres of Excellence is a welcome step, which is acknowledged with appreciation. The Member States are encouraged to make the best use of these offers for capacity building of their scientific workforce.
- 10. The proposals for new initiatives presented by ICCES-China, ICCBS-Pakistan and TIRDO-Tanzania, for the socio-economic uplift of COMSATS' Member States are gratefully acknowledged.
- 11. The Council appreciates the efforts of COMSATS Secretariat to fulfill the objectives of the organization, and acknowledges the following achievements:
  - i. Organization of 12 capacity-building events, in collaboration with other international organizations and Centres of Excellence, which benefited various scientists, engineers and technicians belonging to Member States;
  - ii. Launching of the sixth International Thematic Research Group (ITRG);
  - iii. Steady growth of the Flagship Projects in Pakistan, i.e. the COMSATS Institute of Information Technology (CIIT) and COMSATS Internet Services (CIS).
  - iv. Increased utilization of postgraduate scholarships at CIIT, Pakistan, by Member Countries;
  - v. Continuous expansion of membership of COMSATS' Network of Centres of Excellence;
  - vi. Increase in the Annual Membership Contributions by Member States; and
  - vii. Regular publication of COMSATS' Newsletter, journal 'Science Vision' and other information material about the organization.
- 12. The Council encourages the Network members to make efforts for the following:
  - i. Enhancing cooperation with other Network members for launching new projects and programmes for the benefit of Member States;
  - ii. Examining and availing the opportunities of fellowships available with TWAS;
  - iii. Exploring the possibility of becoming Category-2 Centres of UNESCO;
  - iv. Launching the remaining two ITRGs on 'Materials Science' and 'Construction Materials';
  - v. Sensitizing their respective governments regarding the benefits of regularly making AMC for the financial sustainability of COMSATS; and
  - vi. Keeping COMSATS Secretariat aware of new developments and major achievements of their organizations.
- 13. The Coordinating Council reiterates that every country must strive to build S&T capacity, as we cannot simply be the users of technology but have to generate new knowledge.
- 14. Lead Centres of ITRGs are encouraged to approach their respective governments in order to obtain funds for the activities of the groups.
- 15. The Coordinating Council reiterates its recommendation for the Member States to increase their Gross Expenditure on Research and Development to a level of 2% of GDP.

## **Second Meeting of COMSATS Technical Advisory Committee**

The Technical Advisory Committee deliberates on matters affecting technical programmes and international collaborations of COMSATS with a special focus on improving the efficacy of COMSATS' Network.



COMSATS held the second meeting of its International Technical Advisory Committee on 15<sup>th</sup> November 2017, in Italy. The meeting was hosted by The World Academy of Sciences (TWAS) in the scenic city of Trieste.

During the meeting, the Committee Members gave their intellectual inputs for the future direction and technical programmes of COMSATS based on a proposed agenda circulated by COMSATS Secretariat prior to the meeting.

It was the first meeting after the reconstitution of TAC. The TAC members that attended the meeting were: Dr. Sabah AlMomin, Kuwait; Prof. Huadong Guo, China; Dr. Jalila Ben Salah Abbes, Tunisia; Prof. Dr. Yin Li, China; Prof. Sahalu B. Junaidu, Nigeria; and Prof. Dr. Amal Al-Aboudi, Jordan; while Dr. Richard Catlow, United Kingdom; and Prof. Dr. Sok Ching Cheong, Malaysia, participated through video conferencing. The meeting was also attended by the Heads of COMSATS'

Centres of Excellence in Egypt and Turkey. Representatives from other International organizations based in Italy, i.e. the International Centre for Theoretical Physics (ICTP) and the International Centre for Genetic Engineering and Biotechnology (ICGEB and TWAS) also attended the meeting.

Speaking for the host organization, Prof. Dr. Romain Murenzi, Executive Director TWAS, recalled that Trieste was the

very place where the idea of establishing COMSATS had been conceived by Prof. Dr. Abdus Salam in the early 1990s. He stated that COMSATS and TWAS share common goals to work towards building scientific strength for sustainable development in the South. He stated that scientific expertise is the key to tackling various challenges that humanity is facing today. Therefore, it is therefore all the more necessary to establish effective networks for exchange of ideas and collaborations.



#### List of Participants of 2<sup>nd</sup> Meeting of COMSATS' Technical Advisory Committee (15th November 2017, Trieste, Italy)

- Dr. Sabah AlMomin, Research Scientist, Biotechnology Program, Kuwait Institute for Scientific Research (KISR), Safat, Kuwait.
- Prof. Huadong Guo, Professor, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China.
- Dr. Jalila Ben Salah-Abbes, Laboratory of Genetic, Biodiversity and Bio-Resources Valorization, Higher Institute of Biotechnology of Monastir, Monastir, Tunisia.
- Prof. Dr. Yin Li, Deputy Director-General, Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences, Tianjin, China
- Prof. Sahalu B. Junaidu, Director, Institute of Computing & ICT, Ahmadu Bello University,
- Prof. Dr. Amal Al-Aboudi, Vice Dean, School of Science, University of Jordan, Amman,
- Prof. Dr. Richard Catlow, Head of Department of Chemistry, University College London, London, United Kingdom.
- Prof. Dr. Sok Ching Cheong, Senior Group Leader, Head and Neck Cancer Research, Cancer Research Initiatives Foundation (CARIF), Selangor, Malaysia.
- Prof. Dr. Ashraf Shaalan, President, National Research Centre (NRC), Cairo, Arab Republic
- Dr. Orkun Hasekioglu, President, TUBITAK Marmara Research Centre (MAM), Republic of Turkey.
- Prof. Sandro Scandolo, Head, Scientific Programmes and Outreach, International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- Dr. Oscar Burrone, Group Leader of Molecular Immunology Laboratory, International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste, Italy.
- Prof. Romain Murenzi, Executive Director TWAS, Trieste, Italy
- Dr. Massimo Paoli, Programme Coordinator, TWAS, Trieste, Italy
- Ms. Helen Martin, TWAS General Meetings
- Dr. Syed Muhammed Junaid Zaidi, Executive Director, COMSATS, Islamabad, Pakistan
- Mr. Tajammul Hussain, Advisor (Programmes), COMSATS, Islamabad, Pakistan
- Dr. Kamran Jahangir, Advisor, COMSATS Headquarters, Islamabad, Pakistan
- Mr. Farhan Ansari, Sr. Assistant Director (Programmes), COMSATS Headquarters, Islamabad, Pakistan

To this end, Prof. Murenzi hoped that COMSATS and TWAS would continue to collaborate for building scientific capacity in developing countries, focusing on issues and challenges related to sustainable future of human kind.

The Executive Director COMSATS, Dr. S. M. Junaid Zaidi, dubbed the Technical Advisory Committee as the brain of COMSATS, and considered the meeting instrumental in determining the way forward for the organization. He urged the countries of the South to improve their institutional arrangements, build critical mass of human capital, and enhance

technical capacities to attain research, innovation and technological progress. In this regard, Dr. Zaidi highlighted the fact that COMSATS and UN are the only inter-governmental organizations having their own universities. He informed the participants regarding scientific capacity and human resources available at COMSATS Institute of Information Technology (CIIT), which is one of the finest universities in Pakistan. He also highlighted the key role played by TWAS in establishment of COMSATS, and considered its advice highly important.

The agenda of the meeting, inter alia, included introducing COMSATS and its International Network of Centers of Excellence, Role of TAC in developing policy framework, Enhancing South-South-North Triangular Cooperation, Challenges in Achieving Sustainable Development Goals, and Expanding COMSATS membership and enhancing the Network of International S&T Centers of Excellence.

During the discussions, the Committee members were pleased to note that the membership of the organization was increasing, with Federal Republic of Somalia and Republic of Turkey being the latest to join as Member States. They encouraged COMSATS Secretariat to facilitate the expansion of the Network through induction of renowned R&D Centres from the South and the North.

TAC also advised COMSATS to facilitate upgradation of existing Centres of Excellence through financial and technical support from international donor and development organizations, besides establishing new Centres of Excellence to promote research, education and training in cutting-edge themes of science and technology.

The TAC members encouraged COMSATS to initiate new programmes and projects, which are of significance in achieving the Sustainable Development Goals (SDGs), for the benefit of the Member States. The Centres of Excellence were urged to prepare joint research proposals for possible funding by international donor and development agencies.

In view of the emerging trends in global partnerships, COMSATS was advised to facilitate the South-South-North Triangular Cooperation in science and technology.

# 41st Meeting of COMSATS Management Committee

The COMSATS Management Committee assists the Executive Director's Secretariat in implementation of policy decisions taken by the Coordinating Council and other organs of COMSATS; recommends programmes and budget of COMSATS; monitors financial activities of COMSATS; evaluates rules and regulations of COMSATS Secretariat; and deliberates upon other administrative issues.

During the reporting period, COMSATS Management Committee held its 41st meeting on 2nd March 2017 under the Chairmanship of Dr. S. M. Junaid Zaidi, Executive Director COMSATS. The participants of the meeting included Mr. Tajammul Hussain, Advisor (Programmes), COMSATS; Dr. Arshad Saleem Malik, Advisor, COMSATS Institute of Information Technology; Dr. Tariq-ur-Rehman, former Chairman, Pakistan Council for Science and Technology (PCST); Mr. Jamshed Masood, Chief Executive Officer, COMSATS Internet Services; Mr. Sabih ur Rahman, Advisor (Host Country Affairs) COMSATS; Mr. M. Bilal Chohan, Director (A&E), COMSATS; and Mr. Amanullah

Khattak, Director (F&A), COMSATS.

The three major agenda items of the meeting, which needed immediate attention of the members, were:

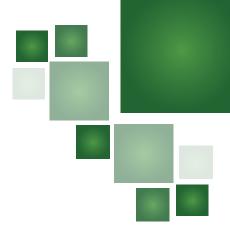
- defining proper structure of the organization,
- enhancement of annual budget, and
- induction of new staff members to strengthen the Secretariat.

Another agenda-item was to deliberate on inducting foreign students of CIIT in COMSATS Secretariat. Later, 17 students were inducted at COMSATS during 2017. (Section 8)

A major decision of the Management Committee meeting was the unanimous nomination of four members of Board of Governors of CIIT for a term of 3 years. These included Prof. Dr. Khalid Mahmood Khan, Former Vice Chancellor, Arid Agriculture University, Rawalpindi; Dr. Samar Mubarakmand (N.T., H. I., S. I.), Former Chairman, NESCOM/Member Planning Commission of Pakistan; Prof. Dr. S. M. Qureshi, Professor Emeritus/Director, Mehran University of Engineering and Technology; and Mr. Syed Masood Hashmi, President, Orient McCann Pakistan, Karachi, Pakistan.









# Section 2: Major Secretarial Activities

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### **Major Secretarial Activities**

COMSATS Secretariat performs Secretarial functions for both the Commission and the Network of Centres of Excellence. It is responsible for holding regular meetings of the statutory bodies and following up their deliberations and decisions. The Secretariat also executes COMSATS' programmes and activities in partnership with other intergovernmental agencies, national S&T institutions, R&D organizations and members of academia and scientific community across the world. Other core activities of the Secretariat relate to: pooling and managing financial resources; enhancing membership of COMSATS and its Network; and disseminating information to the stakeholders.



#### **Enhancement of Membership of COMSATS' Commission**

In line with emerging trends in global partnerships and development cooperation, COMSATS has been expanding its horizons to the North in addition to its focus on the South. During 2017, efforts were made to establish contacts with the North American and European countries with a view to expanding COMSATS' membership beyond Asia, Africa and Latin America. In a series of meetings with relevant officials, offers of membership were extended to various countries/states in the North and the South.

#### Turkey's State Membership to **COMSATS**

Earlier on 31st August 2012, the 'Agreement



to join COMSATS as Member State' was signed by the Ambassador of Turkey to Pakistan, His Excellency Mr. Babür Hızlan. The said agreement was ratified by the

Government of Turkey on 29th May 2017, which was intimated through a letter received from the Turkish Embassy on 17th August 2017.

In addition to the country's already existing participation in COMSATS Coordinating Council, Turkey now has the representation in the Heads-of-State level Commission and the ministerial Consultative Committee of COMSATS by virtue of its State membership.

The Scientific and Technological Research Council of Turkey (TÜBİTAK) now serves as the Focal Point of COMSATS and will be represented in COMSATS Consultative Committee. The Council is also the parent organization of COMSATS' Centre of Excellence in Turkey, TÜBİTAK Marmara Research Center (MAM).





# Somalia's State Membership to COMSATS

The Federal Republic of Somalia joined COMSATS as its 26<sup>th</sup> Member State on 9<sup>th</sup> November 2017 when the accession agreement was signed by His Excellency Mr. Abdi Dahir Osman, Minister for Education, Ministry of Education, Culture, and Higher Education, Somalia, and Dr. S. M. Junaid Zaidi, Executive Director COMSATS.

The signing ceremony was witnessed by Ambassador of Somalia to Islamabad, Pakistan, Her Excellency Ms. Khadija Almakhzoumi; First Secretary, Embassy of Somalia, Mr. Ali Sheikh; Advisor to the Ministry of Education, Culture, and Higher Education, Mr. Mohammed A. Nur; and senior officials from COMSATS.

H.E. Mrs. Khadija Mohamed Almakhzoumi played an important role in realizing the accession of Somalia to COMSATS. Her Excellency visited COMSATS Secretariat on 2<sup>nd</sup> October 2017 where she was handed over a letter of accession for onward submission to the Minister of Education, Culture and Higher Education, Somalia.

After due process, the relevant officials of Somalia showed interest in joining COMSATS that led to the signing of the accession agreement, which was intimated by the embassy of Somalia on 20<sup>th</sup> September 2017

The membership entitles, Somalia to be represented at the Heads-of-State level Commission of COMSATS and ministerial-level Consultative Committee. The Ministry of Education, Culture, and Higher Education, Somalia is the designated focal point of COMSATS in Somalia.

On 8th December 2017, a reception was hosted by the Executive Director COMSATS to celebrate Somalia's accession to COMSATS. The event was attended by foreign diplomats in Pakistan including representatives from the Ministries of S&T and Foreign Affairs, Pakistan; representatives from Pakistan-based and international organizations; and officials from COMSATS were also present during the ceremony. Ms. Khadija represented Somalia on the occasion.

Apart from remarks from the Executive Director COMSATS and Her Excellency Ms. Khadija, the reception ceremony was marked with the ceremonious exchange of flags of Somalia and COMSATS between Ambassador of Somalia and Executive Director COMSATS.

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

The efforts for inducting more scientific institutions in COMSATS' Network were made during 2017

# Accession of Al -Quds University, Palestine

During 20th Coordinating Council meeting (14-15 May 2017, Cairo, Egypt), COMSATS welcomed Al-Quds University, Palestine to its Network as the 21st member. The Certificate of Membership was issued from COMSATS to University on 31st May 2017.

# Other Efforts for Enhancement of COMSATS' Network

One of the recent outcomes of the continuous efforts for expansion of COMSATS' Network is the nomination of another Chinese institution, Tianjin



#### **About Al-Quds University**



Established in 1984, the Al-Quds University, Palestine, houses four campuses in Jerusalem, Sheikh Jarrah, Beit Hanina and Ramallah (al Bireh), apart from the main campus in Abu Dis. It is one of the leading universities of Palestine that holds numerous research laboratories and fifteen academic faculties in diverse disciplines, including arts, humanities, applied sciences, engineering, and medicine. There are more than 130 PhDs working in 83 research groups at the University. Moreover, almost 192 research assistants and 58 project-based employees are serving in different Research Centres of the University.

Institute of Industrial Biotechnology (TIB), for induction in COMSATS' Network. The nomination was made by the Chinese Ministry of Science & Technology during the visit of COMSATS' delegation to China in December 2017 (section 6).

As a result of active correspondence between COMSATS and its focal point in Zimbabwe, the Zimbabwean Ministry of Higher and Tertiary Education, Science and Technology Department nominated National University of Science and Technology (NUST), Zimbabwe for

induction in COMSATS' Network. The induction process of Makerere University, Kampala, Uganda is also underway.

In connection with the regarding the induction process of Mohamed V University, Rabat, Morocco, a formal invitation of the 21st COMSATS Coordinating Council meeting has already been extended to the President of the University.

#### Follow-up of the Decisions of the 20th Meeting of the Coordinating Council

The 20<sup>th</sup> meeting of the Coordinating Council was held on 14th-15th May 2017 in Cairo, Egypt. The meeting was hosted by COMSATS' Centre of Excellence in Egypt, the National Research Centre (NRC). The summary of decisions of made during the meeting was circulated among the participants on 9th June 2017 while the detailed minutes were circulated on 8th January 2018 for feedback.

A number of decisions were taken by the Council regarding expansion of the Commission and the Network of Centres of Excellence, facilitating realtime networking among all Centres of Excellence and implementation of COMSATS' programmes and activities in Member States. These decisions were vigorously followed up by COMSATS Secretariat by way of correspondence and interactions with Heads and Liaison Officers of Centres of Excellence. Following are some key follow-ups.

To extend the membership contacts were made and formal invitation letters sent to governments of potential member states from Asia Africa, North America and Europe. As a result of active correspondence between Executive Director COMSATS and the government officials of prospective member states, the Somali Republic joined COMSATS. Moreover, the Accession Agreement signed by the Republic of Turkey earlier was ratified on 29th May 2017 (reported earlier in this chapter).

The Coordinating Council advised COMSATS Secretariat to continue with the efforts for inducting more Centres of Excellence in order to expand and enhance the technical and scientific activities of COMSATS' Network. In this regard, the Mohammed V University (Morocco) was engaged. Moreover, the Tianjin Institute of Industrial Biotechnology (China) has been nominated by the Chinese Ministry of Science and Technology for induction in COMSATS' Network of Centers of Excellence. A major decision of Coordinating Council was induction of Al-Quds University (Palestine) in COMSATS' Network as a Centre of Excellence. COMSATS Secretariat issued the certificate of membership to Al-Quds University on 30th May 2017 (reported earlier).

Furthermore, the Coordinating Council desired to activate and strengthen other organs of COMSATS, i.e., the Consultative Committee and Technical Advisory Committee by holding regular meetings to facilitate networking and collaboration among different Member States and Centres of Excellence. Accordingly, the 2<sup>nd</sup> meeting of TAC was held in Trieste, Italy, on 15<sup>th</sup> November 2017. The next Consultative Committee meeting is expected to be held during 2018 to be hosted by COMSATS' focal point in Turkey.

The Council encouraged all Centres of Excellence to benefit from the scholarship/fellowship programmes of TWAS. In

this regard, TWAS has been requested to provide relevant information and details for PhD scholarships/post-doctoral fellowships. As per the offer made by TWAS for COMSATS' Member States and Centres of Excellence to participate in training courses in Science-policy-diplomacy for scientists and diplomats, COMSATS Secretariat is encouraging Member Countries and Centres of Excellence to benefit from the offer.

COMSATS Secretariat also invited the Member States and Centres of Excellence to benefit from the offers of scholarships made by the Centres of Excellence enlisted below.

- CIIT-Pakistan: 100 Postgraduates scholarships & 10 postdoctoral fellowships annually;
- ii. ICCBS-Pakistan: 10 PhD scholarships/ postdoctoral fellowships annually;
- iii. NRC-Egypt: 05 PhD scholarships/ postdoctoral fellowships annually;
- iv. ICCES-China: 05 PhD scholarships/ postdoctoral fellowships;
- v. BCSIR-Bangladesh: 01 postdoctoral fellowship;
- vi. KazNU-Kazakhstan: 05 PhD scholarships/postdoctoral fellowships annually.

The Coordinating Council advised COMSATS Secretariat to establish new Centres of Excellence to promote research and training in cutting-edge areas of Science and Technology and to devise strategies for supporting S&T national development plans (NDPs) of COMSATS' Member States to accelerate the pace of socio-economic development in the South. COMSATS' officials also held a number of meetings with senior officials of various International organizations such as European Union, British Council, The World Academy of Sciences and International Centre for Theoretical Physics, to work together for strengthening the existing Centres of Excellence and upgrading them to meet international standards.

The Council encouraged the prospect of representation of Member States/Centres of Excellence at COMSATS Secretariat on secondment. In this connection, the Executive Director COMSATS has started liaison with the relevant officials.

Another noteworthy follow-up was the signing of "Protocol of Cooperation (POC)" between COMSATS and The Oman National Computer Emergency Readiness Team (OCERT) for cooperation in the areas of cyber security and computer emergency response program. The POC was signed at OCERT, Oman, on 2<sup>nd</sup> November 2017 by Executive Director COMSATS, Dr. S. M. Junaid Zaidi and Eng. Badar Al Salehi, Director General, OCERT.

Upon the recommendation of ICCES-China, a four-member delegation of COMSATS visited China with the view to exploring funding opportunities for the initiation of new projects under China's One Belt and One Road (OBOR) Initiative. The meetings with Chinese officials proved fruitful for strengthening close cooperation in different areas of science and technology for mutual benefit.

An important outcome of the meeting was a consensus on regularly organizing workshops on repair and maintenance of scientific instruments to enhance Science and Technology capacity. The latest effort made in this regard was organization of National Training Workshop on Repair and Maintenance of Scientific Engineering Equipment on 2<sup>nd</sup>-6<sup>th</sup> October 2017 at KazNU, Almaty, Kazakhstan. About 60 individuals, including senior scientists, engineers and technicians from various research and academic institutions of Kazakhstan, including Almaty, were trained during the Workshop.

The Coordinating Council urged Member States and Centres of Excellence to enhance collaboration and facilitate real networking among Centres of Excellence. The Council recommended increasing the pace of efforts to improve the S&T

capacity and the international status of COMSATS affiliated Centres of Excellence. As a follow-up, COMSATS Secretariat encouraged and facilitated visits including that of Prof. Dr. Moiz-ud-Din Khan, Chairperson of Mathematics Department, CIIT, to NMC, Nigeria (10th-14th September 2017).

Moreover, the following visits are being planned:

- Visit of Prof. Dr. Iqbal Choudhary, Director, ICCBS to ICCES, China (in first week of January 2018);
- Visit of Prof. Dr. G. M. Mutanov, Rector KazNU to CIIT (February 2018);
- Visit of Dr. S. M. Junaid Zaidi, Executive Director COMSATS to KazNU (February-March 2018);
- Visit of NRC delegation to CIIT, ICCBS and COMSATS Secretariat (March 2018); and
- Visit of Dr. G.A.S. Premakumara, Director ITI to CIIT and ICCBS (February 2018).

The Coordinating Council appreciated the progress reports presented by the Group Leaders/representatives of Lead Centres of International Thematic Research Groups (ITRGs). CSIR-Ghana and TIRDO-Tanzania expressed their willingness to join COMSATS' ITRG on 'Climate Change and Environmental Protection' for which they were requested to nominate suitable scientists to join the respective ITRG. Moreover, UCAD-Senegal offered to lead the proposed ITRG on 'Public Health'. In this regard, UCAD has been requested to share a concept paper on 'Public Health ITRG'.

As a result of strong pursuit of the matter at COMSATS Secretariat, COMSATS' Centres of Excellence identified various areas of common interest and offered to collaborate with other Centres of Excellence. COMSATS Secretariat has taken up the matter with the Heads and Liaison Officers of respective Centres of Excellence.

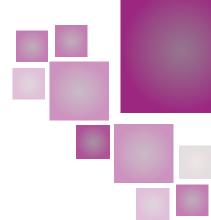
### Disbursement of Annual **Membership Contribution (AMC)**

COMSATS Trust Fund was created to foster self-reliance of its member countries through enhancing their capacity and exchange of scientific and technical

knowledge to address their development challenges in accordance with their values and needs. One of the key challenges for COMSATS is ensuring financial stability for technical activities and programmes in member countries and ensure timely receipt of annual membership contributions. COMSATS relies on the voluntary contributions by governments of the member countries, which are maintained as country-wise Trust Fund.

During the year 2017, COMSATS Secretariat pursued the requests to the member countries for regularizing their **Annual Membership Contributions** through correspondence and interactions with the focal points in member countries. The countries approached in this regard included: Egypt, Jordan, Kazakhstan, Iran, Nigeria, Tunisia, Tanzania, and Sudan. Moreover, during the visits of COMSATS' officials to Ghana, Nigeria, and Kazakhstan, COMSATS' Focal Points in these countries were urged to make their AMC. As a result, COMSATS received AMC from four Member States: China (US \$ 20,000), Pakistan (US \$ 20,000), Kazakhstan (US \$ 20,000) and Sudan (US \$ 3,000) (Section 10).







# Section 3: Activities of COMSATS Centres of Excellence

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•	Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh	25
•	COMSATS Institute of Information Technology (CIIT), Pakistan	27
•	Council for Scientific and Industrial Research (CSIR), Ghana	29
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•	Industrial Research and Consultancy Centre (IRCC), Sudan	31
•	Industrial Technology Institute (ITI), Sri Lanka	32
•	International Center for Chemical and Biological Sciences (ICCBS), Pakistan	34
•	International Center for Climate and Environment Sciences (ICCES), China	37
•	National Mathematical Centre (NMC), Nigeria	41
•	National Research Centre (NRC), Egypt	42
•	Royal Scientific Society (RSS), Jordan	43
•	Tanzania Industrial Research and Development Organization (TIRDO), Tanzania	45
•	TUBITAK Marmara Research Centre (MAM), Turkey	47
•	University Cheikh Anta Diop (UCAD), Senegal	50
•	Water Research and Technologies Centre (CERTE), Tunisia	50

# **Activities of COMSATS' Centres of Excellence**

A group of twenty-one 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 resources for South-South cooperation, in line with their mandates for programmes of scientific research and development.

This section presents an overview of various undertakings of COMSATS' Centres of Excellence during 2017, which provides an insight into their potential in respective fields of specialization.

These reports are from: Al-Farabi KazNU, Kazakhstan, Al-Quds University, Palestine; BCSIR, Bangladesh; CIIT, Pakistan; CSIR, Ghana; Embrapa Agrobiologia, Brazil; IRCC, Sudan; ITI, Sri Lanka; ICCBS, Pakistan; ICCES, China; RSS, Jordan; TIRDO, Tanzania; TUBITAK MAM, Turkey; UCAD, Senegal; and CERTE, Tunisia.

## Prof. Dr. Tlekkabul Ramazanov

Vice-Rector for Research & Innovations Al-Farabi KazNU



It is a matter of honor for Al-Farabi Kazakh National University (KazNU) to be able to round up our practices as a COMSATS Center of Excellence.

In the past year, Al-Farabi KazNU's cooperation with COMSATS has strengthened significantly. In October 2017, we jointly organized a workshop on Repair and Maintenance of Scientific Equipment. In December, with the help of ISESCO and INIT, KazNU and COMSATS, we were able to organize an international workshop on Internet Security. Moreover, our scientists were granted scholarships, a rare opportunity that led to strengthening and reaffirming our fruitful partnership. Cooperative efforts are now underway to strengthen collaboration of the scientific research structures with foreign partners, and of researchers that are already associated with COMSATS with new people and expose them to new ways of learning. These steps in turn hold great significance for further cultural and economic development of the countries of the South.

Pending the 21<sup>st</sup> meeting of COMSATS Coordinating Council and 3<sup>rd</sup> TAC Meeting in KazNU in April 2018, we are looking forward to future successful partnerships under the overarching goal.

### Al-Farabi Kazakh National University (KazNU), Kazakhstan



Being the oldest classical university in Kazakhstan, the Al-Farabi Kazakh National University (KazNU) has a mission to integrate basic and

applied research for involvement in global educational space.

#### **Capacity Building Events**

# Online Conference on International Scientific-Methodical

On February 28, 2017, an International Scientific Methodical Online conference was held at Department of the Faculty of Oriental Studies, Al-Farabi Kazakhstan National University (KazNU), Kazakhstan. The conference was entitled "New Trends in the Development of Arabic Studies". The conference was attended by professors from Al-Azhar University

(Egypt); UNISZA (Malaysia); Al-Arish University (Egypt); and the Islamic Culture Nur-Mubarak University (Kazakhstan). Apart from KazNU, the event also had participation from Ablai Khan University of International Relations and L.N. Gumilyov Eurasian National University.

# **Collaborations with International Organizations**

#### **Cooperation Agreement with CERN**

A working session with the delegation of



the European Organization for Nuclear Research (CERN) took place at Al-Farabi KazNU, on 13<sup>th</sup> September 2017. Earlier, the delegation of KazNU scientists had visited CERN and following this meeting an agreement was reached on matters of mutual collaboration.

During the meeting, Prof. Galym Mutanov, Rector KazNU, noted that the University has great potential to further expand areas of cooperation in the fields of nuclear physics, astrophysics, nuclear medicine, energy, and geology. More recently, young scientists from the University were awarded fellowships at CERN who participated in the summer school and learned programming in accelerator physics.

Mr. Tadeusz Kurtyka of CERN said that the organization is interested in joint activities with KazNU as it has been implementing a programme to transform the University into a research University of international level, which carries out fundamental and applied research in the field of nuclear science and technology.

An outcome of the meeting was signing of a cooperation agreement aimed at joint activities in educational, scientific, and technical fields.

#### Treaty 'Green Bridge through Generations' with Russian Universities

The Universities of Russia and Kazakhstan signed a treaty titled 'Green bridge through generations' on 9th November 2017. From Kazakhstan the agreement was signed by al-Farabi KazNU, while from Russia, B. N. Yeltsin Ural Federal University signed. With the signing of this treaty, all universities of Russia and Kazakhstan have agreed on development of green technologies and training of highly qualified specialists, and conducting scientific research. The treaty will help combine efforts of the universities of the two countries.



# **Prof. Imad Abu Kishek**President AQU



We would like to acknowledge COMSATS' efforts that have been invested in the development of science and research in the world. We are very proud to be a part of COMSATS and all the countries that are participating. The fact that we are representing Palestine in COMSATS is an accomplishment we hope will be fruitful.

We at Al-Quds University here in Jerusalem would like to recognise COMSATS and greet the efforts of everyone in supporting us here in Palestine and in Jerusalem. We look forward to making Jerusalem a lighthouse for knowledge and science with the help of COMSATS.

Please accept our kindest regards and gratitude.

# Al-Quds University (AQU), Palestine



Al-Quds University, Palestine, joined COMSATS Network of Centres of Excellence as its 21<sup>st</sup> member during the 20<sup>th</sup> Coordinating

Council Meeting. Founded in 1984, the main campus of the University is located in Abu Dis with four other campuses in different cities. The University provides higher education and community services.

At Al-Quds University in recent years has been working hard towards improving the concept of a modern university, one that is picking up speed with evergrowing knowledge, scientific research and technology. The University believes that academic programs must be redesigned and redeveloped to match this very rapid knowledge production.

Over the past three years the University has been working on three steps. The first step was focused on coping with the



economic situation of the university. For this reason a financial plan was planned to achieve stability in the university in the face of obstacles that higher education institutions all over the region are struggling with.

For the second step, a concept developed that matches the needs of the market with academic programs and courses was developed through workshops that enable students to develop skills and expertise that are needed in the Palestinian workplace.

Thirdly, the programs that are being designed will also help provide job opportunities for the university students, which will eventually help the economic empowerment of the Palestinian people. Most of the Palestinian population is young -- under 30 years old. This is the reason why Al-Quds University has constructed a network of 120 cells that work on the commercialization of medical and scientific research. To accomplish this mission, the Al-Quds Incubator for technology and entrepreneurship has been built. The incubator will translate the ideas

and research developed by the research centers into productive projects and will also catalyse researchers and students to find funding to complete their creations.

#### Joint Conference with eCampus **University-Italy**

Al-Quds University, and eCampus University, Italy, co-organized the first international conference titled "Bridging the future: the Women's perspective" on 2<sup>nd</sup> December 2017 in Naples, Italy. The conference, which was a culmination of a strategic partnership agreement signed last month between the two universities, was opened by Abu Kishek, President Al-Quds University, and Prof. Imad Abu Kishek, President eCampus.

Several prominent figures from the Kingdom of Saudi Arabia, Egypt, Italy, Tunisia, Greece, Lebanon, Morocco, and Jordan attended the conference. President Abu Kishek's expressed Al-Quds University's desire to host the next conference at the university in Jerusalem, to continue the dialogue on issues of global concern.

Mr. Md. Faruque Ahmed Chairman BCSIR



It gives me great pleasure to present COMSATS' Annual Report 2017. As a member of COMSATS Coordinating Council, I am humbled to read through the activities and achievement of COMSATS and its Centres of Excellence. BCSIR is being benefited from COMSATS support through training, conferences and research collaboration.

I am grateful to be a part of the Network of 21 Centres of Excellences and I assure that my major task is to strengthen the bond with these centres.

I look forward to the coming year and continued success of COMSATS.

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



Bangladesh Council of Scientific and Industrial Research (BCSIR) is a non-profit multidisciplinary public-sector

research organization. The main task of BCSIR is to foster the R&D sector in the country.

In 2017, BCSIR made progress on various fronts including development of laboratories, and induction of scientists.

Research has been carried out in different areas. A summary of the ongoing research projects is given in the table below.

During the reporting period, BCSIR published 121 research papers in different journals. For commercialization, 21 technologies were developed and 11 patents obtained.

#### **Events**

During 2017, BCSIR organized 72 national and international seminars, symposia and conferences on R&D. Eight day-long workshops in collaboration with relevant stakeholders were organized by different institutes of BCSIR. A science fair, with

SL	Name of project	Number
1	R&D project	172
2	Annual Development Program	3
3	Special Allocation Project	9
4	Technical Assistance Project	1
5	Climate Change Project	1

technical sessions, was also arranged.

Other events held during 2017 include:

Symposium on 'Environmental Chemistry for Securing Water Quality' (30th July 2017). The event was attended by 200 local and foreign



- experts. Eighty-nine research articles on water pollution and purification were presented.
- Exhibition on Science and Technology and a seminar on "Biomass for Greener World" (19th-21st January 2017) was organized by Pulp and Paper Research Division of BCSIR

Laboratories, Dhaka. The exhibition was attended by entrepreneurs from pulp, paper and allied industries of Bangladesh. Participants of the event deliberated on current research and development in related fields, as well as its applications and contributions towards the industries.

### **Training and Academic Activity**

BCSIR provided training to 423 professionals on different scientific equipments. In 2017, scientists of BCSIR supervised 182 M.Sc theses of students from different universities.



Prof. Dr. Raheel Qamar **Rector CIIT** 



World-class enterprises consist of some fundamental characteristics: a strategic focus, continuous improvement and a collaborative ethos, to name a few. These words aptly define COMSATS, a distinguished nexus of the Centres of Excellence, of which CIIT is proud to be a leading example.

This reporting period has special meaning as it is now a year since the helmsmanship of CIIT was passed on from the ablest hands of Dr. S. M. Junaid Zaidi (*H.I*, *S.I*) to me. And thanks to the Almighty, we have adeptly sustained the tremendous growth that remains a hallmark of CIIT.

By progressively moving up the international rankings, CIIT continues to remain Pakistan's leading provider of higher education. In the rankings released by Times Higher Education, CIIT sits among the 601-800 World Universities; top 200 Young Universities and at number 125 in Asia, the last one having been released on 7th February 2018.

Success brings joy but also a desire to set higher goals. Reflective of the vision of the Executive Director COMSATS, CIIT now resolves to enhance its cooperation with all other COMSATS Centres of Excellence to create synergies for sustainable development and remain true to the fundamental nature of this world-class enterprise.

### **COMSATS** Institute of **Information Technology (CIIT)**



**COMSATS** Institute of Information Technology (CIIT) has achieved phenomenal growth since its

inception in 1998. CIIT is dedicated to advancement of learning and extending the frontiers of knowledge. Its mission supports and promotes knowledge creation in academically diverse disciplines and to the application of this knowledge to benefit the people.

Key Statistics of CIIT 2017				
Students	34, 825			
Graduates Produced	49,300			
Faculty	3,200 including 1,125 PhD (27% females 73% male)			
Staff	3,383			
Departments	19			
Laboratories	270			
Impact factor Publications	1,860			

According to the 2016 rankings by the Higher Education Commission (HEC), Pakistan, CIIT stands at number three in General Category and sixth among all universities in Pakistan. CIIT has

been placed 137th in the prestigious TIMES Higher Education (THE) BRICS & Emerging Economies Rankings for 2017, while in 2018 ranking by the Times Higher Education Engineering and Technology, CIIT is among the best 300-400 universities of the world.

In 2017, a total of 127 research projects, 117 travel grant applications and 7 seminar/ workshops were approved. CIIT filed 11 US, one UK and four Pakistani patents based on applied research by its faculty while four patents (3 US and 1 Pakistani) have been accepted.

#### **International Students**

During 2017, a total of 45 international students (including 26 Ph.Ds, 10

Postdoctoral, 6 MS, 2 Undergraduate and 1 Senior Visiting Researcher) were enrolled. The foreign students belonged to 12 countries, i.e., Afghanistan, Burkina Faso, Cameroon, Ethiopia, Iraq, Iran, Jordan, Nigeria, Sierra Leone, Syria, Tanzania and USA. They were enrolled in academic programmes on Software Engineering, Mathematics, Chemistry, Computer Science, Meteorology, Environmental Sciences, Physics, Pharmacy, International Relations and Bio-sciences.

#### Interactions with Institutions from the North and the South

As an active collaborator with foreign institutions, CIIT had a number of interactions with foreign institutions and organizations. As a result of visit by various delegations, 15 national and 5 international Memoranda of Understanding were signed.

Some important visitors to CIIT include:

- H.E. Mr. Suchart Liengsaengthong, Ambassador of the Kingdom of Thailand in Pakistan and Ms. Marisa, Counselor at Royal Thai Embassy in Pakistan (January 5, 2017)
- Five Vice Chancellors from Afghani Universities, namely Kabul Medical University, Herat University, Balkh University, Nangarhar University, and Kandahar University (February 9, 2017)
- A delegation from France visited CIIT (March 15, 2017)
- A delegation from China University of Petroleum Beijing (CUPB) (April 20, 2017)
- A delegation from Macquarie University, Australia (April 25, 2017)
- A delegation from higher education institutions of the UK (April 24-26,
- Mr. Mahmoud Oglah Baniata, Jordanian Cultural Counsellor (May 23, 2017)
- A delegation from Hainan Tropical Ocean University, China (May 9, 2017)





- A delegation from Information Technology Industry of Japan (July 24, 2017)
- Mr. Mehmet Mert Kaleci, Specialist/ Coordinator, International Office, Duzce University, Turkey (July 4-10, 2017)
- A delegation from China Association of Higher Education (CAHE) (July 18,
- A delegation led by Mr. Yaya Sireh Jallow, Vice Minister/Permanent Secretary, Ministry of Higher Education, Research, Science and Technology from The Gambia (September 14, 2017)
- The Ambassador of the Federal Republic of Somalia, H.E. Khadija Mohamed Almakhzoumi (October 2,
- A delegation of from University of Western Australia (UWA) (October 26, 2017)

- Prof. Dr. Ali Mohammed B. Hawsawi, Cultural Attaché, Kingdom of Saudi Arabia in Pakistan and Director (Academic Departments) Lafi Snehat AlMutairi, and Officer University Relations, Abdul Waheed Mirza (November 8, 2017)
- A delegation of Tsinghua-Berkeley Shenzhen Institute (TBSI) (November 28, 2017)
- The Ambassador of Yemen, H.E. Mohammed Alashabi (November 29, 2017)

Visitors from international organizations included:

- The Head of World Learning (WL), Ms. Nadya Karim Shaw (January 12, 2017)
- The Country Representative of the World Bank in Pakistan, Mr. Patchamuthu Illangovan (May 11,



2017)

Eng. Wassfi Hassan El-Sreihin, Secretary General, African – Asian Rural Development Organization (AARDO) (December 11, 2017)

#### **Awards and Achievements**

- A Poster Presentation made by the students of Department of Physics, CIIT, at the International Conference on Mathematics and Physics (February 14-16, 2017) won first prize.
- Dr. Syed M Nurulain, Associate Professor, Department of Biosciences, was selected as Science Mentor/ Supervisor in April 2017 for STFS Students under the project "Science Talent Farming Scheme of Pakistan Science Foundation (STFS) for 1800 Young Students, Phase-I.
- A paper by Dr. Farzana Ashraf, Assistant Professor, Department of Humanities, CIIT, was awarded 3rd prize among 35 papers in International Conference on Health Psychology: Issues and Challenges (May 14, 2017).
- Dr. Abdul Jawad, Assistant Professor, and Dr. Shamaila Rani, Assistant Professor, Department of Mathematics, CIIT, secured 6th and 16th positions, respectively in the category of Best Young Researchers/ Scientists (under 40 years of age) in Mathematical Sciences announced in June 2017 by the Pakistan Council for Science and Technology.

### **Capacity Building Events**

Some events that took place at CIIT during the reporting period are as follows:

- Workshop on 'Building High Impact Communication Skills' (January 23-24, 2017);
- Workshop on 'How to write a Research Proposal' (February 23, 2017);
- Talk on 'How to Lead a Successful Career', by Vice President and Chief Human Resources Officer Telenor (February 17, 2017);
- Webinar on 'Simulating the optimization of energy consumption in homes' in Collaboration with Belarus State University of Informatics and Radioelectronics (BSUIR) (February 15, 2017);
- International Seminar on 'Environmental and Climate Change' (May 9, 2017);
- 10th Technomoot consisting of seminars, symposia, and exhibitions (May 9-10, 2017)
- Seminar on Robotics (May 12, 2017);
- 9th South Asian International Conference on 'Today's vision, tomorrow's reality' (August 23-25, 2017)
- International conference on **Environmentally Sustainable** Development 2017 (August 26-27, 2017)
- Sustainable Urban Development-SUD 2017 (October 25-26, 2017)
- Seminar on 'The changing world of

- IT' (October 13, 2017)
- Seminar on 'Role of Leadership in the Development of Youth' (December 7, 2017)
- 15<sup>th</sup> Frontiers of Information Technology Conference (FIT-2017) (December 17-22, 2017)

### **Activities of Office of Research Innovation and Commercialization** (ORIC)

In 2017, the Professional Development department of CIIT's Office of Research Innovation and Commercialization, successfully organized 10 workshops and trained more than 150 professionals from universities and well reputed organizations across Pakistan.

### Council for Scientific and Industrial Research (CSIR), Ghana



The Council for Scientific and Industrial Research (CSIR) focuses on accelerating socio-economic development in

Ghana through utilization of science and technology. The Council formulates and implements government policies regarding S&T based research and development.

#### **Research and Development**

#### Four New Yam Varieties

The Crops Research Institute (CRI) of the Council for Scientific and Industrial Research (CSIR) released four new yam varieties, namely Afaase Adepa, Afaase Hoodenfoo, Afaase Biri and Afaase Soanyinto. The new varieties, which have been tried and evaluated for over 10 years, are said to be very nutritious, high yielding and pest resistant, can be used for icecream and noodles and safe for diabetic patients. During an event held in Kumasi on April 18, 2017, the new varieties were



officially introduced by Dr. Emmanuel Otoo, who led the 11-member team that worked on these varieties of yam.

Dr. Otoo said that the research conducted on new varieties had shown that they could be used as substitute for white yam, which is widely consumed in the country. Moreover, these could also be used in other food products, such as ice-cream and noodles, and even in the cosmetic industry for body cream. According to him, there is a high market- demand for these varieties in the sub-region including Burkina Faso, Mali, Niger and Cote d'Ivoire.

#### **Institutional Capacity Building**

#### **Inauguration of Governing Council of CSIR**

The Minister of Environment, Science, Technology and Innovation (MESTI), Ghana, Professor Kwabena Frimpong

Boateng, inaugurated the Governing Council for Scientific and Industrial Research (CSIR), Accra, Ghana, on 18th July 2017. On the occasion, the Minister said that the Government of Ghana is committed to developing scientific research.

Prof. Frimpong Boateng expressed that the Government consider the scientific research sector as an integral part of the plans for technologically-driven Ghana beyond aid vision. He underscored the need for all stakeholders, particularly, the CSIR, to position themselves for helping the country to take its economy beyond dependence on aid. He also announced setting up of a science innovation center at CSIR with super computers.

The center would be made accessible to all universities and research institutions.

### EMBRAPA Agrobiologia, Brazil



The research in EMBRAPA Agrobiologia during 2017 focused on recovery of degraded land, generation of

new crop varieties, and enhancement of inoculation methods.

### **Capacity-Building Events**

EMBRAPA Agrobiologia organized a number of capacity-building activities during the year 2017. These include:

- A field day on cowpea for the farmers of Paty do Alferes was organized in collaboration with Pesagro-Rio, Emater-Rio, the Cedro Institute, Institute for Community Development and Action (Idaco), the Rio de Janeiro Biological Farmers Association (Abio), and the Rio Rural Program of the City Hall of Paty do Alferes. The day was organized to educate the local farmers about benefits of inoculated varieties of cowpea.
- EMBRAPA Academic Hackathon was held in Seropédica, Rio de Janeiro on 19th October 2017. During this event, researchers produced a mobile application that could guide farmers in choosing species, suitable for environment restoration. Another mobile application having an encyclopedia of medicinal plants





and their respective uses was also prepared. A third team of scientists prepared a system, which can indicate native and exotic species of a certain region.

- 5<sup>th</sup> Global meeting of Alliance for Mountains at the United Nations Headquarters for Agriculture was held on 12<sup>th</sup> December 2017 in Rome. During the meeting, the Mountains 2018 was launched for protection of land.
- Two courses were conducted on collection and management of forest seeds in conservation units. As a result of these courses, 31 technicians were received training to support work on forest seeds.

#### **Research and Development**

Some of the research activities carried out in the reporting period were:

- A study on the use of material as cheap as cardboard to control weeds by crowning, pizza boxes were used for recovery of pastures.
- Development of bacterial inoculant that promotes biological, nitrogen fixation resulting increase in cowpea productivity by up to 33 percent. This is much higher than the productivity using commercial inoculants. With this inoculant, farmers can produce their own nodulated roots.
- The EMBARAPA Agrobiologia's
   Johanna Döbereiner Biological
   Resource Center (CRB-JD) was
   inaugurated in Rio de Janeiro on May

- 10, 2017, which besides gathering microorganisms of recognized agricultural importance, offer various services and activities related to bioprocesses, such as production and analysis of microbial inoculants.
- A research group of EMBRAPA
   Agrobiologia on food security
   was founded on 1<sup>st</sup> July 2017. The
   group aims to initiate process of
   documentation of technical videos,
   knowledge and forms of organization
   that facilitate agro-ecological
   transition.

#### **South-South Cooperation**

Researchers from Ghana visited EMBRAPA Agrobiologia, Brazil on November 27, 2017, to learn about the process of inoculant production and benefits of Rhizobium inoculant technology for small-holding vegetable farmers. The researchers were briefed on industrial value of inoculant production in the country, through visits to inoculant production industries in Brazil.

### Industrial Research and Consultancy Centre (IRCC), Sudan



IRCC, Sudan, being the major research institution in Sudan, caters to the needs of the country's industrial sector. The centre is involved in research,

technology, and consultancy; including industrial information, industrial process modeling, product design, economic and feasibility studies, technology and production line design, and quality assurance.





#### **Research and Development**

#### **Soybean Processing Pilot Plant**

IRCC established and operationalized a Soybean Processing Pilot Plant at its premises in collaboration with the United Nations Industrial Development Organization (UNIDO), the Government of Japan and Sudan's Ministry of Industry.

The plant is a part of a project 'Supporting Food and Nutrition Security in Sudan through Soybean'. The project addresses local production and processing of soybean in Sudan, and is in line with the national priorities reflected in the ongoing Country Program implemented by UNIDO. The project selected and supported up to 30 small-holding farmers to cultivate and produce local soybean varieties.

Moreover, IRCC prepared economic feasibility studies for soybean products in the Sudanese Market. The Centre is also interested in looking forward to cooperating with COMSATS for the programme.

#### **International Collaborations**

#### New Partnership Programme between **IRCC-Sudan and UNIDO**

A delegation from the UNIDO, Vienna, visited IRCC on 16th December 2017 in connection with R&D cooperation in

Cleaner Production in Sudan. IRCC had submitted a proposal for establishing Sudan Centre for Cleaner Production (SCCP) in December 2014 to ensure continuous implementation of an integrated preventive environmental strategy for processing products and services. The aim of the cooperation is to increase eco-efficiency and reduce risks to human and environment.

The visit concluded with an Agreement on the Resource of Efficiency and Cleaner Production in the Republic of Sudan.

### Industrial Technology Institute (ITI), Sri Lanka



The Industrial Technology Institute (ITI), Sri Lanka, comprises of research and development divisions, and technical services

divisions. The Institute conducts multidisciplinary scientific and industrial research on technology-transfer for rapid industrial development.

#### Research and Development

The two major research sections of the ITI, Sri Lanka, Food Technology Section and Herbal Technology Section, which shifted from Colombo premises to Modern Research and

- Development Complex at Malabe resumed their operations in January 2017.
- A joint research project with the Medical Faculty of University of Sri Jayawardanepura, Sri Lanka, on bioactivity studies of Eclipta prostrate and another project carrying out clinical trials on Coccinia grandis with Medical Faculty, University of Ruhuna, Sri Lanka, also commenced during the year.
- A project to develop a National Mercury Release Inventory for the industrial sector was also initiated during January 2017 with an awareness programme for the Industry.
- Discussions were held with the Ministry of Health, Nutrition and Indigenous Medicine, Sri Lanka, on developing specialized nutritious food for the management of Moderately Acute Malnutrition (MAM) in children between 6 -59 months of age.
- A study on air quality and noise & vibration impacts for an environmental impact assessment in development activities and infrastructure facilities at the reclaimed land area for the proposed Colombo Port City was submitted to relevant authorities.
- Fourteen research articles were published in refereed journals and a patent application was submitted.



#### **Technical Services**

- On the request of the Ministry of Education, ITI tested and issued a report on quality of the paper and printing ink used in text books issued by the Ministry to students.
- On the request of Consumer Affairs
   Authority of Sri Lanka, ITI tested the
   rice samples for possible toxic plastic
   consumption, and issued a test report.
- A Sri Lanka Accreditation Board audit was conducted to obtain accreditation for analysis of pesticides residues, Sudan dyes, Histamine and antibiotic residues by GCMS-MS techniques and heavy metals in water and inorganic fertilizers by ICP/MS at the newly established Residual Analysis Laboratory.
- ITI was awarded a project to monitor noise, vibration, air and water quality during the expansion of Bandaranaike International Airport and design the central express way noise barriers
- Collaboration with Bandarawela Agricultural Research Centre and Subaragamuwa University was initiated to carry out a Market Basket Survey on vegetables and fruits.
- A study to investigate the presence of heavy metal in rice was initiated with Rice Research Institute in Batalagoda.

#### **Capacity-Building Events**

Following workshop and seminars were conducted during the reporting period:

- Total Solution for Trace Level Analysis: using AAS, GC, GC-MS, LC, LC-MS/MS and ICP-MS (15<sup>th</sup> – 17<sup>th</sup> February 2017);
- Certificate course on Herbal Drugs & Cosmetic Value Addition Techniques (February – April 2017);
- Training program on Dehydration of Fruits, Vegetables, Culinary Herbs and Spices (29th March 2017);
- Workshop on Troubleshooting in Cottage based Herbal Drugs & Cosmetics Industries (18th May 2017);
- Exhibition and Sale to Empower Cottage Level Entrepreneurs (18<sup>th</sup> May 2017);
- Hands-on Training on Advanced Scientific Instruments for Material Characterization (18<sup>th</sup>-19<sup>th</sup> May 2017);
- Awareness Programme for the Stakeholders on Residue Analysis (30<sup>th</sup> May 2017);
- Awareness programme on "Disposing Industrial and commercial garbage" (26th September 2017);
- The 3<sup>rd</sup> ITI Biennial Research Symposium under the theme "Energizing Economic Growth through Science, Technology and Innovation (16<sup>th</sup>-17<sup>th</sup> November 2017).

ITI scientists/engineers and technologists participated in a number of events to enhance their knowledge and share their experience and expertise. These events pertaining to relevant areas of research were held in Japan, Iran, Italy, Pakistan, Indonesia, China, Egypt, South Korea, Singapore, Philippines, Vietnam, and Thailand.

- Sakura programme for government officials organized by Japan Science & Technology Agency, Japan (19<sup>th</sup> - 25<sup>th</sup> February 2017);
- Seminar on chemical weapons convention and chemical safety & security management for member states of the OPCW in the Asian Region organized by National committee for the prohibition of weapons, Iran (21st 23rd February 2017);
- Application Training workshop on Milestone Neos - GR Microwave System organized by M/S Milestone, Italy (27<sup>th</sup> - 29<sup>th</sup> March 2017);
- 3<sup>rd</sup> International conference on Agriculture, Food Security and Bio Technology organized by Commission on Science and Technology for Sustainable Development in the South (COMSATS), Pakistan (26<sup>th</sup> – 27<sup>th</sup> April 2017);
- 5<sup>th</sup> National Laboratory Equipment
   & chemical Exhibition Iran Lab Expo



- 2017, Iran (24<sup>th</sup> 27<sup>th</sup> April 2017);
  3rd Meeting of Medicinal Plants focal points of Indian Ocean Rim Association (IORA) member states, the IORA Regional Centre for Science and Technology Transfer (IORA RCSTT), Indonesia (10<sup>th</sup> 12<sup>th</sup> May 2017);
- International Training Workshop on Advanced Technology of Herbal Medicine for South and South East Asia, China (11th – 30th June 2017);
- 20th Meeting of COMSATS
   Coordinating Council, Cairo, Egypt (14<sup>th</sup> 15<sup>th</sup> May 2017);
- 2017 South and Southeast Asia Technology Transfer Matchmaking Conference, Kunming, China (12<sup>th</sup> – 16<sup>th</sup> June 2017);
- 2017 Seminar on B and R Governance Corporation for China, Southeast Asia, China (5<sup>th</sup> - 18<sup>th</sup> June 2017);
- WIPO Regional Conference for Presidents/ Vice Presidents and Technology Transfer Officers of University & Research Institutions on creating and enabling intellectual property environment for technology development, management and commercialization, South Korea (21st – 23rd June 2017);
- Workshop on Production of Certified Reference Materials, Singapore (2<sup>nd</sup> – 25<sup>th</sup> August 2017);
- 2<sup>nd</sup> Training workshop on "Industrial

- Biotechnology: Driving value addition and beneficiation" (22<sup>nd</sup> -24<sup>th</sup> August 2017);
- International workshop on "Development and Application of Solar Technologies and Products", China (28<sup>th</sup> August – 16<sup>th</sup> September 2017);
- 2017 International Laboratory
   Designing Conference, Spain (20<sup>th</sup> 22<sup>nd</sup> September 2017);
- IAEA/RCA Regional Coordination Meeting, Philippines (2<sup>nd</sup> – 6<sup>th</sup> October 2017);
- Seminar on Sustainable Development & Management of Rattan resources for "Belt and Road Countries, China (11th - 13th October 2017);
- Programme to Develop Human Resources for enhancing Collaborative Science & Technology Research with Japan, Japan (4<sup>th</sup> – 11<sup>th</sup> November 2017);
- Program on "Working with Pathogen Genoms", Vietnam (12<sup>th</sup> – 17<sup>th</sup> November 2017);
- 11<sup>th</sup> International Olympaid on Astronomy ad Astrophysics, Thailand (12<sup>th</sup>-21<sup>st</sup> November 2017).

# **Collaborations with International Organizations**

The R&D sections initiated two international collaborative research

projects during the year.

- i. A collaborative research with Korean Food Research Institute on Biological activity evaluation system assistant project for nutraceutical applications of Sri Lankan native plants and
- ii. An Indo Sri Lanka Research Programme on Studies in surface sterilization of spices using nonthermal processes.

A project in collaboration with Physikalisch-Technische Bundesanstait, Germany, and other institutes of National Quality Infrastructure in Sri Lanka (SLS, SLAB) was initiated. The aim of the collaboration was to improve the quality of infrastructure in the country and enhance the use of quality assurance services based on international practices in the Short and Medium Enterprises (SME) located in the Northern region of the Island.

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



The International Center for Chemical and Biological Sciences (ICCBS), Pakistan, is one of the leading academic research institutions in

Pakistan with a strong international standing. ICCBS has been a UNESCO Category II institution since 2015. The Center also serves as the Centre of Excellence of COMSATS, TWAS, WAITRO, OIC and UNCSTD.

ICCBS focuses on: research and training for producing high quality human resource; and extending diagnostic, analytical and clinical testing services to local and regional clients from private and public sectors.



#### **Awards and Achievements**

- Prof. Dr. M. Iqbal Choudhary,
  Director ICCBS, was appointed as a
  member of the National Commission
  for Science and Technology (NCST)
  for a period of three years in
  recognition of his scientific research
  and services in the field of chemistry.
  NCST, the highest scientific advisory
  commission to Pakistan, focuses on
  promoting scientific and technological
  capacity building for sustainable
  economic growth of Pakistan.
- The American Heart Association (AHA), United States, awarded "Paul Dudley White International Science Team Award" to five Pakistani scientists for their poster presentation in a scientific session 2017 held in California from 11 to 15 November 2017. Three of these scientists belong to ICCBS.

#### **Institutional Capacity-Building**

#### Sino-Pakistan Ethno-medicine Research Center

Pakistan's first Sino-Pakistan
Ethnomedicine Research Center,
established at ICCBS, was inaugurated on
10th February 2017. It is a joint venture to
serve the people of Pakistan and China.
Chinese and Unani (Greek) are ancient
medicine systems for holistic and natural
healing.

#### **R&D Centre in Pharmaceuticals**

A Research and Development Centre of the pharmaceutical company, The Searle Company Limited (TSCL) was inaugurated at ICCBS Technology Park and Technology Incubation Centre. The center will help accelerate the development and release of national innovative pharmaceuticals to the market.

#### **Accreditations and Certifications**

ISO 17043:2010 Accreditation for IAC, ICCBS: The Industrial Analytical Center (IAC), ICCBS, Karachi, has been awarded the 'certificate of accreditation' by Pakistan National Accreditation Council (PNAC), Federal Ministry of Science and Technology, on June 10, 2017, whereby the Centre was granted the ISO 17043:2010 accreditation. The IAC offers a range of professional analytical and consultancy services to the industrial, private and public sectors. More than 500 industries in Pakistan are benefiting from the analytical and consultancy services of the IAC.

#### ISO 9001:2015 Standard Certification:

ICCBS acquired the ISO 9001:2015 for its all five research units, according to which Bureau Veritas Certification Pakistan Branch has certified the management system of the ICCBS in accordance with the requirements of the management system standards of ISO 9001:2015.

#### **South-South Cooperation**

MoU with SKLCMEMR, China ICCBS inked a Memorandum of Understanding (MoU) with the State Key Laboratory for Chemistry and Molecular Engineering of Medicinal Resources (SKLCMEMR), Guangxi Normal University, China in a ceremony held at Dr. Panjwani Center for Molecular Medicine and Drug Research (PCMD) of ICCBS, on 27th November 2017. Through this agreement, the signing institutions would make joint efforts for establishment of a Sino-Pakistan Joint International Laboratory for Chemistry and Molecular Engineering of Medicinal Resources at ICCBS.

#### **MoU** with Beijing Institute of Genomics

During the reporting period, ICCBS signed an MoU with Beijing Institute of Genomics (BIG) of Chinese Academy of Sciences (CAS), China. Both the institutions aim to work together in the fields of Life Sciences, and strengthen their relationship for the benefit of their students and researchers.

#### Cooperation Agreement with National Economic and Technical Development Zone, Liuyang (NETDZLY), China

ICCBS and National Economic and Technical Development Zone, Liuyang (NETDZLY), China signed an MoU, on



June 21, 2017 for cooperation in Research and Development (R&D) in the fields of drug, health food, including efficacy and safety evaluation, quality control, as well as registration both in Pakistan and China. Director ICCBS, Prof. Dr. M. Iqbal Choudhary and Chairman Administrative Committee of NETDZLY, Mr. Guo Lifu, signed the MoU on behalf of their institutions.

### Intent of Cooperation with Al-Quds University, Palestine

The ICCBS signed an Intent of Cooperation with the Al-Quds University, Palestine, to collaborative promote scientific and educational activities between the two institutions. Director ICCBS and President Al-Quds University Prof. Imad Abu Kishek signed the agreement on behalf of their institutions.

#### MoU with South African Authority on Halal affairs

An agreement was reached with the South African National Halaal Authority (SANHA) - Halal Associates Pakistan to extend the scope of Halaal testing services all over the country. Both the institutions agreed to develop linkages for testing and R&D activities at Halaal Testing Laboratory (HTL) at the Industrial and

Analytical Center, ICCBS.

#### MoU with Hamdard University

ICCBS also signed an MoU with the Hamdard University (HU), Pakistan, according to which HU offered land to grow mutually agreed medicinal plants leading to drug development. Both the institutions aim to initiate formal coordination between the two organizations especially in the field of chemical, toxicological, bioassays and pharmacological studies on Unani/ Eastern medicine and nutraceuticals. Both the organizations have agreed to encourage, promote, and facilitate mutual collaboration and also with the interested research groups within the institutional set-up of both the parties.

### Cooperation with the National Rice Research Institute, Hangzhou, China

A delegation of China National Rice Research Institute (CNRRI) of Hangzhou, China, called on scientists at ICCBS to discuss matters relating to development of new varieties of high quality rice. Director General CNRRI, Prof. Dr. Cheng Shihua, along with six delegates visited the ICCBS and met the former Federal Minister for Science & Technology and ex Chairman Higher Education Commission Pakistan,

Prof. Dr. Atta-ur-Rahman and Director ICCBS Prof. Dr. Muhammad Iqbal Choudhary.

The importance of conducting research on developing new high yielding, disease resistant and high quality varieties of rice was highlighted during the meeting. The delegates explained that the setup of Sino-Pakistan Hybrid Rice Research Center is linked to the objective of mutually conducting research for the development of new high-yielding and high quality rice species.

#### **Capacity Building Events**

The capacity building events organized by ICCBS in 2017 include:

- Three-day workshop on 'Next Generation DNA Sequencing Data Analysis' (March 27-29, 2017);
- 6th International Symposiumcum-Training Course on Molecular Medicine and Drug Research (November, 6-9, 2017);
- Workshop on Scientific Writing (November 15, 2017);
- Public awareness seminar on thyroid problems among women (December 13, 2017).

### Prof. Zhaohui Lin **Director ICCES**



The year 2017 has witnessed comprehensive progress and achievements in various undertakings of COMSATS in its member countries. Bearing in mind its mission and goals, COMSATS has joined hands with governmental departments and scientific organizations, vigorously imparting the scientific spirit to developing countries and regions, and boosted the exemplary role of COMSATS Network as a forceful advocate for developing countries.

ICCES, the COMSATS Centre of Excellence in climate and environment sciences, is deeply concerned about the challenges related to climate change and climate-related disasters faced by developing countries. With the support from COMSATS Secretariat, ICCES has been working together closely with COMSATS' member countries through varied collaboration forums, affirming its commitment to reducing the climatic and environmental risks, and improving sustainable environmental management.

While gaining great progress and high respect from the society, we still have a long way to go in catching up with the most advanced scientific and technological frontiers in the world in many disciplines. I believe that all COMSATS CoEs will continue to make more contributions to the scientific progress as well as thier national economic and social progress. On behalf of ICCES, I wish COMSATS a very successful year ahead.

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



The International Center for Climate and Environment Sciences (ICCES), China, originated from the former Center for Climate

and Environmental Prediction Research (CCEPRE). Since its establishment, ICCES has been supported by the Institute of Atmospheric Physics (IAP), Chinese Academy of Sciences (CAS), and the Ministry of Science and Technology (MoST), Government of China.



As a part of COMSATS Network, ICCES is committed to conducting basic and applied research, such as development of CAS Earth System Model and Climate Forecast system to help find solutions to climatic and environmental challenges



confronting developing countries. Besides, the centre conducts high-level research and training activities for building a critical mass of highly-qualified personnel in the field of climate and environment sciences. ICCES made the following achievements in 2017:

The Director of ICCES, Prof. Zhaohui Lin, made a presentation during the 20th Coordinating Council Meeting as the Council member from China. As the group leader of the International Thematic Research Groups (ITRGs) on 'Climate Change and Environmental Protection, Prof. Lin presented the progress report on joint-applied international projects, capacity building activities, and international cooperation activities among the ITRG group members. He highlighted the "Belt and Road Science, Technology and Innovation Cooperation Action Plan", which consisted of People to People Exchange Initiative, Joint Laboratory Initiative, Science Park Cooperation Initiative, Technology Transfer Initiative, and the funds for developing countries and international organizations. This Action Plan will provide support to COMSATS and its network in seeking opportunities for international collaboration.

### **Capacity-Building Events**

During 2017, ICCES organized/coorganized and participated in various capacity-building activities. These include:

- China-Sri Lanka 3<sup>rd</sup> joint workshop on 'Monsoon Climate and Marine Environment Change' Sri Lanka (May 24<sup>th</sup>-25<sup>th</sup> 2017);
- CAS-CSIRO (Chinese Academy of Sciences-Commonwealth Scientific and Industrial Research Organization) Climate Theme Workshop (27<sup>th</sup>-28<sup>th</sup> June 2017) ICCES, China;
- Workshop on 'US-China coupled Model Inter-comparison' in collaboration with National Oceanic and Atmospheric Administration (NOAA) (23<sup>rd</sup>-25<sup>th</sup> August 2017);
- China-ASEAN Forum on Disaster Prevention and Reduction and Sustainable Development (13<sup>th</sup>-14<sup>th</sup> September 2017);
- 16<sup>th</sup> International Conference of CAS-TWAS-WMO Forum on Climate Science (CTWF), International

Symposium on 'Advances in Seasonal to Decadal Prediction', (18<sup>th</sup>-20<sup>th</sup> September 2017).

#### **South-South Cooperation**

South-South Cooperation was facilitated with visits to and from institutions from the South, which include the following:

#### Delegation from CIIT, Pakistan

On April 18, 2017, ICCES facilitated a visit of a delegation from COMSATS Institute of Information Technology (CIIT), Pakistan. During the visit, discussions were carried out on joint research projects, data-sharing and capacity-building. It was agreed that both sides would apply for international collaborative projects under the "Belt and Road" initiative, and conduct joint research on extreme events, dust-storms and flood. Prof. Zhaohui Lin



#### **ICCES Open Research Programme**

ICCES is committed to promoting joint scientific research in the field of climate change and environment sciences, facilitating academic exchanges with other countries involved in the "Belt and Road" Initiative, contributing to the capacity building activities for all the developing countries, providing avenues for international cooperation and to enhance links between ICCES and institutes from other developing countries. Bearing this in mind, after much deliberation, the ICCES Open Research Program for Climate and Environment Sciences will be officially launched in year 2018. ICCES Open Research Program will support researchers from developing countries engaged in basic and applied research activities, focusing on the key scientific problems in global climate and environmental changes.

#### Key research fields:

- meteorological and environmental forecast and related disaster assessment theory and technique
- data assimilation theory and methodology
- earth system theory and natural cybernetics

#### Interdisciplinary studies

ICCES Open Research Program funds joint research activities conducted by foreign scientists from developing countries with their ICCES counterparts in the areas of mutual interests. The duration of funding is generally 2 to 5 months. The fund will cover international travel costs and living costs for 2-5 months in China for foreign researchers, and the total funding for each foreign researcher will not exceed 50,000 Chinese Yuan. Each year, there will be 3-5 applications granted by the ICCES Open Research Program to enhance and broaden experiences of scientists from developing countries and to create a favorable environment regarding cooperative channels, funding and operational mechanism for researchers.

ICCES Open Research Program will offer researchers more opportunities to conduct joint research in climate and environment related fields, and help develop stronger links between ICCES and other developing countries under the support of CAS, TWAS and COMSATS network.

also invited more students from CIIT to avail for the CAS-TWAS President's Fellowship and other scholarships offered by the University of Chinese Academy of Sciences.

#### **Delegates from Sri Lanka**

H.E. Lakshman Senewiratne, State Minister for Science, Technology and Research, Sri Lanka, visited ICCES on April 20, 2017. Prof. Lin Zhaohui briefed him on the cooperation activities between ICCES and Sri Lanka for the last 3 years with particular emphasis on joint research on the extreme hydrological events over the Mahaweli river basin of Sri Lanka. His Excellence sought bilateral cooperation to meet the local challenges relating to extreme meteorological and hydrological events, including rainstorms and floods.

Prof. Gamini Senanayake, Vice-Chancellor of University of Ruhuna, and Prof. Tilak Priyadarshana, Director of China-Sri Lanka Joint Center for Education and Research (CSL-CER), visited ICCES on June 29, 2017. Considering the two Sri Lankan institutions outstanding partners, Prof. Lin proposed stronger scientific collaborations with both focusing on training of young scientists. The Sri Lankan officials thanked ICCES for its efforts for bilateral cooperation and expressed their determination to strengthening it further.

# Delegation from ICCES-China at Tajikistan Academy of Sciences

Under the Belt and Road Initiative programme on Climate Change Research and Observation, supported by Chinese Academy of Sciences (CAS), a delegation from ICCES and other CAS Institutes visited Tajikistan Academy of Science and Meteorological observation stations in Khujand, Tajikistan, from 1st to 9th July 2017.

The ICCES scientists visited several research laboratories and interacted with scientists working there.

#### Delegation from International Centre ff Physics (CIF), Colombia

Dr. Jamie Erazo from the International Centre of Physics (CIF), Colombia, visited ICCES, China, on December 6, 2017 to foster a long-term cooperative mechanism based on the existing links between these two COMSATS' Centres of Excellence. He also aimed at exploring collaborative potential by seeking international support from COMSATS, TWAS, and other funding sources from their countries.

The two sides agreed to cooperate for climate change and disaster modelling in Colombia, and research on satellite and meteorological observation data.

# Memorandum of Understanding with NRC, Egypt

Prof. Zhaohui Lin, Director of ICCES, visited the National Research Center (NRC), Egypt, from May 16-17, 2017 and signed a Memorandum of Understanding between ICCES and NRC, which paves way for cooperation in:

- exchange of scientists, scientific and technical information for the purpose of research, training and consultation;
- organizing bilateral scientific and technical seminars, workshops and conferences;
- identifying scientific and technical problems, formulation and implementation of a joint research program in the areas of climate, environment and water issues; including hydrological processes and modelling, hydrological risks and management, climate variation and



its modelling and prediction, wind modelling, weather forecasts and air pollution modeling.

#### **Graduate Students and Postdoc Programme**

Based on the existing international collaboration network, ICCES continued to attract students and young scientists from developing countries to enroll in Ph.D. or Post-Doctoral studies through the CAS-TWAS PIFI Programme. In 2017, students from Iran, Pakistan, Thailand, Nigeria and Sri Lanka continued with their PhD programs in ICCES. An awardee of the CAS "Belt and Road" Master Fellowship Programme would also join ICCES.

Dr. Bushra Khalid from Pakistan, who had joined ICCES as a Post-Doctoral researcher under PIFI program in 2015, completed her research report on the relationship between climate change and dengue transmission in Pakistan in February 2017. Dr. Worachat Wannawong from Thailand also finished his Post-Doctoral research on coupled data assimilation in June 2017, and joined the Sun Yat-Sen University in Guangzhou, China, as lecturer.

Dr. Mojisola Adeniyi from University of Ibadan, Nigeria, continued her research at the ICCES from September to November 2017 on improvement in forecast of MJO, monsoon phases by using IAP-

AGCM4 models output. The findings of her research will help public and private institutions in economic, planning. It will also facilitate in adopting and promoting the CAS System Model in Africa.

### Research and Development, and Major Achievements

During the reporting period,

- ICCES completed thirty-year numerical experiments on ensemble hind casting of IAP-AGCM 4.1, evaluated (Preliminary) the model's forecasting ability of summer climate anomaly and days of extreme high temperature in China, besides analyzing the model biases. The simulation and evaluation of cloud and its short wave radiation effect in East Asia by CAS-ESM, and simulation and prediction of Eurasia snow water equivalent by CMIP5 were also executed.
- The Centre made headway towards improving real-time numerical climate prediction system and research on predictability and forecasting methodology.
- The Center also made progress on the development of ocean circulation and land surface models, and interaction between land and atmosphere.
- ICCES developed a new module for plant establishment in the dynamic global vegetation model IAP-DGVM,

- studied the forest ecosystem's response to climate change, and completed the simulation for global fire model comparison project and relevant analysis.
- On May 16, 2017, World Meteorological Organization (WMO) awarded its 61st International Meteorological Prize (IMO) to Prof. Qing-Cun Zeng, founding director and member of ICCES and an academician of the Chinese Academy of Sciences. The award was given for his contributions to satellite meteorological remote-sensing theory, numerical weather prediction theory, meteorological disaster prevention and the earth system model.
  - The Chinese Academy of Sciences developed an Eartlab under the lead of the Institute of Atmospheric Physics, Chinese Academy of Sciences. Prof. Qingcun Zeng, founder of ICCES, is the principal scientist at the Earthlab. The CAS Earth System Model (CAS-ESM) is a vital component of the EarthLab, with ICCES playing a major role in its development. In September 2017, the EarthLab made debut at Hong Kong InnoTech Expo 2017, which is a showcase of achievements in science and technology of the Chinese mainland and Hong Kong. At the booth of EarthLab, visitors could observe and even "touch" simulation of dust/pollutant transportation, solar activities, land surface change, ocean circulation and other earth systems. During his visit to Hong Kong InnoTech Expo 2017, Prof. Minghua Zhang also visited the City University of Hong Kong and the Chinese University of Hong Kong, and made a presentation on CAS-ESM. About a 100 researchers and students attended this seminar. The two universities took keen interest in the EarthLab and expressed their desire to enhance collaboration with IAP.

### Prof. Stephen E. Onah Director NMC



On behalf of Management of National Mathematical Centre, I will like to use this medium to appreciate the Management and the entire Staff of COMSATS Secretariat and COMSATS Institute of Information Technology (CIIT) Islamabad, Pakistan, for the warm reception accorded me during my visit from January 18 – 20, 2018.

The visit and interactions with like minds, great scientists and researchers have provided me the opportunity of on-the-spot overview of core activities of COMSATS and possible areas of collaborations with this highly esteemed organization.

This has spurred me to improve on the already established research activities of the Centre (National Mathematical Centre, Abuja, Nigeria), towards the achievements of its mandate and goal of COMSATS in the area of high level quality research most especially, the International Thematic Research Groups (ITRGs) of COMSATS.

In order to strengthen and deepen quality research in the area of Mathematical modeling following new Research Groups have been formed among members of academic staff of the Centre. These include:

- Research Group on computational mathematics and scientific computing;
- ii. Research Group on mathematical modelling and simulation;
- iii. Research Group on stochastic modelling and numerical computing;
- iv. Research Group on artificial intelligence and computer human interactions;
- Research Group on Ethno-Mathematics.

Let me at this juncture assure the Management of COMSATS that Nigeria will continue to contribute her quota to the goal of the organization for the advancement of mathematical sciences and, by extension, development of Science and Technology in the South.

### National Mathematical Centre, Nigeria



The National Mathematical Centre (NMC), Nigeria, is an inter-university organization that promotes research

and capacity-building in mathematical sciences. It was established, inter alia, to train and develop high quality human resource in Mathematical Sciences, for

enhancing students' performance in Mathematics and Mathematical Sciences at all levels of Nigerian education system.

#### **Capacity-Building Events**

During the period under review NMC organized a few capacity-building activities that include:

- A competition for Mathematics students from Universities across the Nigeria (1st to 6th April 2017);
- A three-day Conference of 'Mathematical Sciences Students

Association' of Nigerian Tertiary Institutions (17<sup>th</sup>-21<sup>st</sup> April, 2017).

The selection process for the 2017 International Olympiad started in February 2017 and the Centre selected candidates to represent Nigeria in the following Olympiads competitions: Pan African Mathematics Olympiad (PAMO) in Morocco; International Mathematics Olympiad (IMO); International Physics Olympiad (IPHO) in Indonesia; and **International Olympiad on Informatics** (IOI), Iran.

Under the nationwide States Development Goals of NMC, a project for training students and teachers on Mental Arithmetic and Mathematics was held from January to May 2017, wherein different methods of teaching and learning Mathematics with the use of teaching aids were demonstrated.

# **Collaborations with International Organizations**

During the period under review, NMC initiated collaboration with Professor Nkechi Agwu, Carnegie and an African Diaspora Fellow on Ethno-Mathematics under a capacity building framework in Science, Technology, Engineering and Mathematics (STEM).

The outcome of this joint project will be reflected in improved students' performance in mathematical sciences, especially participation of women in STEM related fields and development of a better teaching methodology for the teachers.

#### **South-South Cooperation**

# Visit of Chairperson Mathematics Department, CIIT

The National Mathematical Centre, Nigeria, hosted Prof. Dr. Moiz-ud-din Khan, Chairperson of the Department of Mathematics, COMSATS Institute of Information Technology (CIIT), Islamabad, Pakistan, during his three day visit to the Centre from 11-13 September, 2017. The visit coincided with a two-day National Stakeholder's Meeting of Professors and Heads of Departments of Mathematics and Mathematical Sciences. This visit also helped explore more avenues of collaboration between CIIT and NMC

in the field of Mathematical Sciences.

During his visit, Prof. Khan also had extensive discussions and interactions with the Management and Coordinators of Academic Programmes at NMC.

# National Research Centre (NRC), Egypt



The largest R&D Institution in Egypt, National Research Centre (NRC), is devoted to research in science and technology. The

centre is affiliated with the Ministry of Scientific Research, Egypt. The mission of NRC is to foster research in public health, agriculture and industry.

#### **Research on Genetic Crop Modification**

Egypt is sometimes cited as the world's largest wheat importer. NRC researchers made advances that could increase the national production of wheat. One of the advances involves a new compound that would be used to treat wheat seeds. The other involves the genetic manipulation of the wheat seeds themselves.

The researchers obtained a patent for the new compound, which includes microorganisms that could increase wheat yields in arid and semi-arid regions by as much as 68 percent. The new compound would contribute to increasing wheat productivity by making it possible to plant wheat in completely arid lands. The compound will increase production by reducing stresses on wheat as it grows, and increasing the concentration of raw protein and carbohydrates in wheat grains. It would also inhibit bacteria and viruses

in the soil that attack wheat and increase plant resistance to disease.

The research team treated the seeds with the compound before they were planted to get the maximum possible benefit. The plants were also sprayed with the compound after germination to form a layer on the leaves, which improved growth and protected the plants against the effects of climate change and other environmental stresses.

Experiments to test the compound were conducted during two agricultural seasons on two of Egypt's wheat types grown in the Sinai Peninsula and in the Beheira governorate North of Cairo. These places are known for their drought conditions.

#### Cooperation Protocol for Environmental Conservation with Environmental Affair Agency

On 8th January 2017, Mr. Ahmed Soud, Chief Executive, Egyptian Environmental Affair Agency; and Dr. Ashraf Shaalan, President, National Research Center signed a cooperation protocol for conservation of Environment. The protocol targets promotion of technical and applied research capacity in conservation and protection of environment.

Under the protocol, both protocols would work on new areas of scientific research to help address issues relating to development and environmental sustainability. Specifically, the protocol stipulates cooperation on environmental issues pertaining to solid and liquid wastes; climate change; preservation of biodiversity; preservation of natural reserves; and studies of environmental impact assessment.

### HRH Princess Sumaya bint El Hassan President RSS



The Royal Scientific Society (RSS) has been a proud member of the COMSATS' network for over 20 years. Our organisations have grown together and made cooperation between our institutions, and our professionals, a priority that we are delighted to share.

In 2017, RSS was honoured to organise the 8<sup>th</sup> World Science Forum (WSF), the largest ever gathering of scientists and policymakers in the Middle East. Our theme of 'Science for Peace' resonated so well with the mission statement of COMSATS. Our discussions brought together representatives from the Global South and beyond and gave them a voice on the world stage. We proudly facilitated conversations on the power of science to change lives and to make a lasting impact on our region and our world. I know that these discussions will resonate in our region and around the world.

We were delighted to welcome the Executive Director of COMSATS to WSF 2017, and so many other talented members of the COMSATS family. I hope that in 2018, and the years to follow, we may continue these conversations and do all that we can to give our talented scientists a voice in the global discourse of development and change.

# Royal Scientific Society (RSS), Jordan



The Research Scientific Society (RSS) is the largest applied research institution in Jordan. It, inter alia, provides consultancy and

technical support services for scientific capacity-building. The Society serves as the local as well as regional reference point of knowledge for science and technology.

#### **Awards And Achievements**

During 2017, the RSS officials received a number of international awards and recognitions, including.

The Director-General of UNESCO,

Ms. Irina Bokova, honored Princess Sumaya bint Hassan of Jordan (President RSS) with the title of 'UNESCO Special Envoy for Science for Peace' (2017-2019) in a ceremony at the Organization's Headquarters on 2<sup>nd</sup> October 2017. The recognition came as a result of her efforts to promote science as a power to bring

countries together and contribute to positive changes in society, as well as for her commitment to strengthening the development of scientific thinking in her country and dedication to the ideals and aims of the Organization.

During her visit to the University of California, Berkeley, Her Royal Highness Princess Sumaya bint El





Hassan of Jordan, was awarded a Chancellor's Citation by Chancellor Nicholas Dirks. The Chancellor's Citation is awarded to distinguished visitors, alumni and friends whose great achievements the university salutes and whose presence honors and benefits the campus.

- For fostering cooperation between Germany and Jordan in research and education, H.R.H Princess Sumaya bint El Hassan was honored with Order of Merit of Federal Republic of Germany on 6th February 2017. H.R.H Prince El Hassan bin Talal and Princess Sarvath El Hassan also graced the ceremony with their presence.
- Dr. Muhammad Saidam, Chief Scientist, RSS, is among 15 eminent scientists and experts to work as 'Team of Global Experts to Serve UN', with the various branches of the United Nations to compile comprehensive reports with the aim of giving policy-makers necessary data and information on sustainable development.

#### World Science Forum 2017 Hosted By RSS-Jordan

More than 3,000 science leaders from over 140 countries gathered at the World Science Forum 2017 in Jordan from November 7 to 10, to call for a more responsible and ethical use of innovation, and to address the social and economic relevance, influence, and responsibilities

of science. The World Science Forum was organised by the Royal Scientific Society of Jordan (RSS), in collaboration with the United Nations Educational, Scientific, and Cultural Organization (UNESCO); Hungarian Academy of Sciences (MTA); American Association for the Advancement of Science (AAAS); World Academy of Sciences (TWAS); European Academies Science Advisory Council (EASAC); International Council for Science (ICSU); Inter-Academy Partnership (IAP); International Social Science Council (ISSC); and Science Counsellor representatives of the G77.

There were 15 thematic sessions, 150 organisations represented, 22 special sessions, and a number of side events. The forum outcomes pertained to:

- 1. Equitable and sustainable management of natural resources is essential to avoid conflicts and to promote peaceful development.
- The preservation of scientific capacities, threatened by global migration trends, is key to peace, sustainable development, resilience and recovery.
- Diversity is a key enabler of excellence in science, technology and innovation and is essential to optimize its relevance and impact.
- 4. We commit to the fulfillment of the universal right to science.
- We support the launch of a regional science forum for the Arab World.

#### **International Cooperation**

Under the Patronage of H.R.H Princess Sumaya Bint El-hassan, the Royal Scientific Society/National energy research Center organized the inaugural meeting workshop of "the MENA Region Initiative as a model of NEXUS Approach and Renewable Energy Technologies" regional project. This project is being implemented by the RSS' National Energy Research Center in cooperation with the International Union for Conservation of Nature (IUCN) and Future Pioneers for Empowering Communities (FPEC) with support from the Swedish International Development Cooperation Agency (Sida). The project's overall objective is to strengthen regional cooperation within the MENA region through implementing NEXUS approach duly integrated with renewable energy technologies at municipality level to mitigate climate change impacts.

During 2017, RSS signed Memoranda of Understanding and Agreements with different International organizations. These include:

 Agreement with MERCY CORPS, to provide support for the program "Water Innovation Technologies (WIT)" (August 22<sup>nd</sup> 2017). The strategic objective of the agreement is to save 18.5 million m³ of water during the 5-year project, through use of different water innovation technologies and market based approach.



- MoU with Naif Arab University for Security Sciences (NAUSS) (November 7<sup>th</sup> 2017) to contribute to the promotion of scientific and research cooperation in the fields of security.
- Agreement with United Nations Relief and Works Agency (UNRWA) (December 12th 2017)to provide consultancy services in engineering for implementing PV Solar System Project at UNRWA Installation.
- MoU with ENEX Energy Expert in Saudi Arabia (December 13th 2017) to share RSS services and expertise in of Energy and Renewable Energy.

Researchers from RSS published 15 papers in International Journals during 2017.

### **Tanzania Industrial Research** and Development Organization (TIRDO), Tanzania



The mission of Tanzania Industrial Research and Development Organization (TIRDO) is to perform research and development,

and provide technical services for industrial processes and products.

#### **Capacity-Building Events**

#### **Coal Resource Quality Assessment**

The TIRDO Energy Division acquired state-of-the-art equipment (including CHS Analyzer and Bomb Calorimeter Parr 6400) for analyzing the quality of coal (and other energy materials). The energy Division's Coal Laboratory is now capable of analyzing materials with respect to proximate, ultimate and heating value parameters. It can also analyze inorganic content (trace metals) in materials. To date, the laboratory has analyzed over 60 coal samples from mining companies in Tanzania.

In recognition of this capacity, the Minister for Energy and Minerals declared the TIRDO Coal Laboratory as the National backstop reference laboratory for coal quality assessment to Tanzania.

#### **National Capacity Building**

TIRDO ICT Department plans to soon launch an e-learning platform for practicals of science subjects for secondary school students who have access to educational materials as compared to urban schools.

#### **Research and Development**

#### **Greener Cassava Processing System** Leading to Zero Waste

A Greener Casava processing system has been developed by TIRDO, which consists of a grating machine with a pressing unit, a hybrid solar-biogas tunnel drying system for cassava grits, yeast fermentation system for bioethanol production and bacteria fermentation system for production of oligosaccharides, and anaerobic digester for biogas production. The project aims at improving income and welfare of small and medium entrepreneurs in cassava sub-sector in Tanzania through innovative processing technology.

#### **Publications**

The following publications were brought out during the period:

- Anselem P. Moshi and Ivy Matoju. The status of research on application of bio-pesticides in Tanzania. Review. Crop Protection 92 (2017) 16 – 28;
- Anselem P. Moshi and Nges Ivo Achu. Sustainable Management of Cassava Processing Waste for Promoting Rural Development in Cassava: Production, Consumption and Potential Uses for Nova Publishers Inc. USA (In Handbook on Cassava Production, Potential Uses and Recent

- Advances, Chapter 7, Ed. Clarissa Klein, ISBN: 978-1-53610-291-8);
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# **Dr. Orkun Hasekioglu**President TUBITAK MAM



TUBITAK (Turkish Scientific and Technological Research Council), with its research support award programmes, scholarships for international researchers, many research institutions covering a wide range of fields, wholeheartedly supports COMSATS' activities for the benefit of member countries.

We believe such collaborations in science and technology are a very powerful instrument to eliminate hatred and mischief among nations, replacing them with the positive feelings of respect, empathy, concern for others and altruism. When we get to know each other through a common purpose of bringing science and technology to the benefit and service of humanity, valuable friendships arise and we approach one step further towards the peace worldwide.

### TUBITAK Marmara Research Centre (MAM), Turkey



TÜBITAK Marmara Research Centre (MAM), Turkey, is an internationally recognized organization involved in research on conventional

technologies for enhancing Turkish industry and solving technological problems.

During the 20<sup>th</sup> Meeting of COMSATS Coordinating Council held in Cairo, Egypt, the President of TUBITAK MAM made a presentation on the structure and activities of TUBITAK and explored possibilities of cooperation with COMSATS' Member States.

# **South-South and North-South Cooperations**

TUBITAK MAM continued its efforts for South-South and North-South Cooperation in 2017. Some interactions in this regard are as follows:

# Delegation from Pakistan Meteorological Department

TUBITAK MAM received a delegation from Pakistan Meteorological Department (PMD) in May 2017 to follow up on developments in the joint 'Reverse Linkage Project between Pakistan and Turkey on Earthquake Seismological Research' in collaboration with Turkish Cooperation and Coordination Agency (TİKA); and Islamic Development Bank (IDB). The project aims at eliminating three main deficiencies in the field:

- data collection on seismic activities in Pakistan:
- analysis of seismological data; and

conversion of seismological data into useful information for government institutions.

#### Consul General of the Slovak Republic

Consul General of the Slovak Republic in Istanbul, Dr. Jozef ŠESTÁK, visited TUBITAK MAM. Discussions held on the occasion touched upon developments in the existing projects between TUBITAK MAM and Slovak Academy of Sciences (SAS) and emerging cooperation potentials, based on relations established under an earlier Protocol dated 02 February 2002 and joint support programmes since 2003.





#### Chief Scientific Advisor, British Foreign Ministry, visited TUBITAK MAM

On 27 September 2017, the Chief Scientific Adviser of British Foreign Ministry, Prof. Robin GRIMES, and other officials from the Consulate General of the United Kingdom in Istanbul visited TÜBİTAK MAM. The delegation was briefed on the general structure of TÜBİTAK MAM, its activities under various Institutes and possible areas of cooperation.

#### President, Palestinian Higher Council for Innovation and Excellence (HCIE)

The President of the Palestinian Higher Council for Innovation and Excellence (HCIE), H. E. Mr. Adnan SAMARA met the President MAM on 27 September 2017. During the meeting attended by the officials of the Environment and Cleaner Production Institute and Energy Institute, it was planned to hold a workshop on water and energy.

#### **Delegation from Qatar**

A delegation from comprising of Mr. Nada Al Olaqi, Director, Qatar National Research Fund (QNRF) and Dr. Abdul Sattar Al-Taie, Director, Qatar Foundation (QF) visited MAM, Informatics and

Information Security Research Center (BİLGEM) and National Metrology Institute (UME) in the Gebze Campus of TÜBİTAK on 4 August 2017.

The delegation received detailed information on the current activities of TUBITAK MAM and exchanged information on cooperation potentials. The program was completed with a visit to TUBITAK MAM's laboratories.

#### Visit of Consulate General of the United Kingdom in Istanbul

Prof. Robin GRIMES, Chief Scientific Adviser, British Foreign Ministry, and officials from the Consulate General of the United Kingdom in Istanbul were received by the President of TÜBİTAK MAM, on 27 September 2017. The delegation was briefed on the general structure, and fields of activities of TÜBİTAK MAM, as well as possible areas of mutual cooperation.

#### The Country Consultants of Turkey

TÜBİTAK MAM hosted a meeting of the Country Consultants of The Republic of Turkey Prime Ministry Investment Support and Promotion Agency (ISPAT) in countries, including USA, Germany, United Arab Emirates, China, France, Spain, Japan, Korea, United Kingdom and





Saudi Arabia on 28<sup>th</sup> November 2017. The delegation was briefed on the activities, R&D projects and industrial services of TÜBİTAK MAM and TÜBİTAK BİLGEM.

#### **Delegation from Indonesian Institutions**

A delegation from Indonesia comprising of senior officials from the National Nuclear Energy Agency of Indonesia (BATAN), Indonesian Institute of Sciences (LIPI), Institute for Research and Community Services (LPPM), Diponegoro University and Islamic Development Bank (IDB) visited TÜBİTAK MAM and TÜBİTAK Marmara Technopolis (MARTEK) on 8th November 2017. The meeting at MARTEK was attended by business development officials. The delegation was briefed with presentations on the activities of TÜBİTAK MAM and MARTEK and the opportunities of cooperation between Indonesia and TÜBİTAK were discussed They explored the possibilities of collaborating in nuclear technologies, nanotechnology and coal and biogas combustion and gasification.

#### Ministerial Delegation from Tunisia

A Tunisian delegation comprising of senior officials from the Ministry of Higher Education and Scientific Research and the Ministry of Agriculture visited the campus of TÜBİTAK in Gebze on 31st October 2017. The delegation was headed by the General Director in charge of International

Relations, Prof. Slim CHOURA. After presentations by the Tunisian delegation, they were briefed by the TÜBİTAK officials on the activities and projects of BİLGEM and MAM. The officials discussed the opportunities of cooperation between Tunisia and TÜBİTAK.

# Collaborations with International Organizations

# Netherlands Organization for Applied Scientific Research

Officials from the Netherlands
Organization for Applied Scientific
Research (TNO) and TUBITAK MAM
held a meeting on opportunities for
scientific and technological cooperation
and joint events as part of the 2017 TurkeyNetherlands Science Year. The meeting was
attended by the President of TUBITAK
MAM, Dr. Orkun HASEKİOĞLU, and the
Business Development Director of TNO,
Dr. Sühendan ADIGÜZEL.

# **European Organization for Nuclear Research (CERN)**

TUBITAK and CERN signed a "Cooperation Framework Agreement" in Switzerland in order to facilitate the Turkish research community in making better use of the resources at CERN.

A delegation from TUBITAK MAM headed by its President visited CERN to discuss the infrastructure and workforce potentials at CERN and TUBITAK and negotiated the route for Turkey to attain of the accelerator technology infrastructure and become a technology leader in the region. Within this scope, both sides explored the possibility of creation of new support programmes for increasing the number of Turkish students and researchers at CERN along with establishing a hadron therapy center and development of electronic systems and new software. The agreement would help in knowledge-sharing and furthering cooperation between TUBITAK and CERN in strategic areas.

#### **Capacity-Building Events**

During 2017, TUBITAK MAM participated in and organized a number of activities for capacity-building of human resource in science and technology. Some of these events are as below:

- Workshop on 'Solutions to Water Challenges in MENA Region', Mansoura University, Egypt (25th-30th April 2017);
- Ministerial Conference on 'Strengthening Euro-Mediterranean Cooperation through Research and



- Innovation PRIMA Initiative, Valletta, Malta (3<sup>rd</sup>-4<sup>th</sup> May 2017);
- 4<sup>th</sup> International Nuclear Power Plants Summit, Istanbul, Turkey, (8<sup>th</sup>-9<sup>th</sup> March 2017);
- Expo Turkey by Qatar Exhibition, Doha, Qatar, (19<sup>th</sup>-21<sup>st</sup> April 2017); during the exhibition, TUBITAK was awarded the "Innovation Prize of the Year".
- 13<sup>th</sup> International Defence Industry Fair 2017, Istanbul, Turkey (9<sup>th</sup>-12<sup>th</sup> May 2017). TUBITAK MAM was represented in the Fair through the product and project exhibitions by the Center's Energy, Materials and Chemical Technology Institutes.
- Heritage Istanbul 2017: Restoration, Archeology, Museum Technologies
   Fair and Conference, Istanbul, Turkey (27th-29th April 2017);
- Joint workshop with Slovak Academy of Sciences (SAS) (12<sup>th</sup>-13<sup>th</sup> November 2017);
- South Korea-Turkey Renewable Energy Seminar held in Istanbul (7<sup>th</sup> September 2017).

#### **Technical Services**

After having catered to requests from China, TUBITAK MAM is now providing test and analysis services to the United States of America. The number of the countries served has reached 17, subsequent to the "implantation and sub-acute toxicity test" requests from the private sector of the USA.

The list of the comprehensive R&D and test & analysis services offered by TUBITAK MAM can be found at the institution's website on the following page: "http://mam.tubitak.gov.tr/en/content/test-analysis-services".

#### Research and Development

# Development of Resistant Starch against Obesity and Diabetes

TÜBİTAK MAM developed a starchadded flour to help check the ever

increasing rates of obesity and diabetes in Turkey. The new products "Starch-added Diet Flour" and "Starch-added Diabetic Flour" were introduced at Halal Expo 2017, Turkey.

This starch cannot be digested in small intestine but is fermented in the large intestine. It resembles dietary fibers in terms of health effects. In addition to having prebiotic properties, the products affect bowel health positively owing to their production of butyrate and other short-chain fatty acids. The products containing resistant starch with 50% lower energy than regular starch give a feeling of satiety, and thereby control appetite. This helps balance the blood sugar. Resistant starch products can be consumed by everyone as they do not have any side-effects.

# University Cheikh Anta Diop (UCAD), Senegal



Established in 1959, the University Cheikh Anta Diop is one of the largest science and technology institute in Dakar, Senegal. The research

programmes offered in the university focus on Medicine, Physics, Chemistry, and Biology.

#### Research and Development

#### **Software Assisting Mathematics Education**

On 4<sup>th</sup> December 2017, Michel Seck, a PhD student at the Department of Mathematics and Computer Science, UCAD, developed a software named 'Simula'. The software helps the teachers of secondary and higher level education in preparing lessons and correcting the exercises. Students can also use it to do exercises and check corrections. The tool simplifies mathematics teaching. With

this software, users can do analysis, linear algebra, Groebners bases, number theory, 2D and 3D graphs, probability, statistics, arithmetic networks and correction codes. This software has nearly 120,000 lines of code.

### Water Research and Technologies Centre (CERTE), Tunisia



The Water Research and Technologies Centre (CERTE) has five laboratories: Geo-resources; Natural Waters Treatment; Wastewaters and

Environment; Water, Membranes and Environmental Biotechnology; and Valorization of the effluents.

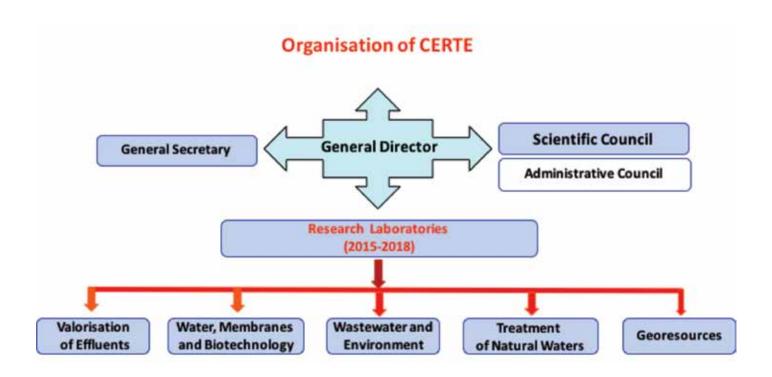
#### **Research and Development**

During 2017, CERTE conducted research in the fields of hydro-geophysics and geostatistics; hydrology and hydrogeology modeling; geology, geochemistry and mineralogy; water resources modeling and climate change impact; improving the quality of drinking water; desalination of brackish and marine water; wastewater (urban, industrial, rural)/treatment and innovative technologies; reuse/recycling; water pollution, sanitary engineering, toxicity, corrosion, ICA, GIS, diagnosis / evaluation, local water management; new approaches, and techniques; application of membranes; phyto-remediation; disinfection of wastewater; and rural sanitation.

#### **Capacity-Building Events**

CERTE organized two international events in 2017

The 1<sup>st</sup> Atlas Geo-resources
 International Congress 'AGIC'
 2017 was held from 20<sup>th</sup> to 22<sup>nd</sup>
 March 2017. The topics covered during the congress included: Basin





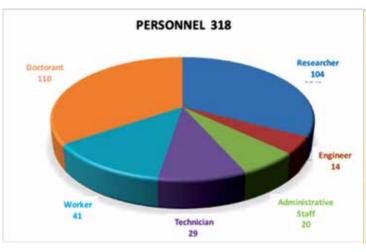
Geo-exploration, Geo-modeling, Geomatics and Geo-statistics, Geomaterials and Mines, Water Resources and Modeling, Energy, Environment and Climatic Change, Geo-hazards and Vulnerability, Soil sciences and Modeling.

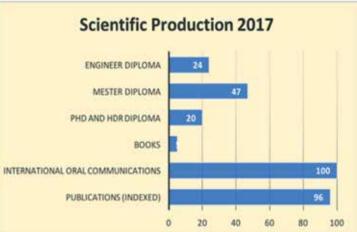
The 3<sup>rd</sup> International Conference on Advanced Oxidation Process for Sustainable Water Management (AOP'TUNISIA) was held from 2<sup>nd</sup> to 4th November 2017, in collaboration with COMSATS. The conference had an attendance of 120 hailing from 11 countries from Africa, Asia and Europe.

To promote technology transfer and water sector related know-how to economic, industrial and social partners, CERTE

participated in the following exhibitions:

- International exhibition on **ENVIROTEC & ENERGIE EXPO** 2017, Tunis, Tunisia, 23-25 May, 2017;
- The Water Forum 2017, Sfax, Tunisia, 11-14 October, 2017;
- National Valorisation Days 2017 organised by the Ministry of Higher Education and Scientific Research and







UTICA (Tunisian Union of Industries, Trade and Crafts), 13-14 December, 2017.

# Collaborations with International Organizations

CERTE is a partner organization in several internationally funded bilateral and multilateral projects, which include:

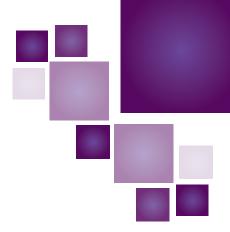
#### (i) Bilateral Cooperation

 Depollution of natural water loaded with minerals using the electrocoagulation technique for

- drinking with PHC-UTIQUE, France.
- Sustainable Olive Mill Wastewater management coupled with biofuel production and water recovery with PHC-UTIQUE, France.
- 3. Development of polyoxometalate/ polymer composites for photocatalytic treatment of emerging pollutants with PHC-UTIQUE, France.
- Technological Transfer and Innovation on TN Research Centres with TRIFOLD, Germany.
- Development of solar photo-nanoreactor for POPs degradation, CMPTM, Morocco.

#### (ii) Multilateral Cooperation

- ERANET-MED Water farming
   Improvement of water and nutrient
   retention and use efficiency in
   arable farming systems from field
   to catchment scale in Europe and
   North Africa, under Horizon 2020 of
   European Union.
- 2. ERANET MED WASA, under Horizon 2020 of European Union.
- Salt in Transformation with German Academic Exchange Service (DAAD), Germany.





# Section 4: Strengthening Triangular Cooperation: Collaborations with National and International Organizations

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# **Strengthening Triangular Cooperation: Collaborations with National and International Organizations**

COMSATS has been endeavouring 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 through its Centres of Excellence for sustainable socio-economic development of the Member States. These partnerships aim at complementing COMSATS' programmes focusing on capacity-building of S&T community in developing countries. The horizons of the cooperation in this regard are being broadened to the North to augment the organization's efforts for strengthening triangular cooperation.



### Institutions in the United Kingdom

COMSATS actively promoted South-South-Cooperation to achieve excellence in the field of Science and Technology for sustainable development. COMSATS seeks to pursue the South-South-North (Triangular) Cooperation as a means of expansion on its programmes through the establishment of a strong network and prominent presence of the organizations in the United Kingdom (UK). The expansion would enable effective outreach in the South as well as the North for successfully attaining the Sustainable Development Goals (SDGs).

The cooperation provides a platform for collaboration in areas of mutual interest, such as Education, Health, Energy and

Information Technology with UK-based funding bodies, academic institutes and individual organizations. The Executive Director COMSATS, Dr. S.M. Junaid Zaidi, accompanied by Ambassador (R) Shahid Kamal, and Dr. Arshad Saleem Malik, Advisor, International Relations, CIIT, Pakistan, visited the United Kingdom for official meetings from 5<sup>th</sup> - 13<sup>th</sup> August 2017. He held meetings with officials of Lancaster University, Universities UK International (UUKi), Commonwealth Secretariat, Association of Commonwealth Universities (ACU), and British Council, to explore potential areas of collaboration and to express interest in partnership.

The participants of the meeting at Lancaster University included the Vice Chancellor, Professor Mark Smith and

Pro-Vice Chancellor International, Professor Steve Bradley. There was a general consensus on the need to seek funding opportunities by exploring areas of interest in alignment with the SDGs and considering problem-based research to tackle with developmental challenges in the member states.

Another meeting was held with Universities UK International's (UUKi) Head of International Engagement (Non-EU), Mr. Sean O'Connor, and Mr. Joseph Taylor, Policy Manager Asia. The concept of South-South-North was discussed in the meeting and was received with great interest, and UUKi was requested to assist COMSATS in enhancing the capacity and quality of human resource in the member states.



The Executive Director also had a meeting with Dr. Nabeel Goheer, Assistant Secretary General of the Commonwealth Secretariat, a central, intergovernmental agency, where views were shared regarding themes of mutual interest, including Environment, which was highlighted as a high priority for the Commonwealth. The Secretariat assured COMSATS of its support in enhancing membership and suggested its presence on the sidelines of the upcoming Commonwealth Heads of Government Meeting (CHOGM) to be held on 16-18 April, 2018, in London, United Kingdom.

Additionally, Dr. Junaid Zaidi also called on Pakistan's High Commissioner to UK, Mr. Syed Ibne Abbas and held a separate meeting with Mr. Zahid Hafeez Chaudhri, Deputy High Commissioner and Mr. Muazam Ali, First Secretary at Pakistan High Commission in the UK. The High Commissioner and officials assured COMSATS' officials of their support and assistance in securing collaboration between the Commonwealth and COMSATS through engagement and interaction.

COMSATS officials shall represent the Organization and present its mandate through active presence at the Commonwealth Heads of Government Meeting (CHOGM) as a platform to explore further opportunities by showcasing its achievements and activities. Dr. Junaid Zaidi held a meeting with Dr. John Kirkland, Deputy Secretary General, Ms. Liberty Oberlander, Director Membership Development and Ben Halls, Director Programs at the Association of Commonwealth Universities (ACU) Office. ACU expressed keen interest in increasing its network of membership through COMSATS and desired to assist in putting together advisory groups, fellowships to lend technical advice, and develop blue prints for the Organisation.

A meeting was also held at British Council London with Dr. Shaun Holmes, Science Adviser; and Mr. Daniel Korbel, Acting Global Director, who expressed their support for setting up a specialized Centre of Excellence (CoE). The possibility of endorsing a COMSATS-based project and signing an MoU with the Organisation was

also discussed. The meetings successfully concluded and highlighted a number of possible areas where COMSATS could collaborate with the respective institutions.

As a follow-up, delegates from the British Council comprising of Mr. John McGovern, Consultant at British Council UK; Ms. Liz Dempsey, Advisor at British Council Manchester; and Mr. Hamza Salim, Project Manager at British Council Pakistan, visited COMSATS Secretariat on 11 December 2017. The purpose of these delegates' visit was to conduct an interview for the 'Going Global' Initiative of the British Council reflecting the Executive Director's contributions towards the higher education sector in Pakistan. They appreciated the quality of education being provided by CIIT at its campuses across the country. There was great emphasis by the delegates on the need for enhancing communication and promoting the organization's vision globally. In addition, a potential area of collaboration between the North and the South discussed during the meeting was the mobility of students.

On the invitation of the Commission, Dr. John Kirkland, former Head of the Association of Commonwealth Universities (ACU) visited COMSATS Secretariat on a four-day visit on December 11, 2017. He held several meetings with the officials in order to assist COMSATS in forging partnerships





with organisations in the UK as well as to support in expansion of COMSATS' membership. Dr. Kirkland emphasized the need of increasing COMSATS' global presence and expressed his willingness to contribute to the ongoing expansion. The visit successfully ended with an understanding between COMSATS and Dr. John Kirkland to officially take him on board as an International Consultant to assist COMSATS in promoting its cooperative activities.

Following the chain of events, the Executive Director requested the Minister for Science and Technology, H. E. Mr. Rana Tanveer Hussain, to participate in the networking activity with researchers and implementers in the UK. On the kind agreement of the Honourable Minister for Science and Technology, an official meeting was held on 29th December 2017 in London.

The participants of the meeting comprised of the following:

- H. E. Rana Tanveer Hussain (Chair), Federal Minister for Science and Technology, Pakistan;
- Mr. Richard Middleton, Head of Commonwealth Scholarship Commission;
- Dr. Nabeel Goheer, Assistant Secretary

- General, Commonwealth Secretariat; Dr. Ihtesham ur Rehman, Reader
- in Biomedical Materials at Sheffield University;
- Dr. Saeed Akber, Head of Accounting and Finance at University of Hull;
- Dr. Jawwad Darr, Professor of Materials Chemistry, University College London (UCL); and
- Dr. Kamran Jahangir, Advisor **Technical Advisory Committee** (TAC), COMSATS Secretariat.

The meeting ended with an emphasis on the need for a more pro-active approach by COMSATS to broaden its activities. A Science Conference was also proposed and agreed to reflect and provide

directions in light of the new and emerging trends in the field of Science and Technology, especially pertaining to the Energy sector.

In order to build a network of systematic partnerships and develop new synergies with sustainable outcomes, possible areas of collaborations were discussed with the afore-mentioned organisations.

The meetings and discussions held shall pave way for COMSATS to build a strong presence in the North, by collaborating with the institutions in the United Kingdom, and promoting S&Tled sustainable development by sharing expertise and resources.





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

COMSATS established contacts with United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) as a part of COMSATS 2017 strategy to explore ways of benefitting from the scientific and related knowledge generated in the North and other global institutions. These resources could prove useful in meeting the sustainable development challenges confronted by the South. With this in view, a delegation of COMSATS called on the Executive Secretary, ESCAP, Dr. Shamshad Akhtar, at her office in October 2017 in Thailand and briefed her on the aims, objectives, structure and functions of COMSATS. Exploratory views were exchanged on the possible areas of collaboration.

As a follow-up to this process, more in-depth discussions were held during a meeting held on 20th December 2017 between Dr. Shamshad Akhtar and Executive Director COMSATS, Dr. S. M. Junaid Zaidi, which culminated in signing of an MoU between COMSATS and UNESCAP.

The agreement aims to promote science, technology and innovation (STI) as the key means of implementation of due measures for achieving Sustainable Development Goals (SDGs). The MoU was signed in a ceremony witnessed by foreign diplomats and representatives of various government officials of Pakistan. Dr. Zaidi and Dr. Akhtar signed the agreement on behalf of their Commissions. The Minister for Science and Technology, Government of Pakistan, H.E. Mr. Rana Tanveer Hussain, and the Federal Secretary of the Ministry, Ms. Yasmeen Masood, also graced the ceremony with their presence.

The MoU entails collaboration in joint research, events, capacity-building, and strengthening the COMSATS Network of Centres of Excellence. The cooperation also involves exchanging comprehensive thought leadership, cooperation platforms as well as technical and advisory services; to support member countries in exploiting the potential of STI for sustainable development.

#### Islamic Educational, Scientific and Cultural Organization (ISESCO)

Since 2004, COMSATS and ISESCO have been collaborating for executing various

joint activities in different fields of science and technology for socio-economic development. These collaborative activities have proved to be productive for both organizations and have contributed to the socio-economic development of their member countries. The collaboration is periodically reviewed and revived through signing of agreements between the two organizations.

During 2017, COMSATS and ISESCO jointly organized the following capacitybuilding events (details are given in section 7):

- 3rd International Conference on Agriculture, Food Security and Biotechnology (26th-27th April 2017, Islamabad, Pakistan)
- 4th International Workshop on 'Applications of ICTs in Education, Healthcare and Agriculture' (25th- 27th July 2017, Abuja, Nigeria)
- 10th National Workshop on 'Repair and Maintenance of Scientific, Engineering Equipment in Universities, Research Institutions and Small Scale Industries' (2nd-6th October 2017, Almaty, Kazakhstan)
- 1st International Congress on Viruses and Vaccines in Tropical Areas (11th-12th October 2017, Sere Kunda, The Gambia)

7<sup>th</sup> International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards' (19th-23rd December 2017, Almaty, Kazakhstan)

Around 580 scientists, engineers, technicians and industry professionals benefitted from these events.

#### **International Centre for Genetic Engineering and Biotechnology** (ICGEB), Italy

Led by Executive Director COMSATS, Dr. S. M. Junaid Zaidi, a delegation of COMSATS visited the International Centre for Genetic Engineering and Biotechnology (ICGEB) Headquarters, Trieste, Italy on 16th November 2017. The visit to ICGEB was held with the purpose to identify joint initiatives in line with the MoU effective between the two organizations since 2009. Other members of the delegation included Mr. Tajammul Hussain, Advisor (Programmes); Dr. Kamran Jahangir, Advisor (TAC); and Mr. Farhan Ansari, Senior Assistant Director (Programmes).

The delegation held a meeting with ICGEB Scientific Coordinator, Dr. Lawrence Banks and other senior officials/scientists of ICGEB.

After a brief introduction of the host group, Dr. Banks apprised COMSATS' delegates about the activities of ICGEB and its six main instruments of operation viz. Research; Long- and Short-Term Fellowships; Annual Meetings and Courses; Competitive grants; Technology Transfer; and Scientific and Advisory Services. During his presentation, Dr. Banks informed that the Centre comprises of almost about fifty (50) active groups which are conducting research in six macro-areas. Dr. Banks also mentioned the fellowships awarded by ICGEB to twenty eight (28) scientists from COMSATS' Member States in 2016.

Subsequently, Dr. Zaidi, acquainted the officials of ICGEB with mandate and mission of COMSATS, its statutory bodies, Member Countries and its Network of International S&T Centres of Excellence as well as flagship projects. Dr. Zaidi informed that COMSATS has organized 255 scientific events since 1997 and signed 56 MoUs with Ministries, Governments, other IGOs and academic institutions. He further informed that COMSATS aspires to expand its Network and extend its outreach in pursuit of South-North-South (triangular) cooperation. Dr. Zaidi also solicited ICGEB's technical support for setting-up high quality biotechnology institutes in COMSATS' Member States.

In her presentation, Dr. Martina Viviani, Head, Fundraising, Technology Transfer & Innovation, ICGEB briefed about the biotechnology and technology-transfer activities in Trieste, New Delhi and Cape Town, the three components of ICGEB. Dr. Viviani further talked about the health bio-economy production lines pursued by the Centre, including bio-similars (new age biopharmaceuticals), diagnostic kits and recombinant vaccines, including one against Dengue. The future plans for developing biosimilars by the Group in Trieste and their model for the transfer of know-how to industries were elucidated by Dr. Natasa Skoko, Research Scientist, Biotechnology Development. Ms. Suzanne Kerbavcic, Head, Communications & Outreach, External Relations noted with satisfaction that ICGEB and COMSATS share 16 Member States and that ICGEB has recently pursued membership of 06 non-ICGEB Member States. She informed that ICGEB would finalize membership with Ghana, whose President is also the Chairperson of COMSATS, and sought COMSATS' support in this regard.

After meaningful discussions between the two sides, a proposition was made to set up more centres of excellence in COMSATS Member States akin to ICGEB Regional Research Centre (RRC) initiative.

The participation of scientists from ICGEB in COMSATS' International Thematic Research Group (ITRG) on 'Agriculture, Food Security and Biotechnology' and ITRG on 'Renewable Energy' was encouraged by COMSATS' officials.

The two sides agreed on initiating Joint Fellowship Programmes in respective Member States. It was agreed that the calendar of scientific events and annual meetings would be shared by the two Organizations and sponsorship and/ or travel grants would be provided to scientists belonging to common Member States. The officials also nominated reference personnel to identify areas of collaboration and possibilities for joint programmes and agreements as well as follow-up the initiatives taken in this regard.



#### **Oman National Computer Emergency Readiness Team** (OCERT)

On 2<sup>nd</sup> November 2017, a Protocol of Cooperation was signed between COMSATS and the Oman National Computer Emergency Readiness Team (OCERT) for cooperation in areas of cyber security and computer emergency response.

The OCERT is one of the divisions of the Information Technology Authority (ITA), Government of Oman. It was established to serve as a trusted focal point of contact for any ICT security incidents in the Sultanate of Oman. It caters to cyber safety and security, capacity building, and promoting cyber security awareness public and private sector organizations. Besides, OCERT is playing a regional-level role in cyber security by hosting the ITU Arab Regional Cyber Security Center, and chairing the OIC-CERT.

This said protocol, inter alia, provides for a framework and assurance that the research and capacity building activities at both the organizations would be enhanced through mutual cooperation.

As agreed in the Protocol, both sides will collaborate for the following activities:



- Joint research and development projects;
- International conferences, training and workshops;
- Exchange of experts and researchers; and
- Exchange of information and d. technical expertise.

#### **Institute of Peace and Diplomatic** Studies (IPD)

On 22<sup>nd</sup> June 2017, a Memorandum of Understanding was signed between COMSATS and the Institute of Peace and Diplomatic Studies (IPD), Islamabad, Pakistan. IPD is an independent, nongovernmental and not-for-profit thinktank, which is working to strengthen global peace and development through

dialogue and diplomacy by sharing knowledge, research, analysis and policy advise.

Senior officials from both organizations participated in the signing ceremony. The MoU signed paves way for cooperation in organizing various events for promoting South-South and North-South cooperation. The broad areas of cooperation stipulated in the agreement include:

- Exchange of expertise and intellectual resources:
- Capacity-building in various areas relating to sustainable development;
- Policy Advice and Strategy Formulation.

Since the agreement, IPD has been involved in arranging meetings between Executive Director COMSATS and a number of foreign diplomats. These belong to Afghanistan, Argentina, Australia, Azerbaijan, Cuba, Kenya, Kyrgyz Republic, Morocco, Nepal, Oman, Somalia, South Africa, Sri Lanka, Tajikistan, Tunisia, Turkmenistan, Uzbekistan, Vietnam and Yemen, as well as the European Union. I

IPD supported the efforts of COMSATS towards enhancing cooperation with countries of the North and the South.

A notable development under the said cooperation was Somalia's accession to



#### COMSATS (Section 3).

As part of their networking activity, COMSATS and IPD organized a farewell reception in honor of H.E. Dr. Nedim Makarevic, outgoing Ambassador of Bosnia and Herzegovina to Pakistan. Held on 27<sup>th</sup> September 2017, the reception was attended by foreign diplomats from Algeria, Azerbaijan, Cuba, Kazakhstan, Kyrgyz Republic, Nigeria, Pakistan, Palestine, Somalia, Sri Lanka, Sudan, Syria, Tajikistan, Tunisia, Ukraine, Uzbekistan, and Yemen.

Organization of an event on UN's Day on South-South Cooperation (Section 7) was also facilitated by IPD.

#### The European Union

In line with COMSATS' efforts to expand the scope of its programmes and international partnerships, a delegation from European Union (EU), Pakistan, was invited by the Executive Director COMSATS, Dr. S. M. Junaid Zaidi, to visit COMSATS Secretariat. Ms. Anne Marchal, Charge d'Affaires, EU, Pakistan, and Mr. Husnain Iftakhar, Senior Economist, visited COMSATS Secretariat, Islamabad, on 28th August 2017. The main purpose of the engagement with EU was to explore the possibility of expanding COMSATS' membership to European countries and scientific organizations to strengthen the North-South dynamic of COMSATS' efforts for S&T-led socio-economic

development.

Ms. Marchal opined that some avenues of cooperation with EU already exist and utilized by COMSATS forthwith, e.g., Horizon 2020. She noted three pillars that constitute this mega cooperation programme: industrial leadership, excellence in science, and societal change. She informed that Pakistan Science Foundation (PSF) is the focal point for promoting Horizon 2020 in Pakistan. Another cooperative project readily available for all the partners is noted by Ms. Marchal is Erasmus programme. It was noted that there is no limit on collaborative proposals from partner countries and organizations.

Ms. Marchal suggested to have consultations and high-level meetings with senior officials of EU to further explore avenues of cooperation between the two organizations. She believed that EU-COMSATS partnership could be useful, given the due channels are utilized and right resources mobilized in the regional office and EU HQ in Brussels.

### Interactions with the Host Country, Pakistan

COMSATS has established strong working relations with the Governments of the host country, Pakistan, and other member states. The Government of Pakistan is generously funding the expenses of

the COMSATS Secretariat located in Islamabad. The Ministry of Science and Technology, Pakistan, acts as the focal point of COMSATS. The officials of the organization make regular interactions and consultations with the focal ministry as well as other government and nongovernmental institutions in the country. Some major interactions with the host country during the year are given below.

#### A Dinner and the Visited by the Minister for Science and Technology, Pakistan to Welcome the New Executive Director

On March 15, 2017, the Federal Minister for Science and Technology, Government of Pakistan, H.E. Rana Tanveer Hussain, hosted a dinner to introduce the newly appointed Executive Director COMSATS to the diplomatic community of Member and potential member states in Islamabad, as well as senior government functionaries of Pakistan. The dinner had an impressive attendance of 75, including ambassadors and representatives from 22 foreign missions in Islamabad. The foreign missions from COMSATS' Member States represent on the occasion belonged to Bangladesh, China, Egypt, Iran, Kazakhstan, Morocco, Nigeria, Palestine, Sri Lanka, Sudan, Syria, Tunisia, and Turkey, while those from nonmember states belonged to Afghanistan, Azerbaijan, Brunei, Mauritius, Oman, Tajikistan, Thailand, Turkmenistan, and







Uzbekistan. Senior officials from hosted country represented, the Ministries of S&T, Foreign Affairs, and Planning and Development. Senior officials from **COMSATS Secretariat; COMSATS** Institute of Information Technology; and COMSATS Internet Services also attended the dinner.

Later Mr. Hussain, visited COMSATS Secretariat, on June 21, 2017 and reiterated his support to COMSATS' operations and efforts to expand the organization's membership. He also offered to write to his counterparts in member states for expansion of COMSATS' membership.

During his interaction with COMSATS on the occasion, he considered it important for the relevant institutions to make more efforts and execute effective projects of applied nature that would have a positive effect on development. In this regard, he especially mentioned COMSATS' project, the COMSATS Institute of Information Technology, which is a government sector degree awarding institution soon to be upgraded to a 'University'.

#### **Brainstorming Session with S&T Organizations**

The Executive Director COMSATS, Dr. S. M. Junaid Zaidi, hosted a hi-tea for senior scientists and experts from different institutions related to science and technology on 29th March 2017. The purpose of the informal sitting was to brief the experts on different ongoing activities of COMSATS and seek their inputs with a view to further improving the future projects and programmes of COMSATS.

The hi-tea had a participation of some renowned scientists of Pakistan, including Dr. Yousaf Zafar, Chairman Pakistan Agriculture Research Council (PARC); Prof. Dr. Anwar-ul-Hassan Gilani, Chairman Pakistan Council for Science and Technology (PCST); Dr. Muhammad Ashraf, Chairman Pakistan Council of Research in Water Resources (PCRWR); Dr. Zabta Khan Shinwari, President Pakistan Academy of Sciences; and Dr. Aslam Baig distinguished Scientist of National Centre for Physics (NCP). Mr. Tajammul Hussain, Advisor Programmes; Mr. Bilal Chouhan, Director Administration and Establishment; Mr. Nisar Ahmad, Deputy Director (Systems); and Mr. Akif Sattar, Coordination Officer from COMSATS Secretariat were also present on the occasion.

The deliberations of the meeting focused on ways and means to enhance COMSATS' activities and its role in





S&T-led development of the South. Other discussions pertained to replicating international projects like SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East) in Pakistan to facilitate the scientists of member states. Similarly, it was suggested that COMSATS, in collaboration with international organizations like UNESCO, can help develop international R&D collaborations on the lines of CERN (European Organization for Nuclear Research).

#### Visit by Honorable Member National Assembly Mrs. Tehmina Daultana

On April 21, 2017, an honorable Member of National Assembly, Government of Pakistan, Ms. Tehmina Daultana, visited

COMSATS Secretariat. In the past, Ms. Daultana has served as Federal Minister for Science and Technology from March 2008 to May 2008.

Ms. Daultana congratulated Dr. S. M. Junaid Zaidi on his then new appointment as the Executive Director of COMSATS. and commended him for his dedicated and selfless services as the Founding Rector of the COMSATS Institute of Information Technology. She considered his appointment as a recognition of his tireless services for promotion and development of science and technology in Pakistan. She noted CIIT's phenomenal growth in the country with an outreach to the rural areas of the country under the visionary leadership of Dr. Zaidi. She opined that establishment of a high-quality degree awarding institution in rural areas, like Vehari and Sahiwal, was a great achievement and valuable contribution in developing skilled and highly educated

#### Meeting with Vice Chancellors of **Pakistani Universities**

On July 18, 2017, the Executive Director COMSATS hosted a luncheon for the leadership of the Pakistani Universities at the premises of COMSATS Secretariat. The purpose was to involve education sector of Pakistan in COMSATS' efforts for S&T led development.

The lunch was attended by the following VCs/Rectors: Prof. Dr. Shahid Siddiqui, Allama Igbal Open University; Maj Gen (Retd.) Khadim Hussain, Foundation University Islamabad; Mr. Imran Rahman, Institute of Space Technology; Dr. Amir Muhammed, National University of Computer and Emerging Sciences; Dr. M. Latif Virk, National University of Computer and Emerging Sciences (Registrar); Dr. Javed Ashraf, Quaid-i-Azam University; Prof. Dr. Javed Akram, Shaheed Zulfiqar Ali Bhutto Medical University (SZABMU), PIMS; Prof. Dr. Rai Niaz Ahmad, PMAS-Arid Agriculture University; and Prof. Dr. Zia ul Qayyum, University of Gujrat.

Also present were Dr. Arshad Ali, Executive Director Higher Education Commission of Pakistan; Capt. U.A.G. Isani, Former Principal Secretary to the Prime Minister of Pakistan; Engr. Dr. Nasir Mahmood Khan, Additional Registrar (HoD), Pakistan Engineering Council; Dr. Izhar Hussain, Registrar, CIIT; and Dr. Arshad S. Malik, Head International Office, CIIT, Islamabad, In addition, senior officials of COMSATS Secretariat also attended the lunch.

The participants expressed keen interest and explored to ways of collaboration particularly in setting up campuses of Pakistani universities in COMSATS' Member States. A special focus of this



discussion remained on Sri Lanka, in response to which the Executive Director pledged that COMSATS would earnestly help these universities in setting up campuses in COMSATS' Member Countries.

#### Visit of Minister of State for Science and Technology, Government of **Pakistan**

On 3rd October 2017, H. E. Mr. Dostain Khan Domki, the Honorable Minister of State for Science and Technology and Ms. Yasmin Masood, Federal Secretary, Ministry of Science and Technology, visited COMSATS Secretariat.

The Executive Director COMSATS shared with the esteemed guests his aspirations for COMSATS to further strengthen ties with international organizations, enhance its membership, and expand South-South

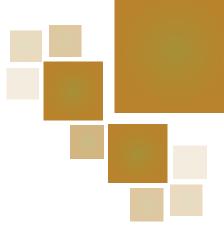


and North-South cooperation. He sought the Ministry's support for COMSATS' present and future endeavours. Federal Secretary MoST made some pertinent queries with regard to various aspects of the organization and stressed

the need for enhancing the international character of the organization to achieve its objectives. In this regard, she suggested devising necessary policies comparable to those of other organizations of similar mandate, such as UNESCO and ISESCO.



Some other Distinguished Visitors to COMSATS Secretariat			
Name	Designation	Date	
Mr. Fazal Abbas Maken	Secretary, Ministry of Science and Technology, Government of Pakistan	28 <sup>th</sup> March 2017	
Mr. M. Iqbal Chaudhry	Director, International Center for Chemical and Biological Sciences	9 <sup>th</sup> May 2017	
Mr. Parvez Hassan	Member National Assembly	10 <sup>th</sup> May 2017	
Mr. Muhammad Ashraf	Additional Secretary, Ministry of Science and Technology, Government of Pakistan	14 <sup>th</sup> June 2017	
Mr. Jeffrey Thomas	Global Head BroadPeak Technologies	26 <sup>th</sup> July 2017	
Mr. Tariq Mehmood	Chairman PCST	31st July 2017	
Dr. Pervez Ahmed Butt	Ex Executive Director COMSATS	31st July 2017	
Dr. Manzoor Hassan Soomro	President, ECO Science Foundation (ECOSF)	2 <sup>nd</sup> August 2017	
Mr. Lars Bergmeyer	Director, German Academic Exchange Service (DAAD)	15 <sup>th</sup> September 2017	
Dr. Ahmed Yousif Ahmed Al Draiweesh	President, International Islamic University, Islamabad	21st September 2017	
Ms. Zareena Salamat	Vice President Council of Social Sciences	23 <sup>rd</sup> September 2017	
Mr. Azam Sawati	Former Minister of Science and Technology	4 <sup>th</sup> October 2017	





# Section 5: Strengthening South-South Cooperation: Meetings with Officials from the South

Meetings with the Diplomats of Member States

Meetings with the Diplomats of Potential Member States

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# **Strengthening South-South Cooperation: Meetings with Officials from the South**

One of the functions of COMSATS is to support major initiatives designed to promote indigenous S&T capacities of the Member States through synergies among relevant Governments/Institutions in the North and the South. Dignitaries, officials and delegations from a number of developing countries are engaged on regular basis to establish and promote linkages to strengthen South-South cooperation in a number of fields, including education, training and research.



### Meetings with the Diplomats of Member States

During 2017, meetings were arranged with the foreign diplomats in Islamabad to sensitized them on COMSATS' undertakings and future aspirations. The foreign diplomats were briefed about the scope, mission and mandate of the Organization.

## Ambassador of Palestine, H. E. Mr. Walid Abu Ali (27th March 2017)

The Ambassador assured of his Embassy's full support to COMSATS Secretariat. He informed about his close contact with the Federal Minister for Science and Technology and Federal Minister of State for Education, Pakistan, for seeking relevant opportunities of cooperation

between the two countries. He expressed his desire to send Palestinian students to Pakistan for post-graduate and undergraduate studies on scholarships.

The Executive Director COMSATS welcomed the idea and expressed COMSATS' readiness to accommodate more than 100 students in undergraduate and post-graduate programmes being offered by CIIT. His Excellency and the Executive Director also agreed to seek financial support from Islamic Development Bank (IDB), Jeddah, to sponsor more students from Palestine in higher education institutions of Pakistan. He hoped for a better mobility of researchers, scholars and scientists traveling from Palestine to Pakistan and vice-versa to share their knowledge and explore new avenues in R&D cooperation.



#### Ambassador of Syria, H. E. Mr. Radwan Loutfi (3<sup>rd</sup> April 2017)

The Ambassador expressed confidence in Dr. Zaidi's leadership that would help COMSATS in achieving its goals. He committed that Syria as a Member State of COMSATS will render all possible support to COMSATS. His Excellency apprised the Executive Director about the prevailing situation in his country with hope for a better future. With regard to the education sector of Syria, H. E. Mr. Loutfi informed that all the educational institutions were functional and the country is doing well in higher education, despite political and regional instability. The Ambassador showed keen interest in securing some scholarships being offered by COMSATS Institute of Information Technology (CIIT) for Syrian students.

Dr. Zaidi welcomed the idea and offered COMSATS' help to accommodate more Syrian students in undergraduate and post-graduate studies at CIIT. He stressed the need for greater intellectual exchange among Syria, Pakistan and other COMSATS' Member Countries.

#### Vice President, TUBITAK MAM, Turkey, Dr. Murat Makaraci (29th May 2017)

During the meeting, the two sides discussed ways to enhance cooperation between COMSATS and TUBITAK Marmara Research Centre in the areas of mutual interest, particularly in the field of

Cyber Security. Dr. Murat apprised that TUBITAK houses 19 research facilities in Turkey, nine of which are working in different fields of Information and Communication Technologies (ICTs) and electronics. It was desired that COMSATS should enhance collaboration with TUBITAK on long-term basis for creation of critical mass of I.T experts. Dr. Murat was requested to identify relevant experts from their institutes in the field of Cyber Security. Mr. Murat assured to mobilize relevant resource from TUBITAK Informatics and Information Security Research Center (BİLGEM) and one of MAM's R&D supporting unit – National Academic Network and Information Center (ULAKBİM).

#### The First Secretary, Chinese Embassy in Islamabad, Mr. Jia Wei (12th June 2017)

During the meeting with Mr. Wei, the Executive Director admired the Chinese R&D organizations and universities for their excellent research work and achievements, and informed that COMSATS wishes to enhance collaboration with such organizations of China in various fields of science and technology. In this regard, the officials of the two organizations discussed avenues of COMSATS' collaboration with R&D organizations working under the Chinese Ministry of Science and Technology (MoST) as well as the Chinese Academy of Sciences (CAS). With regard to COMSATS' S&T collaboration with Chinese S&T organizations, it was agreed

that possibilities will be explored to benefit from the funds available under the China-Pakistan Economic Corridor (CPEC). The potential areas of collaboration include: setting-up of joint laboratories and establishment of S&T Park in Pakistan. COMSATS would try to induct more Chinese R&D organizations in its Network of International S&T Centres of Excellence.

#### Ambassador of Jordan, H. E. Mr. Nawaf Khalifa Ibrahim Saraireh (14th June 2017)

During the meeting, Dr. Zaidi expressed COMSATS' desire for developing good working relations with Jordanian institutions to carry out a number of events and capacity-building activities in Jordan.

His Excellency was urged to write to the Secretary General of the Higher Council for Science and Technology, Jordan, Dr. Khaled Elshuraydeh, to seek his help in identifying the country's national priorities for possible collaborations with COMSATS. It was further informed that a few Centres of Excellence of COMSATS, including the COMSATS Institute of Information Technology (CIIT) and International Center for Chemical and Biological Sciences (ICCBS), Pakistan, offer several scholarships to the students from Member States. It was emphasized that students of Jordan should take full benefit of these opportunities. The possibilities regarding Jordanian students' in other institutions of Pakistan were



also discussed and it was assured that COMSATS would extend all possible help to the students in this respect.

### Ambassador of Tunisia, H. E. Mr. Adel Elarbi (15<sup>th</sup> June 2017)

Dr. Zaidi and H.E. Mr. Elarbi shared views on developing further cooperation and partnerships between COMSATS and Tunisia, particularly in boosting academic cooperation between Tunisian S&T institutions and members of COMSATS' Network of International S&T Centres of Excellence. The two sides discussed a number of matters of mutual interests, such as a proposal for establishing R&D Centre in Tunisia, financial cooperation, faculty and student exchange, and cooperation for establishing technology parks.

Dr. Zaidi sought the Tunisian Ambassador's support for inviting the international students of Tunisia for shortterm student exchange at two Centres of Excellence of COMSATS in Pakistan, Tunisia to cater to the relevant needs of Tunisia. All possible technical and financial support from COMSATS was pledged.

His Excellency informed that there is already a strong political will in Tunisia for purposeful international cooperation and urged COMSATS to maintain high-level engagements with the country. He believed that the existing opportunities could be fully tapped through practical steps and coordination of the joint activities.

#### Ambassador of Sudan, H. E. Mr. Tageldin Elhadi Eltahir (19<sup>th</sup> June 2017)

In the meeting with H. E. Mr. Eltahir, the Executive Director expressed his desire to further strengthen COMSATS' working relations with Sudan. He appreciated the active participation of Industrial Research and Consultancy Centre (IRCC), Sudan, in COMSATS' programmes. He also appreciated the Annual Membership Contribution made by Sudan on regular

best practices and carry out research in the CIIT. He also affirmed that the Professors would only need to bear their travel expense while other expenses will be borne by the host institution.

The Ambassador expressed the willingness of Sudan enhance cooperation and work with the partner organizations. He showed keen interest in the Professor Exchange Programme and collaborations.

### Ambassador of Palestine, H. E. Mr. Walid Abu Ali (7<sup>th</sup> July 2017)

Dr. Zaidi called on the Palestinian Ambassador at his office in Islamabad. Also present during the meeting were the First Secretary/Cultural and Educational Attaché of the Palestine Embassy, Mr. Husni Muhammad Mustafa; and Admin Attaché, Mr. Khalil Abu Ghalyoun.

His Excellency expressed his Government's support towards participation in international fora. He appreciated the induction of Al-Quds University as Centre

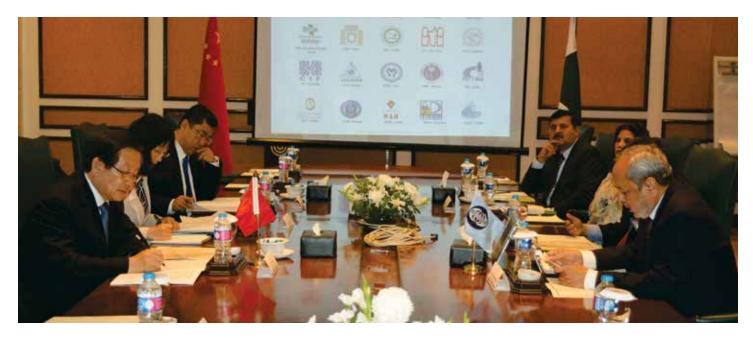


COMSATS Institute of Information Technology (CIIT) and the International Center for Chemical and Biological Sciences (ICCBS). The Executive Director assured that the student exchange programme offered by CIIT will most likely be fully covered except for the air travel and daily allowance.

During the meeting, Dr. Zaidi also proposed the establishment of a COMSATS-Tunisian R&D Centre in

basis. Dr. Zaidi expressed COMSATS' desire to replicate the institution building experience in the form of CIIT in Sudan by establishing a university under the umbrella of COMSATS. He emphasized the need for a state-of-the-art facility to impart quality education to the people of Sudan.

Dr. Zaidi also invited the Sudanese Professors to visit Pakistan to share their of Excellence in COMSATS Network. Dr. Zaidi proposed that a visit maybe arranged for a ten-member delegation comprising of faculty members from Pakistan's leading universities to Al-Quds University and other relevant academic institutions of Palestine to explore avenues of mutual cooperation.



#### Minister for Science and Technology, China, H.E. Prof. Wan Gang (8th July 2017)

A meeting was held between the delegations of COMSATS and the Government of China on 8th July 2017, in Islamabad. The Chinese delegation was led by H.E. Dr. Wan Gang, Minister for Science and Technology. Other members of Chinese delegation were H.E. Mr. Sun Weidong, Ambassador of China to Pakistan; Mr. Ye Dongbai, Director General, International Cooperation, Ministry of Science and Technology, China; Ms. Lyu Jia, Deputy Director, Ministry of Science and Technology, China; Mr. Zhao Lijian, DCM/Political Counsellor, Embassy of China in Islamabad; and Mr. Jia Wei, First Secretary (S&T), Embassy of China in Islamabad.

The Executive Director informed that COMSATS would like to participate in China's mega programme, One Belt One Road (OBOR), as majority of COMSATS' Member States were en route. He informed that CIIT is actively participating in China-Pakistan Economic Corridor (CPEC) program. He also informed His Excellency about the Pak-China Business Forum organized annually by CIIT for the

last few years.

Dr. Wan Gang expressed pleasure on visiting Pakistan and having the opportunity to discuss possibilities of collaboration with COMSATS. He stated that COMSATS has been playing an effective role for South-South cooperation, which includes establishment of CIIT, setting-up of Network of Centres of Excellence, as well as capacity building and talent cultivation activities. He informed that ICCES, China, is actively collaborating with other members of COMSATS' Network, and will continue to receive support of Chinese Ministry of Science and Technology for its participation in COMSATS' activities. He informed that prediction, monitoring and mitigation of extreme weather events as well as environmental protection are among the priority areas of Government of China, and therefore considered the activities of COMSATS' International Thematic Research Group on 'Climate Change and Environmental Protection' (led by ICCES, China) highly important and beneficial.

It was informed that China plans to collaborate with COMSATS in the following areas:

- Jointly organizing trainings for developing countries;
- Hosting seminars and forums;
- Supporting Chinese researchers to participate in COMSATS' activities;
- Participating in international research projects.

The meeting paved the way for future collaboration between China and COMSATS for facilitating S&T-led socioeconomic development in the South.

#### High Commissioner of Bangladesh, H. E. Mr. Tarik Ahsan (11th July 2017)

During the meeting, with the High Commissioner of Bangladesh in Pakistan, discussions were held to enhance and further strengthen the existing cooperation between COMSATS and Bangladesh. Dr. Zaidi stated that COMSATS highly valued its ties with Bangladesh and appreciated the active participation of Bangladesh Council for Scientific and Industrial Research (BCSIR) in the programmes and activities of the Organization. Dr. Zaidi requested Mr. Ahsan to encourage students from Bangladesh to avail the offers of post-graduate and post-doctoral scholarships by CIIT, Pakistan, and other



Centres of Excellence. Dr. Zaidi assured the High Commissioner of COMSATS' of continued assistance in strengthening the Member States' S&T capacity. He further apprised the High Commissioner about the COMSATS' efforts for initiating collaborative programmes between BCSIR and other members of the COMSATS' Network of Centres of Excellence.

Permanent Secretary, Ministry of Higher Education, Research, Science and Technology (MHERST), The Gambia, H.E. Mr. Yaya Sireh Jallow (14<sup>th</sup> September 2017)

On his visit to COMSATS Secretariat, Mr. Jallow was also accompanied by Prof. Fagir Muhammad Anjum, Vice Chancellor, University of the Gambia (UTG); Prof. Ousman Nayan, Deputy Vice Chancellor and Provost, School of Medicine and Applied Health Sciences, UTG; and Mr. Samba Sowe, Senior. Science, Technology and Innovation Officer at MHERST.

Briefing the guests, Dr. Zaidi appreciated the active role played by The Gambia in COMSATS' activities. He informed the delegates about the organization's strength with respect to Member Countries and Centres of Excellence, as well as its various present and past projects benefiting the Member States. He encouraged The Gambia, relatively new Member State, to duly benefit from COMSATS' programmes to the fullest through participation and Annual Membership Contributions.

The Vice Chancellor UTG appreciated the efforts and support of COMSATS since The Gambia joined the Organization. The Vice Chancellor showed interest in using COMSATS' platform for improvement of education and human resource development in The Gambia through capacity building and scholarships programmes.

The Permanent Secretary thanked the Executive Director for inviting them to COMSATS Secretariat. He sought COMSATS' support for the development of Centres of Excellence in The Gambia.

Ambassadors of Tunisia, H. E. Mr. Adel Elarabi, and Somalia, H. E. Mrs. Khadija Mohamed Almakhzoumi (2nd October 2017)

The Ambassador of Tunisia appreciated Dr. Zaidi's efforts towards achieving

COMSATS' objectives and assured him of full support from Tunisia for induction of more Member States to COMSATS. The Ambassador urged the Executive Director to facilitate Tunisian students in receiving graduate and post-graduate scholarships in African and European institutions. Further, he solicited support of COMSATS for strengthening scientific research in Tunisia. He expressed willingness to help in execution of research projects/ establishment of a Centre of Excellence in Africa or Europe.

The Ambassador informed that Tunisia places special emphasis on education, health and women empowerment. He apprised that human resource development, S&T, environment and research are the strengths of Tunisia. The Ambassador proposed that a meeting should be held between Dr. Zaidi and the Minister for Higher Education and Scientific Research, Tunisia, to consider matters of mutual interest.

The Tunisian Ambassador also encouraged the Somali Ambassador to avail the opportunity of joining COMSATS. The Ambassador of Somalia was presented a formal letter inviting the government of the Federal Republic of Somalia to join COMSATS. The Membership of Somalia was realized later in November 2017 (Section 3).





#### Ambassador of Morocco, H. E. Mr. Mohamed Karmoune (27th November 2017)

Morocco joined the organization as a Member State during mid-2015. During his visit to COMSATS Secretariat, the Ambassador of Morocco was requested to help ensure Morocco's participation in the 21st Coordinating Council Meeting to be held in Kazakhstan during 2018.

Mr. Karmoune opined that developing countries could make good progress without collaboration in education and science, countries cannot progress, and, therefore, he considered it important for Morocco to have good ties with COMSATS' Member States and Network of Centres of Excellence. His Excellency hoped to explore further avenues of mutual cooperation between COMSATS and Morocco. He pledged his support for improving the participation of Morocco in the programmes and activities of COMSATS.

Discussing the possible avenues of cooperation between COMSATS and Morocco, Dr. Zaidi suggested establishment of a high-quality R&D institute in Morocco, for which due support and expertise can be harnessed. He also considered it important to have more frequent exchanges and interactions of scientists between Morocco and other member states of COMSATS.

President, Scientific and **Technological Research Council of** Turkey (TUBITAK), H. E. Prof. Dr. Ahmet Arig Ergin (12th December 2017)

A Turkish delegation comprising of the President of the Scientific and Technological Research Council of Turkey (TUBITAK), Turkey, Prof. Dr. Ahmet Arif Ergin; President of TUBITAK Marmara Research Centre (MAM), Turkey, Dr. Orkun Hasekioglu; Chief of Staff, TUBITAK, Dr. I. Soner Karaca; and Head of Bilateral and Multilateral Relations Department, TUBITAK, Ms. Zeynep Arziman Buyukboduk, visited COMSATS Secretariat, on December 12, 2017.

Dr. Zaidi sought the delegation's support for establishing new and up-grading the existing Centres of Excellence, as well as instituting a state-of-the-art university in COMSATS' Member States. He further solicited support for dispatching officials of TUBITAK at COMSATS on secondment as well as experts to provide consultancy and advice in execution of projects in COMSATS' Member States.

In response to Dr. Zaidi's relevant views, Prof. Ergin made offer of providing consultancy to COMSATS' Member States on cyber-security. He also suggested setting-up an institute similar in operation to ICTP, Italy, and proposed to replicate the project in COMSATS' Member States. He also pledged to facilitate the process of establishing of a varsity in one of the Member States by providing technical support. Further, Dr. Hasekioglu indicated

TUBITAK's willingness to offer more scholarships and fellowships to students and researchers from COMSATS' Member States.

Prof. Ahmet assured of all possible support for facilitating networking between COMSATS and General Manager of TUBITAK's Technology Park. He also offered support in the form of technology transfer from TUBITAK to COMSATS' Network. He expressed willingness to accommodate researchers belonging to other Centres of Excellence at TUBITAK MAM for trainings/research.

#### Meeting with Somali Officials (8th December 2017)

An informal meeting with the Ambassador of Somalia to Pakistan and Board Member, Somali-Swedish Researchers Association was held on the sidelines of the reception ceremony to celebrate Somalia's accession to COMSATS' Network. During the meeting Dr. Zaidi expressed desire to buttress relations between Somalia and COMSATS. He offered support and expertise for projects in education and health sector in Somalia. Mr. Khalif Bile, Board Member, Somali-Swedish Researchers Association endorsed Dr. Zaidi's suggestions, particularly regarding e-health services.

Mr. Abdullahi Haji Daud Warsame, Councilor of the Embassy of Somalia and Mr. Nisar Ahmad, Deputy Director (Systems) were designated as focal persons of Somalia and COMSATS, respectively.

#### Meetings with the Diplomats of **Potential Member States**

Meetings were also held with representatives of foreign missions of non-member states throughout the year with a view to exploring their potential for becoming COMSATS member states. Among other things, the officials and diplomats were apprised about the mandate, scope and international projects of COMSATS. They were also sensitized about the benefits and obligations of joining COMSATS as a member state. To encourage the officials of respective countries for joining the organization, they were acquainted with the programmes of COMSATS that have benefited the member states. Other aspects related to finances of the organization like Annual Membership Contribution were also highlighted during the meetings.

#### High Commissioner of Malaysia, H.E. Dato' Dr. Hasrul Sani Mujtabar (19th June 2017)

The Executive Director COMSATS with other officials of COMSATS called on His Excellency Dato' Dr. Hasrul Sani Mujtabar, High Commissioner of Malaysia in Pakistan, at his office in Islamabad, Other officials from COMSATS were Ambassador (R) Fauzia Nasreen; Mr. Laeeq Jaswal, Manager Strategic Partnerships; and Mr. Shahzad Ahmed, Manager International Relations. The meeting was primarily held to follow-up the matter of Malaysia's membership to COMSATS, as well as related issues, such

as establishing a ministerial focal point in Malaysia and nomination of a suitable Malaysian institution to become the organization's Centre of Excellence, if the country were to join the Organization. Possibility of further collaborations between COMSATS Institute of Information Technology (CIIT) and Malaysian universities was also discussed to promote cultural and academic exchanges.

Dr. Mujtabar affirmed all possible support of the High Commission of Malaysia towards COMSATS and assured to once again take up the accession proposal with his authorities. He also offered to facilitate meetings of COMSATS' delegation with officials of relevant Government departments in Malaysia. He praised the Executive Director's efforts for consolidating ties between the universities of Malaysia and Pakistan and his interest in cultural exchanges.

#### Ambassador of Uzbekistan, H. E. Mr. Furkat A. Sidikov (2<sup>nd</sup> August 2017)

During a meeting at COMSATS Secretariat, the Ambassador expressed keen interest in the programmes of the organization, especially in the area of agriculture. He highlighted the potential of cooperation between Uzbekistan and COMSATS Member States, such as Pakistan. He considered COMSATS an effective platform to enhance cooperation between developing countries. Regarding COMSATS' offer of membership, H. E. Mr. Sidikov proposed that a letter of

invitation for the Republic of Uzbekistan to join COMSATS with all necessary documents may be provided to him for onward submission to the Chairman of the Council for Coordination of Science and Technology, Uzbekistan.

The Ambassador assured to personally follow-up the case of Uzbekistan's membership to COMSATS.

#### Ambassador of Turkmenistan, H.E. Mr. Movlamov Atajan Nurlyevich (2<sup>nd</sup> August 2017)

Mr. Nurlyevich assured that the proposal of Turkmenistan's accession to COMSATS will be taken up with the Government of Turkmenistan. He also suggested that the proposal should be forwarded to the Foreign Office in Turkmenistan. The Ambassador added that the Academy of Sciences and Ministry of Education, Turkmenistan, could be contacted for collaborations. It was further informed that the Academy of Sciences in Turkmenistan is most suited to help COMSATS in identifying institutions as potential Network Members.

#### Ambassador of Kyrgyz Republic, H. E. Erik Beishembiev (4th August 2017)

During the meeting, Dr. Zaidi informed the Ambassador that COMSATS would send the membership proposal along with relevant documents for consideration of Kyrgyz Embassy and the Ministry of Science and Technology in Kyrgyz





Republic. Dr. Zaidi also expressed that COMSATS is willing to provide every support for establishing new universities in member countries. The experience and progress of CIIT as a model of academic excellence for the member states was shared. The Ambassador praised the facilities offered by CIIT to the students and showed his interest in visiting the institute.

#### Ambassador of Vietnam, H. E. Mr. Nguyen Xuan Luu (18th August 2017)

The Vietnamese Ambassador shared his Government's interest in building universities in collaboration with countries like Australia, Russia, and Germany. The Ambassador highlighted the cooperative relationship between Vietnam and Pakistan, spanning over 45 years. The Ambassador was requested to forward the offer of COMSATS' membership, through a formal invitation presented to him by the Executive Director, to relevant government officials. It was decided that COMSATS would later follow-up the matter with the Ministry of Education and Academy of Sciences in Vietnam. The Ambassador assured to take up the matter with the Ministry.

#### Ambassador of Yemen, H. E. Mr. Mohammed Motahar Alashabi (18<sup>th</sup> August 2017)

Referring to COMSATS' earlier invitations to Yemen to join COMSATS, Dr. Zaidi urged the Ambassador to take up the matter with relevant officials of the

Government of Yemen. Highlighting the benefits and obligations of COMSATS' membership, Dr. Zaidi told that Yemen could greatly benefit from COMSATS' projects and programmes. Underscoring the success of CIIT, Dr. Zaidi informed the Ambassador that COMSATS could help Yemen establish similar higher education institutions in the country. Mr. Alashabi welcomed the opportunities offered by COMSATS. He recalled COMSATS' efforts for reaching out to the Government of Yemen. He welcomed the renewed invitation to Yemen to join COMSATS and promised to raise the matter at relevant fora.

### Ambassador of Azerbaijan, H. E. Mr. Ali Alizada (21st August 2017)

The Ambassador considered COMSATS an effective platform for promoting South-South cooperation for achieving S&T led socio-economic progress in developing countries. He thanked COMSATS for the offer of membership to Azerbaijan, and pledged to convey the feedback of Azerbaijan's Foreign Ministry in due course of time. He also informed about

the recent initiatives of the Government of Azerbaijan for strengthening S&T sector in the country, including the establishment of S&T Parks and Research Institutions. He took special interest in the scholarships offered by COMSATS' Centres of Excellence and requested for further details in this regard. He also invited delegations from COMSATS' Member States to visit Azerbaijan to explore possibilities of collaboration in the areas of mutual interest.

The Ambassador pledged to follow up COMSATS' requests at relevant organizations in Azerbaijan.

#### High Commissioner of South Africa, H. E. Mr. Mpendulo Jele Kumalo (24<sup>th</sup> August 2017)

The High Commissioner was accompanied by Ms. M. S. Mkhwebane, First Secretary (Corporate Services). He was informed about the benefits that the Republic of South Africa could avail by joining COMSATS, which include: post-graduate, doctoral and post-doctoral scholarships



at COMSATS' Centres of Excellence in China, Egypt, Bangladesh, and Pakistan; participation in technology-transfer and Collaborative Research Programmes (CRP) in partnership with COMSATS' partner international donor/development agencies; training programmes at selected CoEs; participation in International Thematic Research Groups (ITRGs); help and advice by experts on ST&I policy; and exchange visits of scientists for exploring bilateral cooperation avenues between institutions having common research interests.

His Excellency appreciated COMSATS' programmes aimed at South-South cooperation and scientific capacitybuilding of its Member States, and pledged to approach the South African Ministry of Science and Technology.

#### Ambassador of Tajikistan, H. E. Mr. Sherali S. Jononov (30th August 2017)

During the meeting, the Ambassador noted with concern the huge gap in technical cooperation between Pakistan and Tajikistan, which he had been trying to address by meeting with relevant Pakistani officials recently. He proposed holding high level meeting between officials of COMSATS and government officials at relevant Ministries of Tajikistan, such as Ministry of Education. He also proposed ground level interactivity and cultural exchange, e.g., through exhibitions in Tajikistan. Appreciating the worthy inputs from the Ambassador, the Executive Director assured him of taking necessary

actions in this regard.

#### Ambassador of Cuba, H. E. Mr. Gabriel Tiel Capote (22<sup>nd</sup> September 2017)

The honourable Ambassador expressed pleasure on learning about the ongoing activities of COMSATS. He considered COMSATS an important platform for the promotion of South-South cooperation towards instituting S&T led socio-economic progress in developing countries. He thanked COMSATS for the offer of membership to Cuba, and pledged to take up the matter with the Cuban government. He informed about the recent initiatives taken by the Cuban government for strengthening the S&T sector in the country.

#### High Commissioner of Kenya, H. E. Prof. Julius K. Bitok (27th September 2017)

His Excellency was accompanied by Mr. Abdikadir Doyo Wario, Second Counselor at the Kenyan High Commission. The meeting was also attended by Ms. Tehmina Doultana, Member National Assembly, Pakistan, and senior officials of COMSATS.

The High Commissioner called Kenya an engine of East and Central Africa and showed interest Kenya being a part of the Commission. He pledged to take up the matter with concerned departments in Nairobi for further consultation. The High Commissioner pledged his support for

South-South cooperation. His Excellency noted COMSATS' potential for sharing knowledge and helping Kenya overcome the challenges in achieving science and technology excellence. Dr. Zaidi shared his intent to send a letter to the Kenyan Ministry of Science and Technology with regard to accession of Kenya as COMSATS' Member State.

#### Deputy Head of Mission, Afghanistan, H. E. Mr. Zardasht Shams (31st October 2017)

His Excellency was accompanied by Mr. Daud Mohseni (First Secretary), and Mr. Hamayun Ali (Education Attaché). The Ambassador thanked Dr. Zaidi for his invitation and appreciated COMSATS' efforts to enhance South-South collaboration. He explained the transition period of development that Afghanistan was undergoing and hoped that the country would continue to grow in future.

Dr. Zaidi suggested to the Ambassador that the Ministry of Foreign Affairs may be appointed as a focal point for correspondence and collaboration between Afghanistan and COMSATS.

His Excellency was keen to share all the information with relevant officials of Afghanistan to open new doors for collaboration between the two sides.

#### Ambassador of Azerbaijan, H. E. Mr. Ali Alizada (3<sup>rd</sup> November 2017)

The Ambassador showed interest in some









collaborative activities of cultural nature and desired to provide sponsorship for small projects of COMSATS. He also showed keen interest in the scholarship offers by CIIT and hoped to encourage Azerbaijani students to benefit from the quality education at CIIT. Dr. Zaidi suggested some useful options to facilitate admissions of Azerbaijani students which could include a panel of admission officials from CIIT visiting Azerbaijan for on-the-spot admissions.

#### Ambassador of Nepal, H. E. Ms. Sewa Lamsal Adhikari (24<sup>th</sup> November 2017)

Her Excellency Ms. Adhikari lauded the vision of Prof. Dr. Abdus Salam and appreciated the expansion of COMSATS' membership as well as the R&D at COMSATS' Centres of Excellence.

Ms. Adhikari stressed the need for developing and promoting small technologies to benefit the masses, in developing countries. She expressed keen interest in COMSATS' tele-health services and expressed her desire to launch a similar project for the people of remote areas of Nepal. She opined that meaningful research could accelerate the development process in a number of fields. She informed that solar energy and microhydel power has mitigated electricity crisis in less privileged areas of Nepal.

Taking note of the prior correspondence between COMSATS and the Ministry of S&T, Government of Nepal, and Nepal's Chemical Society, the Ambassador pledged to sensitize the Government of Nepal and the concerned authorities about the importance of Nepal's accession to COMSATS, during her visit to Kathmandu in December 2017.

#### Ambassador of Argentina, H. E. Mr. Ivan Ivanissevich (24<sup>th</sup> November 2017)

During a short discussion session with H.E. Mr. Ivanissevich, Dr. Zaidi apprised him about the tele-health project of COMSATS, which caters to the healthcare needs of people in far-flung areas of Pakistan. It was informed that the project provides tele-consultations in cardiology, radiology, dermatology, and urology. His Excellency opined that Argentina, with vast agricultural land, could employ such technologies in agriculture.

The Ambassador said that new technologies are fast getting cheaper and more sophisticated with time and COMSATS' projects are a due utilization of that. Dr. Zaidi presented him an invitation letter in connection with Argentina's accession to COMSATS. The Ambassador pledged to take up the matter with the Ministries of Finance, and Science and Technology for due consideration and political support.

#### High Commissioner of Pakistan to Australia, H. E. Mrs. Naela Chohan (29<sup>th</sup> December 2017)

The High Commissioner shared her views

regarding possible collaborations with Australian universities and institutions, United Nations Sustainable Development Goals, scholarship programmes, and brain drain. She mentioned that COMSATS could collaborate with Australian universities for bilateral exchange programmes and scholarships for the students, for which she pledged to support COMSATS through her office. She also discussed the Memoranda of Understanding signed by CIIT and the Australian universities, which she considered a way forward for exchange of information and resources. Her Excellency pledged to facilitate implementation of the MoUs on the other side.

The High Commissioner agreed to take the request from the Executive Director COMSATS to Pacific Islands Development Forum (PIDF) seeking collaboration based between the two organizations in important areas of common interests.

#### Ambassador of Brazil, H. E. Mr. Claudio Raja Gabagli (12<sup>th</sup> April 2017)

His Excellency Claudio Raja Gabaglia Lins, Ambassador of Brazil in Islamabad, visited COMSATS Secretariat, on April 12, 2017, and delivered a lecture on 'Pak-Brazil Relations' which was attended by officials of COMSATS Secretariat and CIIT.

In his opening remarks before the lecture, Dr. Zaidi underscored the social and cultural strengths of Brazil and also noted the country's contribution to Science and



#### Technology.

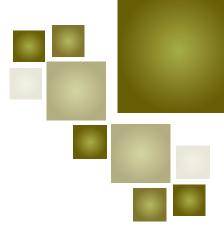
In the wake of the expanding agrobusiness of Brazil, the Ambassador shared growing concerns of environmental protection, as he considered it Brazil's duty to protect environment, especially in the Amazon. Brazil, he noted, was in transition, politically and economically, owing to its fight against corruption and recovery from recession.

He noted that Brazil is the 9th largest economy in the World with highest GDP in Latin America. He informed that EMBRAPA, Brazil, is undertaking very interesting work of both practical and theoretical significance. He informed that research at the Agrobiology centre of EMBRAPA, is helping to increase agricultural productivity, as well as research capacity of Brazilian scientists in related fields.

The Ambassador informed that his country's R&D has gained a lot of international prominence during the last few decades. Sharing some statistics, in this regard, he apprised that Brazil had 2,300 higher education institutions, produced 16,700 PhDs and Brazilian scientists published 40,500 papers during 2016.

At the end of his informative presentation, the Ambassador responded to a number of questions from the audience relating to BRICS block, education sector of Brazil, cultural and academic exchanges, and common socio-political aspects.







### Section 6: International Visits of Secretariat Officials

Ghana (21st to 24th May 2017)

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### **International Visits of Secretariat Officials**

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.



#### Ghana (21st to 24th May 2017)

A three-member delegation of COMSATS headed by Ambassador (R) Fauzia Nasreen and comprising of Mr. Nisar Ahmad and Mr. Basit Rehman visited Accra, Ghana from 21st to 24th May 2017. The purpose of the visit was to strengthen relations with the country hosting the Chair of COMSATS through interactions with its partner institutions within the country. In this regard, meetings were held at COMSATS' focal point, Ministry for Environment, Science, Technology and Innovation (MESTI) and COMSATS Centre of Excellence in the country, the Council for Scientific and Industrial Research (CSIR). The summary of the meetings is given below:

#### Meeting with Director General, Council for Scientific and Industrial Research (CSIR)

The delegation visited CSIR on  $22^{nd}$  and



24th May 2017 and held detailed meetings with the Centre's Director General, Dr. Victor Agyeman. Discussions on scientific activities that COMSATS intended to hold in collaboration with CSIR in the near future were made. The matter of number of faulty and un-installed expensive equipment in the different research labs of CSIR was discussed in detail in connection with holding another event on repair and maintenance of scientific equipment, in response to CSIR's request. In past, Ghana

has benefitted from two such events in 2013 and 2015, respectively.

Meeting with Minister of **Environment, Science, Technology** and Innovation (MESTI)

On May 23rd 2017, the delegation visited MESTI, Ghana, to call on Prof. Kwabena Frimpong Baoteng, Hon. Minister for Environment, Science, Technology and



Innovation (MESTI). The Minister was apprised about activities and future plans of COMSATS, chaired by the Ghanaian President. A number of queries of Prof. Baoteng with regard to COMSATS' past activities for Ghana and surgical instrument industry in Pakistan were also addressed by COMSATS' officials.

In view of the importance of interaction at the highest level of Ghana and COMSATS for achieving the organization's objectives and fulfilling its international obligations, the likelihood and arrangement of a meeting between the Chairperson of COMSATS, the Hon. President of Ghana, Hon. Nana Addo Dankwa Akufo-Addo. and the Executive Director COMSATS was discussed. Moreover, MESTI's support as a focal ministry in Ghana was pledged for

achieving COMSATS' objectives.

#### Meeting with Chief Director, Ministry of Foreign Affairs and Regional Integration

On the same date, the delegation also met the Chief Director of the Ministry of Foreign Affairs and Regional Integration, Ambassador Albert Yankey at the Ministry of Foreign Affairs and Regional Integration, Accra, Ghana, in order to brief the official about COMSATS and its multilayer relationship with Ghana. The meeting was held in view of the important role of the foreign office in the international affairs of the country, including the country's engagements with COMSATS' Member States.

The delegation also visited other institutions in Ghana, including the Water Research Institute, Food Research Institute, Policy Research Institute, and Ghana Atomic Energy Commission, to get better insights into Ghana's scientific and research infrastructure.

The meetings of the delegation in Ghana remained by and large successful in terms of the progress made for sensitization of the Ghanaian institutions and senior officials about COMSATS and the country's role in the programmes and leadership of the organization, as well paving ways for the meeting between the President of Ghana and Executive Director COMSATS.

#### **Thailand** (16<sup>th</sup>-23<sup>rd</sup> **July** 2017)

A three-member delegation of COMSATS comprising of Mr. Bilal Chouhan, Director (A&E); Mr. Laeeq Hassan Jaswal, Assistant Professor; and Mr. Shahzad Ahmed, Manager (IR) visited Bangkok, Thailand, from 16 to 23 July 2017. The visit was undertaken to attend training on "Excellence in Change and Impact Evaluation" jointly organized by International Development Research Centre (IDRC) and Sustainable Development Policy Institute (SDPI) and United Nation Economic and Social Commission for Asia and the Pacific (UNESCAP). The training was meant for productive learning experience and interaction with technical experts, speakers and participants from other think tanks and policy institutions. The workshop had also extended an opportunity to build synergies and to develop a pool of MEAL professionals under the MEAL leadership programme.

The training facilities were provided by UNESCAP office in Bangkok.

#### Malaysia and Thailand (3rd-11th October 2017)

A delegation of COMSATS comprising of





Prof. Dr. Qaisar Abbas, Director, CIIT-Lahore; Dr. Abdus Sattar Abbasi, Head, Centre of Islamic Finance, CIIT-Lahore; and Mr. Shahzad Ahmed, Manager (International Relations), CIIT, Islamabad, visited Malaysia and Thailand from 3<sup>rd</sup> to 11<sup>th</sup> October 2017.

The purpose of the visit included followup of the matter accession of Malaysia and Thailand to COMSATS as member states; attending Kuala Lumpur Islamic Finance Forum (KLIFF-2017); meetings at International Centre for Education in Islamic Finance (INCEIF), International Islamic University Malaysia, University Putra Malaysia, High Commission of Pakistan in Malaysia, and Ministry of Science Technology and Innovation in Malaysia; participation in Disaster Resilience Week at United Nations Economic and Social Commission for Asia Pacific (UNESCAP), Bangkok; and meeting at Ministry of Science and Technology, Bangkok, Thailand.

### **Kuala Lumpur Islamic Finance Forum (KLIFF-2017)**

The delegates participated in various events of KLIFF, which offered an integrated basis for promoting Islamic Financial system dialogue among speakers and delegates to foster the orderly development of an efficient, competitive, sound and innovative Islamic finance in a

rapidly changing global environment. The learning made during the event would help enhance the organization of COMSATS Institute's similar forum, Global Forum on Islamic Finance.

### Meeting with High Commissioner of Pakistan to Malaysia

Meetings with H.E. Syed Hassan Raza, High Commissioner, Pakistan to Malaysia, and Deputy Secretary General, Ministry of Science, Technology and Innovation, Prof. Madya Dr. Ramzah Dambul, were held to sensitize these officials about the benefits of Malaysia's accession to COMSATS. A proposal for the membership of Malaysia to COMSATS in the name of honorable Minister of Science Technology and Innovation, Malaysia, along with other relevant documents, was presented during the meeting.

### Meetings at Academic Institutions in Malaysia

During the visit to various academic institutions in Malaysia the delegates met officials to discuss and explore opportunities for cementing collaborative ties in areas of mutual interest. The purpose of visiting institutions in Malaysia was to further strengthen the relationships in different fields by initiating joint research and study programmes, exchanging technical expertise and

supervising PhD scholars between the institutions.

Meeting at Ministry of Science and Technology and Innovation, Malaysia During the meeting, a proposal of membership of Malaysia to COMSATS addressed to the honorable Minister of Science Technology and Innovation of Malaysia from the Executive Director COMSATS along with other relevant documents was presented. The meeting ended on a cordial note of commitment to engage people from both sides for the development of Science and Technology and to process the case of Membership of Malaysia of COMSATS.

#### Meetings with Officials of UNESCAP

A meeting was held with Executive Secretary UNESCAP, Dr. Shamshad Akhtar, and heads of ICT and disaster management at UNESCAP, Thailand. The Executive Secretary UNESCAP showed interest in cementing ties with COMSATS through various means.

As a result of the understanding reached during this visit, an agreement was reached with UNESCAP later in December (Section 4).

### Meeting at Ministry of Science and Technology, Thailand

For inclusion of Thailand as member state of COMSATS, a formal proposal of COMSATS' membership to Thailand was presented during meeting with Director (Office of International Cooperation), Ministry of Science and Technology, Bangkok.

#### Nigeria (24th - 28th July 2017)

Mr. Farhan Ansari, Sr. Assistant Director (Programmes), COMSATS Secretariat, visited Abuja, Nigeria, from 24<sup>th</sup> to 28<sup>th</sup> July 2017, in order to perform the following tasks:



- To represent COMSATS while jointly organize the 4th International Workshop on 'Applications of ICTs in Education, Healthcare and Agriculture' (25th to 27th July 2017, Abuja, Nigeria) (Section 7);
- To hold a meeting with the Federal Minister for Science and Technology, Government of Nigeria;
- To hold a meeting with the Director, National Mathematical Centre (NMC), Nigeria.

The summary of the activities other than the workshop is given below:

#### Meeting with Honourable Federal Minister for Science and Technology, Federal Republic of Nigeria

Mr. Farhan Ansari held a meeting with H.E. Dr. Ogbonnaya Onu, Federal Minister for Science and Technology, Federal Republic of Nigeria, at his office on 27th July 2017. The Director, Bioresources Technology Research & Development, FMST, Abuja, Nigeria (COMSATS Liaison Officer), Mr. Abayomi Oguntunde; Head of Chancery, High Commission of Pakistan in Abuja, Nigeria, Mr. Asim Ali Khan; and Associate Professor, COMSATS Institute of Information Technology (CIIT), Dr. Khalid Latif, were also present during the meeting.

Mr. Ansari gave a briefing to the Minister on the past collaborations between

COMSATS and Nigeria as well as on the participation of the country in COMSATS' programmes and activities. It was noted that Nigeria, being the founding member, has been actively participating in COMSATS Coordinating Council meetings and recently, in 2016-17, has initiated the payment of Annual Membership Contribution (AMC) to COMSATS. The honourable Minister was pleased to learn that COMSATS has jointly organized 05 capacity-building events in Nigeria, issued travel grants to 22 Nigerian researchers/students in addition to providing postgraduate scholarship to 13 Nigerian students at CIIT. In order to strengthen the education sector in Nigeria for achieving S&T-led sustainable development, the possibilities for jointly establishing a university and setting-up of S&T Park in Nigeria were discussed during the meeting.

It was learnt that Nigeria houses 157 varsities and leads S&T sector in the African continent, therefore, the country can set a benchmark for other African countries by establishing top-notch universities and upgrading the established ones.

In this regard, Mr. Asim Ali Khan offered the help of Pakistani High Commission in Nigeria to play a facilitative role between COMSATS and FMST. The proposal for the launching of joint tele-medicine programme in Nigeria was also discussed during the meeting. Regarding the progress of COMSATS' International Thematic Research Group (ITRG) on 'Mathematical Modeling' that has been working since 2014, it was requested to consider supporting the research project by matching the grants provided by COMSATS-ISESCO.

The honourable Minister was also informed about the postgraduate scholarships and postdoctoral fellowship offers made by different Centers of Excellence of COMSATS for all the member countries of COMSATS. Moreover, Mr. Ansari elucidated some of the upcoming capacity-building events and stated that COMSATS' capacity-building events have a great impact on development of its Member States in terms of practical usefulness. The minister was pleased to know about COMSATS' contribution in the scientific capacity-building events and assured to nominate Nigerian scientists in



order to strengthen the personal capacities.

#### Meeting with the Director, National Mathematical Centre (NMC), Nigeria

Another meeting was held between Mr. Ansari and Prof. Stephen E. Onah, Director/Chief Executive, National Mathematical Centre (NMC), Nigeria. The Director NMC was accompanied by Mr. Olutunji Oladejo (COMSATS-NMC Liaison Officer), Prof. Benjamin O. Oyelami (Leader of COMSATS' ITRG on Mathematical Modeling) and two other officials of NMC. Mr. Farhan Ansari briefly overviewed NMC's past participation in COMSATS' programmes and meetings, and encouraged to do the same in the future.

Mr. Ansari invited Prof. Stephen E. Onah to visit COMSATS Secretariat as well as COMSATS' other Centres of Excellence to strengthen ties with these institutions for science-led socio-economic development.

The progress of COMSATS' ITRG on Mathematical Modeling, led by NMC was also discussed. The future visit of Prof. Dr. Moiz-ud-din Khan, Chairperson, Department of Mathematics, COMSATS Institute of Information Technology (CIIT), Islamabad, was also discussed and both sides were optimistic that the visit would open new doors of collaboration and facilitate the real-time networking among NMC and CIIT.

#### The United Kingdom (5th to 13th **August 2017)**

A delegation from COMSATS Secretariat led by the Executive Director COMSATS, Dr. S. M. Junaid Zaidi, visited the United Kingdom from 5<sup>th</sup> to 13<sup>th</sup> August 2017. The Executive Director was accompanied by Ambassador (R) Shahid Kamal, and Dr. Arshad Malik, Advisor, International Office, CIIT. During this visit, the delegates held successful meetings with officials from Universities UK International; Lancaster University; Commonwealth

Secretariat; High Commission of Pakistan in UK; Association of Commonwealth Universities; and British Council London. The officials met, pledged to provide support to COMSATS for its projects and activities in Member States. They also agreed to work with COMSATS for providing support in setting up the Centres of Excellence in member states. Details of the meetings are given in Section 4.

#### The Gambia (10th to 12th October 2017)

Ms. Huma Balouch, Senior Assistant Director (Programmes) COMSATS, undertook a visit to Sere Kunda, the Gambia, from 10th-12th October 2017 with an objective to represent COMSATS and make necessary organizational arrangements for the first International Congress on Viruses and Vaccines in Tropical Areas (Section 7). A summary of the engagements other than the Congress is given below.

#### Meeting with the Vice-President of the Republic of the Gambia

On the sideline of the International Congress, a meeting was held with Her Excellency, Ms. Aja Fatoumata C.M. Jallow-Tambajang, Vice-President of the Republic of the Gambia. Ms. Balouch briefed Her Excellency about the current programmes of COMSATS and its future initiatives, such as seminars and symposia on cutting-edge technologies; post-graduate scholarships for students from member countries, including the Gambia; and the International Thematic Research Groups. She informed Her Excellency about the nominations received from University of The Gambia to benefit from COMSATS' scholarship offers. Her Excellency appreciated the efforts of COMSATS regarding the capacitybuilding event in The Gambia, which she considered highly relevant to the priorities of her country. She was pleased to learn about the ongoing activities and expressed keen interest in COMSATS' capacity-building programmes and offers of scholarships. The meeting ended on a pledge of mutual support for increased cooperation and support for the Gambia.

#### Meetings with the Higher Officials of Medical Research Council (UK) Unit in The Gambia

Ms. Balouch also had a brief meeting with Prof. Dr. Umberto D'Alessandro, the Director of Medical Research Council (MRC-UK), in The Gambia to explore the avenues of mutual cooperation. The MRC unit, The Gambia is an internationally





recognized Center of Excellence for medical research, contributing knowledge on the evolving epidemic, the evaluation of innovative healthcare options, treatment and prevention, and the development of health policy and practice in West Africa.

Another meeting was held with Dr. Assan Jaye, Head of Research Training and Career Development at Medical Research Council Unit, The Gambia. Ms. Baloch congratulated him on winning the OIC S&T Achievement Award during the first OIC Summit. The officials of MRC UK in Gambia were pleased to learn about the COMSATS platform and the activities being organized under the umbrella of COMSATS.

Both the sides were optimistic about enhanced cooperation between the two international organizations.

#### Oman (31st October to 2nd November 2017)

A five-member delegation of COMSATS Secretariat visited the Sultanate of Oman from 31st October, 2017 to 2nd November, 2017 in connection with signing a "Protocol of Cooperation" with Oman National Computer Emergency Readiness Team (OCERT) (Section 4). The delegation was led by Dr. S. M. Junaid Zaidi, Executive Director COMSATS, and included: Dr. Sohail Asghar, Professor,

COMSATS Institute of Information Technology (CIIT); Dr. Manzoor Ilahi Tamimi, Associate Professor, CIIT; Mr. Jamshed Masood, CEO, COMSATS Internet Services (CIS); and Mr. Nisar Ahmad, Deputy Director (Systems), COMSATS Secretariat. The delegation held a number of meetings during this period in different institutes.

#### Meeting with Ambassador of Pakistan in Oman

On 1st November 2017, the delegation called upon H.E. Mr. Ali Javed, Pakistani Ambassador in Oman at Pakistan Embassy in Muscat, Oman. The meeting was also attended by Mr. Salman Athar, Deputy Head of Mission and Mr. Muhammad

Ishaque, Counselor Trade and Education, Pakistan Embassy.

The Ambassador warmly welcomed the delegation and gave a comprehensive briefing on the status of bilateral relations between Pakistan and Oman. The delegation was informed about the new initiatives being taken by the Pakistani Mission for enhanced outreach.

Dr. Zaidi shed light on the organization and functions of COMSATS and its flagship projects, and expressed desire to establish formal linkages between COMSATS and relevant institutions in Oman. Oman's membership to COMSATS was also discussed in detail and it was adjudicated that the event





will be brought up at the appropriate forum and will be followed-up through the Embassy of Pakistan. Appreciative of COMSATS' efforts for South-South Cooperation, the Ambassador assured the Executive Director that he will sensitize the concerned officials of Oman, in parliamentary procedure to accomplish the aims of COMSATS.

#### Visit to Sultan Qaboos University, **Oman**

Later, the delegation visited the Sultan Qaboos University (SQU). The university was established in 1986 and is the biggest and the oldest Public Sector University in the Sultanate of Oman. Mr. Ishaq of Embassy of Pakistan also accompanied the delegation during this visit. The meeting with Dr. Talal Khamis Al-Wahaibi, Assistant Dean (Research) was held in his office.

Welcoming the delegation, Dr. Talal expressed his pleasure to receive the guests and hoped that the visit will open new areas of collaborations. Dr. Zaidi briefed about COMSATS and its flagship projects with special focus on CIIT. Dr. Talal informed the delegates about the organizational structure of SQU and shared the activities and roles of his Research Department. It was informed that SQU currently has more than 17,000 students and 9 colleges. SQU has different types of grants for students, including 'His Majesty Grant', while different collaborative grants are also available

like 'British Petroleum Fund' for energy sustainability projects, etc. The potential areas of future collaboration were explored in great detail.

The delegation visited different labs of SQU, including Electrical & Computer Engineering (ECE) labs, Advanced Networking lab, Digital Design lab, etc. During the course of these visits, a number of Pakistani faculty members in SQU joined the delegation and had useful discussions apart from exchange of ideas for future collaboration. During these discussions, the programmes and activities of COMSATS were highlighted and collaborations sought wherever feasible.

#### **Participation in Young Leaders** Forum

Afterwards in the evening, COMSATS' delegation, on the invitation of Pakistan Social Club (Pakistani Community forum in Oman) participated in the Young Leaders Forum (YLF) organized by the Embassy. The participants welcomed Dr. Zaidi's announcement for fully-funded scholarships to qualifying Pakistani students in Oman who wished to pursue their careers in the fields of Science & Technology and IT at CIIT. Dr. Zaidi also expressed full support for the online platform of www.ypfo.pk, including IT support and participation through lectures and internships.

#### Signing of a Protocol of Cooperation with OCERT, Oman

On 2<sup>nd</sup> November 2017, the delegation was welcomed at ITA by Ms. Rogaya Al-Tobi, OCERT and other senior officials of the ITA that followed a detailed presentation on ITA activities entitled 'e. Oman Strategy'. Ms. Azhaar Abdullah Ambusa'idi of ITA gave a presentation on OCERT. Dr. Zaidi introduced COMSATS by giving a presentation highlighting the goals and achievements of COMSATS. Later, the delegation visited different labs of ITA, including SAS-Mobile, SAS Virtual Reality and SAS Entrepreneurship. The delegation also visited the OCERT, where senior OCERT officials welcomed the delegates and Ms. Roqaya gave a detailed presentation on OCERT functions that followed a technical briefing with live demos of applications and tools being used by OCERT against cyber threats.

A "Protocol of Cooperation" was signed between COMSATS and The Oman National Computer Emergency Readiness Team (OCERT) to cooperate in the areas of cyber security and computer emergency response program (Section 4).

#### Italy (12th to 17th November 2017)

A four-member delegation of COMSATS headed by Dr. S. M. Junaid Zaidi, Executive Director COMSATS, and comprising of Mr. Tajammul Hussain, Advisor (Programmes); Dr. Kamran Jahangir, Advisor (TAC); and Mr.



Farhan Ansari, Senior Assistant Director (Programmes) visited Trieste, Italy in order to participate in the 2nd Meeting of COMSATS' Technical Advisory Committee (Section 1). On the sidelines of the TAC meeting the delegates visited ICGEB Headquarters in Italy (Section 4).

### China (16<sup>th</sup> to 22<sup>nd</sup> December 2017)

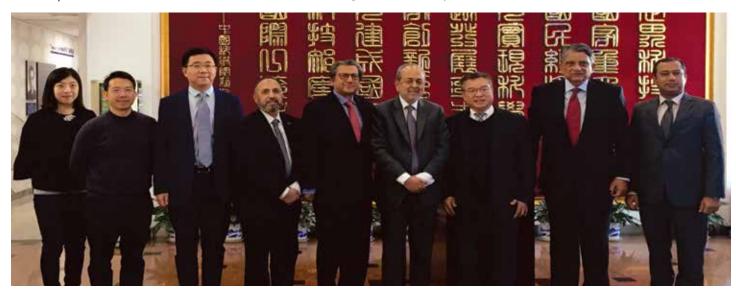
A four-member delegation of COMSATS visited People's Republic of China from 16<sup>th</sup>-22<sup>nd</sup> December 2017. The purpose of the visit was to meet the senior officials of Chinese Ministry of Science and Technology (MoST); Ministry of Commerce; Chinese Academy of Sciences (CAS); International Center for Climate and Environmental Sciences (ICCES); and Tianjin Institute of Industrial

Biotechnology (TIB). The delegation was headed by the Executive Director COMSATS, Dr. S. M. Junaid Zaidi, and included Ambassador Shahid Kamal, Head of CCRD-COMSATS Institute of Information Technology; Major General (R) Muhammad Tahir, Advisor; and Mr. Tajammul Hussain, Advisor (Programmes). The delegation met Chinese authorities and Heads of various scientific institutions with the agenda to further strengthen the relationship in research and innovation between China and COMSATS.

#### Meeting with Director General, International Cooperation, Ministry of Science and Technology

A meeting with Director General of International Cooperation, Ministry

of Science and Technology, Mr. Ye Dongbai, was held on 18th December 2017 at his office. The Director General welcomed COMSATS' delegation and appreciated the role of COMSATS in the promotion of Science and Technology for sustainable science-led development. During the meeting, Dr. Zaidi shed light on the historical background, mission, structure, and statutory bodies of COMSATS. The Director General MoST ensured due consideration on increase of China's Annual Membership Contribution to COMSATS, on request from the COMSATS' delegation. Highlighting the capacity-building and training programmes of MoST, China, the Director General sought 5-8 nomination of scientists from the member states to participate in the workshops at ICCES.



#### Meeting with Director, International Centre for Climate and **Environmental Sciences (ICCES)**

Another meeting during the day was held with Prof. Lin Zhou, Director, ICCES. The agenda of the meeting was to discuss future collaborations to step forward for socio-economic improvements and augmenting the efforts for South-South cooperation. Dr. Zaidi mentioned the remarkable efforts by Prof. Lin for the work ICCES has been doing for collaborations with COMSATS' member countries since its genesis.

#### Meeting with Officials of the Chinese **Academy of Sciences**

COMSATS' officials met with the authorities of Chinese Academy of Sciences (CAS) on 19th December 2017 to discuss the matters of mutual interest. A presentation was made by Ms. Feng Kai briefing the delegation about CAS' international programmes and activities, its international mandate, structure, and on-going projects. CAS officials informed the delegation about the plans of settingup a technology centre in Islamabad. CAS ensured COMSATS' officials about providing financial and technical support to one of the Centres of Excellence of COMSATS.

#### Meeting with Officials of Ministry of Commerce, China, and Institute of **Remote Sensing and Digital Earth**

The meeting with the officials of Ministry of Commerce, China, and department of SSC were held on 20th December 2017 at the Ministry of Commerce, China and Institute of Remote Sensing and Digital Earth (RADI), respectively. The Head of Department of South-South cooperation, Ministry of Commerce, pledged to work with COMSATS in order to harness bilateral and multilateral collaborations with COMSATS' member states.

Meeting with Deputy Director, Tianjin Institute of Industrial Biotechnology (TIB) COMSATS' delegation met with Prof. Sun Jibin, Deputy Director, Tianjin Institute of Industrial Biotechnology (TIB), on 21st December 2017, to discuss the prospective induction of Tianjin Institute of Industrial Biotechnology (TIB) as a Centre of Excellence in COMSATS' Network.

#### Kazakhstan (19th to 23rd December 2017)

Mr. Farhan Ansari, Sr. Assistant Director (Programmes), COMSATS Secretariat, visited Almaty, Kazakhstan, from 19th to 23<sup>rd</sup> December 2017, in order to perform the following tasks:

- To represent COMSATS in a coorganized event, 7th International Workshop on 'Internet Security: **Enhancing Information Exchange** Safeguards' (Section 7), and
- To hold a meeting with the Rector and Vice Rector, Al-Farabi Kazakh National University (KazNU), Kazakhstan

#### Meeting with the Rector, Al-Farabi Kazakh National University (KazNU), Kazakhstan

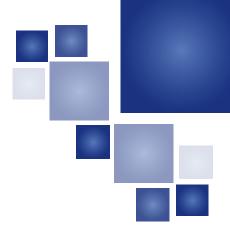
On December 19, 2017, a meeting was

held between Prof. Galimkair Mutanov, the Rector of Al-Farabi Kazakh National University (KazNU), Kazakhstan, and Mr. Farhan Ansari, Senior Assistant Director (Programmes), COMSATS; and Mr. Muhammad Atiq-ur-Rehman, Senior Programme Officer (P&D and HRD), INIT.

During the meeting, Prof. Mutanov stressed the need to introduce new technologies, develop digitalization and competence centers to be based in research universities, as well as to implement the "Digital Kazakhstan" programme. He also highlighted that these technologies are designed to allow Kazakhstani scientists to use nanotechnologies for increasing cyber security in information exchange, conducting advanced research, creating more accurate models of complex processes, and analyzing the increasing amounts of data obtained as a result of experiments. He also informed that the techno-park is being established by creating a center of super-computer and cloud computing in KazNU under the New Silk Road Alliance of Universities.

The COMSATS' officials also discussed the details of the arrangements with regard to 21st meeting of COMSATS Coordinating Council, which is to be held in KazNU in April 2018.







## Section 7: S&T Events Organized with COMSATS Support

Conference on Agriculture, Food Security and Biotechnology, Islamabad, Pakistan 88 (26<sup>th</sup>-27<sup>th</sup> April 2017) International Workshop on Applications of ICTs in Education, Healthcare and Agriculture, 89 Abuja, Nigeria (25th-27th July 2017) Forum on 2030 Sustainable Development Agenda for Sustainable Development, 91 Islamabad, Pakistan (12th September 2017) National Workshop on Repair and Maintenance of Scientific, Engineering Equipment in 93 Universities, Research Institutions and Small Scale Industries, Almaty, Kazakhstan (2<sup>nd</sup>-6<sup>th</sup> October 2017) International Congress on Viruses and Vaccines in Tropical Areas, Sere Kunda, Gambia 94 (11th-12th October 2017) International Workshop on Internet Security: Enhancing Information Exchange Safeguards, 95 Almaty, Kazakhstan (19th-23rd December 2017)

### **S&T Events Organized with COMSATS Support**

Capacity-building activities are an important feature of COMSATS' programmes aimed at strengthening South-South Cooperation. The organization has been regularly organizing scientific events in areas of crucial importance to strengthen scientific linkages; build indigenous capacities; and promote S&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 in particular from Member States, to share their views and experiences on contemporary issues of importance for S&T-led socio-economic development.



#### Conference on Agriculture, Food Security and Biotechnology, Islamabad, Pakistan (26<sup>th</sup>-27<sup>th</sup> April 2017)

The 3<sup>rd</sup> International Conference on Agriculture, Food Security and Biotechnology was held from 26<sup>th</sup> April to 27<sup>th</sup> April 2017, at the National Agriculture Research Centre (NARC), Islamabad, Pakistan. The two-day conference was jointly organized by COMSATS, the Islamic Educational, Scientific and Cultural Organization (ISESCO), and Pakistan Agricultural Research Council (PARC). The conference underscored the importance of agricultural biotechnologies for achieving Sustainable Development Goals (SDGs) related to hunger and nutrition.

The inaugural ceremony was attended by more than 130 national and international academicians, and scientists from different countries, including Egypt, Turkey, Tunisia, Sudan, Iran, Sri Lanka, and Uzbekistan. The Federal Minister for National Food Security and Research, Government of Pakistan, Mr. Sikandar Hayat Khan Bosan, graced the ceremony

with his presence as the Chief Guest. Apart from the inaugural remarks from the Chief Guest, the inaugural session included messages and remarks from Dr. S. M. Junaid Zaidi, Executive Director COMSATS; His Excellency Dr. Abdulaziz Othman Altwaijri, Director General ISESCO; Dr. Yusuf Zafar, Chairman PARC; and Dr. Ghulam Muhammad Ali, Member















Coordination and Monitoring, PARC, Islamabad.

There was a keynote speech at the Inaugural session by Dr. Kauser A. Malik, Department of Biological Sciences, FC College Lahore. He opined that the fear of unknown keeps the human beings hesitant to adopt new technologies. He advocated the use of genetically modified crops to

of transgenic plants; and impact of development of agri-biotechnology research on food and economic security.

Presentations were made on research initiatives by scientists from various academic and research organizations, including the COMSATS Institute of Information Technology (CIIT), Islamabad; National Institute for Genomics

of subjects in agricultural biotechnology were displayed throughout the event. The prizes for three best posters, based on novelty and potential for practical applications, were awarded at the concluding session on 27th April 2017.

The Conference ended on the same date with closing remarks and vote of thanks by the representatives of the co-organizers of the event, Dr. Yusuf Zafar (PARC) and Mr. Tajammul Hussain (COMSATS). The international speakers, Dr. Zihni Demirbag, Karadeniz Technical University (Turkey), and Dr. Majid Javanmard Dakheli, Iranian Research Organization for Science and Technology (Iran) also spoke at the concluding session.

International Workshop on Applications of ICTs in Education, Healthcare and Agriculture, Abuja, Nigeria (25<sup>th</sup>-27<sup>th</sup> July 2017)

The 4th International Workshop on 'Applications of ICTs in Education, Healthcare and Agriculture' was held from 25th to 27th July 2017, in Abuja, Nigeria. It was hosted by the National Space Research and Development Agency (NASRDA), Federal Ministry of Science and Technology (FMST), Nigeria. The event was jointly organized by COMSATS, the Islamic Educational, Scientific and Cultural Organization (ISESCO), and Inter Islamic Network on Information Technology (INIT). The workshop was attended by around 250 participants belonging to Egypt, Jordan, Nigeria, Pakistan, Palestine, Sudan and Sri Lanka. The workshop helped disseminate



address hunger.

The technical sessions of the conference constituted 32 lectures in total and took a multi-sectoral approach, encompassing the crop, livestock, forestry and fishery sectors, as well as use of microorganisms within these sectors. The programme covered a wide range of topics, such as genome-sequencing methods; marker-assisted breeding for crop improvement; microbial bio-pesticides and bio-stimulants; antimicrobial treatment for food safety; bio-products in plant protection; technologies of the agro-food products processing; environmental risk assessment

and Advanced Biotechnology (NIGAB), Islamabad; Centre of Agricultural Biochemistry and Biotechnology (CABB), Faisalabad; University of Gujrat; National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad; Punjab University, Lahore; Institute for Biotechnology and Genetic Engineering (IBGE), Peshawar; Agricultural Biotechnology Research Institute (ABRI), Faisalabad; Institute of Biomedical And Genetic Engineering, Islamabad; and Centre for Agriculture and Bioscience International, Rawalpindi.

Around 35 posters covering a wide range



knowledge and enhance capabilities of the participants regarding the cutting-edge innovative ICT-based technologies and techniques used in Education, Healthcare and Agriculture.

The workshop was inaugurated by H.E. Dr. Ogbonnaya Onu, Federal Minister for Science and Technology, FMST, Government of Nigeria, on 25th July 2017. The inaugural ceremony was attended by distinguished guests belonging to universities, R&D organizations and government departments of Nigeria. Mr. Asim Ali Khan, Head of Chancery, High Commission of Pakistan in Abuja, was amongst the distinguished guests at the ceremony.

During his keynote address, the honourable Minister thanked COMSATS, ISESCO, and INIT for selecting Nigeria to host such an important event. He pledged that the Nigerian Federal Ministry of Science and Technology would continue collaborating with these organizations in future.

Earlier, Mrs. Belema Wakama, Permanent Secretary, FMST, Nigeria; Mr. Farhan Ansari, Sr. Assistant Director (Programmes), COMSATS Secretariat; and Dr. Khalid Latif, Associate Professor, CIIT, Pakistan also spoke on the occasion. Mr. Ansari and Dr. Latif were speaking on behalf of Executive Director COMSATS and President INIT, respectively.

The ceremony was concluded with the Goodwill Messages delivered by the representatives of Nigerian Federal Ministry of Education, Federal Ministry of Health, and Federal Ministry of Agriculture, while the vote of thanks was delivered by Pharm. A. Oguntunde, FMST (COMSATS-Nigeria Liaison Officer).

The technical deliberations of the three-day event included three technical sessions, one each on the applications of ICTs in Education, Agriculture, and Healthcare. There were 16 technical presentations and invited lectures. Each of the three technical sessions included a discussion session for assessing the present state of the use of ICTs as well as to formulate specific recommendations for the governments of the

Member States of COMSATS and OIC to employ ICTs as a tool to strengthen the afore-mentioned sectors.

Recommendations of the International Workshop on ICTs:

- An integrated framework for application of ICTs in distance learning, and off-site teaching should be developed and implemented.
- Sensitization and capacity-building should be intensified for leaders,





policy makers and educators.

- All educational institutions should have Education Management Information Systems (EMIS).
- ICT infrastructure development and sustainability should be given priority for improvement in the educational sector.
- Strategies for adopting ICTs in health management system should be developed.
- The three components of healthcare system, i.e., research, therapy and prevention should be promoted.
- A system of education of farmers through short videos about the use of technology and farm inputs and techniques should be put in place and sustained.
- Farmers should be equipped with Android phones with Long Term Evolution (LTE) applications to enable them to follow the trend of e-agriculture in a relatively cheaper and easier manner.
- There must be a deliberate plan towards reducing the cost of technology (GPS, RFID, Sensors, Satellite Systems, etc.) through local production and manufacturing.
- Monitoring of the environment through air quality, weather, geohazard and waste management, etc. should be institutionalized and made obligatory for the industrial and manufacturing sector.

The event successfully facilitated the exchange of knowledge and expertise among the participants belonging to various developing countries related to emerging ICT applications as a tool to attain socio-economic progress.

Forum on 2030 Sustainable Development Agenda for Sustainable Development, Islamabad, Pakistan (12<sup>th</sup> September 2017)

COMSATS with the support from the Institute of Peace and Diplomatic Studies (IPD) organized a forum on '2030 Agenda for Sustainable Development' on 12th September 2017. The forum was organized to celebrate UN's Day

of South-South Cooperation and was attended by Foreign missions of Embassy of China, European Union, and Palestine and delegates from UNIDO and UNDP and CIIT, Pakistan. They endorsed the importance of South-South Cooperation for exchange of resources, technology, as well as knowledge between the developing countries of the global.

Held in Islamabad, the event had a strong attendance of over 110 from foreign missions in Islamabad, academia, R&D institutions, and government representatives of Pakistan, as well as think-tanks and international organizations, and media.

The Executive Director COMSATS, Dr. S. M. Junaid Zaidi, in his welcome address, informed that, taking its efforts of South-South cooperation forward, COMSATS is trying to establish new Centres of Excellence in COMSATS member countries, as well as working to expand the Network's horizons to the North.

Mr. Zhao Lijian, Deputy Head of Mission, Embassy of People's Republic of China to Pakistan, noted that China is on the mission to eradicate poverty and attributed its development to the efforts made in this regard and has planned to eliminate poverty by 2020. Mr. Lijian stated that the Chinese government has provided subsidies for education as well as health.

















H.E. Mr. Walid Abu Ali, Ambassador of State of Palestine to Pakistan, also spoke on the occasion. He expressed his country's commitment to South-South Cooperation. He also highlighted the need to prioritize Africa while making such efforts and enhance the continent's representation in Science and technology-led platforms, like COMSATS.

Speaking at the Forum, Ms. Anne Marchal, Deputy Head of Mission, Delegation of the European Union to Pakistan, noted that Science, Technology and Innovation are powerful tools for achieving sustainable development with due consideration

towards climate change concerns of all the countries striving for and trying to sustain development. Mentioning Horizon 2020 (an EU project providing research and development opportunities in developing countries) in this perspective, she expressed that the goal is to produce world class scientists who work for the development of countries of the South as well as the North.

Mr. Esam Alqararah, Country Head, United Nations Industrial Development Organization (UNIDO), stated that his organization is working to promote South-South Cooperation not only through public sector but also private sector and NGOs. He looked forward to having effective collaborations with COMSATS for reaching out to its member states with relevant initiatives.

Speaking on the occasion, Mr. Shakeel Ahmad, Assistant Country Director (Development Policy Unit), United Nations Development Programme (UNDP), believed that despite fewer opportunities than challenges, the global South is emerging, but the transition from under developed state to developed state will take time.

Ambassador (R) Shahid Kamal, Advisor, Centre for Climate Research and Development (CCRD), CIIT, Islamabad, who also moderated the Forum, shared his thoughts regarding the growing importance of the South, relevance and increasing involvement of North, role of Science and Technology in South-South Cooperation, and collaborative partnerships and programmes.

The discussion and Q&A session at the end of the event touched upon the themes of: sustenance of S&T facilities and





resources in the South for it to be able to exploit them for sustainable development; resilience of the traditional base in countries that have greatly alleviated poverty; and the narrative of brain drain vs. brain gain.

Ms. Farhat Asif, President, Institute of Peace and Diplomatic Studies, concluded the event with a vote of thanks.

National Workshop on Repair and Maintenance of Scientific, Engineering Equipment in Universities, Research Institutions and Small Scale Industries, Almaty, Kazakhstan (2<sup>nd</sup>-6<sup>th</sup> October 2017)

The 10<sup>th</sup> National Workshop on 'Repair and Maintenance of Scientific, Engineering

Equipment in Universities, Research Institutions and Small Scale Industries' was held from October 02-06, 2017, at KazNU, Almaty, Kazakhstan. The workshop was jointly organized by COMSATS, ISESCO, and KazNU, Kazakhstan under ISESCO-COMSATS biennium Cooperation Programme for 2016-2017. The event was hosted by Al Farabi Kazakh National University (KazNU), Republic of Kazakhstan, COMSATS' Centre of Excellence in Kazakhstan.

The aim of the of this serial workshop is to build indigenous capacity of the local scientists and institutions in the developing countries and promoting self-reliance for the upkeep of scientific equipment being used in research labs. More than 60 participants including senior scientists, engineers and technicians from various research institutions and

universities of Almaty and other cities of Kazakhstan, benefited from the training provided by the COMSATS' international experts.

The event was inaugurated on October 02, 2017 by Prof. Dr. Tlekkabul Ramazanov, Vice-Rector for Research & Innovations, Al Farabi Kazakh National University (KazNU), Kazakhstan. The inaugural ceremony was co-chaired by Mr. Tajammul Hussain, Advisor (Programmes), COMSATS. The ceremony was attended by a number of senior officials of KazNU, Ministry of Education and Science, Kazakhstan and other organizations.

The distinguished guests included Dr. Zayadan Bolatkhan, Dean of Faculty of the Biology and Biotechnology; Dr. Yerdos Ongarbayev, Dean Faculty of Chemistry and Chemical technology; Dr. Vitaly Salnikov, Dean Faculty of Geography and Environmental Sciences; Dr. Serik Muhambet Zhanov, Head Department of Science and Innovation; Dr. Askar Davletov, Faculty of Chemistry and Chemical Technology; Dr. Bisenbaev Amangeldy, Director, SRI of Biology and Biotechnology Problems; Dr. Skakova Aizhan, SRI of Ecological Problems; Dr. Kalugin Sergei, SRI for New Chemical Technologies and Materials; Dr. Kenesov Bulat, Center of Physico-Chemical Methods of Research and Analysis; Dr. Muratov Mukhit, National Nanotechnology Open Laboratory; Dr. Temirbaev Amirhan, Scientific





Technology Park; and Dr. Batyrshev Didar, Laboratory of engineering profile Al-Farabi KazNU. Mr. Nisar Ahmad, Deputy Director (Systems), COMSATS; and the two experts from the Pakistan Council for Scientific and Industrial Research (PCSIR), Mr. Arif Karim and Mr. PirBuksh Khan were also present on the occasion.

The ten technical sessions of the workshop comprised of lectures and hands-on training, and troubleshooting and repairing the scientific equipment in different labs of KazNU. First half of the day was reserved for lectures/theoretical part of the workshop while in second half of the day, hands-on training and practical

demonstrations were conducted to consolidate the participant's learning.

Using the knowledge and techniques learnt during the workshop, the experts and participants successfully repaired a number of expensive and important equipments in various labs. Moreover, interactions with professionals working in these labs further added to the trainees' experience.

Prof. Dr. Ramazanov and Mr. Hussain delivered votes of thanks at the Concluding Ceremony held on 6th October, 2017. Both thanked the Organizing Committee members from ISESCO, COMSATS, and KazNU for their hard work to make the event a success. They hoped that the interactions and networking during the workshop will continue in future.

**International Congress on Viruses** and Vaccines in Tropical Areas, Sere Kunda, Gambia (11th-12th October 2017)

COMSATS, in collaboration with The University of The Gambia (UTG) and Islamic Educational, Scientific and Cultural Organization (ISESCO), organized the first International Congress on 'Viruses and Vaccines in Tropical Areas', from 11th - 12th October 2017,

in Sere Kunda, The Gambia. This is the first event in The Gambia since it became COMSATS' Member State in 2016.

The congress attracted more than 100 participants consisting of scientists, experts on infectious diseases, academicians, public health professionals and postgraduate students from a number of countries around the world involved in treatment, research, discovery and development of drugs and vaccines in the field of emerging viruses.

The countries represented included Bangladesh, Sri Lanka, Ghana, Nigeria, Pakistan, and Sudan.





Her Excellency, Ms. Aja Fatoumata C.M. Jallow-Tambajang, Vice-President of the Republic of The Gambia, inaugurated the event.

The ceremony also featured speeches by Prof. Dr. Faqir Muhammad Anjum, Chairman of the Organizing Committee at UTG; Dr. S. M. Junaid Zaidi, Executive Director COMSATS; Prof. Dr. Umberto D'Alessandro, Director Medical Research Council (UK) Unit in The Gambia; and Dr. Chemo Omar Barry, Permanent Secretary, Ministry of Health and Social Welfare of The Gambia,

The proceedings of the event focused on three major themes prediction and prevention; management; and control of viruses. Under these themes, the participants explored the topics such as emergence, epidemiology and surveillance, animals as hosts for human disease pathogens, historical reports based on research analysis of emerging viral diseases, immune and host responses, genomics and evolution. The event resulted in robust discussions on the most effective strategies related to diagnosis, prevention and management of viral diseases as well as exploring new ideas and concepts related to vaccinations and control.

The Congress programme also featured a keynote presentation by Dr. Assan Jaye, Head of Research Training and Career Development at Medical Research Council Unit Gambia, on HIV Immune-Pathogenesis and Anti-HIV Vaccines. Another riveting keynote presentation was delivered by Prof. Dr. Javed Akram, Vice Chancellor, Shaheed Zulfiqar Ali Bhutto Medical University, on Dengue via video-conference.

The event helped in strengthening the Gambian research community through dissemination of findings and cross-disciplinary collaboration and communication among novice and experienced researchers, at regional and international levels. International Workshop on Internet Security: Enhancing Information Exchange Safeguards, Almaty, Kazakhstan (19<sup>th</sup>-23<sup>rd</sup> December 2017)

The 7<sup>th</sup> International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards' was held from 19<sup>th</sup> to 23<sup>rd</sup> December 2017, in Almaty, Kazakhstan. The event was jointly organized by COMSATS, ISESCO, and INIT, and was hosted by the Al-Farabi Kazakh National University (KazNU), Kazakhstan.

The workshop was inaugurated on 19<sup>th</sup> December 2017 by Prof. Dr. Tlekkabul Ramazanov, Vice-Rector for Research





& Innovations, KazNU, who expressed pleasure on hosting the workshop at KazNU, and thanked ISESCO, COMSATS, and INIT for their collaboration.

Messages from the Executive Director COMSATS, Dr. S. M. Junaid Zaidi, and Director General of ISESCO, Dr. Abdulaziz Othman Altwaijri, were also read-out at the inaugural ceremony.

Speaking on the occasion, Mr. Atiq-ur-Rahman, Sr. Programme Officer, INIT,

thanked ISESCO, COMSATS and INIT for joining hands for this activity, and hoped for further enhanced cooperation in future.

The technical sessions of the five-day workshop were attended by 40 young researchers, academicians, system administrators and cyber-security professionals, belonging to Kazakhstan, Bangladesh, Jordan, Mauritania, Iran, Pakistan and Sudan.

Dr. Haider Abbas, King Saud University, Saudi Arabia, imparted training on Organizational Security. Mr. M. M. Waseem, NUST, Pakistan, covered various aspects of digital forensics apart from conducting detailed training on using Master Boot Record-MBR/VBR/Partition Tables, as well as using Master File Tables -MFT (Scenarios/ Experimentation). Mr. Asad Raza, Institute of Applied Technology, Abu Dhabi, UAE, conducted training on Ethical Hacking. Mr. Muhammad Faheem Qureshi, Institute of Applied Technology, Abu Dhabi, UAE, covered aspects related to incident handling and response. Mr. Zafar Iqbal Mir, Deputy Head, Information Security Risk, MENA - HSBC, UAE, covered topics related to Dissecting a Cyber Attack.

The workshop concluded with the distribution of certificates among the resource persons, local and foreign participants, and organizing committee members, by the representatives of KazNU, COMSATS and INIT.







# Section 8: Special Assignments

<ul> <li>COMSATS Tele-Health Programmer</li> </ul>	COMSATS Tele-Health Programme (CTH)	98
•	COMSATS Internet Services (CIS)	100
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	COMSATS Foreign Interns Programme	103

# **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. Two of the COMSATS' flagship projects have been successfully transformed into full-fledged institutions i.e., COMSATS Institute of Information Technology (covered in earlier section) and COMSATS Internet Services (CIS), while a third project on tele-health is being expanded. The administration related to graduate students from Member States studying at CIIT is also one of the special assignments of the Secretariat. Some of the foreign students after thorough evaluation have been engaged to facilitate in COMSATS' operations.



# **COMSATS Tele-Health** Programme (CTH)

There is a need to integrate tele-health in the conventional healthcare delivery system in order to provide healthcare access to the people who live far and beyond. In 2017, COMSATS continued its efforts to broaden the horizons of COMSATS Tele-Health (CTH) Programme, within and beyond Pakistan, under the new leadership.

In the reporting year, COMSATS has, inter alia, initiated efforts to reach out to its member states for joint collaborations in tele-health. In order to share the experiences and lessons, and to seek collaborations in the field of tele-health, mapping of tele-health and related projects of COMSATS' Centres of Excellence and relevant organizations has been initiated.

## COMSATS and SZABMU-PIMS Joint Tele-Health Set-up

In connection with the expansion of telehealth programme, steps were taken to approach hospitals and medical institutes for joint collaboration.

As a result these efforts COMSATS joined

hands with Shaheed Zulfiqar Ali Bhutto Medical University (SZABMU), Pakistan Institute of Medical Sciences (PIMS) for establishing an e-health system at PIMS hospital, Islamabad, linking patients at far flung areas with medical practitioners at the hospital.

Collaboration between the two organizations materialized after a meeting held between the honourable Executive Director COMSATS and Vice Chancellor Shaheed Zulfiqar Ali Bhutto Medical University (SZABMU-PIMS) at SZABMU. In the meeting, both the officials were accompanied by the relevant officers from their organizations, including Advisor





Health (CIIT), Principal Medical Officer (COMSATS Secretariat) and Assistant Professor Public Health Department (SZABMU).

Under this collaboration, a tele-health system will be set-up at PIMS linking tele-health clinics to be established in various parts of Pakistan, especially Gilgit & Baltistan, and Azad Jammu & Kashmir region, from where PIMS has the greatest influx of patients seeking healthcare.

The preliminary work for the establishment of the Centre at PIMS has been started, including the technical and civil surveys to chalk out the requirements for a set-up of the kind. The surveys will lead to budgeting as well as planning the finances of the project.

### Collaboration with Midlands Doctors Medical Institute (MDMI)

During the reporting period, COMSATS agreed to join hands with a medical facility at Muzaffarabad, Midlands Doctors Medical Institute (MDMI), in order to establish a tele-health set-up at MDMI health facility and link it to overseas medical specialists. This facility will be the first of its kind in Azad Jammu and Kashmir (AJK). A team from COMSATS visited MDMI Muzaffarabad twice during the 2017. First visit aimed to assess the existing health and IT facilities at the institute and later to test the dedicated VoIP link with the videoconferencing equipment. COMSATS has also

approached the Government of AJK seeking support for the establishment of 20 tele-health centres in different areas of AJK, with help from COMSATS Internet Services and AJK IT Board.

### Efforts for Capacity-Building

Since tele-health is all about provision of healthcare at a distance through best possible and feasible technologies available, this year COMSATS focused on searching for new and better tele-health solutions in the market.

Demonstrations of tele-medicine equipment by the vendors and meetings with the relevant stakeholders were held. Two such companies were identified in Islamabad and meetings were held with their relevant technical persons. The meetings helped identify new trends and possible solutions for future tele-health ventures.

In order to keep up-to-date with regard to tele-health practices and find availability of new technologies in the market, Principal Medical Officer of COMSATS tele-health team attended a premier international health event "Health Asia" held in Karachi from 22<sup>nd</sup> to 24<sup>th</sup> August 2017. This event included workshops and seminars on health and also showcased vendors, products and services like Hospitals & Dental Clinics, Medical & Dental Colleges, Software Houses / MT Companies, Pharmaceutical Companies and e-Health & Consultancy Companies. Participation

in the event enabled the COMSATS representative to meet various stakeholders who are either directly linked to tele-health program or indirectly involved in the manufacturing or distribution of digital equipment that can be used for tele-health purposes.

#### **CTH Tele-Health Centre at CIS**

One of the components of COMSATS Tele-Health is being executed at COMSATS Internet Services (CIS) as a project titled "Establishment of Tele-Health Clinics Network". The project comprises of a network of 13 rural tele-health clinics, that are functional and successfully operating at rural Basic Health Units (BHUs) located in the vicinity of Islamabad, Rawalpindi, Peshawar, Swabi, Lahore, Multan, Khairpur, Quetta, Musakhail, and Gwadar.

All of the clinics are fully equipped with the latest digital diagnostic equipment including vital sign monitor, digital stethoscope, examination camera, ultrasound probe, and ENT scope. These clinics are further linked with Tele-health Center at CIS, Islamabad through live video conferencing for medical/specialist consultation. More than 55,000 patients have been examined and advised through this system.





During the year 2017, CIS has signed an agreement with the Punjab Information Technology Board (PITB) and Khyber Pakhtunkhwa Information Technology board (KPITB) Peshawar, for the establishment and maintenance of telehealth facilities at selected BHUs in their respective areas. The facility has been introduced under the title of E-ilaj. At present this facility is available at BHU Bahali, Mansehra whereas four more BHUs in Swabi, Mardan, Nowshera, etc are in the pipeline.

#### **Distinguished Visitors of CTH**

Throughout the year representatives from various government and semi government organizations as well as NGOs visited Tele Heath Clinic Islamabad and appreciated the efforts made by CTH at CIS in provision of specialist healthcare in rural, and under developed areas of Pakistan. The visitors included dignitaries from Pakistani ministries (Ministry of Finance, Planning & Development and Health, AJK; Ministry of Information Technology, Islamabad), senior executives from national corporations (OGDCL, PSO, PAEC, WAPDA, etc.), and medical specialists from hospitals (Shaukat Khanum Memorial Cancer Hospital & Research Centre).

# COMSATS Internet Services (CIS)

Established in 1996, COMSATS Internet Services (CIS) is a pioneer Internet Service Provider in Pakistan offering diversified services like Wireless broadband, Domain & web hosting, On-demand broadband, Data Center Services, Video conferencing, Website designing and development, Search Engine Optimization, Virtual Private Servers, Networking, IT training, and Internet-related research facilities.

Currently, CIS is operating in 17 cities and has more than 10,000 customers of organizations from public and private sector; well-known national and international companies and firms; software and business companies; foreign missions; consulate and embassies; non-governmental organizations; and universities, as well as social development and research organizations.

#### **Board of Management**

CIS' affairs are managed by a Board of Management (BOM) Chaired by the Executive Director COMSATS.

During the year 2017, six meetings of BOM of CIS were held under the chairmanship of Dr. S.M. Junaid Zaidi, Executive Director COMSATS. The board discussed various issues including general performance, financial performance and legal status of CIS. The Executive Director emphasized the need for making developments in the field of IT and design new projects. The main decisions of the meetings are as under:

i. Executive Director advised CIS to make focused efforts on revenue generation, which is only possible with the introduction of new products and value-added services according to the market requirement. In this regard, he proposed 'consultancy services' with the help of experts from CIS, CIIT, LUMS and IBA. It was suggested that software development and data centre facilities should be expanded to meet the national needs as well as those of COMSATS'



member countries.

ii. It was suggested that there should be a study to find out technology trends in USA, UK and Europe so that governments of Member States can be advised on strategic planning for the future of IT sector.

An important decision of the Board was appointment of Mr. Jamshed Masood as the Chief Executive Officer (CEO) who joined CIS on January 03, 2017. The incumbent CEO has made substantial contribution in the business growth of CIS.

#### **CIS Core and Value-Added Services**

CIS offers eight brands of core services, which form 'The Colors of CIS'. These are Tornado<sup>®</sup> (Wireless broadband), Hawaii™ (Domain, hosting, and VPS), and COMSpeed™ (Optical Fiber Connectivity). The value added services include Hurricane<sup>™</sup> (On-demand broadband), Prism<sup>™</sup> (Website development), Viacon<sup>™</sup> (Video conferencing), and COM meeting™ (web Conferencing Service). CIS also offers social services in the form of ComClinic<sup>™</sup> (Tele-health service). All processes and procedures at CIS are ISO9001:2008 certified.

#### **Data Centers**

CIS has well-equipped data centers offering a variety of services including

Virtual Private Servers, Domain Registration, Website Hosting, Co-location of Servers, and rack space to its customers. These data centers provide hosting services on both Windows and Linux platforms. CIS data Centers are located in Islamabad, Lahore and Faisalabad. A data center at CIS Peshawar is planned to be established in the near future.

In order to capture emerging opportunities in the data center services space for its existing and potential customers, CIS has expanded its infrastructure with the latest state-of-the-art technologies at CIS Technology Park building Islamabad. Salient features of the new data center are mentioned below:

- Capacity of 1,526 Sq. ft.;
- Precision cooling system with humidity controller;
- Fire suppression along with four stage fire alarm;
- N + 1 electric system including UPS and backup electric generators.

#### Software Development

Software development section consists of dedicated experts in JAVA, .NET, and PHP platform who utilize latest technology and best practices for website performance optimization and security. This section has successfully developed upgraded applications and websites for Government

and semi-Government institutions, NGOs, and private organizations.

#### **Training**

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

#### Video Conferencing

Two video-conferencing centers, one in Islamabad and another in Peshawar are being used by CIS' customers for videoconferencing within the country and for communicating abroad.

#### **Bandwidth Growth**

To ensure high uplink and downlink speeds for its customers, CIS gets bandwidth from multiple providers. During the reporting period, CIS bandwidth grew from 1.7 GBPs in 2016 to 2.5 GBPs (approximately current bandwidth) in 2017.

## **Tele-Health Clinics (ComClinic)**

CIS Tele-Health clinic network comprising of 13 rural Tele-Health clinics has been operating successfully at Rural Basic Health Units (BHUs) located in the remote areas of Pakistan.

All these clinics are linked via Internet with CIS Tele-Health Center, Islamabad, where a panel of experienced doctors is available to provide consultation to the patients visiting the connected clinics. More than 55,000 patients have been examined so far.

#### **CIS E-Education Project**

COMSATS Internet Services (CIS), Islamabad has initiated and demonstrated an e-education project in collaboration





with Universal Service Fund (USF), Islamabad. USF was established by the Ministry of Information Technology, Government of Pakistan, to spread the benefits of the telecom revolution to all corners of Pakistan. USF promotes the development of telecommunication services in un-served and under-served areas throughout the country. Federal Government Girls School Sihala, Islamabad, has been connected via Internet with CIS building, Islamabad, where a trained IT/computer teacher delivers lectures to the school students.

#### **Achievements During 2017**

Establishment of Tele Health Clinic at BHU Bahali, Mansehra (KPK) CIS Tele Health Islamabad in an agreement with Khyber Pakhtunkhwa Information Technology Board (KPITB), Peshawar, has launched E-ilaj facility at BHU Bahali, Mansehra, as a pilot project. Four more BHUs in Swabi, Mardan, Nowshera, etc are in pipeline.

### **Expansion of Operations**

- CIS have been expanded its operations in Rawalpindi/Islamabad area by establishing base stations/CIS offices at Tarnol, BaraKahu, and PWD Colony.
- CIS Node at Toba Tek Singh has been

- established by CIS, Faisalabad.
- CIS has also expanded its services from Lahore to Okara and Hasilpur.

# **Punjab Information Technology Board Project**

PITB project won last year by CIS is being executed successfully in Attock, Bahawalpur, Jehlum, Sargodha, and Okara (50 BHUs connectivity and support).

#### **Events**

- CIS participated in ITCN-ASIA 16<sup>th</sup> International and Exhibition Conferences at Expo Center Karachi in September 2017, where stalls were set up for marketing, exhibiting CIS products, and tele-health facilities.
- ii. CIS participated in PAKMEDICA
  Medical Expo (A Pakistan-Turkey
  Health Cooperation Forum) for
  developing cooperation between the
  authorities of Turkey and Pakistani
  Ministry of Health with the aim to
  share information and experiences
  to be saved in the scope of Health
  Transformation Movement.
- iii. Inauguration ceremony of CIS Gujranwala office was held on December 27, 2017 where many renowned and honorable personalities, including President of Gujranwala Chamber of Commerce,

industrial heads and educational institutes, graced the ceremony with their presence.

# **COMSATS Graduate Scholarship Programme**

The principle of education for sustainability is reflected in COMSATS' mission to provide leadership and support for North-South and South-South cooperative schemes in education, training and research, by setting up programmes of scholarships for research at its Centres of Excellence. During the 20th Coordinating Council meeting, COMSATS Secretariat urged its Centres of Excellence to offer scholarships for the students from COMSATS member countries to pursue education in other countries leading them to achieve more sustainable and inclusive research excellence for their respective countries.

A few Centres of Excellence agreed to provide an opportunity of doctoral and post-doctoral scholarships for prospective students in different fields of S&T to acquire high-level competence in both academic studies and practical research knowledge. Ten doctoral/post-doctoral scholarship are available for international students from COMSATS' member countries at the International Centre for Chemical and Biological Sciences (ICCBS), Karachi, while Bangladesh Council for Scientific and Industrial Research (BCSIR), Bangladesh; International Centre for Climate and Environmental Sciences (ICCES), China; and National Research Centre (NRC), Egypt, have also agreed to provide access to their labs and facilities and engage researchers from other member countries through post-doctoral fellowships.

COMSATS Secretariat also invited its Member Countries and Centres of Excellence to make use of the standing offer of CIIT's 100 post-graduate scholarships and five post-doctoral fellowships to researchers/scientists



belonging to COMSATS Member States. In this regard, 16 nominations were received and upon completion of necessary prerequisites, scholarships were awarded to 11 nominees, who belong to The Gambia (4), Nigeria (4), Palestine (2), and Ghana (1) for their MS and doctoral studies in various departments of CIIT, including Environmental Sciences, Biosciences, Molecular Biology, Computer Science and Management Sciences (Fall & Spring 2017).

# **COMSATS Foreign Interns Programme**

During 2017, 18 foreign students served at COMSATS Secretariat under the new Foreign Interns Programmes of COMSATS under the mentorship of Dr. Abdul Aziz Khan, Coordinator of the Programme. Initially (March 2017), eight foreign students from CIIT were inducted as the first batch of interns.

Later in June 3, 2017, their progress was reviewed to assess the outcomes of the efforts made by them for establishing links between various member countries of COMSATS and its Secretariat. The meeting was chaired by the Executive Director COMSATS, Dr. S.M. Junaid Zaidi. Among others, the meeting was attended by Advisor (International Coordination), Dr. Abdul Aziz Khan, and Advisor (Programmes), Mr. Tajammul Hussain. The amount of work done by the interns during a short period of just two months was appreciated during the review meeting.

On November 1, 2017, another batch of foreign interns joined COMSATS, who received orientation from senior officials of COMSATS who made presentations to acquaint them with COMSATS' organizational structure, mandate, and involvement with other /international organizations.

During this time, they had identified new research institutions for collaborations, suggested improvements in the working of International Thematic Research Groups (ITRGs), and created new inroads through highlighting the work being done by various Centres of Excellence (CoEs) under the umbrella of COMSATS.

Also, contacts were established in the top universities/institutions of the selected countries in areas of Science and Technology for possible collaboration on scientific research activities with COMSATS and its Centres of Excellence. Other tasks the interns worked on included:

- Making profiles of selected countries to highlight their strengths and possible areas for cooperation;
- Searching for possible funding opportunities at the institutions/ organizations of the North for various projects and programmes;
- Disseminating information regarding call for participants for workshops and events organized by COMSATS;
- Exploring collaborations with top world ranking universities/ institutes in the North as well as with COMSATS ITRGs in relevant areas of research:
- Presentations on the UN SDGs, analysis and the importance of science and technology in the SDGs together with current research trends.

#### **Progress**

Various responses were received from the universities, research institutes and government ministries contacted by the interns, and most of the



universities/institutes indicated interest in collaborating with COMSATS and its Centres of Excellence. Some of the responses have led to possibilities of institutionalizing collaborations through MOUs in different areas of science and technology, like exchange programs, climate change and environment.

Some institutions have shown interest in becoming COMSATS Centers of Excellence and joining the ITRGs. In addition, some have begun initiating moves for their countries to become member states of COMSATS. These

opportunities are being further explored.

Another key task carried out was the review of the activities of different ITRGs like the ones on Mathematical Modelling, Climate Change, Food and Agriculture Security. The aim of this was to suggest some ways in which the Groups can improve on their aims and objectives and further engage in more innovative research activities. In this regard, the interns highlighted the Group's achievements and possible difficulties that may be encountered, and suggested some ways in which the Groups can

enhance the achievement of their aims and objectives. The review was submitted to the concerned authorities, which pledged to pass on the recommendations to the respective leaders of the Group.

Progress made on other fronts includes:

- Generation of articles for COMSATS' publications.
- Assistance provided to various departments of the COMSATS Secretariat for day to day operations of the organization.

#### From an Outgoing Foreign Intern

Abdullahi Muhammad Labbo a citizen of Nigeria, working as Lecturer at Department of Biochemistry Sokoto State University, Sokoto Nigeria.

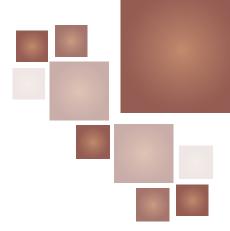
I completed MS Biochemistry and Molecular Biology at COMSATS Institute of Information Technology (CIIT) Islamabad, Pakistan, under Commonwealth fellowship program. During my MS studies at CIIT, I undertook a one-year research thesis where I explored and analyzed a super family group of genes (Transcription factors) that enable plants to cope with different environmental stresses, including drought. In my research, I used different Bioinformatics tools and techniques used in gene expiration analysis, under supervision of Dr. Irfan Sadiq.



In my opinion, CIIT is a world class university with hardworking teachers and excellent research output. I can compare CIIT with other Ivy League Universities across the world. CIIT is Pakistan's top varsity by Times Higher Education Ranking for 2018.

During my studies at CIIT, I enrolled in internship program at the Commission on Science and Technology for Sustainable Development in the South (COMSATS). COMSATS is an international intergovernmental organization with a focus on bringing about development of countries in the South (developing and under develop countries). COMSATS has exposed me to experience of working in an international organization with a workforce comprising of men and women of intellect, from whom I learned idea development and philosophy of life.

Contact Information: abdullahi.labbo@ssu.edu.ng; amlabbo16@gmail.com





# Section 9: Publications and Information Dissemination

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•	Annual Report 2016	107
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# **Publications and Information Dissemination**

Information dissemination through publications 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.

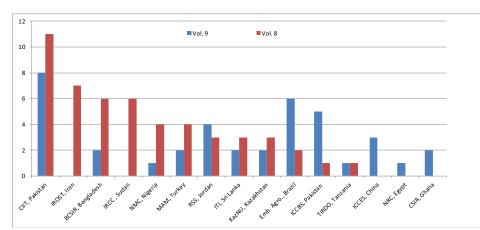
In 2017, COMSATS continued its information dissemination through publications and official website.

#### **COMSATS** Newsletter

During 2017, the 8th Volume of COMSATS Newsletter was completed and 5 issues of the 9 volume were brought out, thus completing 53 issues of this important information dissemination tool.



The prominent sections of the Newsletter include an editorial by the Executive Director COMSATS, and updates on the activities of COMSATS Secretariat and COMSATS Centres of Excellence. Other sections included science and technology indicators of Member States; opinion articles; Science, Technology and Development news; and profiles of the members of COMSATS Technical Advisory Committee.



The following reports were covered in the Special section of the 9th Volume:

- 3<sup>rd</sup> International Conference on Agriculture, Food Security and Biotechnology, Islamabad;
- 20th Meeting of the Coordinating Council, Cairo, Egypt;
- 4th International Workshop on 'Applications of ICTs in Education, Healthcare and Agriculture, Abuja, Nigeria';
- COMSATS' Forum on 2030 Sustainable Development Agenda.

The special section in the last issue of volume 8 covered COMSATS' International Capacity Building Events in Morocco, Malaysia, and Iran.

'Science and Technology Indicators of Member States/Member Country in Spectrum' highlights the social, economic as well as scientific standings of member countries of COMSATS. The data is obtained from credible sources, which include World Bank, World Fact Book, United Nations Development Program (UNDP), and official governmental websites of the respective countries. In

the last issue of volume 8, a brief profile of Sudan was included. In the five issues of the 9<sup>th</sup> volume, the following countries were covered: the Philippines, The Gambia, Egypt, Turkey, and Tunisia.

The section regarding news on COMSATS' Centres of Excellence, described the activities and achievements of the centres during the year 2017. The information for this section was collected from the material shared by the respective centres and from websites. The news covered during the period related to important collaborations; events organized; establishment and enhancement of facilities; services provided; appointments, awards and achievements; important visits and exchanges; research undertakings; and work on important projects.

The Opinion Articles by different authors presented meaningful views on various issues, including:

- 'Potentials of Biomass and Biofuels in the Developing Countries: Prospects and Challenges' authored by Dr. Abdulrahim K. Saad:
- 'Recent Advances in Enhanced

- Production of Value-Added Compounds from Medicinal Plants' authored by Ms. Asma Nasib;
- 'Moving Forward with Science and Technology' authored by Mr. Abdul Majid Qureshi;
- 'Water Crisis and Depleting Aquifers Characterization in the Middle Indus Basin, Rawalpindi city, Pakistan' authored by Prof. Dr. Zulfiqar Ahmad;
- 'Promoting Innovation Economy through Industry-Academia Linkages' authored by Dr. Fahim Qureshi; and
- 'Sustainable Development Imperatives and Responses to SDGs' authored by Ambassador Fauzia Nasreen.

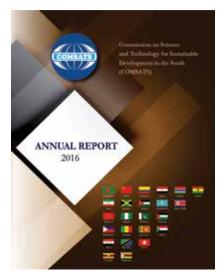
The news covered in the section 'Science, Technology and Development,' inter alia, covered breakthroughs and developments in biofuel production, developments in agriculture, drug discovery, recycling, X-ray imaging, climate change research, nanotechnology, and innovations.

The last issue of volume 8 and the five issues of volume 9 featured profiles of Members of COMSATS Technical Advisory Committee, i.e., Prof. Dr. Seyed Habib Firouzabadi, Shiraz University, Iran; Dr. Moctar Toure, National Academy of Sciences, Senegal; Prof. Stephen E. Onah, Director/CE NMC, Nigeria; Late Dr. Ishfaq Ahmad (former TAC member), National Centre for Physics, Pakistan; Prof. Sahalu Junaidu Balarabe, Ahmadu Bello University, Zaria, Nigeria; and Prof. Huadong Guo, Chinese Academy of Sciences, Beijing, China.

The Newsletter is distributed to COMSATS focal points and Centres of Excellence as well as other related organizations.

#### **Annual Report 2016**

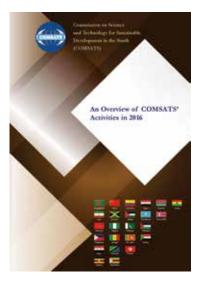
COMSATS Annual Report 2016 was finalized in April 2017 with a completely new outlook duly covering COMSATS' activities, including those of its Centres of Excellence. The Report comprehensively covered the undertakings of COMSATS and its Network, updating the readers



on the organization's programmes and pursuit of its mission. Sections on COMSATS statutory bodies and activities on COMSATS Secretariat delineated COMSATS important statutory body meetings (19<sup>th</sup> Coordinating Council and 39<sup>th</sup> and 40<sup>th</sup> Management Committee Meetings), as well as progress made with regard to follow-up of the meetings' decisions. Efforts for Enhancing Membership of COMSATS' Commission and COMSATS' Network, as well as efforts to mobilize Annual Membership Contribution (AMC) were also presented

COMSATS' capacity building event in Morocco, Malaysia, Pakistan, Iran, Sudan and China were duly projected in a relevant section presenting the full scope of these events that covered different themes. These events bore important themes relevant to the needs of Member States, such as Internet Security, Nanotechnology, Science Museums, Renewable Energy Technologies, Agriculture, Food Security and Biotechnology, environment and Sustainable Development Goals, ICTs, Repair and Maintenance of Scientific, Engineering Equipment, Biosafety and Biosecurity.

Reports on COMSATS' International Thematic Research Groups covered activities of relevant groups on Climate Change and Environmental Protection; Agriculture, Food Security



and Biotechnology; Renewable Energy Technologies; Natural Products Sciences; Information and Communication Technologies (ICTs).

Cooperation with ISESCO, UNESCO, TWAS, NCP, and interactions with the Host Country, Pakistan, were presented in the section on Collaborations with National and International Organizations'. COMSATS Secretariat officials approached officials of a number of countries to advocate COMSATS' mission; and seek and strengthen partnerships. The visits made in this regard to Morocco, Malaysia, Iran, Sudan, China, Jordan, Nigeria were covered.

The activities of COMSATS' most important technical resource, i.e. Network of Centres of Excellence, were covered in a dedicated section. The reports on special assignments gave the readers information on the progress of COMSATS Internet Services, COMSATS graduate scholarships, COMSATS Science Diplomacy, and COMSATS Telehealth.

COMSATS financial affairs are presented to the readers for transparency. This covers Accounts and Audit reports of COMSATS, Summary of Contributions of Member States, and developments with regard to COMSATS' Endowment Fund, as well as Auditor's report for the most recent fiscal year.



A concise version of the report, entitled 'An Overview of COMSATS Activities in 2016', was also brought out for quick reference.

The Annual Report 2017 is being compiled.

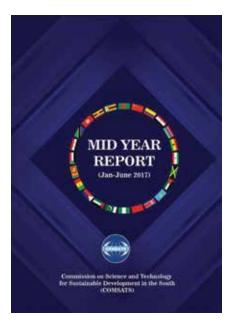
# Mid-Year Report 2017 (January to June 2017)

The activities of COMSATS Secretariat and its Network of International Science and Technology Centres of Excellence in the first half of year 2017 were documented in a Mid-Year report, encompassing the activities of the Centres of Excellence from January to June 2017, other than the highlights of the Secretariat. The publication provided an overview of COMSATS' activities.

The report is available online.

# COMSATS' Journal, 'Science Vision' (Volume 21)

Volume 21 (1&2) of Science Vision was also published during the reporting period. The composite Volume included 7 papers on different themes like environment, innovation, material science,

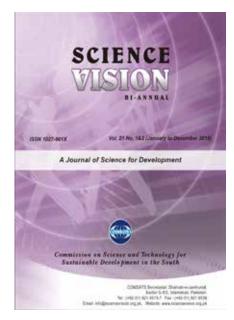


and sustainable development goals.

Efforts are underway to realign COMSATS' focus on S&T and development policies to suitably cover subjects of inter-disciplinary nature. The purpose is to disseminate important findings and research to developing countries to help them contribute to their national development more efficiently. The journal is being prepared to meet international standards and have impact factor.

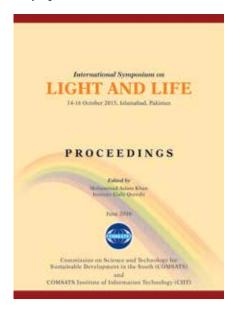
# COMSATS' Series of Publications on Science and Technology (16): International Symposium on Light and Life – Proceedings

The 16<sup>th</sup> book of the series after extensive editing and composing was finalized, published and distributed during 2017, in collaboration with COMSATS Institute of Information Technology (CIIT). The book covers the proceedings of the International Symposium on 'Light and Life' held to observe UNESCO's International Year of Light and Light-based Technologies, organized jointly with COMSATS Institute of Information Technology (CIIT, the Abdus Salam International Center for Theoretical Physics (ASICTP), Trieste (Italy); Ministry of



Science and Technology, Government of Pakistan; Higher Education Commission, Islamabad; Pakistan Academy of Sciences, Islamabad; National Testing Services (NTS), Islamabad; National Center for Physics (NCP), Islamabad; and COMSTECH Secretariat, Islamabad.

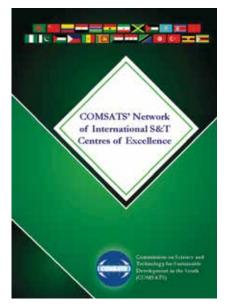
The event resulted in generating content of great intellectual worth relating to various topics covered in the symposium. The book helps the readers engage in specialized fields of study and topical research work that was presented during the symposium.



The book contains material on eleven plenary and invited lectures and two contributed talks, in addition to abstracts of all the papers presented at the symposium. A listing of titles of the poster presentations along with the names of the authors is also included to present the full spectrum of scientific activities during the symposium.

# Profiles of COMSATS Centres of Excellence (Brief)

COMSATS Centres of Excellence constitute the most important resource for COMSATS' technical activities. In order to provide ready information on the Network, to stimulate important relevant collaborations, profiles of the network of COMSATS' Centres of Excellence were developed. To further add to ease of reading, this year, a brief version of these



profiles was created. It provides a quick and easy glance at the scope, strengths and expertise of various nodes of COMSATS' Network.

# COMSATS' Website and other Informational Material

As an important repository of all information on COMSATS, the official website of COMSATS was updated with fresh information on various undertakings and related aspects of the organization. In this regard, announcements about the events, informational material, contact information and reports of various activities were regularly uploaded on the website. Moreover, PDF versions of all the publications of COMSATS including the Newsletter, Annual Report, Mid-Year Report, Proceedings of International Symposium on Light and Life, and Science Vision were added on the website for wider access.

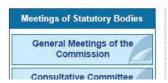




#### About us

COMSATS is an intergovernmental organization with its permanent Secretariat based in Islamabad, Pakistan. Established in 1994, the organization comprising 26 Member States, strives to promote South-South cooperation in the fields of Science and Technology that are most relevant to socio-economic development. A Network of 21 Centres of Excellence in four continents affiliated with COMSATS, provides the necessary pool of human resources and scientific infrastructure for undertaking a variety of capacity-building programmes, bilateral and multilateral cooperative research and consultancy/advocacy for the promotion of S&T as primary ingredient of national development plans. The mission of COMSATS is to help create a world where all nations are at peace with one another and capable of providing good quality of life to their populations in a sustainable way using modern S&T resources.

COMSATS also provides an institutional platform for North-South technical cooperation in areas of common interest such as Energy, Health, Education, Information Technology, and Environment. The flagship projects of COMSATS in Pakistan are open to all Member Countries for training and consultancy.

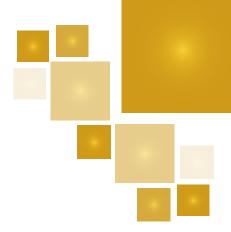


COMSATS hosts Welcome Reception in honor of Ambassador of People's Republic of China

Upcoming Events

3-4 April 2018
 21st Meeting of COMSATS Coordinating Council, Almaty, Kazakhstan







# Section 10: Financial Affairs

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# **Financial Affairs**

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

The Government of Pakistan, being the host country of COMSATS Secretariat, is meeting the running costs of COMSATS Secretariat under an international agreement. Currently, the Government of Pakistan annually contributes PKR 40.00 million towards the running cost of COMSATS Secretariat. In addition, the Government of Pakistan is also making US\$ 20,000 as an Annual Membership Contribution (AMC).

# **Contributions from Member States**

The voluntary contributions from Member States are kept as a trust fund and utilized to support technical activities and programmes of the contributing country. During the year 2017, COMSATS received Annual Membership Contributions (AMC) from four Member States as shown below:

Annual Membership Contribution - 2017				
Country	Amount (US\$)			
Pakistan	20,000			
China	20,007			
Kazakhstan	20,000			
Sudan	3,000			
Total	63,000			

#### **COMSATS' Endowment Fund**

COMSATS Endowment Fund was created by the COMSATS' Commission during its 2<sup>nd</sup> General Meeting held on 16-17 April 2012 in Islamabad, Pakistan, on proposal by the then Prime Minister of Pakistan (Ex-Chairperson of COMSATS). The proposal called for an amount of US\$ 10M with a commitment of US\$ 1.00M as seed money from the Government of Pakistan.

The Ministry of Finance, Government of Pakistan, has since 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 soon.

After receipt of the seed money from the Government of Pakistan, other Member States will be requested to make their contributions towards COMSATS' Endowment Fund.

#### Accounts and Audit

The accounts of COMSATS Secretariat are managed and maintained as per international practices and according to International Accounting & Financial Standards.

The financial year of COMSATS Secretariat begins from 1st July and ends on 30<sup>th</sup> June of the succeeding year. On closing of the accounts on 30<sup>th</sup> June every year, the accounts are voluntarily subjected to external audit by a reputed chartered accountancy firm. The audited accounts, along with Auditors' Report, are submitted to COMSATS Management Committee for endorsement and the Coordinating Council for approval.

M/s. HLB IJAZ TABUSSUM & CO., Chartered Accountants, were engaged to conduct audit of accounts for the financial year ending on June 30, 2016. The Auditors' Report and Audited Financial Statements for the said year were approved by the Coordinating Council of COMSATS during its 20th meeting held on 14-15 May 2017 in Cairo, Egypt.



Chartered Accountants

303 - Sawan Road, G 10/1, Islamabad-Pakistan. Tel: +92 (51) 235 48 01-03 Fax: +92 (51) 235 48 00 Email: admin@hlbitc.com www: hlbitc.com

Other Offices: Lahore Gujranwala (Pakistan) Kabul (Afghanistan)

#### INDEPENDENT AUDITORS' REPORT TO THE COORDINATING COUNCIL

We have audited the accompanying financial statements of COMSATS Secretariat ("the Secretariat") which comprise of balance sheet as at June 30, 2016 and the income and expenditure account, the statement of changes in fundand the cash flow statement for the year then ended,and a summary of significant accounting policies and other explanatory information.

#### Management's Responsibility for the Financial Statements

TheSecretariat's management are responsible for the preparation and fair presentation of these financial statements in accordance with the approved Accounting and Financial Reporting Standards for Medium Sized Entities (MSEs) issued by the Institute of Chartered Accountants of Pakistan, and for such internal control as the Secretariat's managementdetermine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to error or fraud.

#### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conductedour audit in accordance with the approved auditing standards as areapplicable in Pakistan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In makingthose risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by Secretariat's management as well as evaluating theoverall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

A member of HLB International, a world-wide network of independent accounting firms and business advisors



#### Opinion

In our opinion, the financial statements give a true and fair view of the financial position of COMSATSSecretariat as at June 30, 2016 and its financial performance and its cash flows for the year then ended in accordancewith the approved Accounting and Financial Reporting Standards for Medium Sized Entities (MSEs) issued by the Institute of Chartered Accountants of Pakistan.

ISLAMABAD DATE: 11-9-2017

HLB IJAZ TABUSSUM & CO. Chartered Accountants

Engagement Partner: IJAZ AKBER-FCA

### COMMISSION ON SCIENCE AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT IN THE SOUTH (COMSATS) SECRETARIAT BALANCE SHEET AS AT JUNE 30, 2016

		2016	2015
	Note	Rupees	Rupees
NON-CURRENT ASSETS	,		
Property, plant and equipment	4	30,577,488	32,492,270
Investment property	5	783,130	824,347
Investment in joint venture	6	429,108	477,405
Long term loan	7	48,049,387	51,779,972
Long-term security deposits		631,862	593,351
		80,470,975	86,167,345
CURRENT ASSETS			
Advances and prepayments	8	7,050,965	5,288,517
Short-term investments	9	57,705,656	45,047,117
Current portion of long term loan	7	3,600,000	2,700,000
Other receivables	10	1,800,885	4,582,204
Cash and bank balances	11	39,942,844	25,643,379
		110,100,350	83,261,217
TOTAL ASSETS		190,571,325	169,428,562
FUNDS AND RESERVES			
Technical assistance fund	12	32,000,000	32,000,000
COMSATS Endowment Fund	13	12,351,726	-
Accumulated surplus		72,272,868	78,741,681
		116,624,594	110,741,681
NON-CURRENT LIABILITIES	_		
Deferred grants	14	38,525,156	36,965,459
Deferred liabilities	15	19,021,485	16,819,672
		57,546,641	53,785,131
CURRENT LIABILITIES			
Creditors, accrued and other liabilities	16	3,611,090	4,901,750
Unearned income	17	12,789,000	-
		16,400,090	4,901,750
TOTAL FUNDS AND LIABILITIES		190,571,325	169,428,562
CONTINGENCIES AND COMMITMENTS	18		

The annexed notes from 1 to 23 form an integral part of these financial statements.

DIRECTOR (F&A)

EXECUTIVE DIRECTOR

# COMMISSION ON SCIENCE AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT IN THE SOUTH (COMSATS) SECRETARIAT INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED JUNE 30, 2016

	Note	2016 Rupees	2015 Rupees
INCOME			
Grant income	19	40,609,594	40,641,678
Other income	20	20,253,460	18,881,759
	_	60,863,054	59,523,437
EXPENDITURE	_		
Administrative expenses	21	67,317,258	63,896,317
Finance cost	L	14,609	30,918
		67,331,867	63,927,235
( DEFICIT ) / SURPLUS FOR THE YEAR	-	(6,468,813)	(4,403,798)

The annexed notes from 1 to 23 form an integral part of these financial statements.

EXECUTIVE DIRECTOR

# LIST OF FOCAL POINTS IN COMSATS' MEMBER STATES

#### H.E. Mr. Yeafesh Osman

Minister

Ministry of Science and Technology Dhaka, Bangladesh.

# H.E. Prof. Wan Gang

Minister

Ministry of Science and Technology,

Beijing, China.

### Dr. César Ocampo

Director General

The Administrative Department of Science, Technology and Innovation - COLCIENCIAS Bogotá D.C., Colombia.

#### H.E. Dr. Khaled Abdel Ghaffar

Minister

Ministry of Higher Education and Scientific Research Cairo, Egypt.

#### H.E. Dr. Badara Joof

Minister

Ministry of Higher Education, Research, Science and **Technology** 

Kotu, The Gambia.

#### H.E. Prof. Dr. Kwabena Frimpong Boateng

Minister

Ministry of Environment, Science, Technology and

Innovation

Accra, Ghana.

#### H.E. Dr. Syed Zia Hashemi

Minister

Ministry of Science, Research and Technology Tehran, Iran.

### Hon. Dr. Andrew Wheatley

Minister

Ministry of Science, Technology, Energy and Mining Jamaica, West Indies.

### Dr. Khaled Elshuraydeh

Secretary General

Higher Council for Science and Technology (HCST) Amman, Jordan.

### H.E. Mr. Sagada Yerlan Kenzhegalievich

Minister

Ministry of Education and Science

Astana, Kazakhstan.

## Mr. Jang Chol

President

State Academy of Sciences

Pyongyang, Korea, D.P.R.

#### H. E. Mr. Mohamed Hassad

Minister

National Education, Vocational Training, Higher

Education and Scientific Research

Rabat, Morocco.

#### Dr. (Mrs.) Amina M.B. Shamaki

Permanent Secretary

Federal Ministry of Science & Technology

Abuja, Nigeria.

#### Ms. Yasmin Masood

Federal Secretary

Ministry of Science and Technology

Islamabad, Pakistan.

#### H.E. Dr. Sabri Saidam

Minister

Ministry of Education and Higher Education Ramallah, Palestine

#### Hon. Fortunato T. De La Peña

Secretary

Department of Science and Technology (DOST)

Manila, Philippines.

### Hon. Mary Teuw Niane

Minister

Ministère de l'Enseignement Supérieur, des Universités, des Centres Universitaires

Dakar, Senegal.

#### H.E. Mr. Abdi Dahir Osman

Minister of Education

Ministry of Education, Culture and Higher Education

Somalia

#### Hon. Susil Premajayantha

Minister

Ministry of Science, Technology and Research

Battaramulla, Sri Lanka.

#### H. E. Dr. Tahani Abd Allah Atia

Minister

Ministry of Science and Communications

Khartoum, Sudan.

#### H.E. Dr. Atef Nadav

Minister

Ministry of Higher Education

Damascus, Syria.

#### H.E Prof. Makame M. Mbarawa

Minister

Ministry of Communication, Science and Technology

Dar es Salaam, Tanzania.

#### H.E. Prof. Slim Khalbous

Minister

Ministry of Higher Education and Scientific Research

Tunis, Tunisia.

#### H.E. Prof. Hasan Mandal

President

The Scientific and Technological Research

Council of Turkey (TUBITAK)

Ankara, Turkey

#### Dr. Peter Ndemere

**Executive Secretary** 

Uganda National Council for S&T

Kampala, Uganda.

#### Hon. Prof. Jonathan Moyo

Minister

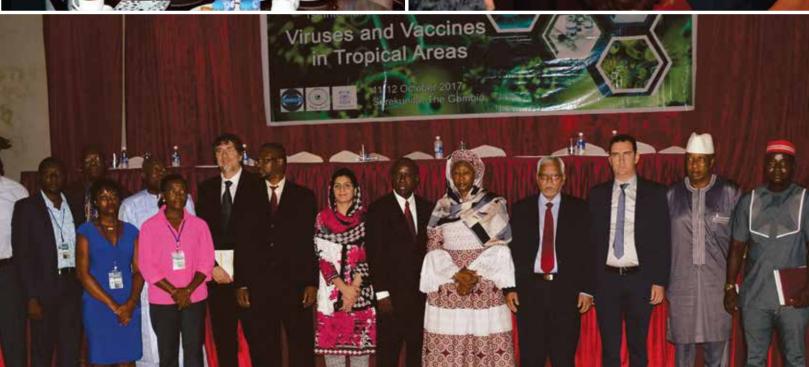
Ministry of Higher and Tertiary Education, Science

and Technology Development

Harare, Zimbabwe.





















































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