

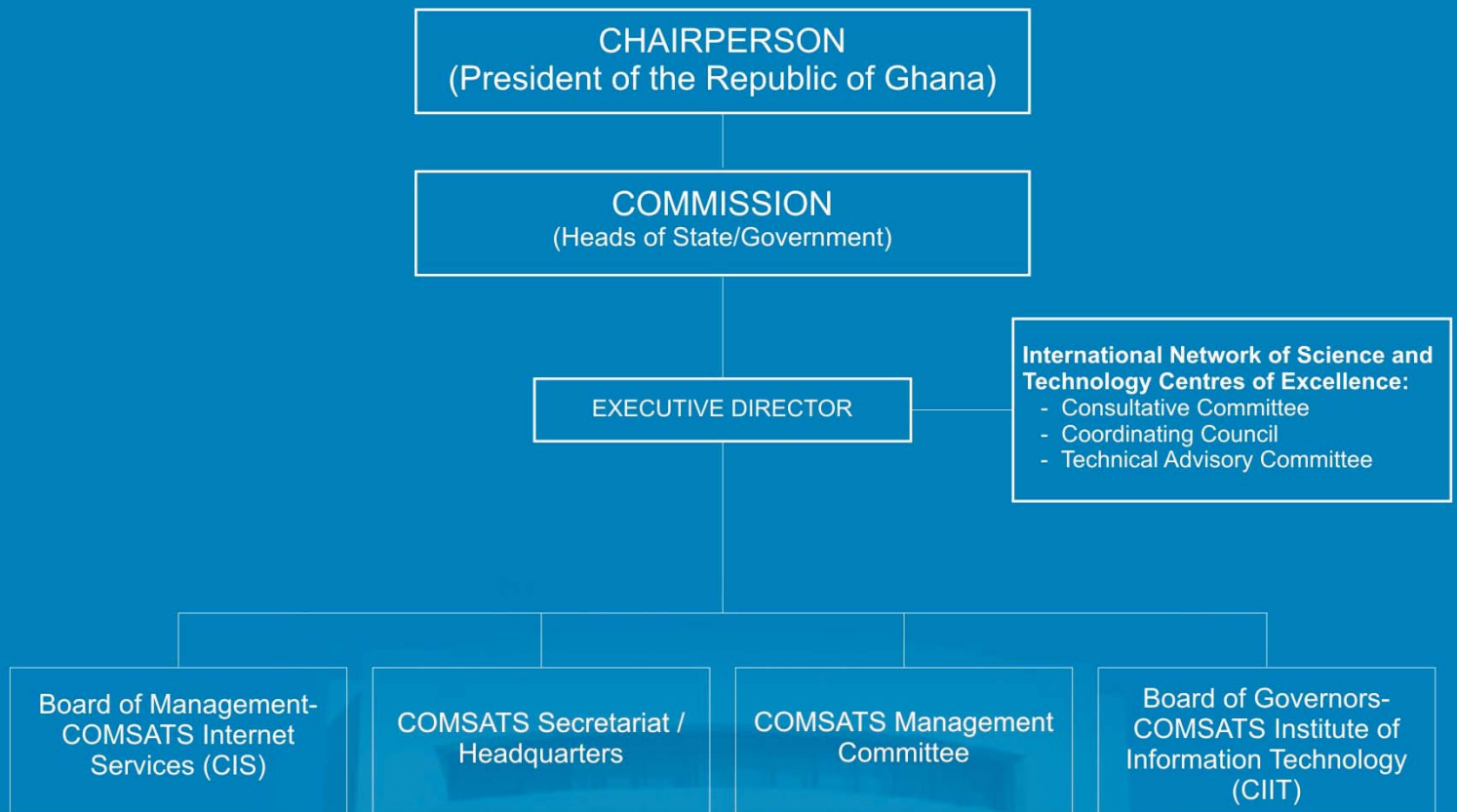
COMSATS

ANNUAL REPORT 2012



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

Organigram



April 2013

ANNUAL REPORT

2012



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



COMSATS' PROFILE

The Commission on Science and Technology for Sustainable Development in the South (COMSATS) was created in October 1994 as an international/inter-governmental organization to act as a global forum for sustainable socio-economic uplift of the developing countries through the applications of science and technology. COMSATS' current membership includes 21 countries located in the continents of Africa, Asia and Latin America, 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. 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.

MISSION

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

OBJECTIVES AND FUNCTIONS

The major objectives and functions of COMSATS as envisioned in the Foundation Agreement are:

- To sensitize the countries of the South to the centrality of science and technology in the development process, to the adequate allocation of resources 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 under this agreement;
- To support other major initiatives designed to promote indigenous capacity building in science and technology for science-led sustainable development, and to help mobilize long-term financial support from international donor agencies and from governments / 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; and
- To support the relevant programmes and initiatives of major international organizations working for the development and promotion of science and technology in the South.



COMSATS' MEMBER COUNTRIES



People's Republic of Bangladesh



People's Republic of China



Republic of Colombia



Arab Republic of Egypt



Republic of Ghana



Islamic Republic of Iran



Jamaica



Hashemite Kingdom of Jordan



Republic of Kazakhstan



Democratic People's Republic of Korea



Federal Republic of Nigeria



Islamic Republic of Pakistan



Republic of the Philippines



Republic of Senegal



Democratic Socialist Republic of Sri Lanka



Republic of the Sudan



Syrian Arab Republic



The United Republic of Tanzania



Republic of Tunisia



Republic of Uganda



Republic of Zimbabwe



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Annual Report

2012



FOREWORD

COMSATS, as an Inter-Governmental Organization, has several unique features. First, it is an apex forum for S&T cooperation among developing countries, without any umbrella political organization or UN system support. Secondly, a vibrant group of eighteen R&D organizations spread across four continents is affiliated with it as its Network of Centres of Excellence. Additionally, a high-quality university in the host country, Pakistan, is attached with this organization, which offers more than 73 degree programmes in diverse areas of Science and Technology, business and management studies, and arts and architecture.



Being a voluntary organization of a relatively small group of 21 countries, mostly in Asia and Africa, it also has to face special challenges in execution of its mission to promote South-South cooperation in S&T sector. Foremost among these is the issue of financial resources. Being an advocacy forum for greater spending on S&T in developing countries, COMSATS has been also urging all Member States to make funds available so that COMSATS can help them in their efforts to create robust R&D infrastructure for socio-economic development.

Notwithstanding the financial constraints, COMSATS has been using a variety of innovative mechanisms to achieve its objectives. The canvass of COMSATS' activities during 2012 was broader than the previous years, because of the fact that the research work under International Thematic Research Groups (ITRGs) has picked up pace. The group on 'Climate change and Environmental Protection' led by ICCES-China was able to get a substantial financial support from the Ministry of Science and Technology, People's Republic of China, in addition to ICCES' resources for the project: "Characteristics and Mechanism of the Extreme Climate Events under the Climate Change Background". The reports of two other ITRGs, namely "Drug Discovery from Nature for Neglected Diseases" and "Enabling ICT Applications using Long-Distance Wi-Fi Networks" showed that these groups are also making steady progress towards their research targets.

As usual, joint activities with ISESCO dominated the last year's programmes. The S&T capacity-building events in the form of workshops, hands-on trainings and conferences in Malaysia, Bangladesh, Jordan, Tunisia and Pakistan covered areas of high interest, such as maintenance of scientific equipment, Internet security, nanotechnology and renewable energy. It is significant that most of the experts for conducting these programmes were from within COMSATS' countries as were the beneficiaries. Thus, a credible implementation of South-South cooperation in S&T

was achieved through COMSATS' platform. One of the notable developments for COMSATS during 2012 was the signing of Accession Agreement by the Republic of Turkey. The Agreement will come into force, after completion of internal procedures by the Government of Turkey. COMSATS' community is very pleased to welcome into its folds a country with advanced S&T capacity and strong economy.

A major turning point for COMSATS in 2012 was the organization of its 2nd Commission Meeting at the level of representatives of Heads of State/Government of COMSATS' Member States. Such a gathering had been long overdue. The appreciation of COMSATS' programmes and the renewal of commitment of Member States to actively participate in COMSATS' activities, as expressed in the Country Statements during the meeting, have given a new impetus to the organization. The decisions of the Commission Meeting to endorse the establishment of COMSATS Endowment Fund was also a very welcome move; efforts to get it materialized are being actively pursued. The future outlook for COMSATS is quite promising. New Centres of Excellence are joining the Network; the number of International Thematic Research Groups is expected to increase, and new directions, such as S&T Policy Advisory and Technology Park schemes have been approved by the Coordinating Council. COMSATS' international role and impact would be hopefully enhanced in the coming years.

It is a matter of satisfaction that a small but highly efficient team of COMSATS Secretariat is performing its duties with a determined spirit of serving the Member States. The presence of COMSATS Secretariat in Pakistan also means that the services of high-quality manpower are available at a fraction of the cost spent by other organizations based in the West. The overheads are low and practically all the funds are spent on sponsoring capacity-building activities. However, the scope and success of COMSATS' initiatives ultimately depends upon the extent to which the member countries provide intellectual and financial support. The generous funding provided by the countries where COMSATS' events are held is a manifestation of their willingness to use the platform of COMSATS for collective benefit of scientists in developing countries.

I thank all COMSATS' Member States and Centres of Excellence for their trust and cooperation in COMSATS' initiatives. All members of COMSATS Secretariat, especially the publications team, are lauded for their contribution towards bringing out this informative and well-produced Annual Report.

Dr. Imtinan Elahi Qureshi
Executive Director COMSATS

LETTER FROM THE CHAIRPERSON COORDINATING COUNCIL

First of all, I wish to express my sincere gratitude to TÜBİTAK Marmara Research Center (MAM) for its support in organizing the 15th Meeting of the Coordinating Council and for the wonderful hospitality in Turkey. The remarkable work that the Marmara Research Center is doing at the international level is a snapshot of the capacities of COMSATS' Centres of Excellence and of the opportunities that they offer for the developing world.



During the last Coordinating Council Meeting in Turkey, the reports presented by COMSATS' Centres of Excellence showed their strengths and established the importance of promoting strong scientific links. The Meeting also approved the Five-year Strategy Document of COMSATS, which provides guidelines to various stakeholders of COMSATS for achieving well-defined targets with mutual cooperation. As the Chairperson Coordinating Council, I am pleased to note that the strategy is aimed at revitalizing the process of South-South cooperation and is expected to leverage the efficiency of COMSATS Network in its international operations.

COMSATS Network of International S&T Centres of Excellence, which was created as per the decisions of the Heads of Governments of Non-Aligned Countries recorded in their resolution of 1989 Belgrade Meeting, has been effectively contributing towards enhancing R&D capacity in scientific areas of critical importance to sustainable socio-economic development of the member countries. The knowledge produced at our centres should play a role in the creation of new knowledge-based entrepreneurship having the potential of competing in international markets.

The commitment of the International Centre for Physics (CIF), Colombia, is to increase the participation of Latin-American institutions that can be involved in projects with other members of COMSATS Network. Thanks to information and communication technologies, the cooperation is now much easier than in the past and the geographical distance is no longer an obstacle. However, the personal contacts remain essential at the initial stages of collaboration, at least, and for this reason we must try to organize comprehensive scientific activities in the American continent.

I am also pleased to note the holding of COMSATS 2nd Commission Meeting last year in Islamabad, Pakistan, which is a manifestation of the trust COMSATS' Member States/Governments have in the organization. The Meeting resulted in revitalizing the mission of COMSATS and helped mobilize the much needed

political and financial support for its programmes and activities. The financial pledges made by the Member States were welcome steps forward.

The focus of future endeavours of COMSATS would be to direct S&T cooperation towards specific research areas of most relevance for development. Efforts in this direction are already underway with three International Thematic Research Groups conducting R&D in the scientific areas of Information and Communication Technologies (ICTs); Natural Products Sciences; and Climate Change and Environmental Protect. Seven other similar Groups, primarily comprising COMSATS' Centres of Excellence, are expected to soon define their research focus and initiate research programmes.

Finally, I would like to congratulate our Executive Director COMSATS, Dr. I. E. Qureshi, and his team for the excellent preparations made for the 16th Coordinating Council meeting to be held in Accra, Ghana, and for their continuous contribution to the consolidation of COMSATS. Thanks to their work, our institution is playing an increasingly important role in the four continents where the Member States and Centres come from.

Dr. Eduardo Posada Flórez
Chairperson COMSATS Coordinating Council &
Director International Centre
for Physics (CIF), Colombia



LETTER FROM THE CHAIRPERSON CONSULTATIVE COMMITTEE

The Ministry of Science and Technology (MoST), Government of Pakistan, plays a dual role of being COMSATS' focal point in Pakistan, as well as being the line Ministry to facilitate COMSATS' administrative interactions with the Government of its host country. While keeping its autonomous international status, COMSATS maintains close working relations with the Ministry as required under the International Agreement to establish COMSATS, signed by representatives of founding Member States in 1994. This relationship is mutually beneficial, since it affords excellent collaboration mechanism for the MoST to strengthen its scientific cooperation with other developing countries, while COMSATS is able to utilize the services of scientific manpower in different R&D Centres of the Ministry. Moreover, the flagship projects of COMSATS in Pakistan are invaluable institutional assets of the Government of Pakistan and an excellent academic resource for all COMSATS Member States.



I am personally honoured to be the Chairperson of COMSATS Consultative Committee in my capacity as the administrative Head of the host Country's focal point. This position provides me a significant role in the international operations of COMSATS. The Consultative Committee meeting, being held in May 2013, in Accra, Ghana, will be an excellent opportunity to interact with the high-level S&T managers and focal points in other Member States. It is my earnest desire to see COMSATS playing an ever stronger role in its laudable mission of promoting South-South cooperation in key areas of S&T, for the noble cause of creating better socio-economic conditions in Member States.

The preceding year 2012, has seen a major turning point for COMSATS in view of the organization of 2nd Commission meeting, held at the level of Representatives of the Heads of State/Government of Member Countries. The Prime Minister of Pakistan was very kind to personally inaugurate the meeting. He also graciously handed over the mantle of COMSATS' Chairperson to Ghana, as a result of a consensus vote to elect new Chair of COMSATS. All government agencies, including the Ministry of Foreign Affairs, played an active role in making this event successful while MoST was the official host and major organizing partner of COMSATS Secretariat for the event.

An array of valuable contributions by COMSATS for the benefit of its Member

States, as reported in this Annual Report, is an indication of COMSATS' international impact. The capacity building activities of COMSATS, on topics such as 'Internet Security' and 'Repair and Maintenance of Scientific Equipments' are of great relevance to COMSATS' Member States. I sincerely hope that all member countries will commit to play stronger role in helping COMSATS to achieve its mission of energizing the S&T sectors in developing countries.

Mr. Akhlaq Ahmad Tarar
Federal Secretary
Ministry of Science and Technology
Government of Pakistan



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ACTIVITIES OF COMSATS' ORGANIZATIONAL BODIES

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The Commission is the highest forum of COMSATS, which is represented by the Heads of State/Government of COMSATS' twenty-one member countries. The first meeting of the Commission was held in 1994 that led to the establishment of COMSATS itself, while the 2nd Commission Meeting was held in April 2012 at the level of Ministers/officials nominated by the Heads of State/Government.

2ND COMMISSION MEETING

During the Foundation meeting of COMSATS held in October 1994, an international agreement entitled 'Agreement to Establish COMSATS' was signed by the representatives of Heads of State/Government of the participant developing countries. The envisaged objectives of the Commission, in broad terms, were to sensitize the countries of the South to the centrality of science and technology in the development process; support the networking among scientific institutions of the developing world; foster indigenous capacities for S&T-led development, and mobilize necessary financial support to supplement funding for international scientific projects in the South. The major motivation behind the establishment of this international forum was to harness the scientific potential of the developing countries, irrespective of their geographic location, cultural norms, religious beliefs, and ethnicity, for addressing the common developmental issues. It was also agreed that the Secretariat of the Commission would be permanently located in Islamabad, Pakistan, and the Prime Minister of Pakistan would be the first Chairperson of the Commission.

As stipulated in the international agreement, the Commission Meeting is to be

convened by its Chairperson at least once every three years. COMSATS Secretariat, in coordination with the Ministry of Science and Technology, Government of Pakistan, has been making efforts for convening the summit meeting of COMSATS' Member States in Pakistan, which were,





nevertheless, unsuccessful because of reasons beyond the control of the Ministry. The plan to hold the 2nd Commission Meeting gained pace in 2011 when fresh efforts were made by COMSATS Secretariat in the light of the recommendations of the meetings of COMSATS' two statutory bodies.

A number of meetings were held and consultations made with high-level officials of the Government of Pakistan, especially the Ministry of Science and Technology and the Ministry of Foreign Affairs for convening of the Commission Meeting. Most notable among these was the meeting with the Prime Minister of Pakistan, which was held on September 20, 2011, with the participation of Minister and Secretary, Ministry of Science and Technology, Government of Pakistan. As an outcome of this high-level meeting, preparatory process was initiated to hold the Commission Meeting in 2012 at the level of Ministers of Science and Technology of Member States.

The 2nd Commission Meeting was successfully held on 16th and 17th April 2012 and resulted in revitalizing the interest of the Member States in COMSATS as an international forum of cooperation for S&T-led development, and renewing their commitment and support for its international role and programmes. Apart from fulfilling COMSATS' international obligation, the 2nd Commission Meeting had the following significant outcomes:

- The Chairpersonship of the Commission of COMSATS was passed on to the Republic of Ghana for a period of three years with a consensus vote.
- Agreement was reached on creating an Endowment Fund of US\$ 10 million, to which the Government of Pakistan would contribute US\$ 1 million as seed money.
- The heads of delegations from the Philippines, Sri Lanka, Tunisia, and Zimbabwe pledged to nominate one R&D institution each from their countries to join COMSATS Network of Centres of Excellence, while Egypt, Sudan and Tanzania showed willingness to nominate a second Centre of Excellence each.
- Pledges and announcements of financial contributions to COMSATS were made by a number of Member States.
- Amendments in the International Agreement were deliberated upon and approved by consensus.
- Broad policy-guidelines for the future functioning of the Commission were worked out.
- Based on the understanding reached after exchange of views, a joint Resolution was adopted.

Pre-Meeting Arrangements

The Ministry of Science and Technology, Government of Pakistan, in consultation with COMSATS, constituted an Organizing Committee and an Inter-ministerial Coordination Committee (IMCC) for making befitting arrangements of the Meeting. Both the IMCC and the Organizing Committee were chaired by the Federal Secretary, Ministry of Science and Technology (MoST), Government of Pakistan. The IMCC was co-chaired by the Executive Director COMSATS. The Organizing Committee comprised senior officials from the Ministry of Science and Technology; Ministry of Foreign Affairs (MoFA); COMSATS Secretariat; COMSATS Institute of Information Technology (CIIT); Pakistan Council of Scientific and Industrial Research (PCSIR); Pakistan Council of Research in Water Resources (PCRWR); and National Institute of Electronics (NIE). While the IMCC had a representation from Pakistani Ministries/ government institutions including Ministry of Foreign Affairs; Ministry of Interior; Ministry of Finance; the Cabinet Division; Press Information Department; Islamabad Capital Territory Administration; and Intelligence Bureau.



Various sub-committees of the Organizing Committee made necessary arrangements under different sets of tasks that pertained to: overall coordination; agenda and programme; boarding and lodging; inauguration; media and publicity; protocol and logistics; administrative and financial affairs; and venue arrangements. The overall undertakings of these sub-committees were administered by the

Organizing Committee, while the IMCC provided the necessary patronage and facilitation of the relevant Ministries and of government departments during the process. Upon the completion of the delegated tasks by these Committees and sub-committees, the Federal Secretary Ministry of Science and Technology reviewed and finalized the preparatory arrangements.

A number of in-house meetings took place at COMSATS Secretariat that reviewed the day-to-day progress being made viz. participation of country delegations; progress of the sub-committees; actions to be taken by the host Ministry, Ministry of Foreign Affairs, Embassies of member country in Pakistan, Pakistani Embassies in Member States; and feed forward and feedback to COMSATS' Focal Points and Centres of Excellence, as well as the Prime Minister Secretariat. Full support to MoST in terms of documentation and correspondence was extended by COMSATS Secretariat in order to expedite the processes at the governmental level.

The sub-committee on Agenda and Programme comprising senior officials of the Secretariat developed, well in time, all the necessary official documents of the

Commission Meeting after a long process of compiling, editing, proof reading, composing and printing. The key documents of the Commission Meeting, Provisional Agenda and Programme, as well as the Working Paper, were prepared meticulously with multiple drafting and revisions. An account of the documents/printing material prepared for the Commission Meeting under the Sub-committee on Agenda and Programme is given in the section-8, 'Publications and Information Dissemination', of this Report.



From the second quarter of the year 2012, COMSATS Secretariat devoted maximum attention to ensuring the participation of the nominated representatives of the Commission Members. The personal data of the delegates and their travel plans were made available to the relevant sub-committees on security, protocol and boarding and lodging.

Efforts were made in parallel to arrange 'visa-on-arrival' facility for delegates proceeding from countries having no embassies or consulates of Pakistan. As a result of close coordination with the Pakistani Ambassadors in Member States, the Pakistani Ministry of Interior, and the Ministry of Foreign Affairs, no delegate encountered any problems with regard to their visa and travel arrangements.

Ambassadorial Dinner (February 15, 2012)

On 15th February 2012, the Minister for Science and Technology, Government of Pakistan, H.E. Mir Changez Khan Jamali, hosted a dinner meeting at COMSATS Institute of Information Technology (CIIT), in honour of the Ambassadors of COMSATS' Member States in Pakistan. The purpose of the dinner meeting was to sensitize these envoys about the upcoming Commission Meeting. The diplomatic missions represented at the meeting belonged to 10 Member States, i.e. Bangladesh, China, Egypt, Iran, Kazakhstan, Nigeria, the Philippines, Sri Lanka, Syria, and Tunisia. Invitations were also extended to dignitaries and high-level officials from various ministries and government departments of Pakistan, as well as from COMSATS Secretariat and CIIT.

The participants were briefed about COMSATS, its role for S&T-led sustainable



development and the benefits the organization offers through its various fora to the Member States. The efforts made for convening the Commission Meeting were recapitulated for the information of the dignitaries, who were also taken into confidence regarding security arrangements. The dinner meeting resulted in getting pledges from the envoys to ensure highest level participation from their respective countries.

Reception Dinner at CIIT (April 15, 2012)

On 15th April 2012, a reception dinner for the delegates arriving to attend the Commission Meeting was held at the Islamabad Campus of the COMSATS Institute of Information Technology (CIIT). During the dinner, pre-meeting consultations were made for organizing the work of the Commission Meeting through constitution of a Bureau and a Drafting Committee.

The Commission Meeting (April 16-17, 2012)

Fifty country delegates from 17 Member States, in addition to the representatives of three international organizations (observers); COMSTECH, ISESCO and TWAS, attended the Meeting. The countries represented at the Meeting were: Bangladesh, China, Colombia, Egypt, Ghana, Iran, Jamaica, Jordan, Kazakhstan, Pakistan, the Philippines, Sri Lanka, Sudan, Syria, Tanzania, Tunisia, and Zimbabwe.



The participating delegates extensively deliberated on the 12-point agenda of the Meeting during three plenary sessions spread over two days. Main highlights of the Meeting included: report by the Executive Director COMSATS, overviewing COMSATS' activities; Country Statements; an Open Forum to discuss cooperation issues and COMSATS' future strategy; discussions on financial sustainability of the organization; amendments in the International Agreement of COMSATS; and election of the new Chairperson of COMSATS.



Proceedings of the 1st Day of the Meeting (April 16, 2012)

The Commission Meeting was inaugurated on April 16, 2012 in Islamabad by the Prime Minister of Pakistan. Other guests of honour at the inauguration were the Minister for Science and Technology (MoST), Government of Pakistan, Mir Changez Khan Jamali; Federal Secretary MoST, Mr. Akhlaq Ahmad Tarar (Chairperson of COMSATS Consultative Committee); Executive Director COMSATS, Dr. Imtinan Elahi Qureshi; and the Chairperson of COMSATS Coordinating Council, Dr. Eduardo Posada Flórez (Executive Director CIF, Colombia). Apart from foreign delegates, members of Pakistani Parliament and senior officials of the Government of Pakistan, as well as envoys of the member countries posted in Islamabad, attended the inaugural session.

In his Introductory Remarks, Dr. Qureshi stressed the need for allocating sufficient resources for enhancing the scientific capacity of the developing countries and working out technology-based solutions to help solve the enormous socio-economic problems faced by these countries.

In his Remarks, Dr. Posada advocated the need for a substantial increase in the financial allocation for S&T in order to ensure social and economic development. He considered the Meeting a wonderful opportunity to collectively address the challenges of building stronger synergies between the institutions of COMSATS' Member Countries for mutual benefit.

"The ownership of COMSATS belongs to Member Countries. It is up to each country to see how best this resource can be utilized for its own benefits.... I would love to see all of you, referring to COMSATS as 'our COMSATS' and asking us or tasking us to do what is in your interest."

***...Introductory Remarks by Dr. Imtinan Elahi Qureshi,
Executive Director COMSATS***

"COMSATS is an excellent platform for South-South cooperation.... The real asset of COMSATS is its Network of Centres of Excellence.... that includes members from three continents.... I call upon Member States to give this institution the importance it deserves, to provide sufficient funds, send requests of your technology-transfer requirements and make offers of how you can help other developing countries."

***...Remarks by Dr. Eduardo Posada Flórez,
Chairperson of COMSATS' Coordinating Council and
Executive Director CIF, Colombia***

In his Welcome Address, Federal Minister Jamali pointed out that it was in the collective interest of all COMSATS' Member Countries to share their experiences, pool resources – human, material and technical – and actively collaborate in R&D activities.

"Let me assure you that the Government of Pakistan is ready to play its part in our collective efforts and provide full support to COMSATS Secretariat in pursuing its objectives and looks forward to similar commitment from other Member Countries."

**...Welcome Address by H.E. Mir Changez Khan Jamali,
Minister for Science and Technology,
Government of Pakistan**

"....special thanks go to the COMSATS' Member Countries and their leadership for providing continued cooperation for the programmes of COMSATS. The COMSATS' Network of International Science and Technology Centres of Excellence has played a commendable role in providing scientific and technological support to COMSATS' various projects, linked to capacity building and research facilitation."

**...Inaugural Speech by H.E. Syed Yusuf Raza Gilani,
Prime Minister of Pakistan**

Speaking on the occasion, the Prime Minister of Pakistan considered South-South cooperation indispensable for the sustainable progress of the developing world and lauded COMSATS' role as the proponent of science and technology for socio-economic development. Moreover, he expressed his confidence that all the member countries will stand by the Government of Pakistan in extending full support to the future efforts of COMSATS, aiming to bring peace, prosperity, and socio-economic well-being to the poor segments of their populations. To ensure the long-term availability of sufficient funds for

COMSATS, the Prime Minister proposed the establishment of an Endowment Fund of US\$ 10 million, with inputs from all COMSATS' Member States and international donor organizations. In this regard, he announced Pakistan's willingness to contribute US\$ 1 million as its share.

During the first plenary session that was presided over by the Federal Minister for Science and Technology, Government of Pakistan, the Provisional Agenda of the Meeting was presented for adoption and unanimously approved by all participants. Thereafter, elections for the Vice Chairpersons and Rapporteur-General took place, and a Drafting Committee and a Bureau of Meeting were constituted.



The Executive Director COMSATS presented his Report, 'Overview of COMSATS' Activities and Future Plans', under the agenda item-4, covering the period since 1st Commission Meeting. The highlights of the Report, inter alia, were; COMSATS' initiatives and activities, salient features of its five-year future strategy, and financial position of the organization. He noted that 167 events in scientific areas were held during the last 17 years having direct impact on socio-economic development in Member States. Dr. Qureshi underscored the key role of COMSATS' Network of 17 Centres of Excellence in achieving the objectives of promoting S&T collaboration among member countries. With regard to national and international collaboration, the

Report covered COMSATS' cooperation programmes with the Islamic Educational, Scientific and Cultural Organization (ISESCO) and Pakistan National Commission for UNESCO (PNCU). Some important initiatives of COMSATS recalled in the Report

were: COMSATS Institute of Information Technology; Syria-COMSATS-COMSTECH Information Technology Centre; COMSATS Internet Services; and COMSATS' Tele-health Programme. Other salient points of the Report included COMSATS' efforts for enhancement of the Membership of the Commission and its Network of Centres of Excellence, and more recently, the constitution of eight International Thematic Research Groups. COMSATS' publications and information dissemination activities were highlighted as an important source of enhancing South-South cooperation.

Presentation of the Country Statements by the heads of delegations was taken up under the agenda item-5. On the first day of the Meeting, statements were made by: Bangladesh, China, Colombia, Egypt, Iran, Jamaica, and the Philippines. These Statements highlighted various initiatives taken by the government of each country for development through Science and Technology and touched upon their future aspirations in the light of national priorities.

Proceedings of the 2nd Day of the Meeting (April 17, 2012)

The Country Statements continued through the 2nd plenary session that commenced on the 2nd day of the Meeting, under the Chairpersonship of H.E. Nadia Iskandar Zakhary, Minister for Scientific Research, Egypt. The following nine countries presented their statements on the second day: Ghana, Kazakhstan, Pakistan, Sri Lanka, Sudan, Syria, Tanzania, Tunisia, and Zimbabwe.

The intersecting points in these Country Statements are highlighted below:

- Recognition of Science and Technology (S&T) as the vehicle to secure fast-track socio-economic development and cooperation in research and development in frontiers of science;
- The provision of an overview of these countries' scientific and technological activities in the S&T institutions and research organizations;
- The expression of commitment to and support for COMSATS' national and regional programmes and projects.





The 2nd plenary session was concluded with an Open Forum Discussion, under which the delegates deliberated upon issues of mutual interest. Based on the deliberations and discussions of the Forum, the participating countries reached a consensus on: sharing and exchanging of resources; capacity-building activities; promotion of the benefits of Science and Technology at the grassroots level; interactivity among member countries; and enhancement of indigenous Research and Development capacity.

The mobilization of financial resources for COMSATS was extensively debated in the 3rd plenary session that was steered by the second Vice-Chairperson of the Meeting, H.E. Ms. Sherry Ayittey, Minister for Environment, Science and Technology, Republic of Ghana. Appreciating the Government of Pakistan's generous and continued financial support to COMSATS for the past 17 years and the commitment of Pakistan to extend its financial support for COMSATS' future activities, the delegates made pledges for the membership contributions and identified other avenues for mobilizing funding. The Vice-chairperson emphasized the need for strengthening the financial health of COMSATS to expand its future scientific and technological programmes for the benefit of the member countries.



The financial commitments and pledges made during the meeting were appreciated by the Executive Director COMSATS and representatives of the observer organizations. Dr. M.H.A. Hassan, former Executive Director TWAS, stated that each of the 17 Centres of Excellence should ensure that a detailed study and profile of the Centre was undertaken and highlighted the strengths and opportunities for commercialization of science and research within the COMSATS' Network. ISESCO's in-cash and in-kind contributions to COMSATS' capacity-building activities, through joint regional and inter-regional programmes, were also recalled. Dr. Mukhtar Ahmed, Deputy Director General ISESCO, opined that COMSATS should seek an increased proportion of in-kind contributions from its partners and advised the member countries to involve COMSATS in the international moots planned to be held in their countries.

It was suggested that international organizations like the World Bank, African Development Bank, Asian Development Bank and other organizations should be approached for sponsorships and support for developmental activities of COMSATS.



Thereafter, the long awaited rotation of the chairpersonship of COMSATS was taken up, and Ghana was elected by consensus to be the new Chair for the next three years. On behalf of the then President of Republic of Ghana, H.E. John Evans Atta Mills, the Ghanaian Minister for Environment, Science & Technology, accepted the Chairpersonship of COMSATS. In her acceptance speech, Ms. Ayittey thanked the participating representatives of the Member States and pledged strong support on Ghana's part to promote S&T cooperation among the Member States of COMSATS. In the Ghanaian Country Statement, it was noted by Ms. Ayittey that the new Chairperson of COMSATS, the President of Ghana, was of the view that 1% of the country's GDP should be allocated for Research and Development in S&T sector.

After the election of the new Chairperson of COMSATS, the Rapporteur-General, H.E. Mr. Earle Courtenay Rattray, the Ambassador of Jamaica to China, presented a report encompassing the proceedings of the two days of the Commission Meeting.

Recommendations

Various recommendations that were made during the proceedings of the Meeting, inter alia, pertained to matters of cooperation between universities, research centres and industry; commercialization of research undertakings of scientific organizations and promotion of Science and Technology in member countries. Some specific recommendations of the Meeting related to:

- Member countries' financial contributions to COMSATS' programmes and projects on a permanent basis;
- Greater focus on science and technical/vocational education through establishment of academic institutions, like CIIT;
- Exchange of young students, scientists and experts within COMSATS' Network of S&T Centres of Excellence;
- Expansion of COMSATS' Network in Africa and other continents;



- S&T activities to be modelled on Colombia's initiative to introduce S&T at the school level;
- Technology-transfer agreements to be reached with the help of UNESCO and ISESCO for enhancing S&T cooperation.



The joint 'Resolution' (page no. 15) adopted at the end of the Meeting captured most of the salient parts of discussion and recommendations.

Dinners by the Prime Minister of Pakistan and the Minister for Science and Technology, Government of Pakistan

One of the highlights of the Commission Meeting was the banquet hosted by the Prime Minister of Pakistan in honour of the international delegates on the first day of the Meeting. Senior officials from various government departments and COMSATS Secretariat also attended the dinner. Speaking at the banquet, the Prime Minister urged the delegates to suggest ways to further improve and strengthen S&T capacity, especially through the platform of COMSATS.

At the conclusion of the Meeting on 17th April 2012, a dinner was hosted by the Pakistani Minister for Science and Technology at the Pak-China Friendship Centre, Islamabad, where the Pak-China Business Forum 2012 (April 15-18, 2012) was organized by COMSATS Institute of Information Technology (CIIT) on the sidelines of the Commission Meeting. The forum aimed to provide an opportunity to the visiting country-delegates for discussing business and financial matters with the businessmen and other stakeholders from China and Pakistan. The dinner was preceded by a multi-hued cultural show, comprising highly entertaining theatrical and musical performances.

Meetings with the Country Delegations to the 2nd Commission Meeting

Availing the presence of a number of country delegations headed by Ministers (or other high-level officials), a number of meetings were arranged on the sidelines of the Commission Meeting, in which bilateral matters were discussed with the delegates by the Executive Director COMSATS, Dr. Imtihan Elahi Qureshi, and other senior officials from the Secretariat. Formal meetings were held with delegates from



Bangladesh, China, Egypt, Ghana, Sri Lanka, Tanzania, Tunisia and Zimbabwe, while informal discussions were held with all other delegations attending the Commission Meeting. Extensive in-house preparations to hold these sideline meetings were made prior to the Meeting. These included comprehensive desk research on the national S&T standing, capacity, contribution, and policy and developmental issues of member countries; and preparation of talking points and other related documents.

Matters taken up during the meetings broadly covered a multitude of topics, including: existing state of scientific cooperation with the respective member country; identification/nomination of R&D institutions for inclusion in COMSATS' Network of Centres of Excellence; member countries' Annual Membership Contribution to COMSATS; their participation in COMSATS' capacity-building activities, International Thematic Research Groups, as well as its publications, e.g. newsletter and science journal.

During the meeting with H.E. Nurul Islam Nahid, Minister for Education, Bangladesh, the Executive Director COMSATS informed about the on-going cooperation with the COMSATS' Centre of Excellence in Bangladesh, the Bangladesh Council of Scientific and Industrial Research (BCSIR), and the contribution of COMSATS to the country's scientific capacity-building. Dr. Qureshi invited the Bangladeshi scholars to participate in three upcoming workshops being co-organized by COMSATS.

A meeting with the three-member Tanzania delegation, headed by H.E. Prof. Makame Mbarawa, Minister for Communication, Science and Technology, took place at the venue of Commission Meeting. During the meeting, Dr. Qureshi recalled COMSATS' scientific cooperation with Tanzania and expressed the desire to scale-up the level of its scientific activities by firstly improving interactivity with the Tanzania Commission for Science and Technology (COSTECH), which is COMSATS' focal point in the country. With the same objective, COMSATS' request to designate a liaison officer at COSTECH was communicated.

Meeting with the three-member Tunisian delegation, including the Ambassador of Tunisia in Islamabad, was held at the Commission Meeting venue. The delegation was headed by Prof. M. Ben Amor of the Water Research and Technologies Center of Borj-Cedria. The benefits COMSATS offers to its member countries in the form of collaborative technical programmes and activities were highlighted. It was impressed upon the visiting dignitaries that one of the Tunisian R&D institutions should be nominated to join COMSATS Network of Centres of Excellence.

The key outcome of the meeting with H.E. Prof. Nadia Iskandar Zakhari, Minister for Scientific Research, Egypt, was the pledge of Annual Membership Contribution towards COMSATS. Detailed meeting on strengthening scientific ties with Egypt and COMSATS' Centre of Excellence in Egypt also took place over a dinner hosted by the Egyptian Ambassador to Pakistan at his residence.

The country delegation of Zimbabwe, headed by the Zimbabwean Minister for



Science and Technology Development, Hon. Prof. Henri A.M. Dzinotyiweyi, visited COMSATS Secretariat and held meeting with its senior officials. Avenues of cooperation were explored in order to boost the scientific cooperation between COMSATS and Government of Zimbabwe. While discussing the South-South cooperation taking place through COMSATS Coordinating Council meetings, the Executive Director recalled COMSATS' earlier requests made to Zimbabwe for designating an R&D institution to have representation in the Council. The Minister expressed his strong commitment to South-South cooperation and cited several examples of Zimbabwean engagements in this regard.

In a meeting with the Sri Lankan delegation, headed by H.E. Prof. Tissa Vitarana, Senior Minister for Scientific Affairs, it was pledged that one Sri Lankan S&T centre would soon be nominated to be affiliated with COMSATS' Network.

Important matters discussed during the meeting with H.E. Ms. Sherry Ayithey, Ghanaian Minister for Environment, Science & Technology, included: building strong working relations with Ghana in its new capacity as the Chair of COMSATS; re-designation of COMSATS' Centre of Excellence in Ghana from Building and Road Research Institution (BRRI) to its parent institution the Council for Scientific and Industrial Research (CSIR); and offer of CIIT scholarships to Ghanaian students/researchers.

The meeting with a member of the Chinese delegation, Mr. Cai Zhiping, Counselor, Ministry of Science and Technology, China, took place at COMSATS Secretariat. Speaking with Mr. Cai, the Executive Director expressed his gratitude to the Government of People's Republic of China for its strong and consistent support for the programmes and activities of COMSATS. Dr. Qureshi recounted the scientific activities jointly held in collaboration with the Chinese Government and COMSATS' Centre of Excellence in China, ICCES. Continuation of the same spirit of cooperation and support was urged. Mr. Cai was also shown around the technical facilities of COMSATS Internet Services (CIS).

Several other discussions were held with the country delegates and representatives of diplomatic missions in Islamabad to strengthen COMSATS' role as a promoter of 'S&T for development', which included the delegates from Colombia, Jamaica, Iran, Kazakhstan, the Philippines, Sudan and Syria.



**Resolution Adopted in the 2nd Commission Meeting of
COMSATS held in Islamabad, Pakistan, on 16 – 17 April 2012**

We, the participants of the Second Commission Meeting of COMSATS, representing Members of the Commission, hereby resolve as under:

APPRECIATING the efforts of the Government of Pakistan for hosting the Commissions' Meeting in Islamabad;

REALIZING the importance of the applications of Science and Technology for the socio-economic progress of the countries of the South;

RENEWING the member countries' resolve and commitment to support the objectives of the Commission as contained in its International Agreement of October 1994;

EMPHASIZING the need to strengthen the Scientific and Technological Activities of the Commission in the light of new challenges and to enhance its financial strength to achieve its objectives;

APPRECIATING the role of Commissions' Network of Centres of Excellence and the Secretariat in the progress made so far for the socio-economic benefits provided to the member countries through the mechanism of South-South cooperation;

NOTING with satisfaction the adoption of innovative mechanisms by the Secretariat in cooperation with the Centres of Excellence for strengthening the Scientific and Technological Capacity base of the Commission through the introduction of thematic research programmes and its efforts for expanding the membership of the organization;

COMMENDING the support provided by the Government of Pakistan to the Secretariat for successfully carrying out its international functions and obligations;

WELCOMING the election of Ghana as the new Chair of the Commission for the next three years;

The Member Countries of the Commission pledge to:

1. **CONTINUE** extending their full support to the Commission in its efforts of promoting the integration of Science and Technology into member countries' national and regional development plans for achieving rapid socio-economic development in the South;
2. **INCREASE** the allocation of funds for strengthening the Scientific and Technological capacities of their countries and make full use of the collaborative forum of COMSATS in these efforts.
3. **STRENGTHEN** the role of Focal Points in ensuring the allocation of sufficient funds for the COMSATS' Centres of Excellence based in their own countries, to enable their effective participation in COMSATS' programmes and activities and their full transformation into international Centres of Excellence;
4. **PROMOTE** the objectives and programmes of the Commission at the national as well as the international level through diplomatic and other channels and devise effective framework for disbursement of adequate financial contribution to COMSATS on voluntary basis;
5. **CONTRIBUTE** towards the COMSATS Endowment Fund of US \$10 M of which a seed amount of US \$1 M is to be contributed by the Government of Pakistan as announced by the Prime Minister of Pakistan in his inaugural address.



6. **FACILITATE** the exchange of scientists, engineers, technicians, educationists, scholars and experts among the relevant organizations of the member countries to enhance the pace of activities related to capacity building and transfer of technology;
7. **FACILITATE** the continuity of the Commission's Meetings once every three years as stipulated in the Commission's Agreement and agree to convene the next meeting of the Commission in Accra (Ghana) in 2015;

And urge the Executive Director of the Commission to:

8. **CONTINUE** making all efforts to achieve the objectives of the Commission with the support of the Governments of the member countries and through its Centres of Excellence;
9. **DEVELOP** an Action Plan for the next three years, based on COMSATS over-all five years' strategy in consultation with the member countries;
10. **STRENGTHEN** the Scientific and Technological programmes of the Commission through joint technical cooperation projects employing the concept of International Thematic Research Groups in order to provide maximum socio-economic benefits to the member countries;
11. **TAKE** measures to harmonize the 'International Agreement to Establish COMSATS' and the 'Charter of the Network of International S&T Centres of Excellence', which would be considered jointly as COMSATS Statutes.
12. **INCREASE** efforts for elevating the S&T capacity and the international status of its affiliated Centres of Excellence;
13. **ENHANCE** the campaign for the expansion of the membership of the Commission and Centres of Excellence to achieve wider South-South cooperation;
14. **PREPARE** a comprehensive follow-up report on the relevant provisions of this resolution for presenting to the Commission at its next meeting.

PROFILE OF THE CHAIRPERSON OF COMSATS

The President of the Republic of Ghana, H.E. John Dramani Mahama, is a writer, historian, journalist, and politician. He assumed the position of Chairperson of COMSATS on 24th July 2012 following the sad demise of the former President, Dr. John Atta Mills, who was elected as the Chairperson of COMSATS during its Second Commission Meeting held in April 2012. Having won Ghana's Presidential Election in December 2012, Mr. Mahama will continue his position as the President of Ghana for the next four years.



President Mahama was born in Damongo, in the Damongo-Daboya constituency of Ghana. He received a bachelor's degree in History in 1981 and a postgraduate degree in communication studies in 1986 from the University of Ghana, Legon. He later proceeded to the Institute of Social Sciences in Moscow, Soviet Union, for further studies.

During his early professional career, from 1991 to 1996, Mr. Mahama worked as the Information, Culture and Research Officer at the Embassy of Japan in Accra, Ghana and served the Country Office of PLAN International in Ghana as International Relations, Sponsorship Communications and Grants Manager.

In 1996, Mr. Mahama was first elected to the Parliament of Ghana. He was appointed as the Deputy Minister of Communications in April 1997, and was later appointed as the Minister of Communications by November 1998.

Mr. Mahama was re-elected as a Member of Parliament for four-year term for the second and third time in 2000 and 2004, respectively. From 2001 to 2004, he served as the Minority Parliamentary Spokesman for Communications. In 2002, he was appointed as the Director of Communications for the National Democratic Congress (NDC). During the same year, he served as a member of the team of international observers selected to monitor Zimbabwe's Parliamentary Elections.

During his tenure as the Minister of Communications, Mr. Mahama also served as the Chairman of the National Communications Authority, and played a key role in stabilizing Ghana's telecommunications sector after it was deregulated in 1997. He has also been a member of the National Economic Management Team, a founding member of the Ghana AIDS Commission, a member of the Implementation Committee of the National Population Census (2000) and the Deputy Chairman of the Publicity Committee for the re-introduction of the Value Added Tax (VAT).

Continuing to expand his interest and involvement in international affairs, Mr. Mahama became a member of the Pan-African Parliament in 2003, serving as the Chairperson of the West African Caucus. In 2005, he was, additionally, appointed as the Minority Spokesman for Foreign Affairs. On 7 January 2009, he became the Vice-President of Ghana, who in line with Ghana's constitution, replaced the President Mills on his sudden demise.

President Mahama has a keen interest in environmental affairs, particularly in addressing the issue of 'plastic pollution' in Africa, to which he had devoted himself during his tenure as the Vice President. He has authored a memoir called 'My First Coup d'État and Other True Stories from the Lost Decades of Africa', published by Bloomsbury Publishing in July 2012.

The Coordinating Council of COMSATS comprises the Heads of its International S&T Centres of Excellence. The Council meets once annually to take decisions 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.

15TH COORDINATING COUNCIL MEETING

As a major platform for South-South scientific cooperation, the annual meetings of the Coordinating Council review the activities of COMSATS' Network; follow up on the decisions and recommendations made in its last meeting(s) and outline the future course of action for COMSATS' international projects and programmes. The 15th Meeting of COMSATS Coordinating Council was successfully held on May 24-25, 2012, at Gebze, Kocaeli, Turkey, under the Chairmanship of Prof. Eduardo Posada, Executive Director, International Centre for Physics (CIF), Colombia. The meeting was hosted by COMSATS' Centre of Excellence in Turkey, the TÜBİTAK Marmara Research Center (MAM). This meeting of the Council was of special importance as it took place immediately after the 2nd Commission Meeting of COMSATS, which was held on April 16-17, 2012, in Islamabad, Pakistan, at the level of Ministers nominated by the Heads of the Member State/Government.

Apart from the high officials of COMSATS Headquarters, the meeting was attended by Council Members or their representatives from 13 Centres of Excellence of COMSATS, representatives of the University Cheikh Anta Diop (UCAD), Senegal, and the International Centre for Genetic Engineering and Biotechnology (ICGEB), Italy, as an observer; as well as other senior officials of the host centre.



The major agenda items included: presentations on the activities of the Centres of Excellence as well as COMSATS' three International Thematic Research Groups (ITRGs) during the period since last Coordinating Council Meeting. COMSATS' senior officials also made presentations on: Annual Activity Report by Executive Director COMSATS; Financial and Administrative Affairs of COMSATS by the Advisor-

Programmes COMSATS and the 2nd part of COMSATS' Strategy Document (Implementation and Monitoring) by Advisor (International Affairs) COMSATS.

The key decisions taken by the Coordinating Council in its 15th meeting include: re-designation of the Council for Scientific and Industrial Research (CSIR), Ghana, as COMSATS' Centre of Excellence in place of its constituent organization, Building and Road Research Institution (BRRI); induction of UCAD-Senegal in COMSATS' Network; approval of the 2nd part of the COMSATS' Strategy Document; and constitution of a three-member Committee to make necessary amendments in the Charter of the Network. The Coordinating Council showed satisfaction over the administrative and financial affairs of COMSATS, and approved the organization's budget for 2012-13. The participants of the meeting were also provided an opportunity to visit various institutes of the host Centre, TÜBİTAK MAM, as well as National Metrology Institute of TÜBİTAK.

Inauguration

The meeting was inaugurated on May 24, 2012, at the Turkish Institute for Industrial Management (TÜSSİDE), Gebze, Kocaeli, Turkey, by the Advisor to the President TÜBİTAK, Mr. Çağatay Telli (also the Chief Economist at the Ministry of Development, Government of Turkey). Mr. Telli, in his presentation on 'Principles of R&D Policy: An International Perspective', emphasized the important role of the private sector in achieving economic prosperity through R&D. He also urged the governments of the developing countries to develop their research policies keeping in view their capabilities and resources. Earlier, the host of the meeting, Dr. İbrahim Dinçer, Acting President TÜBİTAK MAM, in his welcome speech, stressed the significance of making technological advancements in order to achieve socio-economic development. He regarded COMSATS' objectives aimed at promoting South-South cooperation as most laudable and offered the full cooperation of TÜBİTAK MAM in this respect.

In his Introductory Remarks the Executive Director COMSATS, recounted the

"COMSATS is a body, which is full of possibilities for new initiatives and is ever ready to help in implementing plans that any country may have, in line with the organization's core objectives....The real strength of COMSATS, of course, lies here in this forum of the Coordinating Council. The intellectual input that is provided by the Member Countries and some non-member countries through interactions in the Council meetings is, in fact, worth more than any monetary contribution."

Dr. Imtinan Elahi Qureshi
Executive Director COMSATS

"...our participation in COMSATS has had an enormous importance in making us aware of the great challenges that the world faces today, which can only be successfully solved if we are able to work together. Research and development projects must be defined in the field, based on the diagnosis of problems, not on symptoms. The construction of sustainable solutions involves interdisciplinary work using local resources and international experiences, especially from countries of similar levels of development."

Dr. Eduardo Posada Florez,
Chairperson Coordinating Council





outcomes of the recently held 2nd Commission Meeting of COMSATS (April 16-17, 2012, Islamabad, Pakistan), one of which was the election of Ghana as COMSATS' new Chair. He also informed that the Commission Meeting highly appreciated the vital role being played by COMSATS' Centres of Excellence towards the achievement of COMSATS' objectives.

The Chairperson of the Council during his address stressed the necessity of enhancing scientific collaboration among scientific/research institutions in the developing world, and pointed out some actions to be taken by the developing countries on urgent basis that included: development of policies for the promotion of science, technology and innovation; improvement in the standards of S&T education; and strengthening of linkages between R&D organizations and industries. He also suggested that a couple of capacity-building activities of COMSATS may be held in Latin America during 2012-13, on the themes of common interest.

Technical Proceedings

At the beginning of the meeting, the 12-point Provisional Agenda was adopted unanimously by the Council. The Council expressed satisfaction over the implementation status of the decisions taken during the 14th Meeting of COMSATS Coordinating Council. As per the standard format of the meeting, the Executive Director COMSATS presented COMSATS' Annual Activity Report (May 2011 – April 2012). The comprehensive report presented by the Executive Director was highly appreciated, particularly with respect to the following major achievements among others: holding of 2nd Commission Meeting; Co-organization of nine international capacity-building events; progress of three active ITRGs and COMSATS' flagship projects; and finalizing the document on implementation aspects of COMSATS' five-year strategy.

The 2nd part of the COMSATS' Strategy Document, presented for the Council's approval, comprises nine strategic activities related to the Centres of Excellence, Focal Points, donor organizations and the Secretariat with the tentative timeline spanning from the year 2012 to 2016. These activities are: Project Formulation, Project Implementation and Monitoring, Programme Funding, Capacity-Building Programmes, Amendments in the Charter, International Collaboration, Administrative Adjustments, Strengthening Membership, and Visibility and Public Awareness. Efforts for most of these are already underway. The Council unanimously approved the Strategy Document and appointed a three-member Committee to take up matters relating to amendments in the Charter of the Network.

Progress reports of the three operational ITRGs were presented to the Council by the



respective Group Leaders, followed by the discussion on matters relating to launching of the remaining ITRGs.

The Council highly appreciated the achievements of the incumbent Executive Director, and adopted a resolution recommending the continuation of his services for COMSATS. The resolution also mandated the Executive Director to, inter alia, implement the decisions of the 2nd Commission Meeting. A Communiqué was issued at the end of the 15th Council meeting.

Major Outcomes

The Council also discussed at length the possibility of new initiatives. After detailed discussions, it unanimously approved the following:

- Establishment of 'COMSATS Technology Park' at CIIT, Islamabad, Pakistan.
- Launching of a scheme whereby outstanding scientists in COMSATS' Centres of Excellence will be designated as 'COMSATS Distinguished Professors'.
- Establishment of a Network of Experts in the field of 'Science, Technology and Innovation Policy'.

The next (16th) meeting of the Coordinating Council will be hosted by the Council for Scientific and Industrial Research (CSIR), Ghana, on May 2-3, 2013.

Participants of the 15th Coordinating Council Meeting

- Prof. Dr. Ahmad Ismail Mustafa, Chairman BCSIR, Bangladesh
- Prof. Lin Zhaohui, Director ICCES, China
- Dr. Eduardo Posada F., Director CIF, Colombia
- Prof. Dr. Ashraf Shaalan, President NRC, Egypt
- Dr. Abdulai Baba Salifu, Director General CSIR, Ghana
- Dr. Ahmad Akbari, President IROST, Iran
- Dr. Richard Annells, Director General ICENS, Jamaica
- Dr. Nabeel Ibrahim Al-Fayoumi, Vice President for Testing, Quality & Technology, RSS, Jordan
- Mr. Clement Olajide Adeyemo, Registrar NMC, Nigeria
- Prof. Dr. M. Iqbal Choudhary, Director ICCBS, Pakistan
- Prof. Dr. Fatima Z. Basha, Professor of Chemistry, ICCBS, Pakistan
- Prof. Dr. Sajjad Mohsin, Dean, Faculty of Information Sciences & Technology, CIIT, Pakistan
- Dr. Azhari Mohamed Elbadawi, Director General IRCC, Sudan
- Prof. Aly Mbaye, Dean, School of Economics, UCAD, Senegal
- Prof. İbrahim Dinçer, Acting President TÜBİTAK MAM, Turkey
- Dr. Suat Genç, Acting Vice President, TÜBİTAK MAM, Turkey
- Dr. Sibel Sain Özdemir, Manager BDU, TÜBİTAK MAM, Turkey
- Ms. Demet Erenoğlu, Business Development Specialist, BDU, TÜBİTAK MAM, Turkey
- Mr. Cem Özbek, Corporate Communication Specialist, BDU, TÜBİTAK MAM, Turkey
- Mr. Decio Ripandelli, Director Administration and External Relations, ICGEB, Italy
- Dr. Amir Saeed Karami, Deputy Director General, Office of International Scientific Cooperation, Ministry of Science, Research and Technology, Iran
- Dr. Imtihan Elahi Qureshi, Executive Director COMSATS, Pakistan
- Mr. Tajammul Hussain, Advisor (Programmes), COMSATS, Pakistan
- Dr. Hasibullah, Advisor (International Affairs), COMSATS, Pakistan
- Mr. Farhan Ansari, Assistant Director (Programmes), COMSATS, Pakistan





Communiqué
15th Coordinating Council Meeting of COMSATS
(24-25 May, 2012)
TÜBİTAK Marmara Research Center – Turkey

- The COMSATS' Coordinating Council in its 15th Meeting wishes to express its profound gratitude to the Government of Turkey and TÜBİTAK Marmara Research Center (MAM) for hosting the Meeting and making excellent arrangements in this regard.
- The members of the Council have learned with great appreciation, the high standards of scientific and technical research being conducted in TÜBİTAK MAM and the contributions this Centre of Excellence has made in promoting the objectives of COMSATS. The Council strongly feels that Turkey's early membership of COMSATS will expand and strengthen scientific and technical cooperative programmes among the Member Countries for their collective benefit.
- The progress made by COMSATS' Centres of Excellence in achieving their scientific and technical targets is praiseworthy. Utilizing this potential for the promotion of the International Thematic Research projects for accelerating the pace of socio-economic development in the member countries would be highly desirable.
- The Council expresses its great pleasure and satisfaction on successfully holding the 2nd Commission Meeting in Islamabad-Pakistan in April 2012 through the joint efforts of COMSATS' Secretariat, the Ministry of Science and Technology, Government of Pakistan and the Governments of the COMSATS' Member Countries. The Council welcomes the election of the Head of State of the Republic of Ghana as the new Chairperson of the Commission and assures him of Council's full cooperation in the promotion of COMSATS' future programmes.
- The Council endorses and supports the Resolution unanimously adopted during the 2nd Commission Meeting and expresses its willingness to cooperate with the Secretariat to implement the decisions taken therein.
- The Council appreciates the efforts of the Secretariat for enhancing the membership of COMSATS' Network, and welcomes the addition of the University Cheikh Anta Diop (UCAD), Senegal, and re-designation of the Council for Scientific and Industrial Research (CSIR), Ghana, as COMSATS' Centres of Excellence. The addition of these Centres has imparted great strength to COMSATS' Network and will expand the scope of its technical programmes in the countries of the South.
- The Council commends the role of COMSATS' Secretariat in completing the work on COMSATS' future strategy and feels convinced that the strategy will greatly help in facilitating the progress of International Thematic Research projects in an efficient and cost-effective manner.
- Scientific and technical capacity building in the COMSATS' Member Countries through South-South cooperation is a central objective of the Network of Centres of Excellence. The partnership of COMSATS with other international organizations such as ISESCO, UNESCO, NAM S&T Centre in promoting the capacity building programmes in COMSATS' Member Countries is highly encouraging. It is hoped that these esteemed organizations will continue supporting COMSATS in the future as well and more Centres of Excellence will be able to participate in such collaborative activities.
- The Council attached considerable importance to the pressing need of raising more funds for successful implementation of COMSATS' scientific programmes in the member countries. In this regard, it has been felt that systematic efforts need to be made by the member countries, Centres of Excellence and the Secretariat on priority basis.
- The Council, taking note of the substantive para 5 of the Resolution adopted by the 2nd Commission Meeting, requests the member countries to contribute generously towards the Endowment Fund of US \$ 10 million, approved by the Commission.
- The Council reaffirms its full commitment to the objectives of the Network of the Centres of Excellence as laid down in its Charter and expresses its resolve to uphold the spirit and principles of South-South cooperation for sustainable socio-economic development of COMSATS' Member Countries. The Centres of Excellence renew their commitment to hold Capacity Building Programmes for COMSATS' Member Countries.
- Taking note of the substantive para 11 of the Resolution adopted by the 2nd Commission Meeting, the Council approves the constitution of a three member committee to harmonise the provisions of the International Agreement to Establish COMSATS and the Charter of the Network of International S&T Centres of Excellence, to be considered jointly as COMSATS Statutes.
- The Council strongly urges the governments of all developing countries, in general, and COMSATS' member countries, in particular, to allocate at least 2% of their GDP for developing and strengthening the systems of scientific education, S&T research and development, and innovation in their countries that would lead to socio-economic progress and prosperity in the developing world.

The COMSATS Management Committee assists the Secretariat in the 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, considers and examines audited reports of COMSATS Secretariat and other projects; evaluates rules and regulations of COMSATS Secretariat; and deliberates upon any other administrative issue proposed by the Executive Director.

32ND MANAGEMENT COMMITTEE MEETING

The 32nd regular meeting of COMSATS Management Committee was held on 9th May 2012, at COMSATS Secretariat, Islamabad, Pakistan. Chaired by the Executive Director COMSATS, Dr. Imtinan Elahi Qureshi, the meeting was attended by the following Committee members or their representatives, Dr. Haroon Rashid, Director External Campuses CIIT (on behalf of Dr. S. M. Junaid Zaidi, Rector CIIT); Mr. Tajammul Hussain, Advisor (Programmes) COMSATS; Mr. Asim S. Husain, CEO COMSATS Internet Services (CIS); Dr. Tariq-ur-Rahman, Former Chairman Pakistan Council for Science and Technology (PCST); and Mr. Zhang Shilin, Science Attaché, Embassy of the People's Republic of China. Other officials of COMSATS Secretariat present in the meeting included Dr. Hasibullah, Advisor (International Affairs); Mr. M. Bilal Chouhan, Deputy Director (Administration and Establishment); and Mr. Amanullah Khattak, Deputy Director (Finance and Accounts).

The Committee reviewed the international programmes of COMSATS Secretariat, as well as major activities and initiatives of CIIT and CIS during the recent months. The Executive Director noted the importance of the 32nd Management Committee meeting in the light of the upcoming 15th Coordinating Council meeting that was later held on May 24-25, 2012. The preparations were found satisfactory and necessary actions to be taken for the Council meeting were also reviewed by the Committee.

Dr. Qureshi also recounted the successful organization of the 2nd Commission Meeting and the major outcomes and highlights of the event, to the participants of the Management Committee. He mentioned that COMSATS Secretariat has fulfilled an important international commitment by holding the 2nd



Commission Meeting that provided an opportunity for all the Member States to interact with each other. The tireless efforts of the Executive Director COMSATS for the successful holding of the Commission Meeting were highly appreciated by the members of the Management Committee.

The Advisor (Programmes) COMSATS made a presentation on the activities of COMSATS, covering the period January to April 2012. The Committee Members were, inter alia, informed about the COMSATS' financial support to various capacity building events in its Member Countries. The representatives of CIIT and CIS also delivered presentations on the activities and progress of their respective institutions. Chief Executive Officer of CIS shared with the participants the fact that CIS revenue grew by 14%, from Rs.105 million in 2010-11 to Rs.120 million in 2011-12. Bandwidth purchased by CIS has grown by 40% from 258 Mbps in 2010-11 to 360 Mbps in 2011-12.

Dr. Haroon Rashid reviewed to the Committee the recent developments at CIIT in the light of latest facts and figures on research productivity, student and faculty strength, development projects, number of graduates, research funding, international collaboration, etc. Among important decisions made during the meeting was the selection of two Deans of CIIT as Members of CIIT's Board of Governors for a term of three years. The following Deans were selected:

- i. Prof. Dr. Sajjad Mohsin, Dean, Faculty of Information Science and Technology, CIIT;
- ii. Prof. Zain UIAbedin, Dean, Faculty of Architecture and Design, CIIT.

In accordance with the objectives of Management Committee, the meeting also deliberated and showed satisfaction upon administrative and financial matters of COMSATS Secretariat. The issues related to recruitment and other matters related to human resource management of COMSATS Secretariat were also deliberated upon and the suggestions made in this regard were unanimously approved.



2

SCIENCE AND TECHNOLOGY EVENTS ORGANIZED WITH COMSATS' SUPPORT

- National Workshop on 'Repair and Maintenance of Scientific Engineering Equipments in Universities, Research Institutions and Small Scale Industries' (December 10-14, 2012, Nabeul, Tunisia) 26
- 3rd International Workshop and Conference on 'Nanotechnology: Nanomaterials for Green Technology' (December 5-7, 2012, Selangor, Malaysia) 29
- International Workshop on Nanotechnology (September 21-23, 2012, Dhaka, Bangladesh) 30
- 2nd COMSATS-ISESCO-INIT International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards' (September 16-20, 2012, Amman, Jordan) 32
- 11th CTWF Workshop on 'Terrestrial Ecosystems under the Changing Climate' (September 2-5, 2012, Beijing, China) 34
- 5th Asian School on 'Renewable Energy: Advanced Micro-power Systems' (July 9-13, 2012, Selangor, Malaysia) 35
- Symposium on 'Sustainable Environment for Socio-economic Development' (June 6, 2012, Islamabad, Pakistan) 37
- Travel Grants and Sponsorships 40

COMSATS organizes and sponsors national and international capacity-building events in various fields of Science and Technology pertinent to the needs of its member countries. Most of these activities are undertaken in partnership with international organizations and scientific institutions of the host countries.

SCIENCE AND TECHNOLOGY EVENTS ORGANIZED WITH COMSATS' SUPPORT

National Workshop on 'Repair and Maintenance of Scientific Engineering Equipments in Universities, Research Institutions and Small Scale Industries' (December 10-14, 2012, Nabeul, Tunisia)

A five-day national workshop on "Repair and Maintenance of Scientific Engineering Equipments in Universities, Research Institutions and Small Scale Industries" was jointly organized by COMSATS, ISESCO and the Tunisian National Commission for Education, Science and Culture (TNC), on December 10-14, 2012, in Nabeul, Tunisia. The Higher Institute of Technological Studies (ISET) under the Ministry of Higher Education and Scientific Research, Government of Tunisia, hosted this national workshop.

The event was 6th of the series of workshops on repair and maintenance, under which similar workshops were organized in Sudan (2004, 2005), Syria (2005), Senegal (2010) and Egypt (2011). The number of individual beneficiaries in COMSATS'

Member States, who have received hands-on training on repair and maintenance of various scientific instruments and passed on the fruits of their learning to their parent institutions, has now exceeded 180.

The national workshop held in Tunisia specifically aimed to develop indigenous capacities of Tunisian scientists and institutions through hands-on training in repair and maintenance of scientific and engineering equipment used in





universities, research institutions and small scale industries of the country.

The Inaugural Ceremony of the workshop was held on December 10, 2012. Dr. Mohammed Khelifi, Secretary General of the Tunisian National Commission for Education, Science and Culture; Mrs. Wafaa El Alami, Head of ISESCO Centre for Promotion of Scientific Research (ICPSR); Dr. Foued Lindolsi, Director of ISET; and Mr. Nisar Ahmad, Senior Assistant Director (Systems), COMSATS, represented their respective organizations at the inauguration.

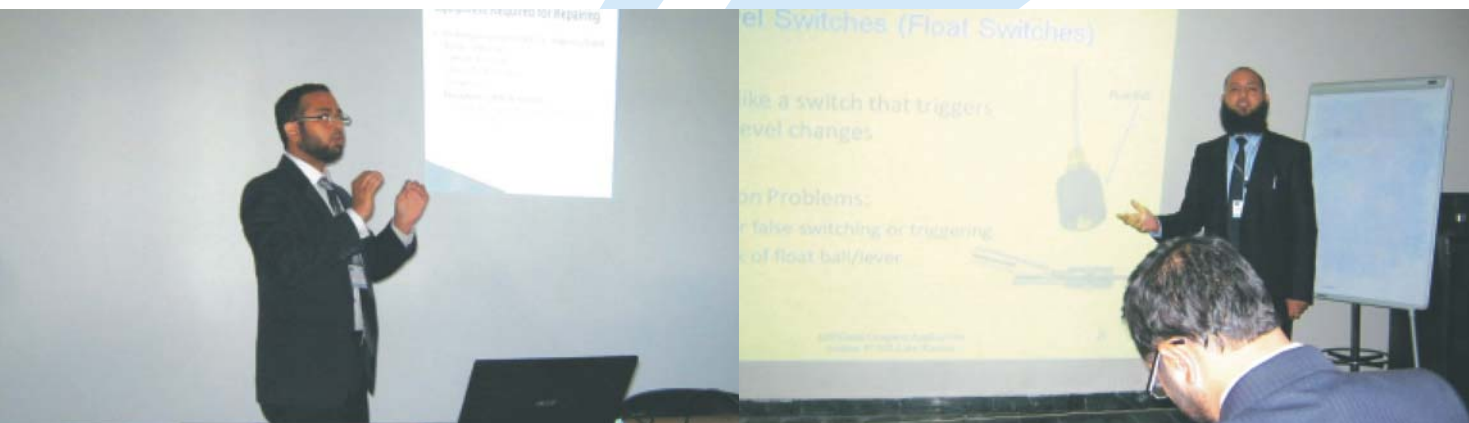
Dr. Lindolsi welcomed the participants and representatives from ISESCO and COMSATS. Dr. Khelifi applauded the efforts made by COMSATS and ISESCO for their support in organizing the workshop in Tunisia. Mrs. El Alami welcomed the partners and participants and read-out the message of H.E. Dr. Abdulaziz Othman Altwaijri, Director General ISESCO. In his message, Dr. Altwaijri expressed special thanks towards the Executive Director COMSATS for his valuable support towards the event. In his message, Dr. Qureshi highlighted the importance of the theme of the workshop and hoped that it would prove to be a good learning experience for the participating institutions and individuals.

Two subject-experts from Pakistan Council of Scientific and Industrial Research (PCSIR), Pakistan, Mr. Arif Karim and Mr. Faisal Ghazanfar, and one local expert from ISET, Mr. Abidi Hatem, imparted training to the Tunisian scientists, engineers and teachers, during 10 technical sessions of the workshops.

The workshop covered training on the following instruments/equipment: Spectrophotometer Systems; XRF-Systems; Atomic Absorption System; PCR Systems; Gas Chromatographic Systems; HPLC Systems; Mass Spectroscopy; Mass Detectors; and Thermal Analyzers.

More than thirty participants, including engineers, scientists and faculty members from different cities of Tunisia took part in the workshop. As per the prescribed format of the workshop, a theoretical session in the morning and a practical session in the afternoon in the laboratories of ISET, comprised each day's proceedings. The training methodology comprised lectures/presentations on key topics, visits to different scientific laboratories, hands-on training, and post-day progress evaluation meetings.

An immediate impact of the training imparted was noted during the workshop, when



participants successfully made operative a number of expensive and important equipments that were lying useless for many years. The equipment that was fully repaired included: three dimensional measuring machine (CMM); ultrasonic tester; micro-milling; bench of flow control; and bench of simulator TV defects.

Problems were also identified by the subject-experts in a number of other faulty equipments and guidelines were provided to fix them.

Equipment	Problems Observed	Final Status/Recommendation
Bench of flow control Model/Specification: Festo	Flow sensor problem	Repaired and made functional
Micro Milling Model/ Specification: Charly Robot M2A Ingenerie	Electrical and software problem	Repaired and made functional
Three Dimensional Measuring Machine, Mistral Brown and Sharp	Z-axis drive problem	Repaired and made functional
Numerical Control Lathe Model/Specification: Fanuc 3T Control	Software and electrical failure	Electrical problem was resolved. Engineers were asked to follow software parameters
Training Bench for Three phase inverter (Cyclo-converter) Model/Specification: Leybold	Electronic failure	Problem was identified and relevant personnel were instructed to service the PCBs and check the two replaced IGBTs for compatible ratings.
Teaching Bench for speed control Model/Specification: Feedback Actuator Unit-ES 151	Electronic failure	Problem was identified and relevant personnel were instructed to replace the Quad-Opamp IC.
Surface grinder Model/Specification: Teknoscuola RT600	Electronic failure	Problem was identified and relevant personnel were instructed fix the main supply (~24 VDC) for the actuation of solenoids and hydraulic unit.
Ultrasonic Tester	Electronic failure	Problem was identified and relevant personnel were instructed to replace the crystal attached to microcontroller and check the components of power on reset circuitry.
Machining Centre	Z-axis drive problem	Problem was identified and relevant personnel were instructed to trace and follow the 24 volt DC path for any disconnection by fuse blown or relay contact.

The workshop resulted in establishing linkages among the participating engineers, academicians, researchers and scientists for future interaction.

During the concluding ceremony, held on December 14, 2012, the participants expressed their gratitude to ISESCO and COMSATS for organizing the



workshop and providing a good opportunity for learning and enhancing technical expertise.

3rd International Workshop and Conference on 'Nanotechnology: Nanomaterials for Green Technology' (December 5-7, 2012, Selangor, Malaysia)

The 3rd International Workshop and Conference on 'Nanotechnology: Nanomaterials for Green Technology', was held on December 5-7, 2012, in Selangor, Malaysia. The event was jointly organized by COMSATS, ISESCO, University Kebangsaan Malaysia (UKM), Malaysia, and the Malaysia Nanotechnology Association (MNA).

The event consisted of two components, a one-day workshop and a two-day conference. The workshop held on December 5, 2012, included the following four lectures:

- 'Synthesis of Nanomaterials' by Prof. Shahidan Radiman, UKM;
- 'Use of Carbon Nanotubes in Novel Solar Cells' by Prof. Joe Shapter, Flinders University, South Australia;
- 'Green Aspects of Metal Nanoparticles – Modified Electrodes' by Prof. Munetaka Oyama, Kyoto University, Japan; and
- 'Solvo-thermal Synthesis of Optical Ceramic-Polymer Nanocomposites' by Dr. Tan Mei Chee, University of Technology, and Design, Singapore.

A conference was held during the subsequent two days of the event. The conference included two plenary lectures on 'Nanomaterials in Energy Production and Storage' by Prof. Arshad Saleem Bhatti, CIIT, Pakistan; and 'New Materials for the Next Generation of High-Efficiency Dye-Sensitized Solar Cells' by Dr. Nicolas Tetreault, École Polytechnique Fédérale de Lausanne, Switzerland. Two keynote addresses on 'MEMS and Lab on Chip: Top Down Nanotechnology Interfacing Macro to Nano World' by Prof. Burhanuddin Yeop Majlis, UKM; and 'Manufacturing and Application of SR Nanofiltration Membranes (SRNF) for Low-cost Biodiesel Production' by Prof. Dr. Mohsen Jahanshahi, Babol University of Technology, Iran, were also delivered during the Conference.



In total, 88 oral presentations were made during 14 sessions having the following themes: Advanced Materials; Advanced Materials (Synthesis); Advance Materials (Thin Films); Advanced Materials (Nanocomposites), Biomedical, Bioenergy and Environment; Device and Sensor; Energy; Technology; and Photocatalytic.

The conference also included 57 poster presentations of scientific papers by researchers and students.



The foreign participants of the event belonged to Australia, Bahrain, Bangladesh, Egypt, Indonesia, Iran, Iraq, Jordan, Palestine, Pakistan and Switzerland.

International Workshop on Nanotechnology (September 21-23, 2012, Dhaka, Bangladesh)

COMSATS-ISESCO International Workshop on Nanotechnology was organized on September 21-23, 2012, at the University of Dhaka, Bangladesh, in collaboration with OIC Standing Committee on Scientific and Technological Cooperation (COMSTECH), the University of Dhaka, and the Bangladesh University of Engineering and Technology (BUET), Bangladesh.

The objectives of the workshop were to help the participants from various developing countries to:

- Discuss and develop strategies for promoting studies, research and use of nanotechnology in the country;
- Make recommendations to the Government of Bangladesh for its future support to nanotechnology research and development, in line with its Vision 2021; and
- Facilitate communication, exchange and enhancement of collaboration in the field of nanotechnology among the representatives of academia, research organizations, public and private sectors, and SMEs and industries.

The three-day international workshop was inaugurated by the Prime Minister of the People's Republic of Bangladesh, H.E. Ms. Sheikh Hasina. In her remarks, the Prime Minister considered research programmes imperative for making progress in Science and Technology. Her Excellency stated that nano-technology can directly benefit the local industries in different sectors, and encouraged public-private partnership in this regard. The Prime Minister informed that the scientists of Bangladesh have made a breakthrough in the





field of gene research by decoding genomes of the jute in 2010 and of a devastating pathogen harmful to nearly 500 crops including jute. She also pledged support of her government for the establishment of a National Centre of Nanotechnology in Bangladesh.

Four technical sessions of the workshop comprised the technical proceedings of the workshop that covered lectures, technical papers and poster presentations on various aspects of Nanotechnology. Apart from the lectures specific to nanotechnology, the experts also addressed its applications in other interdisciplinary fields, including health and medicine; food and agriculture; energy and environment; nanotechnology in ICT and electronic devices; and industry and consumer products.

H. E. Mr. Dilip Barua, Minister for Industries, Government of the People's Republic of Bangladesh, also attended the event. The Vice-Chancellor BUET, Prof. S. M. Nazrul Islam; Vice Chancellor University of Dhaka, Prof. Dr. A.A.M.S. Arefin Siddique; and the Deputy Director General ISESCO, Dr. Mukhtar Ahmad, were also among the distinguished guests who spoke at the inaugural session of the workshop.

The workshop had participation of more than 30 experts from scientific and academic institutions of Bangladesh, Canada, Germany, India, Malaysia, the Philippines, Pakistan, Sri Lanka, Thailand, and USA.

The workshop was attended by over 200 participants, including representatives from government institutions; international organizations; industries; scientific and academic institutions; and companies conducting research and developing products in the field of nanotechnology.

H. E. Dr. Nurul Islam Nahid, Minister for Education, Government of Bangladesh, graced the Closing Ceremony as the Chief Guest, which was held on September 23, 2012. Highlighting the importance and potential benefits of nanotechnology, the Minister urged the Bangladeshi researchers working in this field



to utilize their research results for achieving progress in other scientific fields that are vital for Bangladesh's socio-economic development, including medicine, agriculture, engineering and environment.

Other distinguished guests of the closing ceremony included Prof. Mesbahuddin Ahmad, President, Bangladesh Academy of Sciences; and Prof. Dr. M. Afzal Hossain, Former Vice Chancellor of Hajee Mohammad Danesh Science & Technology University, Bangladesh.

The recommendations of the workshop pertained to:

- Building nanotechnology roadmap for Bangladesh that should entail short, medium and long-term plans for nanotechnology R&D for the socio-economic development of the country;
- Supporting nanotechnology research in Bangladesh through proper funding to R&D institutions and incentives for scientists working in the fields of agriculture, industry, health and environment;
- Establishing Nanotechnology Research Centre having state-of-the-art facilities;
- Developing and implementing curricula on nanotechnology at secondary, higher secondary, and tertiary levels of education; and
- Creating wide-spread public understanding of nanotechnology through seminars and symposia.

2nd COMSATS-ISESCO-INIT International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards' (September 16-20, 2012, Amman, Jordan)

The 2nd COMSATS-ISESCO-INIT International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards' was jointly organized by COMSATS; ISESCO; the Inter Islamic Network on Information Technology (INIT); the Royal Scientific Society (RSS), Jordan; and the COMSATS Institute of Information Technology (CIIT), Pakistan, on September 16-20, 2012. The event hosted in Amman, Jordan by RSS, COMSATS' Centre of Excellence in Jordan, was second of the series of workshops that are being jointly organized by COMSATS, ISESCO and INIT in their common member countries, in order to train IT professionals to collectively address network issues and challenges related to information and Internet security. Around 40 participants from Bangladesh, Brunei Darussalam, Egypt, Iran, Jordan, Nigeria, Pakistan, and Tunisia benefited from the proceedings of the workshop.

The workshop was inaugurated on September 16, 2012, by Prof. Odeh Al-Jayyousi, the Vice President – Science and Research, RSS. During his Inaugural Address, Prof. Al-Jayyousi stated that the key role for organizations like ISESCO, COMSATS, EI-Hassan Science City and RSS is to enhance both organizational and societal learning, and to ensure the confluence and fusion of ideas





in Science, Technology and Innovation for overall well being of humanity.

In his message, the Executive Director COMSATS asserted the need to ensure confidentiality, integrity, and availability of the large amount of critical information on the networking infrastructures worldwide. He opined that in the absence of secure computers and networked systems, individuals and organizations are vulnerable to cyber crimes, computer frauds, telecommunications abuse, and the unauthorized access, disclosure, modification or misuse of information.

Dr. Abdelwareth Sarhan, Expert of Science, Science Directorate of ISESCO, hoped that the outcomes of the workshop would be of great value in strengthening the scientific capacities of the participants and enhancing their skills on protection of computer networks. He further stated that the event would bring together academicians, researchers and practitioners from the fields of Information Technology and Internet Security, thus creating an opportunity for the international community to exchange ideas and discuss best practices in keeping their respective networks more secure. Mr. Tahir Naeem, Director (P&D and HRD), CIIT, stated that INIT aims at directing and encouraging the use of ICTs and associated systems to promote collaboration and cooperation in building human resources and institutional capacities.

Other distinguished guests at the Inaugural Ceremony included: H.E. Mr. Taofeek Oladejo Arapaja, Ambassador of Nigeria to Jordan; H.E. Mrs. Attiya Mahmoud, Ambassador of Pakistan to Jordan; and Dr. Emmanuel R. Fernandez, First Secretary and Consul, Embassy of the Philippines in Jordan.

The workshop comprising five modules was conducted by four resource persons: Dr. Sheikh Ziauddin, Assistant Professor, CIIT, Pakistan; Dr. Abbas Haider, Research Fellow, Center of Excellence in Information Assurance, King Saud University, Saudi Arabia; Mr. M. Mustafa Khattak, Assistant Professor, CIIT, Pakistan; and Dr. Malik Najmus Saqib, Assistant Professor, CIIT, Pakistan, covering wide-ranging tools related to cyber security.

The key topics covered in the workshop included: Network Security; Modern Cyber Attacks, Evasion Techniques and Defenses; Malicious Code Analysis and Detection;



Information Security Management; Measuring Security; Ethical Issues of ICT Security; Organizational Security; Hardware and Physical Security; Operating System Security; Android/Mobile Systems Security; Cryptographic Techniques for Network Security; Biometrics Security; Web Security; Social Network Security; and Cloud Security.

Speaking at the concluding Ceremony held on September 20th 2012, Prof. Al-Jayyousi considered international scientific collaboration vital for achieving socio-economic progress in the developing world. He stated that the Internet is a unifying power that must be protected from all types of attacks, cyber crimes and misuse. Mr. Farhan Ansari, Assistant Director (Programmes), COMSATS Secretariat, gave a vote of thanks, in which more collaborative scientific activities aimed at science-led socio-economic development of the Member States were pledged.

The event achieved the following objectives:

- Provided a forum to the young scientists/researchers from the developing countries to learn about the latest advancements in the field of Internet security;
- Promoted the use of state-of-the-art technologies for protection of network and network accessible resources from different types of software attacks; and
- Identified effective Internet/information security solutions for general public, governmental organizations and commercial ventures, through rigorous risk-analyses and security-management approaches.

11th CTWF Workshop on 'Terrestrial Ecosystems under the Changing Climate' (September 2-5, 2012, Beijing, China)

The 11th CTWF Workshop on 'Terrestrial Ecosystems under the Changing Climate' was jointly organized by the Chinese Academy of Sciences (CAS); the Academy of Sciences for the Developing World (TWAS); and the World Meteorological Organization (WMO), on September 2-5, 2012, in Beijing, China. The workshop was co-sponsored by COMSATS, the Institute of Atmospheric Physics (IAP), China; and the International Center for Climate and Environment Sciences (ICCES), China. More than 70 participants attended this workshop; these included 19 representatives from developing countries, i.e. Brazil, Ethiopia, Ghana, Jordan, Mongolia, Nepal, Pakistan, Sudan, and Turkey, as well as representatives from developed countries such as Germany and Russia.



The main objective of the workshop was to provide a forum for exchange of knowledge and research results in the field of terrestrial ecosystem, with special reference to its relationship with climate change. The workshop focused on the following two aspects: (a) ecosystem structure, functioning, and biodiversity; and (b) biophysical and biogeochemical processes

in terrestrial ecosystem. Around 70 participants, belonging to Brazil, Ethiopia, Germany, Ghana, Jordan, Mongolia, Nepal, Pakistan, Russia, Sudan, and Turkey, attended the workshop.

The event included five plenary lectures by Prof. Bojie Fu, Vice-chairman of Scientific Committee of CERN, Switzerland; Dr. Ghulam Rasul, Chief Meteorologist, Pakistan Meteorological Department, Pakistan; Prof. Guangsheng Zhou, Vice President of Chinese Academy of Meteorological Sciences, China; Prof. Changhui Peng, University of Quebec, Canada; and Prof. Guanghui Lin, Tsinghua University, China.

The lectures covered various topics on the following themes:

- Impact of climate change on biodiversity;
- Terrestrial ecosystems, observation and modeling;
- Current research activities on coastal wetlands and blue carbon; and
- Development of Chinese Ecosystem Research Network.

Moreover, 31 oral presentations were made by young researchers, scientists and graduate students, from various developing and developed countries, which covered different aspects of the impacts of climate change, including droughts and floods, impact of human activities on ecosystem structure and functioning, etc. It was noted by the participants that uncertainties exist in the research activities on ecosystem observation, theory and modeling, which can be overcome through close cooperation among scientists and researchers, particularly from the developing countries.

5th Asian School on 'Renewable Energy: Advanced Micro-power Systems' (July 9-13, 2012, Selangor, Malaysia)

COMSATS, in collaboration with ISESCO, UNESCO and the Solar Energy Research Institute (SERI) of Universiti Kebangsaan Malaysia (UKM), organized an international training workshop, titled '5th Asian School on Renewable Energy: Advanced Micro-power Systems'. The event took place in Selangor, Malaysia, on July 9-13, 2012.

The objectives of the workshop were to:

- Promote the use of environment-friendly technologies in the developing countries of Asia;
- Create awareness among policy-makers, academicians and professionals on the concept of sustainable energy technologies, based on solar, wind, biomass, fuel-cell and hydrogen energy;
- Introduce micro-financing schemes for micro-power technologies; and
- Orient the participants with the practical aspects of micro-power system applications.



Speaking at the Inaugural Ceremony held on July 9, 2012, at UKM, Prof. Kamaruzzaman Sopian, Director SERI-UKM, welcomed the national and international participants, as well as thanked ISESCO, UNESCO and COMSATS for sponsoring the event.

Expressing his views on the occasion, Mr. Abbas Sadri, Director ISESCO Tehran Regional Centre, noted that majority of the population of the developing countries



have a poor access to electricity and that the unfulfilled energy needs worsen their living conditions and hamper development. Use of renewable energy can be an effective means to meeting the developing world's energy needs. Mr. Sadri informed that ISESCO is expanding its programmes of renewable energy in Islamic countries and has formulated regional policies for the promotion of energy efficiency, using clean and renewable energy.

In his message, the Executive Director COMSATS opined that the renewable energy technologies such as solar, photovoltaic, wind, and biomass, etc., have enormous potential to solve energy related problems of the developing countries, but a lot of efforts are required to realize this potential. He believed that it is imperative for all the developing countries to strengthen their regional and international linkages for research in the field of renewable energy.

Dr. Hamiza Ibrahim, Senior Vice President, Malaysian Green Technology Corporation (MGTC) underscored the importance of energy supply for income generation through enhanced agricultural productivity and micro-enterprises while taking into account the economic conditions of the developing world. Dr. Ibrahim noted that the availability of electricity to rural communities could be improved by employing renewable energy technologies for an accelerated development, alleviating the wide-spread poverty in the developing world.

The five-day School helped promote practicable solutions using solar cell micro-power systems to meet the energy needs of the households and other loads in the rural communities, where grid-electricity supply is inadequate or absent. Lectures by the subject-experts from Bangladesh, Indonesia, Malaysia, Maldives, Pakistan, Sudan, Sri Lanka, and Turkey, were delivered and training imparted on various topics in line with the theme of the event.

Some topics covered during the event pertained to: solar photovoltaic technology; photovoltaic thermal collectors; biomass resources and technologies; use of homer PV system design; electricity generation in small scale solar thermal and photovoltaic systems; fuel cell and renewable hydrogen production system; and micro-generators.



Research related projects on renewable energy deliberated on during the event included: doping dependent textured TiO_2 thin films for photo-catalytic and solar cell applications; applications of power electronics in the distributed renewable energy system; thermo-electricity and its applications; thermo-electric micro-power generation for mobile phone charging and LED lighting using biogas; R&D studies of biogas production via different organic wastes; and bio-degradation of lignocelluloses for biofuel production.

Moreover, practical training was imparted to the participants on micropower systems, who also visited Green Technology Innovation Parks at UKM. Thirty scientists, researchers, engineers, industrialists, technicians and academicians from various institutions of Bangladesh, Iran, Indonesia, Maldives, Malaysia, Pakistan, Sri Lanka and Sudan benefited from proceedings of the event.

Symposium on 'Sustainable Environment for Socio-economic Development' (June 6, 2012, Islamabad, Pakistan)

To mark the World Environment Day 2012, a one-day symposium on 'Sustainable Environment for Socioeconomic Development' was organized by COMSATS and one of its Centres of Excellence in Pakistan, the COMSATS Institute of Information Technology (CIIT), on June 6, 2012. Dr. Ishfaq Ahmad, Former Senior Advisor on Climate Change and Development, Planning Commission of Pakistan, graced the occasion with his presence as the Chief Guest. In his keynote address, Dr. Ahmad expressed his delight and appreciated COMSATS for holding the symposium. He also emphasized that environmental governance at the national, regional and global levels is critical for the achievement of environmental sustainability. Dr. Ahmad considered over-population, and complex life styles as major drivers of ecological devastation. He believed that humankind can reverse its destructive and unsustainable momentum, prosper together, sustain and advance human civilization by collaborating together.

Speaking on the occasion, the Executive Director COMSATS welcomed and thanked



the participants for affording a great learning opportunity through the Symposium. Dr. Qureshi explained that the theme of the Symposium was deliberately kept broad-based to allow wide-ranging discussion among the diverse array of participants.

Dr. Qureshi stated that COMSATS and CIIT are one step ahead of other institutions working in the environment and climate change studies, as apart from holding capacity-building events, they are also conducting active research in collaboration with relevant organizations in other developing countries. Dr. Qureshi noted that one such initiative was the establishment of International Thematic Research Group of COMSATS on 'Climate Change and Environmental Protection', which is being headed by the Director of the International Center for Climate and Environment Sciences (ICCES), Beijing, China. The specific project, 'Characteristics and Mechanism of the Extreme Climate Events under the Climate Change Background', is being conducted with the participation of scientists from Iran, Jamaica, Nepal, Sudan and Thailand.

Earlier in his welcome address, Dr. Arshad Saleem Bhatti, Dean Faculty of Science, CIIT, gave the background of the World Environment Day and highlighted the importance of the year's theme of the Day, 'Green Economy: Does it Include you?'. He also thanked the organizers and speakers for being a part of the event that showed their solidarity to the global efforts to address the concerns relating to environmental degradation and climate change.



The symposium comprised four technical talks on key topics relating to the theme of the event: 'Green Economy' by Mr. Arif Goheer, Global Change Impact Studies Centre (GCISC); 'Impact of Global Climate Change on Pakistan's Environment' by Dr. Shahina Tariq, Department of Meteorology, CIIT; 'Winter Fog-variability over South Asia and its effects on Environment' by Dr. Faisal Saeed Syed, Pakistan Meteorological Department; and 'Land-slide Hazards and Environmental Intensity Scale for Azad Kashmir, North-West Himalayas, Pakistan', by Dr. Mona Lisa, Department of Meteorology, CIIT.

It was noted in these presentations that natural resource wastage, population explosion, poor management and economic policies on the use of these resources may be the key aggravator of climate change leading to the degradation of environment. It was discussed that climate change, manifests itself in the form of more frequent and powerful cyclones and hurricanes; frequent and intense floods and heavy snowfalls; severe and longer drought periods; unexpected climatic events and changes in weather patterns such as short winters, earlier springs and longer summers. The technical talks also highlighted the correlation of landslides and earthquakes, and the increasing trend in fog frequency over South Asia. These events adversely affect economy, water resources, agriculture, forestry, biodiversity, health, and tourism among many other aspects of life. The experts believed that green economy – characterized by low-carbon use, resource efficiency and social equity – may be an effective means to mitigate the effects of climate change and lead to socio-economic development by, inter alia, better food, water and energy security; ecosystems' stability; and alleviation of poverty by creation of new jobs.

In view of the climate change phenomenon and its impact on the lives of the people, the speakers generally called for shifting the focus from resource exploration to resource efficiency; lessening dependence on fossil fuels and using renewable energies; judicious use of natural resources; turning to simpler ways of living; enhanced role of academia in sensitizing the communities towards green economy, and creating public awareness on impact of climate change.

The occasion attracted more than 40 participants, including scientists, government representatives, resource managers, policy-makers, academicians, and students to share scientific information concerning the sustainable environment and ecosystem.



Travel Grants and Sponsorships

Though not a donor organization, COMSATS encourages scientists and research scholars to take part in the academic and capacity-building activities through the provisioning of individual or institutional sponsorships for travel, boarding and lodging, etc. Despite its limited financial resources, such sponsorships are awarded on priority to scientists/engineers from the Member States that have remaining balance of Annual Membership Contributions kept as a trust fund with COMSATS. Partial sponsorships are also given from funds available with COMSATS as part of collaborative activities with partner institutions, such as ISESCO.

During 2012, an amount of US\$ 58,370 has been spent for making 44 individual and 3 organizational sponsorships towards Bangladesh, China, Colombia, Egypt, Iran, Jordan, Korea (DPR), Nepal, Pakistan, the Philippines, Saudi Arabia, Sri Lanka, Sudan, and UK. The scientific activities for which grants were given took place in Bangladesh, China, Germany, Iran, Jordan, Malaysia, Nepal, Pakistan, Qatar, Tunisia, and Turkey.



3

ACTIVITIES OF COMSATS' INTERNATIONAL THEMATIC RESEARCH GROUPS

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COMSATS' International Thematic Research Groups are clusters of scientific institutions aiming at collaborative research in a particular field of Science and Technology to address specific developmental issues of the Member States. Based on their expertise in the respective fields, selected Centres of Excellence of COMSATS are designated as the 'Lead Centres' of these Groups. The member institutions of a group are expected to complement each other's scientific capacities for a coherent R&D activity, under the guidance of the designated Lead Centre.

ACTIVITIES OF COMSATS' INTERNATIONAL THEMATIC RESEARCH GROUPS

COMSATS' International Thematic Research Group on 'Information and Communication Technologies (ICTs)'

In order to formally establish COMSATS' International Thematic Research Group (ITRG) on 'Information and Communication Technologies (ICTs)', its foundation meeting was jointly organized by COMSATS and the Lead Centre of the Group, the COMSATS Institute of Information Technology (CIIT), on April 19-20, 2011, in Islamabad, Pakistan. The meeting was attended by a total of 21 scientists/experts from Jordan, Malaysia, Nigeria, and Pakistan. During the two-day event, brief presentations were made by the participating officials, highlighting the research interests and strengths of their respective organizations. During the meeting, a consensus was built as to the theme of the joint research project to be initiated under the Group, i.e. 'e-Solutions for community using low-cost Wi-Fi'. It was agreed that the project will have the following four components: Enabling ICT Applications using Long Distance Wi-Fi Networks; Precision Agriculture; Augmenting Traditional Learning by using e-Learning; and 3D Graphical Imagery Therapy for Healing Brain Tumors in Children (3DGIT). Major activities of the Group during the reporting period are listed below:

Enabling ICT Applications Using Long Distance Wi-Fi Networks

Following goals were achieved under this component of the joint project:

- In August 2012, a project titled "Utilizing Long Distance Wi-Fi to enable ICT Applications (e-health) for Rural Communities" was submitted to ISESCO-COMSTECH, with a request to grant funding of US\$ 10,000/- for procurement of (i) hardware for establishing long distance Wi-Fi link; (ii) basic routers for setting up a wireless hot-spot at remote sites; (iii) and basic telemedicine equipment for remote patient diagnostics. The decision on the submitted application is still

pending.

- Last year, the group had established a long distance Wi-Fi link and tested for the provision of e-learning activities. During the reporting period, the group has tested the established link for the provision of other services, such as e-health and e-agriculture. The established link was also optimized to achieve better services with the deployed hardware.
- The current prototype makes use of the stations deployed at an aerial distance of 1.1 km. The group is making efforts to increase the distance between the deployed stations up to 22 km (maximum range of the equipment in use) by addressing related technical issues. For this purpose, the group has selected the Vehari Campus of CIIT, which is surrounded by many small villages that lack basic education and healthcare facilities. The focus of the efforts is to use CIIT (Vehari Campus) as a central hub for the provision of these services in the surrounding areas. In this regard, the group had a few meetings with the officials of Pakistan Telecommunication Company Limited (PTCL), who have agreed to provide high bandwidth connectivity to CIIT's Vehari Campus. The work is already under way for making available a high bandwidth line (~20Mbps) at CIIT's Vehari Campus. The low-cost long-distance Wi-Fi will be subsequently used to connect remote villages to CIIT's Vehari Campus and boost the Internet connectivity, with high bandwidth, at the Campus.

Using the already installed hardware, a maximum distance of 22 km can be covered. In order to extend the coverage to remote areas (~60 km), the group plans to identify other available solutions and configurations for the currently deployed setup, which includes reaching distances beyond 22 km using multiple stations as relays.

The Universiti Teknologi Malaysia (UTM), Malaysia (one of the participating institutions of the ITRGs' foundation meeting) has expressed willingness to actively contribute towards this component of the joint research project.

3D Graphical Imagery Therapy for Healing Brain Tumors in Children (3DGIT)

This component of the project aims to provide psychotherapy through computer games, and will make pseudo-therapists available at homes of the children having brain tumors. The progress made during the reporting period is as follows:

- The group has completed the 3D design of the game at the following three levels:
 - Integration of all regional languages in the game-play, including English, Urdu, Punjabi, Pushto, Sindhi and Balochi;
 - Embedment of morphing and cinematization of the game; and
 - Incorporation of the therapeutic and encouraging dialogues in all regional languages in the game-play.
- The game has been tested on children having brain tumors, which has shown remarkable results. The children have shown positive attitude towards taking medicine, eating fruits and meals properly, as well as doing physical exercises.



- The following six papers have been published in international journals during 2012:
 - Digitizing 2D Sketched Animated Character for Graphical Imagery Therapy (GIT) Game;
 - Efficient Way of Skull Stripping in MRI to Detect Brain Tumor by Applying Morphological Operations, after Detection of False Background;
 - Enemy Character Design for Graphical Imagery Therapy (GIT) Game;
 - Evolving Enemy Avatar through Categorization Technique in Computer Game for Healing;
 - Background Music Generation for Health Game using Children preferred Music; and
 - Unique Avatar Creation using Computation.
- The following two papers are under review in Tier 1, ISI IMF Journal:
 - Multimedia Tools and Applications, Springer, A case study of 3D Imagery Therapeutic Game Design for Serious Health Games; and
 - International Journal of Computer Games Technology, An Overview of Game Design Approaches for Health Games.
- The following two papers have been accepted for the 'International Conference on Multimedia and Human Computer Interaction':
 - Colour Psychology Application on Enemy Character in Graphical Imagery Therapy (GIT) Game Quantifies Virtual Reality; and
 - Choice of Weapon for Graphical Imagery Therapy (GIT) Game for Fighting Against the Tumor as an Element of a Virtual Experience.

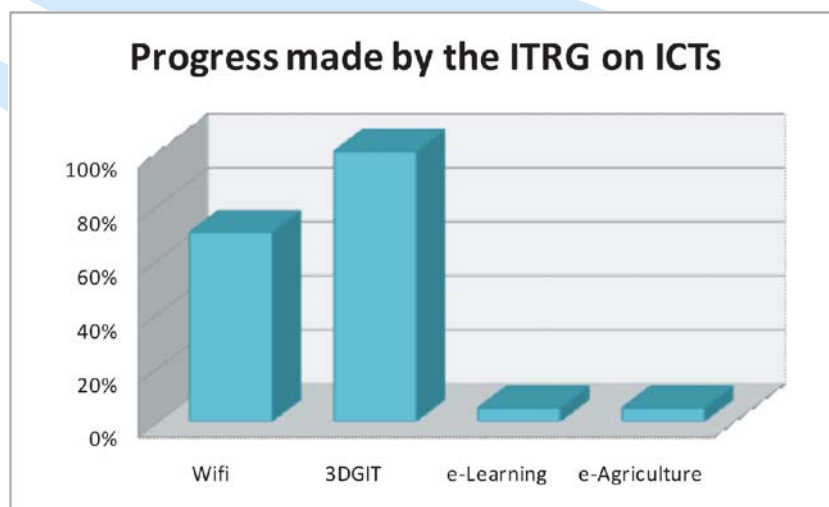
Augmenting Traditional Learning by Using e-Learning: Concepts, Tools and Methods

The main focus of this component of the project is to make best possible use of existing specialized faculty (limited in size) in the developing countries through developing e-Learning framework for low-cost specialized knowledge dissemination. In this regard, CIIT plans to sign an MoU with Electronic Solutions Pakistan (Pvt.) Ltd. (ESLOPK), under which the e-Learning Solution will be tested over Wi-Fi connectivity. Once the testing of audio, video and other Learning Management System (LMS) solutions will be completed over Wi-Fi, its deployment and business plan will be made available for the use of Member States of COMSATS.

Precision Agriculture

This component focuses on increasing the production and growth of crops by assessing the variability of various factors present in an agricultural field such as climate, air temperature, soil and water. It will make use of wireless sensor technology for optimizing the agricultural yield. The dedicated team is currently in the process of preparing a project proposal to be submitted to the donor agencies.

The graphical overview of the four components of the project is given as follows:



COMSATS' International Thematic Research Group on 'Climate Change and Environmental Protection'

COMSATS' International Thematic Research Group (ITRG) on 'Climate Change and Environmental Protection' was formally launched by COMSATS and the Group's Lead Centre, the International Center for Climate and Environment Sciences (ICCES), China, by holding its foundation meeting on November 20, 2010, in Beijing, China. The foundation meeting, which was attended by the representatives of 13 scientific institutions from 9 developing countries, resulted in the selection of a suitable scientific area for joint research project, i.e. 'Multi-scale Climate Variations and its relation with Atmospheric Circulations'. Till date, representatives of 9 scientific/research institutions from 6 developing countries have joined the ITRG by signing a Memorandum of Understanding (MoU). Major activities of the Group during the reporting period are listed below:

Approval of the Joint Research Project titled "Characteristics and Mechanism of the Extreme Climate Events under the Climate Change Background" for funding by the Ministry of Science and Technology, Government of China

Based on the discussions held during the foundation meeting of ITRG, ICCES in consultation with other Member institutions, prepared a detailed proposal for the joint research project, titled: "Characteristics and Mechanism of the Extreme Climate Events under the Climate Change Background", to be executed under the Group. The major objectives of the project are to investigate the characteristics and regional difference of the extreme climate events occurred in the collaborating Member countries of COMSATS, including China, in order to understand the mechanisms responsible for the occurrence of such extreme climate events, as well as to improve their prediction capabilities.

The afore-mentioned project proposal was submitted by ICCES to the Ministry of Science and Technology (MOST), Government of China, for acquiring requisite funds for the project's execution. In this regard, MoST-China, approved a budget of RMBs 1 million (US\$ 159,461/-) for the execution of the project between May 1, 2012, and April 30, 2015.

Execution of the Joint Research Project

During the reporting period, the member and potential member institutions of the Group, under the guidance of the Group Leader, have performed the following activities:

Collection of Meteorological Datasets

- The Himalayan Cryosphere, Climate and Disaster Research Center, Nepal, has gathered data related to daily air temperature (maximum and minimum) and daily rainfall from 25 stations in Nepal, during the period from 1980 to 2007. Moreover, extreme rainfall events in Nepal during the period from 1960 to 2000 have also been identified by the Center.
- The Atmospheric Sciences and Meteorological Research Centre, Iran, collected monthly meteorological data of nearly 30 years from about 50 Synoptic Stations in Iran.
- The Hydro and Agro Informatics Institute (HAIL), Thailand, collected monthly meteorological data from 47 stations in Thailand during the period from 1961 to 2010, as well as performed preliminary analysis of the rainfall patterns in Thailand during the last 50 years. Ms. Aisawan of HAIL-Thailand, also visited ICCES during March 15 to May 15, 2012, in order to conduct collaborative research.

Transfer of the Seasonal Climate Prediction System of the Institute of Atmospheric Physics (IAP), China, to HAIL, Thailand

With the view to involve the Hydro and Agro Informatics Institute (HAIL), Thailand, in the execution of the joint research project, the Seasonal Climate Prediction System of IAP, China, was transferred to HAIL, Thailand, and the corresponding Bias Correction System was developed during the reporting period.

Efforts made for the Expansion of the Thematic Group

In order to enhance the membership of the Group for effective execution of the selected joint research project, the Lead Centre (ICCES) has made the following efforts during the reporting period:

- At the initiative of the Group Leader, it has been planned that under the framework of the ITRG on 'Climate Change and Environmental Protection', the Atmospheric Sciences and Meteorological Research Centre (ASMRC), Iran, will conduct a study on "Integrated Analysis of Meteorological Droughts and Dust Events in Iran and considering of the Effective Mechanisms". In this regard, Mr. Ali Didevarasl will serve as the focal point of ASMRC, Iran.
- During the visit of Prof. Prugchan Wongwises of King Mongkut's University of Technology Thonburi (Thailand) to ICCES, on October 15-17, 2012, the possibility of the University's involvement in the joint research project being executed by the Group was discussed.
- Establishment of a Group on "Climate Change and Ecosystems" at CIIT,

Pakistan, is under consideration, which will be linked with the ITRG on “Climate Change and Environmental Protection”. Utilizing the expertise available at CIIT, the Group is expected to explore the risks and hazards arising from the interactions between ecological systems and the changing climate.

- ICCES will facilitate CIIT (Pakistan) in developing a concept paper on the “Establishment of Research Group on Mountain Meteorology and Extreme Weather Hazards at CIIT” with the support from other international partners.
- During the visit of HRH Princess Maha Chakri Sirindhorn of Thailand and delegation from HAII-Thailand to ICCES on April 05, 2012, various matters related to initiating scientific collaboration were discussed.

Capacity-building of Member Institutions of the Group

The Lead Centre of the Group, ICCES, in collaboration with COMSATS and other partner organizations, held the 11th International CTWF Workshop on the “Terrestrial Ecosystems under the Changing Climate” on September 2-5, 2012, in Beijing, China. A total of 10 scientists belonging to the following 5 member institutions of the Group were provided travel grants by COMSATS and ICCES for participating in the workshop: Pakistan Meteorological Department (Pakistan); COMSATS Institute of Information Technology (Pakistan); Sudan Meteorological Authority (Sudan); Pakistan Space and Upper Atmosphere Research Commission (Pakistan); and Himalayan Cryosphere, Climate and Disaster Research Center (Nepal).

Planned Activities

The 5th International Conference on “Environmentally Sustainable Development”, scheduled to be held on August 25-27, 2013, in Abbottabad, Pakistan, is expected to contribute towards the capacity-building of the member institutions of the Group. It is also planned to hold the second meeting of Sub-group on ‘Green Technology’ under the ITRG on ‘Climate Change and Environmental Protection’ on the sidelines of the conference.

COMSATS’ International Thematic Research Group on ‘Natural Products Sciences’

COMSATS’ International Thematic Research Group (ITRG) on ‘Natural Products Sciences’ was formally launched by COMSATS and the Group’s Lead Centre, the International Center for Chemical and Biological Sciences (ICCBS), Pakistan, on November 26, 2010, in Karachi, Pakistan. The foundation meeting of the Group was attended by a total of 18 scientists/experts representing 9 scientific organizations belonging to 8 developing countries. During the meeting, common areas of interest of the participating organizations were identified and a scientific area in which the joint research project would be initiated was selected, i.e. “Phytochemical and Pharmacological Studies on Medicinal Plants and Standardization of Herbal Plants of Indus and Nile Valley”. During the meeting, representatives of eight scientific/research organizations belonging to eight developing countries formally joined the ITRG by signing a Memorandum of Understanding (MoU). Major activities of the Group during the reporting period are listed below:

Preparation of Proposal for the Joint Research Project to be Executed by the Group and its Budget Estimation

The proposal for the joint research project, entitled: ‘Drug Discovery from Nature for



Neglected Diseases', which is in-line with the theme selected during the ITRG's foundation meeting, was prepared by the Lead Centre of the Group (ICCBS-Pakistan) in consultation with other Group members. Twelve scientists belonging to Turkey, Sudan, Egypt, Nigeria and Pakistan have committed to participate in the joint research project. The estimated annual budget for executing the afore-mentioned research project is US\$ 100,000/-.

Following activities shall be performed under the joint research project:

- The most prevalent diseases in the developing countries will be selected as target areas. Each Member institution of the Group will participate in the process of selecting the target diseases.
- Each member institution of the Group will prepare crude plant-extracts that have been reported to have applications in the treatment of selected diseases (100 plants extract from each member institution).
- Crude plant-extracts will be sent to ICCBS (Karachi-Pakistan) for preliminary analysis and bio-assay.
- Results will be shared with the collaborating member institutions of the Group, and further investigation of the active extracts will be carried out subsequent to the signing of an MoU among the collaborating member institutions of the Group.
- Joint publications will be brought out and patents will be filed on important discoveries made during the execution of the joint research project.

The project proposal was submitted to COMSATS Headquarters for perusal by the Group Leader, Prof. Dr. Iqbal Choudhary, Director ICCBS, Pakistan. The Executive Director COMSATS, appreciated the efforts

Planned capacity-building events to be held in 2013

Workshop on "Plant Products Chemistry" and International Symposium on "Medicinal-Aromatic Plants":

The International Center for Chemical and Biological Sciences (ICCBS), Pakistan, in collaboration with the Ege University, Turkey, and COMSATS' ITRG on 'Natural Products Sciences' will organize a Workshop on "Plant Products Chemistry" and an International Symposium on "Medicinal-Aromatic Plants", on June 5-7, 2013, in Izmir, Turkey. The workshop will provide hands-on training on structure elucidation of natural products using spectral techniques, particularly Nuclear Magnetic Resonance (NMR). A theoretical overview of NMR will be covered during the lectures, whereas problem-solving sessions will impart spectral interpretation skills for structural determination to the participants.

Second Meeting of COMSATS' ITRG on 'Natural Products Sciences'

The Second Meeting of COMSATS' ITRG on 'Natural Products Sciences' will be organized on the sidelines of the afore-mentioned events. In this regard, COMSATS Headquarters will provide travel grants to five scientists/researchers belonging to the member institutions of the Group in order to facilitate their participation in these events.

International Symposium on 'Sustainable Utilization of Natural Products for Human Health and Well Being':

The proposed international symposium will be jointly organized by the COMSATS' ITRG on 'Natural Products Sciences' and the Iranian Research Organization for Science & Technology (IROST), Iran. The event is tentatively scheduled to be held on August 25-27, 2013. This three-day event, which is expected to have participation of about 15 Member countries of COMSATS, will have nine plenary lectures by renowned researchers, 18 invited lectures, 20 session lectures, and two poster presentation sessions by young researchers. The symposium will focus on the sustainable utilization of natural products for improvement in health and well-being of the people. The event will cover topics such as ethnobotany, natural product chemistry, biotechnology of medicinal plants, pharmacology, clinical trials, safety and efficacy and standardization, etc.

of the Group members in connection with preparing the afore-mentioned project proposal, and informed that the international funding agencies will be approached for financing when the project will start yielding preliminary results.

Capacity-building of Member Institutions of the Group

Provision of short-term training to a scientist belonging to a member institution of the ITRG on 'Natural Products Sciences':

One of the objectives of COMSATS' ITRGs is to provide short-term trainings to researchers from member institutions of the Group in order to build their capacities and enable them to complete their research work efficiently. In this regard, Dr. Azhari Mohamed Elbadawi, Director General IRCC, Sudan, requested COMSATS Headquarters for the provision of a short-term training to Mr. Fihir Mohamed Ibrahim Mohamed on the operation, calibration and routine maintenance of the Gas Chromatography at ICCBS, Pakistan (Lead Centre). Mr. Fihir Mohamed Ibrahim Mohamed's afore-mentioned training will commence on January 1st, 2013, under supervision of the Group Leader. In this connection, COMSATS Headquarters will provide travel grant, as well as boarding and lodging expenses to the Sudanese scientist.

Organization of 13th International Symposium on Natural Product Chemistry, September 22-25, 2012, Karachi, Pakistan:

The International Symposium on Natural Products Chemistry was organized by the International Center for Chemical and Biological Sciences (ICCBS), Pakistan, in collaboration with COMSATS' ITRG on 'Natural Products Sciences', on September 22-25, 2012, in Karachi, Pakistan. The technical programme of the four-day event consisted of 16 plenary lectures, 68 invited lectures, and a poster presentation session. The symposium covered the topics such as isolation and structural elucidation of natural products, chemosynthesis and biosynthesis of natural products, pharmacology and bioassay on natural products, biotechnology for natural products development, advances in spectroscopy, rational drug designing, medicinal plants cultivation and conservation, chemistry of marine and micro-organisms, etc.

More than 600 scholars, experts and students working in the field of natural products chemistry and chemical biology, belonging to more than 40 countries, attended the Symposium.





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COMSATS has been endeavouring to expand its group of national and international working partners, in order to have collaboration in Science and Technology for sustainable socio-economic development of the Members States and launch new programmes and activities with its own Centres of Excellence.

INTERNATIONAL COLLABORATIONS

Cooperation with Islamic Educational, Scientific and Cultural Organization (ISESCO)

ISESCO-COMSATS Cooperation Programme (2012)

Cooperation between COMSATS and Islamic Educational, Scientific and Cultural Organization (ISESCO) dates back to 2004, whereby joint activities were initiated in various fields of science and technology. During 2012, COMSATS successfully implemented 'ISESCO-COMSATS Cooperation Programme', under the framework of 'ISESCO's Cooperation and Partnership for the year 2010-2012'. This year's partnership included the holding of five international conferences/workshops in Malaysia, Jordan, Bangladesh and Tunisia. These activities were successfully implemented by COMSATS in collaboration with:

- i. United Nations Educational, Scientific and Cultural Organization (UNESCO); COMSATS Institute of Information Technology (CIIT), Pakistan; and Solar Energy Research Institute (SERI) of Universiti Kebangsaan Malaysia (UKM), Malaysia, for the 5th Asian School on Renewable Energy: Advanced Micro-power Systems (July 09-13, 2012, Selangor, Malaysia);
- ii. Inter Islamic Network on Information Technology (INIT), Pakistan; CIIT, Pakistan; and Royal Scientific Society (RSS), Jordan, for the 2nd International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards' (September 16-20, 2012, Amman, Jordan);
- iii. OIC Standing Committee on Scientific and Technological Cooperation (COMSTECH); University of Dhaka, Bangladesh; and Bangladesh University of Engineering and Technology (BUET), Bangladesh, for International Workshop on Nano-technology (September 21-23, 2012, Dhaka, Bangladesh);

- iv. Universiti Kebangsaan Malaysia (UKM), Malaysia, for the 3rd International Workshop and Conference on Nanotechnology: Nanomaterials for Green Technology (December 5-7, 2012, Bangi, Selangor, Malaysia);



- v. Tunisian National Commission for Education, Science and Culture (TNC) and Higher Institute of Technological Studies (ISET), Tunisia, for National Workshop on 'Repair and Maintenance of Scientific Engineering Equipments in Universities, Research Institutions and Small Scale Industries' (December 10-14, 2012, Nabeul, Tunisia).

Moreover, as a part of the joint activities, COMSATS-ISESCO cooperation for the maintenance of the web-portal, Islamic World Science Net (IWSN), also continued in 2012.

ISESCO Recognizes its Cooperative Ties with COMSATS

As a partner organization of ISESCO collaborating with it for S&T-led development over the years, COMSATS was awarded the 'ISESCO Medal' on September 26, 2012. To accomplish its development initiatives, ISESCO seeks collaboration with organizations of similar mandates, such as COMSATS, UNDP, COMSTECH and UNESCO. ISESCO has over 160 partner organizations around the world, out of which selected partner organizations have been awarded this medal on the organization's 30 years of operations.

During a small ceremony held at COMSATS Secretariat, the Deputy Director General ISESCO, Dr. Mukhtar Ahmed, on behalf of ISESCO presented the medal to the Executive Director COMSATS, Dr. Imtihan Elahi Qureshi. Dr. Ahmed noted with great appreciation the scientific initiatives taken by COMSATS Secretariat under the able leadership of Dr. Qureshi. Apart from the officials of COMSATS Secretariat, representatives of the Ministry of Science and Technology (MoST), Government of Pakistan; COMSATS Institute of Information Technology (CIIT); COMSATS Internet Services (CIS); and representatives of print media attended the ceremony.

Speaking on the occasion, the Executive Director COMSATS thanked ISESCO for its generous recognition of COMSATS' efforts. Recalling the strong working relations with ISESCO, Dr. Qureshi noted that during the last five years COMSATS has organized 15 scientific capacity-building events in collaboration with ISESCO that benefited scientists, researchers and policy-makers belonging to 26 developing countries. Based on common interests, ISESCO undertakes scientific activities with partner organizations in common member states, under short to mid-term collaborative arrangements. ISESCO organizes around 300 to 350 scientific activities in member countries every year.

Dedicating the medal to his team, Dr. Qureshi lauded their hard work and dedication in pursuit of COMSATS' mission. He also thanked the Ministry of Science and Technology for its support to COMSATS and its programmes and projects.



Executive Director COMSATS Inaugurates Regional Experts' Meeting of ISESCO

The Regional Experts' Meeting on 'Using e-Books and e-Libraries in Educational Institutions' was held in Islamabad, Pakistan, on May 7-9, 2012. The Executive Director COMSATS graced the opening ceremony of the Regional Experts' Meeting as the Chief Guest.

The three-day event was organized on the occasion of the 30th Anniversary of ISESCO, in collaboration with the Ministry of Awqaf and Islamic Affairs, Kuwait, and Pakistan National Commission for UNESCO (PNCU). The other dignitaries who addressed the gathering during the inaugural session were Mr. Muhammad Ikram, Secretary General PNCU; Mr. Muhammad Dawood, Deputy Secretary General PNCU; and Dr. Md. Yusnan Bin Yusof, Representative from ISESCO Headquarters, Morocco.

Dr. Qureshi, in his Inaugural Address, considered Information and Communication Technologies as the most significant among the new and emerging technologies in terms of socio-economic impact on societies across the globe. He opined that the electronic management of the academic resources through e-libraries would become a norm in the near future, which is in line with the Plan of Action agreed by 175 countries during the World Summit on Information Society (2003), Geneva, Switzerland. As delineated by Dr. Qureshi, there are three-fold challenges for developing countries in this respect: i) to create enabling environment for access to e-books for a large fraction of their populations; ii) to develop new content or digitize their knowledge resources that preserve their social and economic interests; and iii) to ward off cultural invasion and negative stereotyping of their faiths and values.

The event was attended by experts from Bangladesh, Malaysia, Maldives, Pakistan, the Philippines, Sri Lanka, and Thailand.



Expansion of COMSATS' Membership: Turkey Signs Accession Agreement to Join COMSATS

In order for COMSATS to realize one of the objectives of its establishment – to sensitize the countries of the South to the centrality of science and technology in the development process, to the adequate allocation of resources for research and

development, and to the integration of science and technology in the national and regional development plans – it is imperative to expand the existing membership of the organization. During 2012, efforts were continued to approach the governments of the developing countries with offers of COMSATS' membership. These included Afghanistan, Indonesia, Iraq, Kenya, Libya, Malaysia, Maldives, Nepal and Turkey. Most notable among the outcomes of these efforts was the Turkey's signing of Accession Agreement to join COMSATS.



On August 31, 2012, Mr. M. Babür Hızlan, Ambassador of Turkey to Pakistan, and Dr. I. E. Qureshi, Executive Director COMSATS, signed an accession agreement on behalf of the Republic of Turkey and COMSATS, respectively, to induct Turkey as the 22nd Member State of COMSATS. The agreement will come into force after a notification is issued in this respect by the Government of Turkey. This Eurasian country has been associated with COMSATS since its inception through its Centre of Excellence, TÜBİTAK Marmara Research Center (MAM), Gebze-Kocaeli, Turkey.

Held in Islamabad, the signing ceremony was, inter-alia, attended by officials from Ministries of Science and Technology, and Foreign Affairs, Government of Pakistan, as well as the Ambassadors/High Commissioners of COMSATS' Member States. H.E. Mir Changez Khan Jamali, Federal Minister for Science & Technology, Government of Pakistan, graced the occasion as the Chief Guest. Expressing his views, Mr. Jamali opined that Turkey's membership will greatly benefit the programmes and activities of COMSATS and set an encouraging precedent for more countries to join the organization.

"Turkey's advancement in science, technology, innovation and industrial production will greatly benefit the South-South cooperation existing among the COMSATS' Member States and will greatly enrich the potential of the Member States to accelerate their pace of development".

H.E. Mir Changez Khan Jamali
Federal Minister for Science & Technology
Government of Pakistan

In his Welcome Remarks, the Executive Director COMSATS stated that it is a matter of honour for COMSATS to have Turkey as a Member State. For Turkey, the excellent infrastructure and cooperation framework available through COMSATS is another door to reach out to a group of 21 developing countries spread across three continents.





Considering it a personal privilege to sign the accession agreement, Ambassador Hızlan showed Turkey's eagerness to contribute to South-South cooperation in S&T through the platform of COMSATS and expected mutually beneficial outcomes for both Turkey and COMSATS.

"Turkey is ready to contribute to COMSATS and believes in the strength of this cooperation".

Mr. M. Babür Hızlan
Ambassador of Turkey to Pakistan

Speaking on the occasion, H.E. Ms. Shahnaz Wazir Ali, Special Assistant to the Prime Minister on Social Sector, stated that Turkey's Membership would bring in a new perspective and added value for COMSATS' development initiatives and regional and international programmes. Moreover, Turkey could serve as a window for effective North-South cooperation as it has representation in regional and international organizations, such as UN, OECD, ICSU, ICGB, ECO, IEA, KEI, APSCO, and OIC; as well as various European research programmes, such as COST, ESF, ESA, EuroHORCS, EUREKA, and EMBC.

"Both Turkey and Pakistan have an abiding interest in each other's progress and unwavering support for each other's policies".

H.E. Ms. Shahnaz Wazir Ali
Special Assistant to the Prime Minister of Pakistan on Social Sector

Expansion of COMSATS' Network of Centres of Excellence

In cognizance of its international role viz. socio-economic development through Science and Technology, COMSATS has always endeavoured to consolidate and strengthen its Network of S&T Centres of Excellence, which provides the organization with the needed scientific and technological resource-base for national and regional programmes. The induction of a new centre, the University Cheikh Anta Diop of Dakar (UCAD), Senegal, and re-designation of the Council for Scientific and Industrial Research (CSIR), Ghana (in place of its constituent institution, Building and Road Research Institute) are major steps in this direction, which were approved during the

15th Coordinating Council meeting of COMSATS, held in Turkey on 2012.

UCAD and CSIR were represented by Prof. Aly Mbaye, Dean, School of Economics, UCAD, Senegal, and Dr. Abdulai Baba Salifu, Director General CSIR, Ghana, respectively, during the 15th Coordinating Council Meeting held in Turkey. The Council unanimously approved the induction of UCAD in COMSATS' Network as a Centre of Excellence, and re-designation of CSIR, Ghana, in place of its constituent organization, BRRI. By virtue of these Centres' membership to the Network, the Rector UCAD-Senegal and Director General CSIR-Ghana will attend the future meetings of the Coordinating Council as its members.



Prof. Aly Mbaye



Dr. Abdulai Baba Salifu

UCAD comprises six faculties, i.e. Faculty of S&T; Faculty of Economic Sciences and Management; Faculty of S&T for Education and Training; Faculty of Law and Political Sciences; Faculty of Medicine, Pharmacy and Odonto Stomatology; and Faculty of Letters and Human Sciences. The key areas of focus of the University are: Tropical Medicine, Renewable Energy, Biotechnology, Veterinary Medicine, Pharmacology, Environmental Sciences, Information Science, Agro Biology, and Agro Chemistry.

The focus areas of 13 research institutes of CSIR are: Agriculture, Environment, Forestry, Fisheries, Health and Medicine, Industry and Natural Sciences, and Social Sciences. CSIR has fully functional laboratories having state-of-the-art equipment and qualified technical staff. CSIR's recent research initiatives are in various areas of modern bio-technology, including the production of bio-fuels and bio-chemicals, as well as the introduction of yield and nutrient-enhancing genes in plants. CSIR has also developed improved varieties of crops.

Owing to the academic and technical strengths of these institutions, their induction in the Network is expected to enhance COMSATS' role for South-South cooperation.

Efforts were also made during 2nd Commission Meeting of COMSATS (April 16-17, 2012, Pakistan) to further strengthen COMSATS Network. As an outcome of the efforts and COMSATS Secretariat's continuous follow-up with the respective governments, the Center of Earth Sciences, Metallurgy and Ore Beneficiation (CESMOB) of Kazakhstan, and the Industrial Technology Institute (ITI) of Sri Lanka, were nominated to join COMSATS Network of Centres of Excellence.

Collaboration with International Institute of Applied Systems Analysis (IIASA)

COMSATS has been coordinating the activities of IIASA with various scientific and technological organizations in Pakistan since 2011. IIASA is an international research organization that conducts policy-oriented research into problems that are too large or too complex to be solved by a single country or academic discipline.

The outreach activities of IIASA in its member states are conducted in collaboration with its National Member Organizations (NMOs) with the help of a high-level group of



the countries' scientists, engineers, policy-makers and researchers. COMSATS Secretariat had been hosting IIASA's NMO office in Pakistan at its premises since 2010. This year the office has been relocated from Islamabad to Lahore due to the change of the National Council Member and the Secretary of the NMO. Consequently COMSATS' coordination with the NMO and IIASA are to be redefined in the light of the previous experience of the NMO. This aspect is being considered by COMSATS for future guidelines.

COMSATS Secretariat has remained engaged in the dissemination of IIASA's information on various training and research opportunities available at IIASA's premises in Austria. As a result, two researchers from Pakistan participated in the 'Young Scientists Summer Programme (YSSP-2012)' of IIASA in Austria in the field of Water Research, and Risk Policy and Vulnerability. For YSSP-2013, COMSATS Secretariat has sent IIASA's request to 42 universities and research organizations across Pakistan. It is hoped that more young researchers from Pakistan shall have the opportunity to participate in the YSSP in Austria with the help and collaboration of IIASA's NMO office in Pakistan.



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The Executive Director and other officials of COMSATS Secretariat undertake international visits with an objective to strengthen and expand the membership of COMSATS and its Network of S&T Centres of Excellence, as well as to participate in international meetings and for developing partnerships and cooperation mechanisms.

INTERNATIONAL VISITS

Visit to Sudan

In view of its dual role as the Secretariat of the Commission and the Headquarters of the Network of Centres of Excellence, the COMSATS Secretariat has to remain engaged with the national focal points of the Member States and the administration of the Centres of Excellence, in order to implement the organization's programmes for science-led socio-economic development. In this regard, the Executive Director COMSATS undertakes visits to COMSATS Member States and Centres of Excellence from time to time. The most recent of this visit was made to the Republic of Sudan. The visit had three important components: meetings with COMSATS' Focal Point in Sudan; visit to COMSATS' Centre of Excellence in Sudan and participation in the 6th ICMHESR. A short account of the Executive Director's activities in Sudan is as follows:

Participation in the 6th Islamic Conference of Ministers of Higher Education and Scientific Research (ICMHESR)

The sixth Islamic Conference of Ministers of Higher Education and Scientific Research (ICMHESR) was held on 20th and 21st November 2012, in Khartoum, Sudan. On invitation from ISESCO, the Executive Director COMSATS, Dr. Imtihan Elahi Qureshi, participated in the meeting. The 6th ICMHESR deliberated on the theme: "The role of Higher Education in the development of Science and Technology for a prosperous future". The meeting, inter alia, considered a report on "Key Performance Indicators (KPI) for Universities in Islamic Countries".

As a follow up of the extraordinary



session of the ICMHESR held on 4th and 5th October 2011, in Riyadh, Kingdom of Saudi Arabia, a guide for “Assessment and Quality Enhancement for Universities in the Islamic World” has been prepared for improving their KPIs. The delegates, in general, expressed their resolve to increase the access to higher education and enhancement of expenditure on education and to compete with the knowledge economies of the world. The overall current situation with respect to educational institutions and their quality was mutually agreed to be unsatisfactory.



In his address to this august gathering, Dr. Qureshi highlighted the S&T capacity-building programmes that were conducted in collaboration with ISESCO during the past two years. Dr. Qureshi informed the audience that a flagship project of COMSATS, namely, the COMSATS Institute of Information Technology (CIIT) has been ranked as the 9th best Higher Education Institution of Pakistan among 138 Pakistani universities. He invited the OIC countries to make use of the offer of scholarships for post-graduate studies at CIIT.

At the end of 2-day's deliberations, a Khartoum Declaration was issued which laid stress on the establishment of world-class facilities for conducting research on new and emerging areas of critical importance, completion of the project on 'Atlas of Islamic World Innovation', establishment of ISESCO Chairs for women scientists in Member States, and expansion of higher education sectors in all Member States.

Contacts with COMSATS' Focal Point in Sudan

Availing his presence in Khartoum, Sudan, on account of the 6th ICMHESR, in which COMSATS was invited as an observer organization, the Executive Director visited the offices of the Ministry of Science and Communications on 21st November 2012. He held meetings with the State Minister, H.E. Dr. Tahani Abdalla Attia Gasmalla and the Under Secretary of the Ministry, Mr. Zuhair Alfadil Alabjar. Also present during the meetings was Mr. Ahmed Obeid Hassan, the Coordinator of the National Programme on Bio-Fuels under the Ministry.

The discussion with the Under Secretary involved the review of past consultations and the support provided to Sudanese scientists in the form of their participation in

COMSATS sponsored capacity-building events in Sudan and other Member States. The Under Secretary was informed that COMSATS has organized seven training workshops/conferences in Sudan since 2004, covering the fields of bio-fuels, biotechnology,



ICTs and maintenance of scientific equipment. From 2002 to 2012, 16 Sudanese scientists have travelled abroad on COMSATS' grants for training or participation in COMSATS' scientific events. The generous financial support in the form of Annual Membership Contribution by Sudan was gratefully acknowledged. The Under Secretary assured the Executive Director that Sudan recognizes the benefits of its association with COMSATS and would continue to provide administrative, as well as financial support to the projects and programmes of the organization.

In another formal meeting, the State Minister for Science and Communications was informed that Sudan has been actively participating in COMSATS Coordinating Council meetings since the induction of Industrial Research and Consultancy Centre (IRCC) of Sudan as a Centre of Excellence of COMSATS in 2008. The Executive Director elaborated upon three modes of support offered by COMSATS under the categories: i) Education, by means of COMSATS university attached with the Network; ii) Training, by utilizing the expertise available in its Centres of Excellence; and iii) Research, through COMSATS' International Thematic Research Groups (ITRGs).



In particular, he invited the honourable Minister to take maximum benefit of COMSATS ITRGs, currently undertaking research in three key areas, namely ICTs, Climate Change and Medicinal Plants. The Minister showed keen interest in all these fields and also conveyed the interest of Sudanese Government to expand its capacity in cutting-edge fields of S&T, such as nanotechnology.

Her Excellency expressed her confidence that Sudan will be able to contribute strongly towards COMSATS' international programmes aimed at socio-economic development of Member States through South-South cooperation in Science and Technology.

Visit to the Industrial Research and Consultancy Centre (IRCC), Sudan

As per advice of COMSATS Coordinating Council, the Executive Director has been paying personal visits to the Centres of Excellence affiliated with COMSATS in different developing countries. In this connection, a visit was made on 22nd November

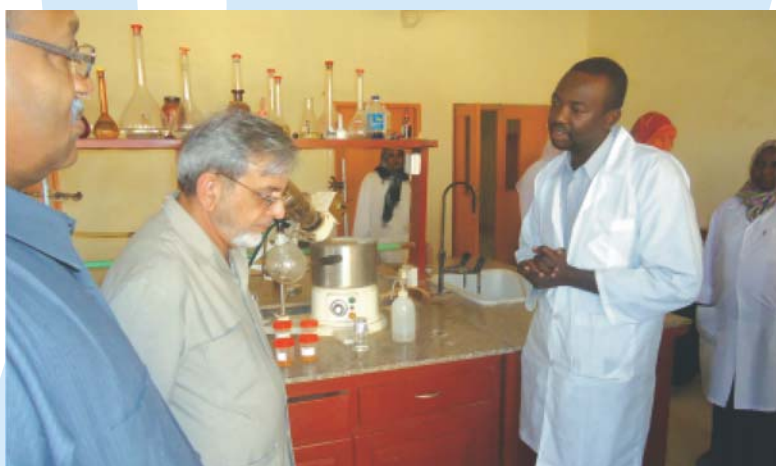


2012 to the Industrial Research and Consultancy Centre (IRCC) in Khartoum, Sudan, following an invitation received from the Director General IRCC, Dr. Azhari Mohamed Elbadawi.

The facilities inspected by the Executive Director COMSATS included mechanical workshop, analytical measurements laboratory, chemical testing and research laboratory, food testing and research laboratory, and industrial documentation and publication centre. Dr. Qureshi was informed that the Centre serves as an Engineering Faculty for Sudan's Academy of Sciences, which is a post-graduate degree-awarding institution.

Dr. Elbadawi explained that IRCC is in dire need of funds to renovate laboratories and upgrade instruments and equipment as per international standards. The Director General also expressed his desire to reach a quality level attained by some of the private-sector establishments, such as Capo Dairy Industry and Amipharma. A visit to these industrial complexes located in the industrial zone of North Khartoum was organized to acquaint the Executive Director about the high industrial standards achieved by some companies, which benefitted from IRCC's consultancy.

An exchange of information and discussion session was held between Dr. Qureshi and senior officers of IRCC. The programmes and projects of COMSATS were highlighted by Dr. Qureshi during his presentation, which was preceded by a general introduction and current engagements of IRCC described by Dr. Elbadawi. Among various agreements made during the meeting, one was to hold a workshop on repair and maintenance of scientific equipments in 2013, in collaboration with ISESCO.



The Executive Director COMSATS emphasized the need for IRCC to actively participate in COMSATS' ITRGs and contribute information and articles for COMSATS' publications.

Visits to Italy and Switzerland

In order to further strengthen COMSATS' collaborative links with international organizations of the North, a delegation of COMSATS Secretariat and COMSATS



Institute of Information Technology (CIIT) visited three European scientific institutions from 30th January to 3rd February 2012. Some highlights of these visits are as follows:

TWAS, Italy

The delegation of COMSATS Secretariat and CIIT, led by the Executive Director COMSATS, Dr. I.E. Qureshi, visited the Headquarters of the Academy of Sciences for the Developing World (TWAS) in Trieste, Italy. The purpose of the visit was to discuss ways and means of further strengthening technical cooperation between COMSATS and TWAS. The delegation included Rector CIIT, Dr. S.M. Junaid Zaidi; Dean of Faculty of Sciences, CIIT, Dr. Arshad Saleem Bhatti; and Dean of Research, Innovation and Commercialization, CIIT, Prof. Raheel Qamar.

A presentation made by Dr. Qureshi on the organizational structure and programmes of COMSATS was attended by Prof. Romain Murenzi, Executive Director TWAS; Prof. M.H.A. Hassan, Treasurer TWAS; and Dr. Peter McGrath, In-charge TWAS Programmes. Dr. Qureshi emphasized the generic relationship of COMSATS and TWAS, both of which were created at the behest of Prof. Abdus Salam. The crucial role played by TWAS in helping COMSATS to set up itself as an IGO and the assistance provided to establish a Network of S&T organizations in developing countries as its Centres of Excellence, was recounted by Prof. M.H.A. Hassan. Prof. Murenzi was informed about a major initiative of COMSATS in the form of creating International Thematic Research Groups (ITRGs), with the aim of conducting high-quality collaborative research, with participation of clusters of R&D organizations. Prof. Murenzi appreciated COMSATS' endeavours for the cause of South-South collaboration in S&T capacity-building. He also noted that TWAS and COMSATS have joined hands to prepare and disseminate booklets containing profiles of outstanding research organizations in the developing countries.



Prof. Murenzi further suggested that COMSATS can become TWAS' partner in its new programme entitled 'Science and Diplomacy'. Dr. McGrath was of the opinion that a number of existing TWAS' programmes can be utilized by COMSATS in support

of its ITRGs. During the meeting, Rector CIIT recalled the MoU signed between TWAS and CIIT in 2010, whereby TWAS fellows may opt for research and training at CIIT. It was considered desirable to extend the scope of this programme.

The Executive Director COMSATS presented his personal invitation letters to Executive Director TWAS and Prof. Hassan to participate in the COMSATS 2nd Commission Meeting that was held on April 16-17, 2012.

ICTP, Italy

The delegation of COMSATS visited the Abdus Salam International Centre for Theoretical Physics (ICTP) on February 02, 2012. COMSATS' officials held a meeting with the Director ICTP, Prof. Fernando Quevedo, in his office. The objective of this meeting was to strengthen the existing ties between COMSATS and ICTP for collaborative research work and explore more such possibilities for future.

The Director ICTP pledged the Centre's help towards CIIT within its framework, inter alia, through its Federation Scheme and Training and Research in Italian Laboratories (TRIL) Programme. TRIL Programme of ICTP gives scientists from developing countries as well as from the Central and Eastern Europe, opportunities to spend periods ranging from a few months to one year at research laboratories of Italian universities, and governmental and private institutions, which operate in different branches of Physics. This includes academic studies as well as practical applications and industrial projects. On the other hand, the 3-year agreements under the Federation Scheme enable the signatory scientific institutes to send junior scientists to ICTP for two to five months, on a cost-sharing basis. CIIT is one of the 105 scientific institutes in 34 States to have an agreement with ICTP under its Federation Scheme. On invitation from the Rector CIIT, Prof. Quevedo accepted to visit CIIT.



The Director ICTP assured the Executive Director COMSATS that ICTP's Aeronomy and Radiopropagation Laboratory (ARPL) will be glad to assist COMSATS' International Thematic Research Group on ICTs in its research undertakings.

Separate meetings were also held with the heads and representatives of various groups of ICTP including: Prof. John Miller of the Applied Physics Group; Prof. Kareem of Climate Change Group; Prof. Sandro Scandolo, Condensed Matter Theory; and Prof. Joseph of Niemela Entrepreneurship and Industrial Physics.

During the discussions with the ICTP officials, an understanding was reached that ICTP officials will provide assistance to CIIT in establishing departments/centres for Meteorology and Climate Research, Applied Physics (particularly in Lasers and





Optics) and Biophysics. Moreover, the young faculty of CIIT was invited to visit the Climate Change group of ICTP. Additionally, training on Liaison with Industry was offered to the CIIT faculty.

CERN, Switzerland

COMSATS' delegation visited the European Organization for Nuclear Research (CERN), Geneva, Switzerland, on 30th and 31st January 2012. The purpose of the visit was to explore avenues of CIIT's participation

in A Large Ion Collider Experiment (ALICE) Collaboration, of CERN.

Prior to the formal visit programme, preliminary meetings were held with Dr. Luciano Musa (ALICE, Inner Tracker System) and Jean-Pierre Revol (COMSATS' Technical Advisory Committee member and former CERN Team Leader for ALICE). A review of CIIT's contribution as Associate Member of ALICE Collaboration was organized on 30th January 2012, where members of the visiting delegation were joined by Dr. Paolo Giubellino (Spokesperson, ALICE Collaboration), Dr. Wisla Carena (CERN Team Leader for ALICE), Dr. Luciano Musa and Catherine Decosse (Resource Coordinator ALICE Collaboration). On this occasion, the Rector CIIT expressed his institution's intention to apply for full membership of ALICE Collaboration. Financial and Technical requirements for proceeding with the plan were thoroughly discussed.

On 31st January 2012, the visiting delegates of COMSATS received a briefing from Dr. Rüdiger Voss, Adviser for Islamic Republic of Pakistan at CERN's International Relations Office, introducing them to CERN's activities and recent scientific results obtained during the operation of Large Hadron Collider (LHC) at 7 TeV center-of-mass energy. The COMSATS' officials were then shown around the CERN experimental areas that included LHC superconducting magnet test hall, CERN Control Centre (CCC) and LHC accelerator and tunnel. The officials were also escorted to ALICE surface exhibition and ALICE underground experimental area, where a briefing was given by Dr. Giubellino.

A presentation was made on LHC Computing Grid Project of CERN by Dr. Robert



Jones, Head of open lab; I.T Department CERN, who also accompanied the COMSATS' officials to CERN's Computer Center. Other CERN officials that facilitated the visit included Dr. Marta Bajko, Technology Department; and Dr. Rende Steerenberg, Beams Department.



Visit to Tunisia

The Senior Assistant Director (Systems), COMSATS Secretariat, Mr. Nisar Ahmad, visited Tunisia, from 8th to 16th December 2012, in connection with organization of COMSATS' collaborative Workshop on 'Repair and Maintenance of Scientific Engineering Equipments in Universities, Research Institutions and Small Scale Industries', which was held on December 10-14, 2012 (Details on Page 26). On the sidelines of the workshop, some useful discussions were held with Mrs. Wafaa El Alami, Head of ISESCO Centre for Promotion of Scientific Research (ICPSR); Dr. Mohammed Khelifi, Secretary General of Tunisian National Commission for Education, Science and Culture (TNC), Dr. Foued Lindolsi, Director of Higher Institute of Technological Studies (ISET); and Prof. Abdelwahed Ghorbel, Director General of Centre of Biotechnology of Borj-Cédria (CBBC), Tunisia.

During a meeting with Mrs. Wafaa, COMSATS-ISESCO collaboration for the Islamic World Science Net (IWSN) web-portal came under discussion. The portal was launched in 2006. Discussions on COMSATS-ISESCO Action Plan for the year 2013 also came under review. In the presence of Mrs. Wafaa, a meeting was also held with Prof. Abdelwahed Ghorbel, who is the Coordinator of IWSN's virtual thematic group on Science & Technology Park Management. The performance of IWSN was reviewed and different suggestions to improve the web-portal were made.



In his meeting with Mr. Ahmed, Dr. Lindolsi showed interest in COMSATS Network of Centres of Excellence and inquired about the procedure for joining the COMSATS Network, should a Tunisian scientific institution feel interested. The possibilities of future collaborative activities with Tunisian institutions were also discussed with Dr. Khelifi.

On-site discussions on repair and maintenance issues of scientific equipment were made with the engineers, technicians, and staff of ISET laboratories in Nabeul. Apart from the successful holding of the Tunisia Workshop, the meetings and discourses on matters of mutual interest held during the visit served as an opportunity to establish linkages with scientific community in Tunisia.



Visit to Jordan

A delegation of COMSATS visiting Amman, Jordan, in connection with the 2nd International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards', called on the honourable Ambassador of Pakistan to Jordan, H.E. Mrs. Attiya Mahmoud, on September 16, 2012. The workshop was jointly organized by COMSATS, ISESCO, INIT and RSS-Jordan on September 16 to 20, 2012 (Details on Page 32).

The three-member delegation comprised Mr. Farhan Ansari, Assistant Director (Programmes), COMSATS Secretariat; Mr. Tahir Naeem, Director Planning, Development and Human Resource Development, CIIT; and Mr. Atiq-ur-Rehman, Sr. Programme Officer, CIIT. The Ambassador, who had graced the inauguration ceremony of the workshop with her presence, was briefed about its objectives and expected outcomes. Other matters discussed during the meeting related to the potential collaboration between CIIT and Jordanian universities; opportunities of scholarships for Jordanian students at CIIT, as well as review of the S&T infrastructure of Jordan.

Also, during the visit, the COMSATS' delegation held a meeting with the Dean and other senior officials of King Hussein School for Information Technology, Princess Sumaya University for Technology (PSUT), Jordan, to discuss different modes of collaboration. Mr. Naeem informed the senior officials of PSUT about the academic programmes and departments of CIIT. The Dean PSUT expressed keen interest in post-graduate scholarships available at CIIT for students from COMSATS' Member States.

Mr. Ansari briefed the participants of the meeting about the upcoming capacity-building events of COMSATS. He invited the Dean PSUT to nominate suitable individuals for participation in COMSATS' capacity-building events, who could also avail travel grants from COMSATS Secretariat for their participation.



AN OVERVIEW OF MAJOR ACTIVITIES AND ACHIEVEMENTS OF COMSATS' CENTRES OF EXCELLENCE

- COMSATS Institute of Information Technology (CIIT), Pakistan 70
- International Center for Chemical and Biological Sciences (ICCBS), Pakistan 72
- Royal Scientific Society (RSS), Jordan 74
- International Center for Climate and Environment Sciences (ICCES), China 76
- National Mathematical Centre (NMC), Nigeria 78
- Higher Institute for Applied Sciences and Technology (HIAST), Syria 79
- TÜBİTAK Marmara Research Center (MAM), Turkey 80
- National Research Centre (NRC), Egypt 82
- Tanzania Industrial Research and Development Organization (TIRDO), Tanzania 83
- Industrial Research and Consultancy Centre (IRCC), Sudan 84
- Embrapa Agrobiologia, Brazil 85

A group of eighteen R&D institutions from various developing countries, predominantly COMSATS' Member States, is affiliated with COMSATS as its Network of International S&T Centres of Excellence. The Network Members serve as COMSATS' technical resource for South-South cooperation, while following their own programmes of scientific research and development.

AN OVERVIEW OF MAJOR ACTIVITIES AND ACHIEVEMENTS OF COMSATS' CENTRES OF EXCELLENCE

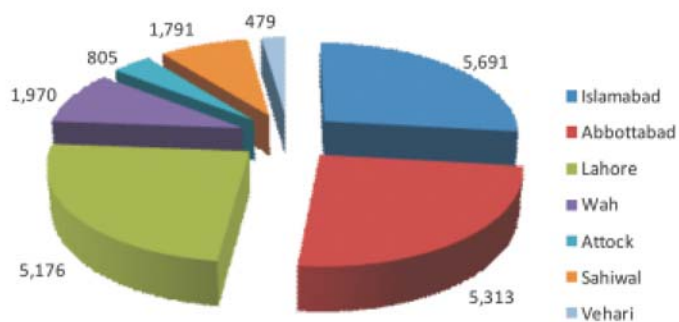
COMSATS Institute of Information Technology (CIIT), Pakistan

The COMSATS Institute of Information Technology (CIIT) was created in 1998 with the establishment of its first campus in Islamabad, Pakistan. In recognition of CIIT's achievements, the Federal Government of Pakistan granted it the status of a degree-awarding institute through the promulgation of its charter, in August 2000. CIIT is now slated for upgradation as a university by the name of 'COMSATS University' through an Act of the Parliament of Pakistan.

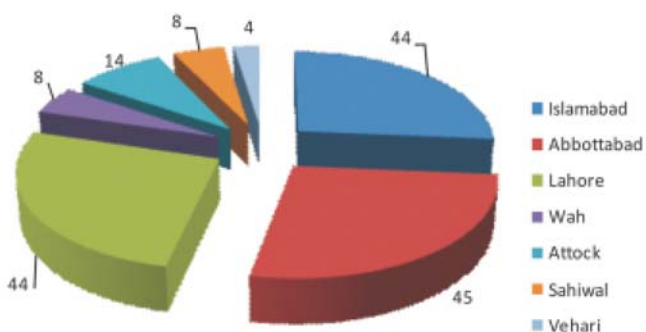


During 2012, CIIT experienced a tremendous growth in its student enrollment, faculty members and academic programmes. The Higher Education Commission (HEC) of Pakistan ranked CIIT as the number one higher education institution (HEI) of the country in the category of Computer Sciences and Information Technology, and overall as the 9th best HEI, out of the total 138.

Important Statistics of CIIT for 2012	
Total Student Enrollment (Fall 2012)	21, 225
Campuses	7
Faculty	2,172
Academic Programmes	73
Staff	1,850
Departments	17
Laboratories	167
Papers produced	381



Number of Students



No. of Labs

International Events Organized

- Pak-China Business Forum (April 15-18, 2012);
- Vice Chancellors' Forum on 'Higher Education in the Islamic World: Challenges and Opportunities' (June 11-12, 2012);
- 4th South Asian International Conference – SAICON - 2012 (December 5-7, 2012);
- Frontiers of Information Technology – FIT - 2012 (December 17-19, 2012).

National and International Collaboration

- CIIT became a member of the Federation of the Universities of the Islamic World (FUIW) during the Seventh Session of the Executive Council of the FUIW (May 26-27, 2012).
- As a member of the EMMA (Erasmus Mundus Mobility with Asia) consortium of European and Asian universities, 35 scholarships were allocated to partner universities and other candidates from all over Pakistan, in 2012, out of which thirteen scholarships were availed by CIIT students, faculty members and staff.
- Thirty six national and 38 international MoUs were signed between CIIT and prestigious institutions and organizations belonging to France, Germany, Iran, Italy, Jordan, Malaysia, Russia, Turkey, as well as various countries of the African continent and Central Asia.
- During 2012, thirteen cases of visiting scholars from different countries have been approved by HEC, nine professors have already visited CIIT's departments of Mathematics, Humanities, Physics, Management Sciences and Biosciences, whereas one is going to visit CIIT in February 2013.
- During 2012, 117 academicians and technocrats from Bangladesh, Canada, China, Finland, France, Germany, Iraq, Malaysia, Turkey, U.A.E, U.K, and USA visited CIIT. The delegation from the University of Technology Petronas, Malaysia, during a visit to CIIT, offered 50 fully-funded Ph.D scholarships for the young faculty members of CIIT. Similarly, a delegation from the University of Malaya, Malaysia, provided 10 fully-funded Ph.D scholarships to CIIT faculty.



- Ninety seven senior officials, including faculty members of CIIT, visited various leading universities of Brazil, China, Egypt, France, Germany, Indonesia, Japan, Malaysia, Morocco, Poland, Romania, Switzerland, Turkey, U.A.E and U.K in order to exchange research experiences; engage in professional networking through participation in the conferences; and conduct research work in the laboratories of the institutions.

Awards and Honours

- Dr. S. M. Junaid Zaidi, S.I., Rector CIIT, was awarded an Honorary Doctor of Science (D.Sc) degree by Lancaster University, United Kingdom, on July 19, 2012, in recognition of his contribution towards creating strong linkages between CIIT and Lancaster University.
- Dr. Saleem Asghar, Eminent Professor, Department of Mathematics, CIIT Islamabad received “HEC Distinguished National Professor” award (2012).
- Three civil awards were given to the following CIIT employees on Pakistan’s Independence Day, August 14, 2012, in recognition of their portentous work in academia: Dr. Haroon Rashid, Director External Campuses, received *Sitara-i-Imtiaz*; Dr. Jamshed Iqbal, Associate Professor, Department of Pharmacy, received *Tamgha-i-Imtiaz*; and Dr. Sonia Zulfiqar, Assistant Professor, Department of Physics received *Tamgha-i-Imtiaz*.

Ongoing Projects and Funding

A total of 122 R&D projects of CIIT have been accepted for funding by different agencies, out of which 10 projects received funds worth PKR 112.32 million during 2012. This funding has been mainly received from HEC, Pakistan.

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

The International Center for Chemical and Biological Sciences (ICCBS) based in Karachi, Pakistan, is regarded as one of the finest academic research establishments of chemical and biological sciences in the developing world. The Center is serving over 350 industries of Pakistan by providing them world-class analytical and consultancy services. These have led to saving millions of dollars in foreign exchange, besides strengthening the indigenous S&T institutions and their research capacity.



During 2012, ICCBS continued to make rapid progress in academia and research. The Academic Coordination Office of the ICCBS institutions (H.E.J. Research Institute of Chemistry (HEJRIC), and Dr. Panjwani Center for Molecular Medicine and Drug Research (PCMD)), continuously pursued and managed academic activities, including redesigning and up-gradation of M.Phil. and Ph.D. courses, on-line courses/research-based lectures, GRE-type examinations, liaison with the Board of Advanced Studies & Research (BASR) and Semester Cell of the University of Karachi, along with other student affairs, related to ICCBS scholars and alumni.

Research and Academic Output

- The faculty of the ICCBS institutions has published 373 scientific papers in leading international journals during 2012. The cumulative impact factor of these publications is 578 (Scopus, Web of Knowledge).
- Sixty eight scholars have either completed their Ph.D/M.Phil. or submitted their M.Phil/Ph.D thesis to the University of Karachi for evaluation and processing. In addition, over 20 scholars from other Pakistani universities have completed their degree programmes under the co-supervision of ICCBS' faculty members. The ICCBS' faculty is also supervising research of a large number of M.S./M.Phil./Ph.D scholars, registered in other universities of the world.
- A large number of eminent foreign scholars from Bangladesh, Colombia, Germany, Lebanon, Malaysia, Switzerland, Turkey, UK and USA, were invited to deliver lectures, supervise research of students, discuss and provide guidance on institutional development, as well as to arrange training abroad for young Pakistani scholars in frontier disciplines.
- The first group of Ph.D students of the PCMD has completed newly implemented Ph.D programme of 18 credit hours, specifically designed to develop understanding of and appreciation for the innovative developments in the fields of molecular medicine and drug discovery.
- Teaching of newly approved Ph.D courses for biochemistry/chemistry to students of H.E.J. Research Institute of Chemistry commenced during 2012. Interactive lectures delivered through video-conferencing are also made a part of the Ph.D courses. Over 100 online lectures and several courses by eminent scholars from all around the world were organized under Virtual Education Project Pakistan (VEPP).



International Events Organized

The ICCBS institutions organized/co-organized several national and international events during 2012. Over 150 foreign and 200 Pakistani researchers participated in the following events:

- 13th International Symposium on Natural Product Chemistry;
- Two-day Workshop on 'Developing Skills for the Interpretation of 1D and 2D NMR Spectral Data for the Structure Determination of Organic Molecules';
- PAK-US Workshop on Applications of Nanotechnology;
- Regional Workshop on Chemical Laboratory Safety and Security, Patent Protection for R&D.

Awards and Honours

During 2012, many faculty members of the ICCBS institutions have received



prestigious awards and honours from national and international agencies. Some of these are:

- i. Civil Award of Pakistan *Sitara-i-Imtiaz* to Prof. Dr. Khalid M. Khan by the President of Pakistan (2012);
- ii. Pakistan Academy of Sciences' Gold Medal in Chemistry to Dr. Farzana Shaheen (2012);
- iii. Announcement made to confer Civil Award of Pakistan *Sitara-i-Imtiaz* to Mr. Aziz Latif Jamal (Chairman, Husein Ebrahim Jamal Foundation) by the President of Pakistan on the country's Independence Day in 2013 (August 14).

Establishment of New Centres and Facilities

- The foundation stone of the Latif Ebrahim Jamal Research Institute of Nanotechnology was laid on September 25, 2012.
- Prof. Dr. Atta-ur-Rahman (FRS) donated a generous fund for the establishment of Jamil-ur-Rahman Center for Genome Research in Pakistan. Construction of the building has already commenced and equipment for the Center is in the process of being ordered.
- The construction work on laboratory building and green house is in progress at the new Campus of ICCBS, in Murree, Pakistan.
- Some of the major equipment procured for the ICCBS institutions during 2012 are: High Speed Genome Sequencer (JRCGR, PCMD); Atomic Force Microscope (HEJ); LC/MS (MS6460) Agilent (CBSBR, PCMD); Genome Analyzer 5500XL System (HEJ); Vibration Free Cooling Incubator (PCMD); Airstream® Class II Biological Safety Cabinets (PCMD); and Dry Shipper (PCMD).

International Patents

During 2012, an unprecedented number of patents has been successfully filed and obtained by the faculty members of the ICCBS institutions. This includes 12 patents in USA and 12 patents in Pakistan. One of these patents has been leased out to an international company for the first-phase clinical trials.

Royal Scientific Society (RSS), Jordan

The Royal Scientific Society (RSS) was established by a Royal Decree in 1970, as a national, non-profit, non-governmental, applied research institution of Jordan designed to support the continuous socio-economic development. RSS is Jordan's premier applied scientific research institution and is the main pillar of the Research and Development (R&D) hub of El Hassan Science City. RSS strives to build national capability and acquire competence as the largest consultancy and technical service provider in Jordan. It prioritizes its R&D activities to support society, industry and government, to avert crises and meet the challenges of building a strong and sustainable knowledge-based economy.



Research Activities and Initiatives

- Under the "Let Jordan Shine" component of the Smart Solar Energy in Jordan programme, RSS supervised the installation of the roof-top solar systems and

studied the socio-economic impact of these systems on the local community.

- To reduce water losses and enhance the efficiency of water supply in Zarqa Governorate, a detailed environmental and social impact assessment study was undertaken by RSS.
- Efforts continued for the implementation of the project, 'Integrating Jordan into the European Research Area (IJERA)', funded by the European Commission (EC) under the seventh frame work programme (FP7).
- During the period February to October 2012, an awareness building campaign was launched by RSS through a social marketing behaviour change and advocacy project.
- Discourse on 'Key Water Issues in Jerash Governorate', funded by the United States Agency for International Development (USAID)/Public Action for Water, Energy and Environment Project (PAP).

International Events Organized

- Joint Conference on 'Intelligent Cities: Strategies for Sustainable Energy Policies in the Middle East and North Africa';
- The 2nd COMSATS-ISESCO-INIT International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards';
- Training workshops in UAE under the Regional Project of the 'Integrated Hazardous Management System (IHMMMS)';
- Final conference and closing ceremony of the 'Enhancement of Jordan - European S & T Partnerships' (EU-Jordan Net) in October 22-23, 2012, Amman, Jordan;
- The final conference on the project 'Integrating Jordan into the European Research Area- (IJERA)';
- Workshop on the Project 'Increase Youth Public Discourse in Key Water Issues in Jerash Governorate'.



International Collaboration

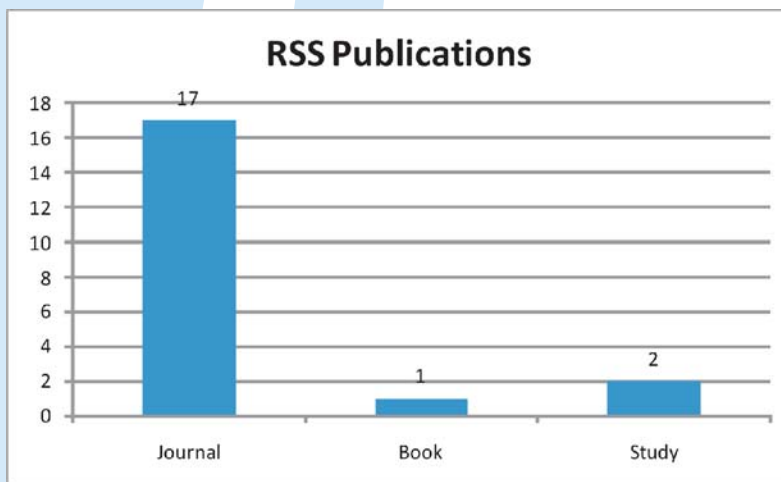
- Agreement with 'Best Reference for Business Consultancy – UAE' for Environment Impact Assessment;
- Agreement with AECOM-USAID for establishing energy efficiency in buildings programme;
- MoU with Friedrich-Ebert-Stiftung (Germany), Jordan Office;
- MoU with United Nations Human Settlements Programme (UN-HABITAT);



- MoU with Saudi Standards, Metrology and Quality Organization (SASO);
- MoU with United Nations University (UNU), and Institute for Water, Environment and Health (Canada).

Awards and Honours

- HRH Princess Sumaya bint El Hassan was awarded the title of 'Foreign Academician for Jordan' by Spain's exclusive Economics and Science Academy – Real Academia de Ciencias Económicas y Financieras (RACEF) – making her the second Arab to receive this rare honour.
- Moh'd A. Al-Nimr, Research Director at RSS, was awarded the Khwarizmi International Award 2012 in its 25th round and Khalifa Award for the Distinguished Professors in Scientific Research (2012).
- Dr. Jamil Sami Haddad, a Researcher at RSS, won the 'Best Invention for 2011' Award from Philadelphia University for his invention, 'Vibrating Dryer'.



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), which was established in 1991, in order to meet the urgent need for studying climate and environment problems. ICCES is capable of giving consultancies and making predictions of drought and flood, forecast of disastrous weather (especially the heavy rainfall during summer season), dust-storm, air pollution, as well as environmental studies for specific needs.



During 2012, ICCES underwent rapid development in diverse fields, including scientific research, international collaboration, awards, as well as faculty and student numbers.

ICCES Statistics for 2012	
No. of Ph.D. Degrees Awarded	8
No. of Masters Degrees Awarded	1
New Scientists Inducted	4
Number of Graduates Studying at ICCES (local and foreign)	50
Visiting Scholars from Developing Countries	3
Research Scientists Visiting ICCES for Academic Exchange	over 20
Participation in National/International Events	50
Research Scientists from ICCES sent Abroad as Short-term Visiting Scholars	7



Major Scientific Achievements

- ICCES achieved great progress in development of different component models of Earth System Model (ESM), together with the prediction theory and methodology.
- ICCES has provided consultancies and made predictions of disastrous weather and climate events, which were required urgently by the government and other related authorities of China to address urgencies in fields, such as agriculture, aviation, navigation, transportation, irrigation, and pollution-control.
- Through successful implementation of the on-going projects, scientists from ICCES have published over 40 peer-reviewed scientific papers in leading national and international journals.
- The 11th CAS-TWAS-WMO-Forum workshop on the 'Terrestrial Ecosystems under the Changing Climate' was held on September 2-5, 2012 in Beijing, China.

Number of On-going Projects 2012	
Research projects funded by Chinese Government	6
Sponsored by National Natural Science Foundation of China	5
Sponsored by Chinese Academy Sciences	1
International cooperation projects sponsored by MoST, China	2*
Other projects	40
Total	54
* Includes a project titled "Characteristics and Mechanism of the Extreme Climate Events under the Climate Change Background" (May-2012 – April-2015), under COMSATS' ITRG on Climate Change and Environmental Protection, with total budget of 1 million RMB.	

Awards and Honours

- Prof. Jiang Zhu was awarded the second prize of National Scientific and Technological Progress in 2012, for his contribution on the 'Argo-ocean observation and data assimilation and improvement of short-term climate prediction in China'.
- Dr. Fei Zheng was selected as a member of the 'Young Talent Project' by the Organization Department of the CPC Central Committee.
- Dr. Xianmei Lang from ICCES won 'Elio Maticena Award for Outstanding Papers by Young Scholars in China'.

National Mathematical Centre (NMC), Nigeria

The National Mathematical Centre (NMC) of Nigeria was established by the Federal Government of Nigeria by issuing a Decree promulgated in 1989. NMC has a vision to develop appropriate initiatives and resources of international standing for the re-awakening and sustaining of interest in the mathematical sciences and their applications to life, and by doing so produce specialists and teachers in the mathematical sciences at all levels of the educational system in Nigeria.



The Centre's research and capacity-building activities throughout the year revolved around developing appropriate initiatives and resources of international standing for sustaining interest in the mathematical sciences at all levels and their applications to real-life issues in Nigeria.

Events Organized

During 2012, the following events were organized/co-organized by NMC:

- National Workshop on Mathematical Modeling and Simulation;
- 2nd Meeting of All Professors of Mathematics and Heads of Departments of Mathematics in Nigerian Universities;
- Pan-African Mathematical Olympiad Symposium, Training and Research (PAMOSTAR);
- 6th Nigerian Universities Computer Programming Contest (NUCPC) 2012;
- West Africa Regional ACM-IBM Collegiate Computer Programming Contest 2012;
- Train the Trainers Workshops for Nigerian Government;
- In-house events on Total Quality Management;
- A number of International Olympiads in informatics, mathematics and sciences.



National and International Collaboration

- The Centre signed an MOU with Uppsala University in Sweden, as a result of which a staff member from NMC is currently doing his Ph.D.
- The Centre, in collaboration with University of Abuja, Nigeria, runs post-graduate diploma (PGD) and M.Sc degree programme in Financial Mathematics.



Student and Faculty Strength

NMC Faculty 2012	
Professors	6
Associate Professors	1
Research Fellows	9
Research Assistants	20

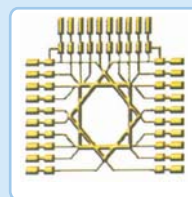
Programme wise Student Strength	
Post-graduate Diploma (PGD)	5
M.Sc	55

Awards and Honours

- A gold and a silver medal at the Pan-Africa Mathematics Olympiad, held in Tunisia (September 2012);
- A bronze medal at the International Mathematical Olympiad (IMO), held in Argentina (July 2012).

Higher Institute for Applied Sciences and Technology (HIAST), Syria

The Higher Institute for Applied Sciences and Technology (HIAST), Damascus, Syria, was established in 1983. The Institute aims to develop human resource that is appropriately equipped to conduct scientific and technological research in all fields of applied science and technology so that it can actively contribute in the scientific and economic progress of Syria. HIAST offers specialized education, e.g. License in Engineering, Diploma, as well as Masters and Doctorate degrees, to prepare a specialized cadre of human resource in the field of engineering.



National Collaboration

During 2012, HIAST signed memoranda of understanding with four academic and scientific research institutions in Syria: the Higher Commission for Scientific Research; the Syrian Virtual University; Damascus University; and Higher Institute of Business Administration (HIBA).

Events Organized

- Workshop on 'Biodiesel Production from Frying Oils Wastes and Chicken Fats Wastes – Presentation of Pilot Station';
- Workshop on 'High-performance Computing Techniques to Develop Scientific Research'.



TÜBİTAK Marmara Research Center (MAM), Turkey

The TÜBİTAK Marmara Research Center (MAM) is a leading Science and Technology institution of Turkey. Established in 1972, TÜBİTAK MAM maintains alignment with national development objectives, while carrying out research on advanced and conventional technologies to improve the competitiveness of Turkish industry, identifying and solving technological problems, and ensuring the application of developed technological solutions.



Ongoing Projects

- Analysis, conservation and management of large mammals in context of National strategies on conservation of Biodiversity and genetic resources;
- Development of humanized anti angiogenic antibodies to inhibit tumor vascularization;
- Development of immune-affinity columns for determination of Aflatoxin;
- Investigation of effects and molecular mechanisms of immunizations as therapeutic approaches in chronic HBV carriers;
- Investigation of effects and molecular mechanisms of therapeutic immunizations on cellular immunity in an environment where tolerance to HBV antigens has developed;
- Molecular design and cellular study of novel oligoelectrolyte based nanocarriers for targeted gene and drug delivery;
- Production of industrial enzymes intended for the feed industry;
- Microarray analysis and functional characterization of drought stress related genes in Wheat;
- Development of insect resistant Maize;
- Investigation of Yellow rust resistance mechanism in Wheat at proteome level;
- Determination of cultivation methods for Turkey's geophytes and bringing of new species and cultivars to the related sectors.

Events Organized

- EUROFORENSICS – 3rd International Forensic Sciences Conference and Exhibition;
- NTREM 2012 – New Trends in Research of Energetic Materials;
- EURASIA 2012 – TURKCHEM Chem Show;
- 43rd International Annual Conference of the ICT;
- 4th International Congress on Food and Nutrition;
- 3rd SAFE Consortium International Congress on Food Safety;



- SAFETechnoPACK – International Food Packaging Conference;
- MycoRed Workshop on Mycotoxicological Risks in Mediterranean Countries: Economic Impact, Prevention, Management and Control;
- BIO-NET Project – Brokerage Event;
- UNISWORK XI – International Workshop on Industrial Food Drying Technologies;
- WssTP–Turkish Water Sector Roundtable Meeting at the 5th World Water Forum.

International Collaboration

EU-FP7 Projects started by TÜBİTAK MAM in 2012, are as follows:

- Development of novel and advanced decontamination technologies for the production of high quality dried herbs and spices;
- Pan European total diet study;
- Beneficial effects of dietary bioactive peptides and polyphenols on cardiovascular health in humans;
- New directions in seismic hazard assessment through focused Earth observation in the Marmara Supersite;
- Turning bio-waste into sustainable products: development of appropriate convention technologies applicable in developing countries;
- Microbial biodiversity, bioinformatics and biotechnology;
- Promoting and improving Azerbaijan research collaboration with European Research Area;
- Preparation of ITO free transparent conductive electrode via layer-by-layer deposition of Carbon nanotubes and its application for solar cells;
- New operational steps towards an alliance of European research fleets;
- Resource efficient and safe food production and processing;
- Efficient Aluminum salt cake recycling technology;
- Black Sea basin joint operational programme;
- Biometric test and evaluation.

Human Resources

Latest Statistics	
Managers	19
Researchers	650 (16% B.Sc, 41% M.Sc, 43% Ph.D)
Administrative Personnel	183
Security	40
Total Personnel	892



Awards and Honours

Mr. Cesarettin Alasalvar, Chief Research Scientist/Associate Professor at TÜBİTAK MAM Food Institute, received an 'IFT Fellow Award' by the Institute of Food Technologists (IFT) at the Annual Congress held in Las Vegas, USA, from June 25-29, 2012. He is the first recipient of this award among Turkish scientists in the field of food science and technology.

Patents

Applications for two patents have been submitted to the concerned authorities by TÜBİTAK MAM: Production System of "Boza" with Starter Culture; and Purification of Tetraphosphorus Decasulfur (P₄S₁₀).

Publications during 2012	
Papers	111
Posters	58
Articles	69
Technical Reports	382
Total Publications	620

National Research Centre (NRC), Egypt

The National Research Centre (NRC) is the largest multi-disciplinary R&D centre in Egypt, devoted to basic and applied research within the major fields of national interest. The Centre was established as an independent public organization in 1956, with the aim to "foster basic and applied scientific research, particularly in agriculture, industry, public health and other sectors of national economy". The Centre is the largest of all institutions affiliated with the Ministry of Scientific Research, Egypt, and employs about 60% of all scientists working in these institutions.



Research Output

Under the Ninth Research Plan (2010-2013) of NRC, projects are being undertaken under 14 research groups on: Renewable Energy; Water; Nanotechnology and Advanced Materials; Biotechnology; Agriculture; Waste management; Stem Cells; HCV; Obesity; Cancer; Diabetes; Human Genetics; Functional Food; and Polymers. During 2012, a total of 83 papers and articles, pertaining to: nanotechnology, textiles; medicine; earth sciences; environment; materials sciences; and livestock, were published by NRC scientists in national and international journals, as well as newspapers.

Scientific Achievements

Launch of H1N1 Vaccine: The National Research Centre (NRC), Egypt, announced the launch of the first Egyptian vaccine for the prevention of H1N1 and its supply



to local markets. The vaccine was prepared from two strains of the H1N1 virus, one found in hens and the other in ducks. The effectiveness of this vaccine is said to have exceeded that of any imported vaccine.

Research on Application of Nanotechnology for Electric Power Generation: Prof. Dr. Ahmed Abdel Hamid, Physical Chemistry Department of NRC, Egypt, revealed a new method for production of electric power and generation of pure hydrogen by adopting nanotechnology procedures using sea-water electrolysis. This new procedure has many useful industrial applications, such as treatment of organic industrial wastes, extraction of trace-minerals from salts, as well as sterilization of tap water, petrochemicals and pharmaceuticals.

Tanzania Industrial Research and Development Organization (TIRDO), Tanzania

Tanzania Industrial Research and Development Organization (TIRDO) is a multidisciplinary research and development organization established in 1979. With a vision to become a regional Centre of Excellence for conducting quality R&D and providing technological support to creating a internationally competitive industrial sector in Tanzania, TIRDO has a mandate to promote environment-friendly industrial development through a demand-driven research and development and provide quality technical services to the public and private sector of Tanzania.



During the year 2012, TIRDO launched its five-year Strategic Plan, which has eight key result areas:

- Development and efficient utilization of local materials in industrial processes;
- Accreditation of Labs;
- Improvement of safety and quality in product through HACCP and GMP;
- Development and promotion of environment-friendly production processes;
- Improvement of competence and sustainability in human resource management;
- Efficient provision of technical services for industrial development and dissemination of technical knowledge;
- Adaptation of the local and foreign industrial techniques and technologies, and their preparation for transferring to the relevant sectors;
- Effective documentation and promotion of a system to access and disseminate results and information of applied research.

Ongoing Research Activities

- *Industrial Bioconversion of Selected Tanzanian Crops and Residues into Value Added Products using Biotechnology:* The research aims to develop and investigate biotechnological processes for the bioconversion of products and wastes from sisal, coffee, cassava and wood agro-industry in Tanzania into value-added products such

Human Resources

In 2012, TIRDO had a total of 74 staff members including: 27 scientists, 14 technicians and 33 support staff. Among the scientists, 5 PhD holders, 14 were Master's degree holders and 8 were Bachelor's degree holders. The academic qualification of the TIRDO personnel is being further enhanced as 4 staff members are doing Ph.D, 3 are engaged in Master's degree and 5 in Bachelor's degree. Moreover, as a part of the Staff Development Strategy, TIRDO staff attended various national and international trainings/ conferences/ workshops during 2012. TIRDO stood second in the category of R&D institutions, during the Darussalam International Trade Fair that took place in Tanzania, in July 2012.

- as ethanol, methane and enzymes.
- *Value Addition on Leather Solid Wastes to Produce Leather Boards:* The research is funded under the R&D funds from the Tanzanian Government and is being implemented in five regions of Tanzania. The research aims at adding value on leather wastes to produce different types of leather boards and transfer the technology to leather stakeholders and SMEs.
- *Research on 'Appropriate Solar Drying Technologies':* The research aimed at reducing post-harvest losses from Cassava and adding value to Cassava products. TIRDO has designed a prototype tunnel solar dryer which can dry Cassava flour for commercial use. The prototype dryer is at the trial run stage. So far, five trial runs have been conducted and the dryer production rate is 150 kg of Cassava flour per day.

Ongoing Projects

- *Product Quality Improvement and Establishment of Quality Certification System for Competitive Market Access:* The objective of the project is to improve the quality of products and establish quality certification system in areas of food, industrial chemistry, industrial pollution, and engineering materials and product testing using non-destructive testing techniques. During 2012, TIRDO concentrated mainly on capacity building through training, proficiency testing, and procurement of equipment and chemicals.
- *Utilization of ICT for Enhanced Business Export Support for Food SMEs through collaboration with Small and Medium Business Competitive Facility (SCF):* TIRDO supports food processing SMEs to apply ICT to enhance their businesses specifically in communication and marketing of their products. The project was carried out in five regions in Tanzania and a total of 75 SMEs were provided with websites and about 175 entrepreneurs were trained on ICT basics.

International Collaboration

Following are the outcomes of TIRDO's efforts for fostering international collaboration:

- Agreement with International Atomic Energy Agency (IAEA) for support to TIRDO on accreditation of Non-Destructive Testing (NDT) laboratory;
- Discussions on reaching an agreement with the Japanese International Cooperation Agency (JICA) on to support accreditation of TIRDO laboratories;
- Memorandum of Understanding with German Biomass Research Centre.

Industrial Research and Consultancy Centre (IRCC), Sudan

The Industrial Research and Consultancy Centre (IRCC), Sudan, was established in 1965 with the assistance of the United Nations Industrial Development Organization (UNIDO). The Centre is affiliated with the Ministry of Science and Technology, Government of Sudan, while the Ministry of Finance fully covers the research and running expenses of the Centre. The mission of IRCC is to participate in the promotion and development of the industrial sector in Sudan, by conducting research and rendering consultancy, with an aim of raising the standard of industry and competitiveness of local products.



A few activities of the Centre are as follows:

In 2012, IRCC prepared a feasibility study for the establishment of a leather products complex in western Darfur State. The proposed project is targeting unemployed graduates and small-scale industry.



National and International Collaboration

- An MoU was signed with Salha Company for traditional gold mining. According to the agreement, IRCC will handle the technical training and maintenance of metal detectors.
- Also collaboration took place with Department of Bottled Water Industry to review bottled water plant layout and water source specifications.
- Preparations are underway at the Centre to hold a workshop on repair and maintenance of scientific equipment expected to be held during March-April 2013, under the patronage of ISESCO and COMSATS.
- COMSATS offered a 3-week training course on operations, maintenance and calibration of gas-chromatograph and atomic absorption to a technician from IRCC at ICCB Pakistan. An IRCC technician is currently pursuing the training, under this programme.

Participation in Events

During 2012, IRCC participated in the following events:

- The Parliamentary Round Table on Science Technology & Innovation (STI);
- 14th Annual Congress of the Scientific Association of Colleges of Pharmacies;
- The Arab World and the 2nd International Conference of the Colleges of Pharmacy and Health Sciences.

Embrapa Agrobiologia, Brazil

The Embrapa Agrobiologia, Brazil, has its origins in the research initiated by Dr. Johanna Döbereiner in 1951. Over the years, she gathered a dedicated team of students and young researchers from the Federal Rural University of Rio de Janeiro for research on Biological Nitrogen Fixation (BNF) at the Soils Laboratory of the National Centre for Agronomic Education and Research. The team gradually expanded and was adopted by Embrapa (the Research Corporation of Ministry of Agriculture), founded in 1973. The Centre is now recognized nationally and internationally for its excellence in research work related to BNF and



organic agriculture, emphasizes on research and development of sustainable agricultural systems with reduced global, regional and local environmental impacts.

Events Organized

- A training for agricultural technicians who work with family farmers in the mountainous regions;
- A training course on composting, in partnership with the Enterprise Technical Assistance and Rural Extension (Emater);
- A training course on technology of the ecological production of Xaxim;
- 2nd Workshop on Community Seed Banks;
- An event on the theme 'Agroecology and Organic Farming';
- A training course on composting.

Other Activities

- The Executive Director of Embrapa Agrobiologia, Eduardo Campello, represented the Brazilian Agricultural Research Corporation (Embrapa) at a seminar held as a precursor to the UN Conference on Sustainable Development, Rio+20 (June 21-22, 2012). The seminar was held on June 11, 2012, and aimed to discuss and anticipate gridlock and national and international uncertainties surrounding the Rio+20.
- On the occasion of Rio+20, Embrapa launched a campaign on 'Sustainable Agro', under the patronage of the Ministry of Agriculture, Livestock and Supply, to further promote the use of sustainable solutions developed by the research in the Brazilian agricultural sector. The campaign was meant to guide the participants of the Rio+20 and society in general, on sustainability in agriculture by highlighting the relevant solutions found by the Brazilian research organizations.



7

REPORTS OF SPECIAL ASSIGNMENTS

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- COMSATS Tele-Health Programme 91
- Islamic World Science Net (IWSN) 93

For the benefit of its member countries, COMSATS undertakes special assignments from time-to-time, such as conducting scientific studies, undertaking pilot projects or implementing educational programmes. Two of the projects of COMSATS have been successfully transformed into full-fledged institutions, i.e. COMSATS Institute of Information Technology (CIIT) and COMSATS Internet Services (CIS), while a third project on tele-health is being expanded to acquire institutional status. Another project that has become a regular assignment of COMSATS Secretariat is the maintenance of COMSATS-ISESCO web-portal: Islamic World Science Net (IWSN).

REPORTS OF SPECIAL ASSIGNMENTS

Board of Governors, COMSATS Institute of Information Technology (CIIT)

The Executive Director of COMSATS is the ex-officio Chairperson of the Board of Governors of COMSATS Institute of Information Technology (CIIT), which is a flagship project of COMSATS, as well as an important member of COMSATS' Network of International Centres of Excellence. This governing body meets from time-to-time to deliberate on the important matters pertaining to the organizational, technical, legal, administrative and financial issues of various campuses of the university. As the Chairperson, the Executive Director COMSATS steers the proceedings of the meetings to ensure effective decision-making and follow-up of the decisions of earlier meetings regarding property, funds, assets and resources; budgetary issues; initiation and approval of schemes; appointments and creations of new posts; and new projects and facilities. The membership of the Board includes Rector, Directors of all campuses and Registrar of CIIT; and important Pakistani government officials, including Secretary Ministry of Science and Technology; Secretary Ministry of Education; and Chairman of the Higher Education Commission (HEC) of Pakistan.

The 23rd meeting of the Board of Governors of CIIT was held under the Chairmanship of the Executive Director COMSATS on 26th December 2012, at its Islamabad Campus. In addition to the members of the Board belonging to CIIT, the meeting was also attended by external Board members, Mr. Anwar H. Rammal of Asiatic Publications Network Karachi and Mr. Najeeb Khawar Awan,





Additional Secretary, Ministry of Science and Technology, as well as Dr. Muhammad Yasin, Former Chairman Pakistan Telecommunication Authority. During the meeting, Dr. S. M. Junaid Zaidi, Rector CIIT, gave a detailed presentation on overall progress, future plans and achievements of CIIT.

The Board appreciated the Institute's achievements and its position as No. 1 institute of higher learning in the category of 'Computer Science and Information Technology' and among the top six universities of Pakistan in terms of research productivity, according to the 2012 ranking of the HEC. The Board also emphasized the need of research and development, industrial linkages, as well as innovation and commercialization.

Among the important decisions made during the meeting was the approval of creation of one position of 'Pro-rector' and a draft bill to rename the Institute as 'COMSATS University', which will be enacted after the approval of the Parliament of Pakistan.

A selection of CIIT activities out of a wide spectrum of its academic engagements is given under the 'An Overview of Major Activities and Achievements of COMSATS' Centres of Excellence'.

COMSATS Internet Services (CIS)

COMSATS Internet Services (CIS) is the pioneer Internet Service Provider (ISP) of Pakistan which was established by COMSATS in 1996. Currently, CIS has presence in 8 major cities of Pakistan: Islamabad, Lahore, Karachi, Faisalabad, Sialkot, Peshawar, Gilgit and Multan. The administrative and organizational matters of CIS are governed by a Board of Management, chaired by the Executive Director COMSATS.

RETIREMENT OF ADVISOR (CIS) COMSATS MR. PARVEZ AHMED BUTT

COMSATS Secretariat pays tribute to its former Advisor COMSATS Internet Services (CIS), Mr. Parvez Ahmed Butt, for his long-standing affiliation with COMSATS in different capacities. Mr. Butt has the honour of being the founder Executive Director of COMSATS (1994 - 1998). Subsequently, he remained affiliated with COMSATS in capacities of Projects Director CIS and Director General CIS. Having Masters degrees in Physics (Pakistan) and Economics (U.S.), Mr. Butt has held important positions in the government departments and institutions of Pakistan, most notable amongst these were: the Secretary, Ministry of Science and Technology and Ministry of Environment and Urban Affairs; and Managing Director, Pakistan Tourism Development Corporation. Mr. Parvez Ahmed Butt retired from his position as the Advisor (CIS) at COMSATS Secretariat, w.e.f. 1st January 2013.



Products and Services

CIS offers multiple media options to its customers including copper, fiber, wireless, and satellite. At present, CIS offers eight different branded services known as 'The Colors of CIS'. These are: Tornado™ (Wireless broadband); Freedom™ (Wi-Fi DSL); Hawaii™ (Domain, hosting, and VPS); Hurricane™ (On-demand broadband); Prism™ (Website development); Viacon™ (Video-conferencing); Comtrain™ (IT training courses); and ComClinic™ (Telemedicine).



The wireless coverage of CIS in Islamabad and Rawalpindi stretches as far as 50 kilometers to Hattar in North, and Rawat in South. CIS has wireless networks in Peshawar, Lahore, Faisalabad, Sialkot, Multan, and Karachi. CIS has setup more than 400 wireless links for different public and private organizations all over Pakistan. In 2012, bandwidth purchased by CIS grew by more than 70%, i.e. from 258 Mbps in 2011 to 441 Mbps in 2012. Sold bandwidth is almost twice this bandwidth because of sharing ratios.

CIS has different centers of expertise including a data center, a training center, and a video-conferencing center. The data center provides hosting services on both Windows and Linux platforms. Keeping its tradition of being the pioneer ISP, CIS became the first ISP to offer VPS (virtual private server) with local hosting in Pakistan in April 2012.

Clientele and Technical Expertise

CIS has more than 30,000 customers including individuals, government organizations, private enterprises, foreign missions, and educational institutions in Pakistan. CIS plans on offering cloud services not only at the infrastructure level but at the software level as well.

CIS has a team of developers that develops softwares and applications for web, based on Java and .Net. During 2012, the software team has developed websites for many public and private organizations as well as CIS' own website. The team has developed applications in Java and .Net on billing system, helpdesk system, purchasing system, and attendance system, etc. These applications will be put on COMSATS Cloud™ and offered to customers on rental basis, saving them costs of expensive software licenses.





Based on 17 years of its experience as an ISP, CIS is equipped to provide consultancy and training services to any member country of COMSATS that wishes to launch a new ISP or wants to launch any of the eight services offered by CIS.

Training

CIS launched new training centers in Faisalabad and Peshawar in 2012 in addition to the one in Islamabad. In these centres, CIS offers a wide range of training courses including Cisco® networking, Linux Administration, Windows® Administration, Web development, ITIL® V3 Foundation, Project Management Professional®, and Information Security. Moreover, CIS established two video conferencing centers in Islamabad and Peshawar in 2012. These centers are being used for both local and foreign video conferencing for meetings and trainings.

CIS Tele-health Activities

In 2012, CIS launched telemedicine under the brand name ComClinic™. ComClinic™ is a social service from CIS and its first telemedicine clinic is being established in Gokina village near Pir Sohawa in Islamabad, Pakistan. Patients in the village will be examined and given diagnosis remotely by doctors using video-conferencing and telemedicine equipment. More clinics are planned to be established in rural areas in 2013.

CIS Rising 2012

Annual Employee Event of CIS with the theme 'CIS Rising 2012' was conducted in Faisalabad, Pakistan, on December 12, 2012. Presentations were made by CEO CIS, GM (Admin) CIS Islamabad, GM CIS Faisalabad, and Advisor (Programmes) COMSATS. Cash awards and shields were given to profitable node heads and best employees of the year for different nodes and departments. CIS training center in Faisalabad was also inaugurated on the event.

COMSATS Tele-Health Programme

COMSATS Tele-health Programme that started its journey in 2001 entered a new decade in 2012 with a resolve to continue the efforts to provide healthcare services to the remote areas of Pakistan using Information and Communication Technologies. COMSATS Tele-health programme progressed with a steady pace purely on self-financed basis.

Activities of Tele-health Centres

As a result of joint collaboration between COMSATS and Human Development Fund (HDF), tele-consultations continued to be carried out at COMSATS Tele-health Clinic at Zhob, Pakistan. The total number of consultations carried out, since the clinic commenced its operations in September 2011, has reached 100. In addition to





Dermatology and Gastroenterology, a new speciality of Gynaecology has been introduced for the tele-consultations on the request forwarded by the local Health Coordinator at Zhob. As informed by the Coordinator, major beneficiaries of the tele-consultations are women and the new speciality would be of great benefit to this significant segment of the Zhob population.

The Zhob clinic was established as a result of an MoU between COMSATS and HDF. As per COMSATS' obligations stipulated in its International Agreement, COMSATS Secretariat continued to strive for more tele-health initiatives in other remote areas of Pakistan. In this regard, the feasibility of a new clinic in Mardan, Pakistan, is being explored.

Collaboration with eHealth Association of Pakistan

COMSATS provided support to eHealth Association of Pakistan in its 3rd International eHealth Conference, held in Lahore, Pakistan, in January 2012. COMSATS Secretariat facilitated the organization of the conference by providing space to setup the Conference Secretariat, as it was logistically convenient to manage the related affairs from Islamabad in comparison with Karachi, where eHAP Secretariat is based. COMSATS' Principal Medical Officer, in her capacity as the Vice-President of eHAP, also participated in the conference and arranged a workshop on tele-dermatology for the participants of the event.

By virtue of its institutional membership of eHAP, COMSATS was also represented in a workshop on (ICT in Healthcare) that was held in conjunction with the 8th Health Asia 2012, International Exhibition & Conferences, in Karachi, and a workshop of "National Consultative Commission on Information and Accountability" (COIA), supported by WHO, held in Islamabad.

Support to Tele-health Project of COMSATS Internet Services

COMSATS Internet Services (CIS) is to establish 19 tele-health clinics in remote

areas of Pakistan, under a project approved by the Ministry of Science and Technology, Government of Pakistan. COMSATS Secretariat provided full support to CIS in establishing its first Tele-health Clinic in Gokina village in the suburb of Islamabad. Based on its 10-year experience of tele-health activities, the e-Health team at COMSATS Secretariat has been fully involved in this project since its inception. The team has helped CIS in the following activities:

- Identification of suitable equipment, evaluation and review of prices quoted by various vendors, and purchase of the most appropriate equipment;
- Identification of suitable locations for remote Tele-health Clinics through visits to different areas;
- Identification of required human resource for the project and creation of job description, announcements and hiring of the human resource;
- Training of the staff hired for the project.



COMSATS Tele-health Programme Showcased at Pak-China Business Forum

COMSATS Tele-health Programme was showcased at Pak-China Business Forum, held on the sidelines of the 2nd Commission Meeting of COMSATS (April 2012). A team comprising officials from COMSATS Secretariat and CIS held a stall where information material was shared on COMSATS tele-health activities. A demonstration of tele-consultations with Zhob tele-health Clinic was also made for the delegates of the Commission Meeting.

Islamic World Science Net (IWSN)

Realizing the modern day's need of scientific researchers and scientific community to enhance networking and cooperation among Islamic Countries, COMSATS and ISESCO jointly initiated the Islamic World Science Net (IWSN) web-portal in 2006, which was launched in 2007 by COMSATS through the website www.icpsr.org.ma.

The IWSN, within seven years of its establishment, has successfully created a niche for itself as a useful source of information for the scientific community of the Islamic World. The web-portal has won recognition as a source of scientific data from Islamic countries. IWSN web-portal, contains S&T profiles of 57 OIC member countries, as well as information of 674 R&D institutions, and profiles of 772 universities and twenty four academies of sciences in Islamic countries. The S&T profiles comprise 58 scientific indicators under nine main categories, i.e. general, scientific, economic, educational, agricultural, industrial, telecommunication and indicators. In order to highlight the achievements of scientific community, web-portal is also hosting a



databank of CVs of 166 scientists, and a number of publications, including research references, science journals and research papers.

The most important feature of the web-portal, the 'Virtual Scientific Thematic Groups' (VSTGs), was launched in March 2009 for enhancing cooperation among Islamic Countries. Currently, IWSN is hosting thirteen VSTGs in various important areas, which are being administered by renowned scientists. Access to these Groups is open only to the registered group members in order to make the group activities more meaningful. Each group facilitates academic exchange between scientists, researchers and students by providing all modern web-based communication facilities including discussion forums, chat facility, document-sharing, news sharing, group e-mail, etc. At present, IWSN has over 3,000 members registered in these groups, as reflected in the following table:

Thematic Groups	Members
New and Renewable Energy	412
Science and Research Policy	282
Bio-sciences / Biotechnology and Genetic Engineering	396
Bioethics	108
Environment	400
Mathematics	135
Water Management	197
Nano-Technology	224
Science and Technology Park Management	170
ICTs in Science and Technology	175
Universities	287
Science Academies	245
Science Women	146
Total IWSN Members	3,177

During 2012, the web-portal was visited by 51,079 people from 114 countries/territories across the globe. The United States, India and the United Kingdom are among top ten countries from where the web-portal has been visited.

The screenshot displays the homepage of the Islamic World Science Net (IWSN). At the top, there is a banner with the ICPSP logo and the text 'ISESCO Center for Promotion of Scientific Research' and 'Centre de l'ISESCO pour la Promotion de la Recherche scientifique'. Below the banner, there is a navigation bar with links for 'HOME', 'ISESCO', 'ABOUT ICPSP', 'COMSATS', and 'CONTACT US'. A search bar is located on the left side. The main content area is divided into several sections: 'User Corner' with links for 'Already Member: Login', 'New? Signup', and 'Feedback'; 'Thematic Groups' listing various scientific fields; 'General Groups' listing 'Universities', 'Science Academies', and 'Science Women'; 'News Alerts' with recent events; 'OIC Countries Scientific Profile'; 'S&T Institutes in the Islamic World'; 'Academies of Sciences'; and 'Universities'. A 'Join IWSN groups...' link is at the bottom left.

8

PUBLICATIONS AND INFORMATION DISSEMINATION

- COMSATS Newsletter 96
- Publications and Information Material Prepared for the 2nd Commission Meeting 97
- COMSATS' Journal 'Science Vision' 98
- COMSATS-NAM S&T Centre Joint Publication, 'Nanotechnology in the Edge of Convergence' 99
- COMSATS-TWAS Collaboration to Publish Profiles of Research Institutions in Developing Countries 100
- COMSATS' Website and Other Information Material 100

Information dissemination and outreach is done by COMSATS through four tools: bi-monthly Newsletter, bi-annual journal, 'Science Vision', COMSATS' Series of S&T Publications and COMSATS' official website, apart from other promotional material.

PUBLICATIONS AND INFORMATION DISSEMINATION

COMSATS Newsletter

During the year 2012, six issues of COMSATS Newsletter were published that included five issues of Volume - 4 and one issue of the preceding volume. The bi-monthly newsletter of COMSATS has been serving as an effective means for information dissemination about the international programmes and activities of COMSATS' organizational bodies, and the scientific and technological potential available to the organization in the form of its Network of S&T Centres of Excellence. As per practice, the printed issues of COMSATS Newsletter were distributed, inter-alia, among COMSATS' focal points, affiliated Centres of Excellence, partner and other international organizations, R&D organizations, S&T institutions, universities and academies of sciences around the world. The most recent issues of the newsletter were distributed among the delegates of 2nd Commission meeting and 15th

Coordinating Council meeting, as well as dignitaries met by COMSATS' officials.

Over a period of time, new features have been added to the existing format of the newsletter. After publishing the profiles of nearly all the Centers of Excellence of COMSATS, a series was initiated with the 5th issue of 3rd volume (2011) that covers the profiles of Heads of Centres of Excellence. For the fourth Volume, the profiles of the following six Heads of Centres of Excellence have been covered:



COMSATS Newsletter (bi-monthly) Sector S&T, Islamabad - Pakistan
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Pakistan". This publication projected the different initiatives of the Government of Pakistan being undertaken by various institutions under the Ministry of Science and Technology. The official documents related to the Commission Meeting are listed below:

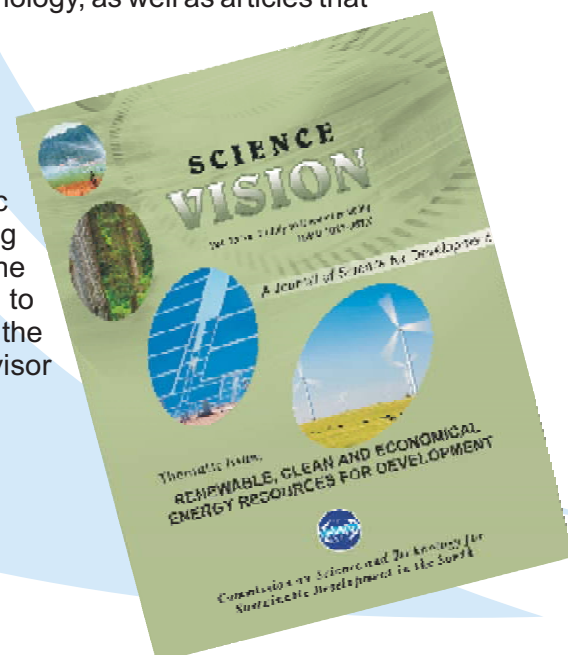
Sr #	Documents	Document numbers
1	Provisional Agenda and Programme	2-COMSATS-01
2	Working Paper	2-COMSATS-02
3	Overview of COMSATS' Activities and Future Plans: Executive Director's Report	2-COMSATS-03
4	Profile of COMSATS' Network of Int'l S&T COEs	2-COMSATS-04
5	Speeches	2-COMSATS-05
6	Rapporteur General's Report	2-COMSATS-06
7	Joint Resolution	2-COMSATS-07
8	Information Guide and S&T Panorama of Pakistan	2-COMSATS-08

Apart from the updates regularly posted on COMSATS' official website, COMSATS' regular promotional material was also printed with increased number of copies for wider distribution during the Meeting; these included COMSATS' Flyer; COMSATS' Brochure; current issue of COMSATS Newsletter; and COMSATS Annual Report 2011.

Special newspaper supplements were also published in two news-dailies of Pakistan during the course of the Meeting, including messages from the Chairperson COMSATS; Executive Director COMSATS; Chairpersons of the statutory bodies of COMSATS, and the Minister for Science and Technology, as well as articles that were prepared at COMSATS Secretariat.

COMSATS' Journal 'Science Vision'

As per practice, COMSATS Secretariat made correspondence with various sections of scientific community across the globe, inviting research/review papers for Science Vision in line with the journal's focus. This included requests to Heads of COMSATS' Centres of Excellence by the Executive Director COMSATS and the Advisor (Programmes) COMSATS.





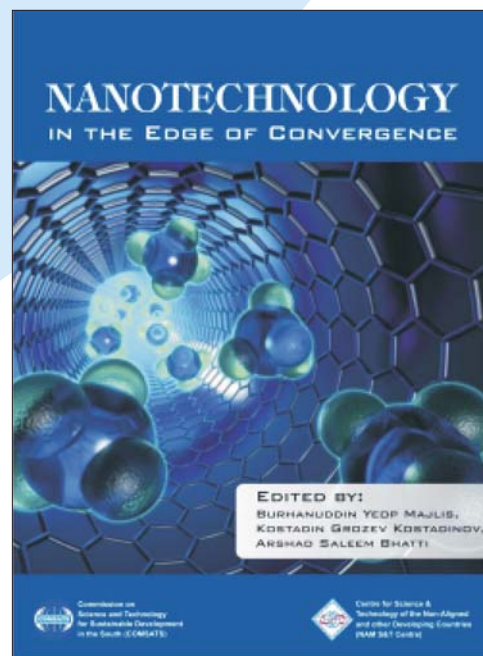
In July 2012, COMSATS published Volume 15(2), the 2nd thematic issue of the journal comprising eight research/review papers under the theme 'Renewable, Clean and Economical Energy Resources for Development'. In order to make up for the publication gap of past issues of the journal, it was felt appropriate to make especially intensive efforts and bring out combined bi-annual issues of the journal under Volumes 16 and 17. During his international visits and sideline meetings of the 2nd Commission Meeting, the Executive Director COMSATS personally requested high-level officials, Heads of scientific institutions, and other dignitaries to encourage their scientists and researchers to contribute scholarly papers for the journal. The other means used to make the call for papers included, letters, COMSATS bi-monthly Newsletter, and COMSATS' website. With a targeted approach, invitation letters to contribute content, in line with the focus of the journal, were sent to subject-experts; Heads of Centres of Excellence; and members of COMSATS' Technical Advisory Committee. In addition to this, a call for papers, through a bulk e-mail, was made to all the faculty members of CIIT (over two thousand in number) during 2013.

During 2012, the publications team at COMSATS Secretariat worked on Volumes 16 (year 2010) and 17 (year 2011). Volume 16 comprises ten papers received from scholars belonging to Pakistan and other Member States. Nine papers are being processed for Volume 17. Three papers were selected from one of the workshops organized by COMSATS in Bangladesh, titled 'Science Education for Sustainable Development', for inclusion in the combined issues of the journal.

COMSATS-NAM S&T Centre Joint Publication, 'Nanotechnology in the Edge of Convergence'

Extending its support and cooperation to the initiatives of international partner organizations, COMSATS is collaborating with the Centre for Science & Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre) in bringing out publication of the International Workshop on 'Nanotechnology in the Edge of Convergence'. The event was held in Malaysia, on November 24-27, 2011, in collaboration with the Institute of Microengineering and Nanoelectronics (IMEN), Malaysia, NAM S&T Centre and UNESCO.

During 2012, the contents of the book were compiled and edited by NAM S&T Centre and shared with COMSATS Secretariat for printing. The manuscript of the joint publication has been further edited from publisher's point-of-view, composed and re-formatted to give it a final book shape



prior to its printing in Islamabad.

The book comprises 19 papers and research articles presented in the workshop. The book is intended to advance the objectives of the event, i.e. highlighting recent advancements in the field of nanotechnology and their impact on socio-economic development. Recommendations made at the end of the event have also been made a part of the publication under the section, 'Bangi Recommendation'.

The book will be published during the first quarter of the year 2013.

COMSATS-TWAS Collaboration to Publish Profiles of Research Institutions in Developing Countries

After the successful joint COMSATS-TWAS publication of the profile of the International Center for Chemical and Biological Sciences (ICCBS) during 2011, the collaboration of the two organizations continues for the second publication of the series 'Excellence in Science', covering the Centro Internacional de Fisica (CIF), Colombia. The content prepared by TWAS, encompassing scientific, technical and human-resource aspects of the Centre, would be printed by COMSATS as per the standard specifications prescribed for the publication by TWAS.

The publications under the series are expected to highlight the scientific potential of COMSATS' Centres of Excellence as well as to identify the areas that need strengthening. The dissemination of profiles to scientific institutions all over the world are expected to promote South-South and North-South cooperation.

COMSATS' Website and Other Information Material

COMSATS' official website in 2012 was revamped as has been the practice for the recent years, while retaining its characteristics of regular uploading of current events.



COMSATS

Commission on Science and Technology for Sustainable Development in the South

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[Introduction](#) | [Headquarters/Secretariat](#) | [Member Countries](#) | [Network of Centres of Excellence](#) | [Programmes](#) | [News Archives](#)

COMSATS presents the most sincere felicitations to its Chairperson, H.E. John Dramani Mahama, on his victory as the President of the Republic of Ghana in 2012 Elections

SECOND COMMISSION MEETING OF COMSATS

Successful Conclusion of the 2nd Commission Meeting of COMSATS (April 16-17, 2012)

The 2nd Commission Meeting of COMSATS concluded on April 17, 2012, after having worked out broad policy guidelines for the future functioning of the Commission. The meeting was held at the level of Ministers appointed by the Heads of Member States. Around 53 country delegates from seventeen Member States, along with representatives of three international organizations; TWAS, ISESCO and COMSTECH, attended the Meeting. The countries represented in the meeting were: Bangladesh, China, Colombia, Egypt, Ghana, Iran, Jamaica, Jordan, Kazakhstan, Pakistan, Philippines, Sri Lanka, Sudan, Syria, Tanzania, Tunisia and Zimbabwe.

The Meeting was inaugurated on 16th April 2012 by the Prime Minister of Pakistan, Syed Yusuf Raza Gilani, in Islamabad. Other guests of honour at the inauguration were the Minister for Science and Technology (MoST), Mir Chanzar Khan Jamali; Federal Secretary MoST, Mr. Akhlaq Ahmad Tatar (Chairperson of COMSATS Consultative Committee); Executive Director COMSATS, Dr. Imtihan Elahi Qureshi, and the Chairperson of COMSATS Coordinating Council, Dr. Eduardo Posada Pérez ...[[Read more](#)]



[Speeches](#) | [Resolution](#) | [List of Participants](#) | [Video Clips](#) | [Picture Gallery](#) | [Media Coverage](#)

Apart from the extensive updating of the fixed content projected online, the website has been given a totally new look by redesigning the home-page and re-distributing the information under various tabs. Necessary revisions have also been made on the website of COMSATS' journal, 'Science Vision', and the web-portal of Islamic World Science Net (IWSN), which is administered by COMSATS.

COMSATS' flyer, 'COMSATS.... at a glance', has been revised for currency in November 2012 after the revisions were made earlier in February 2012, prior to the holding of the 2nd Commission Meeting (April 2012).

To keep the scientific community and COMSATS' stakeholders well-informed about the capacity-building events co-organized by COMSATS, in collaboration with its partner institutions, the Secretariat meticulously prepared pre-event information material and post-event reports of these events. These events were also given coverage through electronic and print media.





Annual Report

2012



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FINANCIAL AFFAIRS OF COMSATS

- Accounts and Audit 104
- Contributions of Member States 104

Since the inception of the organization, COMSATS Secretariat's Finance and Accounts Department has been managing its financial activities, including the grant by the Government of Pakistan for meeting the overhead expenditure of the Secretariat, and the Annual Membership Contributions received from the Governments of COMSATS' Member States.

FINANCIAL AFFAIRS OF COMSATS

Accounts and Audit

The accounts of COMSATS Secretariat are maintained as per the International Accounting & Financial Standards. The fiscal year of COMSATS Secretariat begins from July 1st and ends on June 30th of the succeeding year. After closing the accounts on 30th June every year, COMSATS gets its accounts audited by a reputed chartered accountancy firm. Each year, the audited accounts, along with Auditors' Report, are presented to COMSATS Management Committee for endorsement and COMSATS Coordinating Council for approval.

M/s Ernst & Young Ford Rhodes Sidat Hyder, Chartered Accountants, have been conducting the audit of accounts of COMSATS Secretariat for the last several years. The Auditors' Report and Audited Financial Statements of COMSATS Secretariat for the financial year July 1, 2010, to June 30, 2011, are given in this report.

Contributions of Member States

The voluntary contributions of Member States towards COMSATS are kept as a trust fund and is spent to support the technical activities and programmes, in the form of sponsorships, travel grants to the scientists, etc. related to the contributing country.

During the calendar year 2012, COMSATS received Annual Membership Contributions (AMC) from three Member States, China (US\$ 20,000), Ghana (US\$ 30,000), and Iran (US\$ 10,000). The Government of Pakistan, being the host country of COMSATS Secretariat, contributes PKR 40 million (~US\$ 400,000) per annum towards the running costs of COMSATS Secretariat based in Islamabad, Pakistan.



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INDEPENDENT AUDITORS' REPORT TO THE COORDINATING COUNCIL

We have audited the accompanying financial statements of the **Commission on Science and Technology for Sustainable Development in the South (COMSATS) - Secretariat** (the Secretariat), which comprise the balance sheet as at **30 June 2011**, and the income and expenditure account, cash flow statement and statement of changes in funds for the year then ended, and a summary of significant accounting policies and other explanatory notes.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Accounting and Financial Reporting Standard for Medium-Sized Entities (MSEs) issued by the Institute of Chartered Accountants of Pakistan and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance 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 auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Secretariat'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 Secretariat's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall 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.

EFM

A member firm of Ernst & Young Global Limited





Ernst & Young Ford Rhodes Sidat Hyder
Chartered Accountants

Basis of qualified opinion

The long term loan, (referred to in note 8 to the accompanying financial statements), amounting to Rs. 63 million due from a related party - COMSATS Internet Services (CIS) appears to be doubtful due to the unusually long repayment period and the weak financial position of CIS. However, no provision in this regard has been recorded by the management of the Secretariat in the accompanying financial statements.

Had this provision been made, the Secretariat's deficit for the year would have increased by Rs. 63 million and its total assets at the end of the year would have decreased by Rs. 63 million.

Qualified opinion

In our opinion, except for the effects of the matter described in the Basis for Qualified Opinion paragraph, the financial statements give a true and fair view of the financial position of the Secretariat as of **30 June 2011**, and of its deficit and its cash flows for the year then ended in accordance with the Accounting and Financial Reporting Standard for Medium-Sized Entities (MSEs) issued by the Institute of Chartered Accountants of Pakistan.

Chartered Accountants

Audit Engagement Partner's Name: Sajjad Hussain Gill

Date: 25 May 2012

Place: Islamabad

A member firm of Ernst & Young Global Limited



**COMMISSION ON SCIENCE AND TECHNOLOGY FOR SUSTAINABLE
DEVELOPMENT IN THE SOUTH (COMSATS) SECRETARIAT**

BALANCE SHEET AS AT JUNE 30, 2011

	Note	June 30, 2011	June 30, 2010
		----- Rupees -----	
ASSETS			
NON-CURRENT ASSETS			
Property and equipment	5	29,172,893	31,119,459
Investment property	6	1,012,082	1,065,350
Long-term investment	7	750,142	869,191
Long-term loan	8	62,565,363	32,000,000
Long-term security deposits		586,460	606,460
CURRENT ASSETS			
Advances and prepayments	9	2,378,885	2,398,864
Short-term investments	10	18,179,063	2,000,000
Current portion of long-term loan	8	600,000	-
Accrued interest on bank deposits		215,420	-
Other receivables	11	4,937,243	35,524,964
Cash and bank balances	12	22,578,443	33,799,883
		48,889,054	73,723,711
TOTAL ASSETS		142,975,994	139,384,171
FUNDS AND LIABILITIES			
FUNDS			
Technical Assistance Fund	13	32,000,000	32,000,000
Accumulated surplus		64,775,784	65,988,389
		96,775,784	97,988,389
NON-CURRENT LIABILITIES			
Deferred grants	14	30,840,576	31,264,045
Deferred liabilities	15	9,434,567	6,753,464
CURRENT LIABILITIES			
Advance rent		-	594,809
Creditors, accrued and other liabilities	16	5,925,067	2,783,464
		5,925,067	3,378,273
TOTAL FUNDS AND LIABILITIES		142,975,994	139,384,171
CONTINGENCIES AND COMMITMENTS	17		

The annexed notes from 1 to 24 form an integral part of these financial statements.

EFM



**Deputy Director
(Finance & Accounts)**



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, 2011**

	Note	June 30, 2011 ----- Rupees -----	June 30, 2010
INCOME			
Grant income	18	40,787,812	40,829,276
Other income	19	6,758,957	9,252,490
		<u>47,546,769</u>	<u>50,081,766</u>
EXPENDITURE			
Administrative expenses	20	48,734,761	36,641,245
Finance cost		24,613	16,323
		<u>48,759,374</u>	<u>36,657,568</u>
(DEFICIT) / SURPLUS FOR THE YEAR		<u>(1,212,605)</u>	<u>13,424,198</u>

The annexed notes from 1 to 24 form an integral part of these financial statements.

BPM.



Deputy Director
(Finance & Accounts)



Executive Director

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Dr. Imtinan Elahi Qureshi
Executive Director COMSATS

EDITORS

Mr. Irfan Hayee
Ms. Farhana Saleem

DESIGNED BY

Mr. Imran Chaudhry





Annual Report

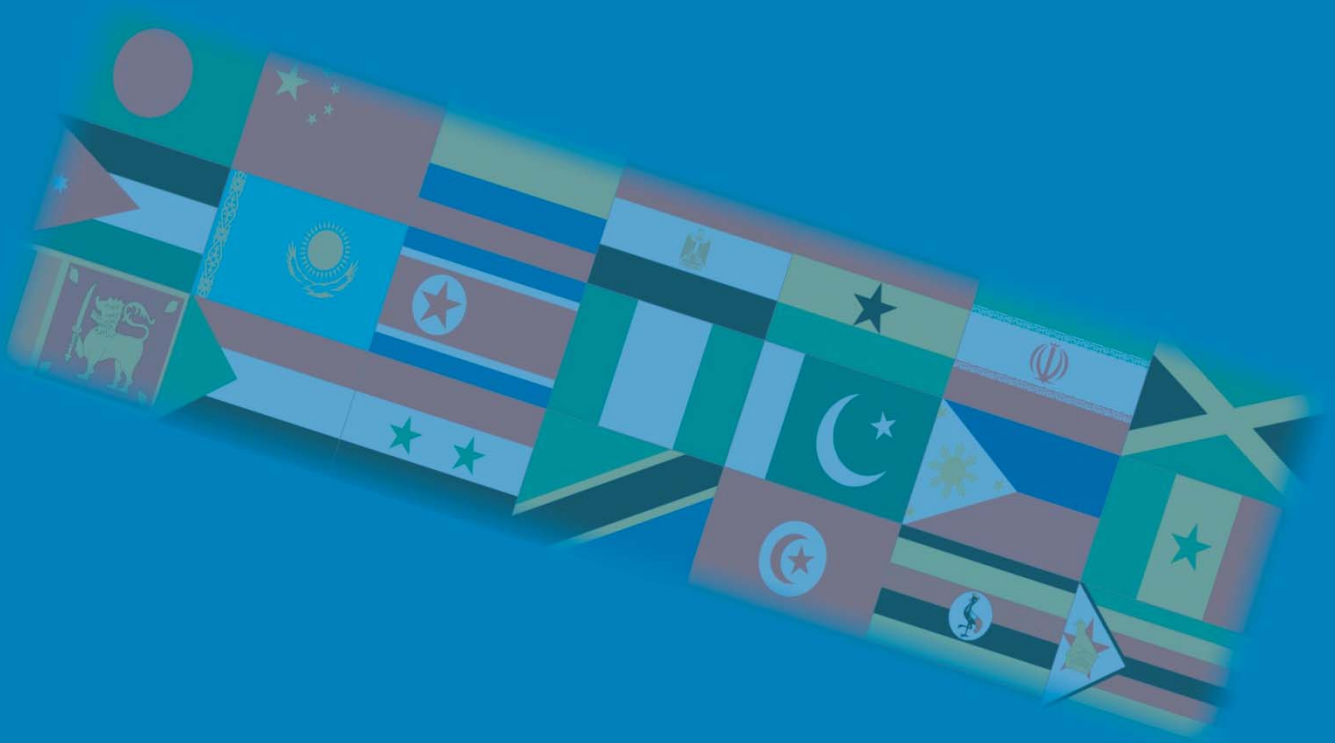
2012



LIST OF MEMBERS OF COMSATS' NETWORK OF INTERNATIONAL S&T CENTRES OF EXCELLENCE

- Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh
- COMSATS Institute of Information Technology (CIIT), Pakistan
- Council for Scientific and Industrial Research (CSIR), Ghana
- Higher Institute for Applied Science and Technology (HIAST), Syria
- Industrial Research and Consultancy Centre (IRCC), Sudan
- International Center for Chemical and Biological Sciences (ICCBS), Pakistan
- International Center for Climate & Environment Sciences (ICCES), China
- International Centre for Environmental and Nuclear Sciences (ICENS), Jamaica
- International Centre for Physics (CIF), Colombia
- Iranian Research Organization for Science and Technology (IROST), Iran
- National Mathematical Centre (NMC), Nigeria
- National Research Centre (NRC), Egypt
- Royal Scientific Society (RSS), Jordan
- Tanzania Industrial Research and Development Organization (TIRDO), Tanzania
- Embrapa Agrobiologia, Brazil
- The Biosphere Reserve – Beni Biology Station (BBS), Bolivia
- TÜBİTAK Marmara Research Center (MAM), Turkey
- University Cheikh Anta Diop (UCAD), Senegal

ANNUAL REPORT 2012



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