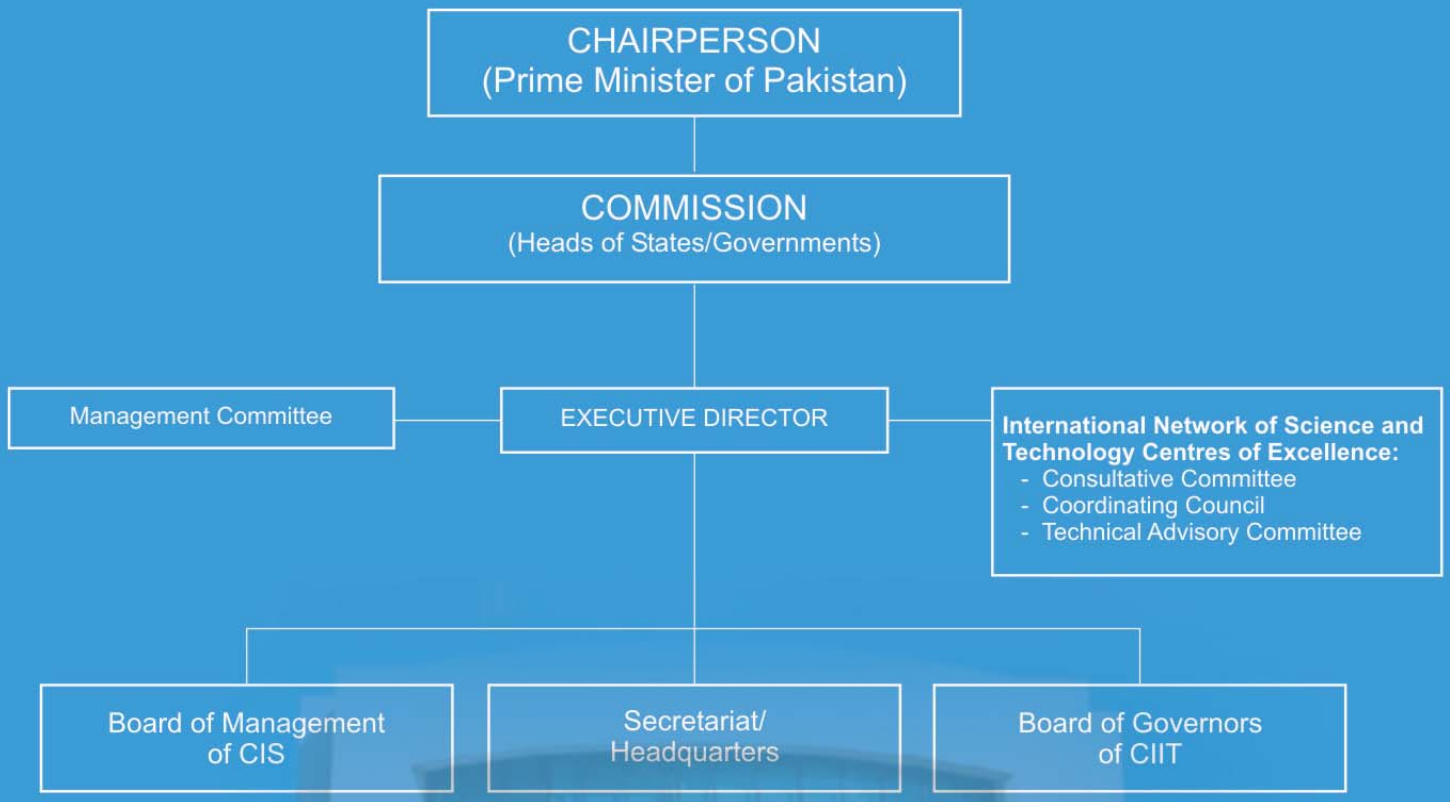


ANNUAL REPORT 2009

COMSATS

Commission on Science and Technology for Sustainable Development in the South

Organigram





March 2010

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 the sustainable socio-economic uplift of the developing countries through the application of science and technology. The current membership includes 21 countries located in three continents, Africa, Asia and Latin America, representing a population of around 35% of the world's total. These countries have diverse social, cultural, economic, political, educational, religious backgrounds and also differ greatly in their scientific and technological potentials. The permanent Secretariat of COMSATS is located in Islamabad, which is supported by a generous grant from the Government of Pakistan. The membership of COMSATS is open to all developing countries.

MISSION

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

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 resource allocation for research and development and to the integration of science and technology in the national and regional development plans;
- To support the establishment of a Network of International Science and Technology Centres for Sustainable Development in the South;
- To support other major initiatives designed to promote indigenous capacity 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 of the North and the South to supplement the financing of international scientific projects in the South;
- To provide leadership and support for major North-South and South-South cooperative schemes in education, training and research; and
- To support the relevant programmes and initiatives of major scientific organizations working for the development and promotion of science and technology in the South.

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
- United Republic of Tanzania
- Republic of Tunisia
- Republic of Uganda
- Republic of Zimbabwe

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FOREWORD

One of the most influential proponents of creating scientific culture in developing countries, Prof. Abdus Salam, maintained that the difference between the North and the South is simply that of "mastery and utilization of present day science and technology". The understanding that Science and Technology is the key to progress has finally become an undisputed paradigm, in most developing countries. However, there remains a disconnect between intentions and reality, sometimes under extraneous compulsions, that requires to be addressed through persistent efforts. The national political will is pivotal for the success of this mission, however, the role of international fora dedicated to facilitating the transition towards technology savvy societies is no less important. Fortunately, there are a significant number of regional and international bodies that can give a helping hand or provide a nudge in the right direction for putting science and technology at the core of national development agendas. COMSATS has been making sincere efforts for the same cause since 1994. With a membership of twenty one countries, it has endeavoured to promote S&T capacity building and to accord it a central role in national policies. The operational strategy of COMSATS has been to work in synergy with national and international bodies with similar mandates. The mechanism of generating South-South scientific cooperation through a Network of Centres of Excellence has been COMSATS' main forte for its programmes and activities.



The annual report for the year 2009 is a further step towards our renewed commitment to make COMSATS an effective force in the arena of international scientific cooperation. Cognizant of the fact that COMSATS has yet to realize its full potential, the priority at hand is to devise innovative strategies for remaining engaged in spite of serious financial constraints. The continued generous support from the Government of Pakistan and a steadfast assistance from the People's Republic of China has been extremely encouraging. The collage of technical programmes and administrative activities highlighted in the report would hopefully convey the picture of an organizational set-up that is moving steadily towards its

avowed objective – to make science and technology a vehicle of socio-economic progress in the countries of the South.

I am glad to acknowledge the hard work done by the editorial committee to bring out this document and sincerely thank all those in the Secretariat as well as in the Centres of Excellence of member countries who provided valuable inputs for its contents.

Dr. Imtinan Elahi Qureshi
Executive Director COMSATS

LETTER FROM THE CHAIRPERSON COORDINATING COUNCIL



The first meeting of COMSATS Coordinating Council took place in 1995. Much has changed since then, both for COMSATS and the intertwined worlds of science and development in which it operates. Yet the core elements of COMSATS have remained remarkably the same, i.e., to strengthen scientific capacity in the South by building centres of excellence that seek to bring about science-based advancement in the developing world.

The driving force behind the creation of COMSATS was Abdus Salam, the founder of both the International Centre for Theoretical Physics (ICTP) and the Academy of Sciences for the Developing World (TWAS). I am privileged to have worked closely with Prof. Salam for more than two decades. So, on a personal level, it is indeed heart-warming to see that one of his most significant accomplishments – COMSATS – continues to thrive and prosper.

Owing to the dynamism of Abdus Salam, my organization, TWAS, has worked closely with COMSATS from the very beginning. Indeed, I fondly remember travelling with Salam in the late 1980s to make the case before foundations and multilateral funding agencies to support the creation of scientific centres of excellence across the developing world, which despite our best efforts fell short of Salam's expectations. Yet, thanks to the generosity of the Government of Pakistan, COMSATS came to be.

As detailed in the following annual report (the first to be produced by COMSATS), the organization's impact is rising on a number of fronts. COMSATS has become an important hub of information and communications technology. It successfully promotes interaction among its expanding Network of S&T Centres of Excellence, increasingly serves as a strong and effective voice for investments in science and technology, and sponsors a broad range of research and training programmes for scientists from its Member States.

But it would be a profound mistake to suggest that COMSATS can rest on its laurels. Indeed, much more needs to be done to secure adequate levels of core and programmatic funding to: build on the success that has been achieved in ICT development; expand the depth and range of COMSATS' research and training programmes; and convince governments that their countries' future well-being lies

in consistent investment in science and technology.

The need for scientific centres of excellence in the South is as great today as it was when COMSATS was established. The same is reflected in the activities outlined in this report as they not only provide a welcome overview of COMSATS' accomplishments but also represent it as a platform for moving ahead to achieve the goal that Salam forcefully articulated throughout his life to nurture scientific excellence in the developing world and to use it to build peaceful and prosperous societies.

Mohamed H.A. Hassan
Executive Director
The Academy of Sciences for the
Developing World (TWAS)

LETTER FROM THE CHAIRPERSON CONSULTATIVE COMMITTEE



I am pleased to note that COMSATS has adopted the practice of publishing an annual report highlighting its activities during the course of a calendar year. The present report covering the period January to December 2009 is very significant in view of a number of new developments. The request of COMSATS' administration to enhance the contribution of the Government of Pakistan was responded to most favourably with a 100% increase; the COMSATS Internet Services – a subsidiary of COMSATS – received a generous grant to construct its own building and to establish a Technology Park; the first Consultative Committee meeting was held in Abuja, Nigeria, and for the first time COMSATS Newsletter was launched to create greater awareness of COMSATS' activities and programmes. I had the privilege of chairing the first meeting of COMSATS Consultative Committee in which a renewed commitment was made to reinvigorate COMSATS as an effective forum for promoting South-South scientific cooperation. While conceding the limitations resulting from financial constraints, it was nevertheless realized that owing to the institutional framework and the infrastructure created by the host Government, COMSATS is a potent tool for generating scientific research activities beneficial to all cooperating Member States. The members of the Committee agreed to take steps aimed at generating political support for the organization, exploring funding opportunities and starting joint scientific projects based on technical and financial resource sharing. In my capacity as the focal point of the host country, I had made it very clear that the Government of Pakistan will always remain firm in its commitment to support COMSATS. It is a matter of great satisfaction that the Executive Director COMSATS and his team are fully aware of the significance of their mission and they have earnestly engaged themselves in achieving COMSATS' objectives.

M. Kashif Murtaza
Federal Secretary
Ministry of Science and Technology
Government of Pakistan
(Jan. to Dec. 2009)

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ACTIVITIES OF COMSATS' ORGANIZATIONAL BODIES

- 1st Consultative Committee Meeting and 12th Coordinating Council Meeting Organized in Abuja - Nigeria 02
- 2nd Commission Meeting: Efforts Made by COMSATS Secretariat 08
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The Consultative Committee comprises the national scientific Focal Points of COMSATS' member countries. The Committee, inter alia, coordinates matters relating to: formulation of general policy of the Network; upgradation of member countries' institutions so as to help them achieve full member status of the Network; sensitization of the Network towards the specific requirements of member countries; and fund raising for the Centres at national, regional and international levels.

The Coordinating Council comprises the heads of COMSATS' International S&T Centres of Excellence. The Council meets 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 Network, as well as makes rules for governing its own procedures.

1ST CONSULTATIVE COMMITTEE MEETING AND 12TH COORDINATING COUNCIL MEETING ORGANIZED IN ABUJA - NIGERIA

1st Consultative Committee Meeting

With the support of the Ministry of Science and Technology, Government of Pakistan, COMSATS co-organized the 1st meeting of the Consultative Committee with one of its Centres of Excellence, the National Mathematical Centre (NMC), based in Abuja, Nigeria. The meeting was held on 27th April 2009 at NMC, under the chairmanship of the Federal Secretary, Ministry of Science and Technology, Government of Pakistan, Mr. Muhammad Kashif Murtaza. The Committee comprises high-level government officials (Focal Points) of the Member States who are responsible for their respective governments' policies and financial matters pertaining to science and technology and play important role for the efficient functioning of the Centres of Excellence. Due to this reason, it was necessary that Consultative Committee should meet to foster the necessary political will for a more integrated cooperation between the Network members. This high-level meeting was

"…. The Forum will strive to create an environment that is conducive to science and technology development and thereby contributes to national well-being of member countries, which are congruent with the seven point agenda and vision 20:20:20 of the administration of President Umaru Musa Yar'Adua of Nigeria…."

Inaugural Speech by the Minister of Education Government of Federal Republic of Nigeria

"…This (congregation of eminent scientists and government representatives) is clearly a practical demonstration of the developing countries' determination of bringing about a sustainable socio- economic change by facilitating South-South and North-South cooperation in Science and Technology…."

Welcome Address of the Director General National Mathematical Centre (NMC), Nigeria



"…I must say that the use of S&T, as an equalizer of the North and the South, has been slow to come about. Within the South, new disparities are emerging, making it ever more necessary to offer helping hand to each other. The use of multilateral fora such as COMSATS is the best way to realize this task..."

Introductory Remarks by the E.D. COMSATS

"...Investment in science is vital for developing nations. Therefore, in order to achieve our quest for sustainable economic growth and development in the South, it is necessary that we aggressively and effectively promote excellence in science and technology among member countries of COMSATS..."

Message from the Minister for Science and Technology of Nigeria

held in concurrence with the 12th meeting of COMSATS' Coordinating Council. The two meetings were jointly inaugurated by the Minister of Education, Government of Nigeria, Dr. Sam O. Egwu.

Over a hundred participants attended the joint inauguration ceremony, which included, COMSATS' Focal Points, distinguished members of the Coordinating Council, as well as members of the scientist community in Nigeria. The meeting had representation from Egypt, Ghana, Iran, Jamaica, Nigeria, Pakistan, Senegal, Sri Lanka, Sudan, Tanzania, Uganda and Zimbabwe. This one-day meeting, deliberated a nine point agenda during two technical sessions. These included: review of the General Policy of the Network and recommendations for any improvements; upgradation of Member Countries' institutions through capacity building; strengthening the coordination between Focal Points and Centres of Excellence within Member States for facilitating the execution of programmes and activities of COMSATS; enhancing the role of Focal Points to address the financial issues faced by COMSATS; and suggestions on matters to be taken up in the 2nd Commission Meeting.

The major highlight of this meeting was the country statements/messages made by the members (or their representatives) of the Consultative Committee. These statements conveyed the stance of their respective governments on S&T-led sustainable development. While identifying their respective governments' priority areas of cooperation, recommendations were made for improving the general policy of the Network, building scientific capacities and developing means to strengthen synergies among COMSATS' Focal Points and Centres of Excellence.

Another important issue discussed during the Consultative Committee Meeting was the holding of the 2nd Commission Meeting in Islamabad during the year 2010. The Committee appreciated the efforts for convening the summit meeting made by COMSATS Secretariat with the support of the Government of Pakistan, especially its Ministry of Science and Technology. The Committee members endorsed Pakistan's proposal of holding the Commission Meeting and to sensitize the governments of the Member States for the participation at the highest possible level.







EGYPT – Prof. Maged M. Al-Sherbiny

"…Egypt values the role of COMSATS in promoting South-South S&T relationships through networking …. Our future efforts should not only develop the existing relationships, but also focus on joint programmes targeting poverty alleviation in our societies, where S&T plays a major role and our indigenous knowledge is being implemented for the benefit of our people…"

IRAN – Dr. Alireza Ghorbanali Allahyari

…The objectives of IROST are related to orienting the country towards the needs of the society and the world by focusing on the development of science and technology and its input on economic growth and social progress…

JAMAICA – Mr. Arnoldo K. Ventura

"…Jamaica stands ready to share its successes and experiences with other countries in the South, and COMSATS could become a platform for such activities ….COMSATS is ideally positioned to form a convenient bridge between the East and the West, as the centre of gravity of the world shifts towards the East…"

NIGERIA – Prof. Sam O. Ale

"….Federal Government of Nigeria is making efforts to place Nigeria in her rightful position in the world of advanced technology as a vehicle for the achievement of our vision 20:20:20..."

PAKISTAN – Mr. Muhammad Kashif Murtaza

"...Our vision is to: acquire world class capabilities in scientific & technological research; use S&T as an engine for economic development; improve quality and productivity in industrial processes; and absorb proven technologies to meet national needs…"

The Focal Points reiterated their commitment to assist COMSATS in pursuit of its mission and gave their assurance to provide all help and support to the Centres of Excellence and the Secretariat to strengthen the programmes and functions of Commission. The Focal Points appreciated the Secretariat's efforts to bring productive changes in the working of COMSATS and reaffirmed their strong affiliation to it in the future as well.

At the end of the Meeting, ten recommendations were made regarding agreement on holding the 2nd Commission Meeting in Islamabad; regular payment of annual membership contributions by the Member States; creation of an Endowment Fund; adding more Centres of Excellence to the Network; need of proactive role by the Focal Points (in COMSATS' programmes); designation of Liaison Officers by Member States; formulation of a technical advisory group for technical coordination and outreach of the Member States; finalization of COMSATS' Strategy Document; and holding the meetings of Consultative Committee at least once in a two-year time. During the subsequent months, COMSATS Secretariat arduously engaged itself in following up on these recommendations of the Committee, which is also reflected in various parts of this report.





SENEGAL – Dr. Ndiaga Mbaye

"...In Senegal, sustainable development means giving importance to quality: quality of life, quality of atmosphere, quality of food, quality of water..."

SRI LANKA – Mrs. M.B.A. Ekanayake

"… We intend to formulate and implement policies pertaining to the advancement of science and technology, including scientific research and development and transfer of technologies, to ensure the economic and social development of Sri Lankans…."

SUDAN – Dr. Ahmed Obeid Hassan

"…In view of the situational diagnosis MoST-Sudan aims at: encouraging the establishment of technology incubators and science parks; ensuring adequate infrastructure for S&T development in particular scientific equipments & laboratories, and promoting S&T education linked with development issues ..."

TANZANIA – Dr. Matheo L. Raphael

"…The member countries need to play a greater role to facilitate COMSATS' programmes in collaboration with the Centres of Excellence and to identify special requirements of the country on S&T…"

UGANDA – Mr. Bashir R. Kagere

"….The Government of Uganda recognizes the critical role science and technology plays in fostering sustainable socio-economic growth and transformation of Uganda ...Uganda alone cannot advance in S&T without collaborating with its scientific peers, especially in the era of globalization that requires international and strategic partnerships…."

ZIMBABWE – Prof. L.R. Ndlovu

".....The biggest need is for re-building the skills base of the country. We note with appreciation, the availability of scholarships from COMSATS and we would welcome other opportunities to speedily increase our skills base. Short- and long-term loans to experienced S&T personnel at professorial or equivalent status would assist our universities to quickly rebuild post-graduate training and re-establish research cultures that have dwindled. We would also welcome collaborative research activities, especially those that address issues of poverty alleviation and sustainable economic growth…."

12th Coordinating Council Meeting

The meeting of COMSATS' Coordinating Council was held on 28th & 29th April 2009 in Abuja, Nigeria, subsequent to the one-day meeting of the Consultative Committee. The Council meets every year to deliberate on the programmes and projects of COMSATS' Network of International S&T Centres of Excellence and takes key decisions on important administrative and financial matters, in order to steer the fulfillment of COMSATS' commitment to science-led sustainable development. The Council comprises heads (or their representatives) of the members of COMSATS Network, which are R&D institutions from various developing countries having international repute.

The Executive Director COMSATS, as the Secretary of the Council, requested Prof. Sam O. Ale, Director General, National Mathematical Centre of Nigeria, to chair the technical sessions in view of the absence of Prof. M. H. A. Hassan, who is the Chairman of the Council and the Executive Director of the Academy of Sciences for the Developing World (TWAS). The two-day meeting comprised four technical sessions. The representative from National Research Centre of Egypt, Prof. Osama El Shabrawy, also chaired one of the sessions. Heads or representatives of eight Centres of Excellence, out of a total of sixteen, participated in the meeting. The participating Centres included: National Research Centre (NRC), Egypt; International Centre for Material Sciences and Technology (ICMST), Ghana; Iranian Research Organization for Science and Technology (IROST), Iran; International Centre for Environmental and Nuclear Sciences (ICENS), Jamaica; National Mathematical Centre (NMC), Nigeria; International Center for Chemical and Biological Sciences (ICCBS), Pakistan; COMSATS Institute of Information Technology (CIIT), Pakistan; Industrial Research and Consultancy Centre (IRCC), Sudan; and Tanzania Industrial Research and

Development Organization (TIRDO), Tanzania.

The agenda items of the meeting included: presentations of technical reports of the Centres; updates on proposed future strategy of COMSATS; review of the composition of COMSATS' Management Committee and its terms of reference; reconstitution of the Technical Advisory Committee (TAC); and matters to be taken up in the 2nd Commission Meeting. The Council also made valuable suggestions for the COMSATS' Strategy Document for a period of next five years. It resulted in revitalized pledge of the Centres of Excellence for a meaningful collaboration and a call for expediting the scientific cooperation among the members of COMSATS' Network.



Approving the minutes of its 11th meeting, held in Beijing in June 2008, the Coordinating Council expressed its satisfaction over the follow-up actions taken by COMSATS Secretariat during the intervening period between the 11th and 12th meetings. The efforts of the new leadership of COMSATS Secretariat, for giving a greater thrust to COMSATS' programmes, were appreciated and a stronger support of the Network was deemed necessary in order to complement the Secretariat's efforts to convene the 2nd Commission Meeting. In this regard, the Executive Director COMSATS was advised by the Council to undertake visits to COMSATS' Member States on invitations from the Focal Points/Centres of Excellence to, inter alia, sensitize them about the Commission Meeting as well as make a first-hand assessment of the scientific capacities at the Centres to make the cooperation mechanism more effective.

Another key decision made by the Council was the formation of a new thematic group on the research and production of construction materials. The group comprises NRC-Egypt, ICMST-Ghana, IRCC-Sudan, TIRDO-Tanzania and Council for Works and Housing Research (CWHR)-Pakistan. ICMST-Ghana was declared the Lead Centre for this thematic group known as Construction Materials. It was also agreed that all members of this cluster will interact with one another through group e-mails and the Secretariat will be kept informed on any updates. The inputs of the Council members were also sought for the draft Strategy Document, based on which the document was to be finalized by December 2009. The details on



follow-up of the decisions regarding COMSATS' Management Committee and the Technical Advisory Committee are given in the following sections.



As usual, the main focus of the meeting was the presentations of scientific and technical activities of the centres and the progress of their various projects during the preceding year. This agenda item of COMSATS Coordinating Council meeting provides a unique opportunity to R&D institutions in Member States to: learn about each other's capacities; offer a helping hand where necessary; get inspiration from the success stories; and, in general, share avenues of cooperation present within the Network or from institutes world-wide. A group of Heads of COMSATS' Network members brought together at the forum of Coordinating Council to share their experiences and plans on yearly basis constitutes a South-South cooperation mechanism for which COMSATS is rightly appreciated by the scientific community of developing countries.





On conclusion of the meeting, Dr. Qureshi appreciated NMC for hosting COMSATS' two international meetings and particularly thanked Prof. Sam O. Ale for chairing the meeting. The 13th meeting of the Council has been scheduled for May 2009 and would be hosted by the Academy of Sciences for the Developing World (TWAS), Trieste, Italy.



The Commission is the highest forum of COMSATS, which is represented by the Heads of States/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.

2ND COMMISSION MEETING: EFFORTS MADE BY COMSATS SECRETARIAT



The Commission Meeting of COMSATS is the highest forum, which is envisaged to generate political support for COMSATS' programmes. The first Commission Meeting was held in 1994 that led to the establishment of COMSATS itself. The Meeting also endorsed the formation of a Network of International S&T Centres of Excellence that comprises renowned R&D institutions from various developing countries, affiliated with COMSATS as its resource pool of S&T-led development.

COMSATS Secretariat, while maintaining a close contact with its focal point in Pakistan, the Ministry of Science and Technology, has in the past proposed the convening of the 2nd Commission Meeting by its host government, the Government of Pakistan. Under the leadership of its new Executive Director, Dr. Imtinan Elahi Qureshi, who succeeded Dr. Hameed A. Khan in September 2008, the endeavours of COMSATS Secretariat reached a new vigour, leading to the revitalized support of the Government of Pakistan to COMSATS' activities and programmes, in general, and to the convening of the 2nd Commission Meeting, in particular.



In order to pursue the case for the organization of the 2nd Commission Meeting by the Government of Pakistan, Dr. Qureshi made a number of consultations and held several meetings with high-level government officials, including the Federal Minister and Federal Secretary of the Ministry of Science and Technology, Government of Pakistan,









Mr. Muhammad Azam Khan Swati and Mr. Muhammad Kashif Murtaza, respectively, as well as the Special Assistant to the Prime Minister of Pakistan on Social Sector, Ms. Shahnaz Wazir Ali. In this connection, the Ministry of Science and Technology sent a summary of recommendations to the Prime Minister of Pakistan on the request of COMSATS Secretariat in December 2008. During a high-level meeting, on February 23, 2009, the Prime Minister of the Islamic Republic of Pakistan, Mr. Syed Yousaf Raza Gilani, in his capacity as the Chairperson of COMSATS, received a briefing on the programmes of COMSATS in Pakistan and abroad, at the Prime Minister's Secretariat, Islamabad. Dr. Qureshi, highlighted the contributions of COMSATS as a dynamic organization advocating the role of S&T in national and regional development plans; as an advisory forum for strengthening R&D institutions in the developing countries and making them responsive to national needs; and as a facilitator of South-South cooperation in S&T through exchange visits of scientific personnel and capacity building programmes.

The Prime Minister, appreciating the organization's capacity to build international scientific collaborations among developing countries, enhanced the Government's grant to COMSATS Secretariat and directed the relevant ministries and departments of the government to extend help to COMSATS in fulfilling its international obligations and implementing national initiatives, the foremost being the convening of its summit meeting. In this regard, on March 3, 2009, the Prime Minister of Pakistan issued directives to form a Steering Committee to facilitate the organization of the 2nd Commission Meeting. Besides senior officials from Senate, National Assembly and representatives from various ministries and other government departments, the



Committee comprises the Minister for Science and Technology and the Special Assistant to the Prime Minister on Social Sector as the Chairman and Vice Chairperson of the Committee, respectively.

The first meeting of the Steering Committee was held on April 6, 2009 under the chairmanship of the Federal Minister for Science and Technology, in Islamabad. The objective of the meeting was to gauge the level of efforts required to hold the state-level meeting. The meeting of the Steering Committee led to the formation of 9 sub-committees to ensure smooth operations and fool-proof arrangements under various areas of the organizational activities, including administrative and financial matters; documentation and printing; protocol; security; logistics; media coverage; as well as healthcare. The meeting also laid down the institutional framework of these sub-committees that are headed by senior government officials, as well as the Executive Director COMSATS, who is heading the sub-committee for preparing the provisional substantive agenda of the Commission Meeting.



The Steering Committee also recommended that the Member States of COMSATS and its affiliated Network should be kept sensitized about the Commission Meeting. Hence, the matter was raised in the 12th Coordinating Council and the 1st Consultative Committee meetings of COMSATS held in Abuja, Nigeria, in April 2009. Also as a follow-up, the members of the Coordinating Council and the Consultative Committee were approached by COMSATS Secretariat through letters seeking their inputs for



the Meeting. All Focal Points in the 21 Member States were requested to send their feedback on the provisional agenda of the Commission Meeting and confirmation of their participation. During the following months, the sub-committees held their meetings to chalk out a well coordinated plan-of-action and make assessment of the budgetary requirements. These were later submitted to COMSATS and presented at the 2nd Steering Committee Meeting for evaluation in the form of reports.



The Steering Committee met for the second time on October 19, 2009, in Islamabad, to follow-up on the preparations of the Commission Meeting in the light of the decisions and recommendations of its first meeting. The Committee reviewed the ground work done by the sub-committees and deemed it satisfactory; however, while analyzing the prevalent security situation of the host country, Pakistan, the Committee decided to postpone the Commission Meeting until favourable conditions and adequate support from Member States is achieved.





The Technical Advisory Committee of COMSATS comprises internationally renowned subject-experts of science and technology. The membership of the Committee is approved by the Coordinating Council in consultation with the Academy of Sciences for the Developing World (TWAS).

TECHNICAL ADVISORY COMMITTEE (TAC) RECONSTITUTED AS APPROVED BY THE COORDINATING COUNCIL

New members have been included in the Technical Advisory Committee (TAC) of COMSATS. The induction came into effect in the light of the decisions taken in the 11th and 12th meetings of COMSATS Coordinating Council. During the 11th meeting of the Council held in China, in June 2008, the matter was presented by Dr. Hameed Ahmed Khan (Former Executive Director COMSATS), since the membership of the previous Technical Advisory Committee had expired at the end of 2007. In the light of the same, COMSATS Secretariat requested Chairperson Coordinating Council, Dr. M.H.A. Hassan, to review the issue of reconstitution of Technical Advisory Committee. It was then suggested by one of the members of the Council, Dr. S.M. Junaid Zaidi (CIIT-Pakistan), that all the members of the Coordinating Council should nominate and communicate a list of most relevant, dynamic, and available scientists/technologists to COMSATS Secretariat by mid-2008; the same would be short-listed by the Executive Director COMSATS in consultation with the Chairman Coordinating Council.



Later, the matter was taken up in the 12th Coordinating Council meeting in Nigeria, where extensive discussions took place on various aspects of the issue, including the proposed names of the new Committee members and the responsibilities assigned



to them. The present Executive Director COMSATS, Dr. I. E. Qureshi, informed the Council that it would be necessary to take prior consent of the proposed new members in order for them to be inducted as members of the Committee. In this regard, the Council authorized the Executive Director to seek consent of the selected five scholars out of the proposed list of ten, prepared in consultation with the Executive Director TWAS. These proposed members were: Dr. Jean-Pierre Revol of European Organization for Nuclear Research (CERN), Switzerland; Dr. Moctar Toure, Executive Secretary SPAAR, Senegal; Prof. Farida Habib Shah of Novel Plant Sdn Bhd and BioIT Technologies, Malaysia; Dr. Afsaneh Safavi of Sheraz University, Iran; and Prof. Lu Yongxiang, President Chinese Academy of Sciences, China.

As endorsed by the Coordinating Council, letters were written to these potential candidates. Consent had been received from four of these distinguished scholars. For the position of the fifth member, due to unavailability of Prof. Lu Yongxiang, the Deputy Director, Institute of Atmospheric Physics of Chinese Academy of Sciences, Prof. Zhu Jiang, was approached under the recommendation of TWAS, who accepted the invitation.

The list of the members of the reconstituted Technical Advisory Committee, which includes 2 ex-officio, 3 continuing and five newly inducted members, will be placed before the Coordinating Council for approval in its 13th meeting to be held in Italy, on May 12-13, 2010.

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 audit reports of COMSATS Secretariat and other projects; evaluates rules and regulations of COMSATS Secretariat; and deliberates upon any other management issue proposed by the Executive Director.

ADMINISTRATIVE AND FINANCIAL MATTERS TAKEN UP BY COMSATS MANAGEMENT COMMITTEE



COMSATS Board of Directors (presently COMSATS Management Committee) was constituted in accordance with a decision taken by the 2nd Coordinating Council meeting in 1997. The purpose of the Management Committee was to provide assistance to the Executive Director COMSATS for taking participatory policy decisions, framing rules and regulations pertaining to the establishment matters and managing the administrative and financial affairs of the organization more effectively. During the year 2009, three meetings of the Management Committee were held under the chairmanship of Executive Director COMSATS, Dr. Imtinan Elahi Qureshi.

The 27th meeting of the Management Committee was held on 7th February 2009. Besides deliberating on the administrative and financial matters and reviewing the activities and programmes of COMSATS, the Committee took stock of the preparations made by the Secretariat for the then upcoming meetings of the Coordinating Council and the Consultative Committee. Emphasis was also laid on making efforts for convening the Commission Meeting in 2010 in close coordination with the Ministry of Science and Technology, Government of Pakistan. Some of the important decisions made during the meeting called for taking appropriate steps to:

1. Motivate the COMSATS' member countries and Centres of Excellence, during the forthcoming Abuja meetings, to fully participate in the programmes and activities of COMSATS.

2. Persuade the Centres of Excellence to play their due role in imparting post-graduate studies to scientists/engineers from developing countries, in general, and those from COMSATS' Member States, in particular.

3. Approach the Government of Pakistan to enhance the annual grant of COMSATS Secretariat.

4. Include an agenda-item in the Abuja meetings to seek approval for revision in the composition and terms of reference of COMSATS Management Committee.

The matter of enhancement of the grant for COMSATS Secretariat was successfully pursued with the Prime Minister of Pakistan. In April 2009, the suggestions and recommendations of the Management Committee were communicated to the Coordinating Council, who among other decisions, recommended having representation of Member States in the Committee on rotation basis, and approved the revised composition and terms of reference of COMSATS Management Committee. These were:

Composition of the COMSATS Management Committee:

a. Chairperson: Executive Director COMSATS
b. Members:
- *i. Director General (International Affairs)*
- *Ii. Director General (CIS)*
- *iii. Rector (CIIT)*
- *iv. Director (A&E) – Secretary*
- *v. A reputed scientist – (co-opted member)*
- *vi. Any other expert – (co-opted member)*
- *vii. One representative of Member Countries (co-opted member)*

[Duration of Membership: Three (3) Years – for co-opted members]

Terms of Reference:

1. *To assist the Secretariat in the implementation of policy decisions taken by the Coordinating Council and other organs of COMSATS;*
2. *To recommend programmes and budget of COMSATS;*
3. *To monitor financial activities of COMSATS, consider and examine audit reports of*



COMSATS Secretariat and other projects;

4. *To evaluate rules and regulations of COMSATS Secretariat;*
5. *To deliberate upon any other management issue proposed by the Executive Director.*
6. *To carry out functions relevant to it and with the agreement of the Executive Director, with respect to COMSATS and its organs, in accordance with various rules and regulations.*
7. *Frequency of the Meetings: The Management Committee should meet at least twice a year. It would be advisable to hold one meeting in the first half and the other in the second half of the year.*

The approved composition and terms of reference were duly adopted by the Management Committee during its 28th meeting held on 28th September 2009. The Committee, inter alia, discussed the follow-up and implementation status of the decisions taken in the 1st meeting of the Steering Committee for the Organization of the Second Commission Meeting.

In connection with the inclusion of a representative from Member States in the Management Committee, the Government of People's Republic of China was requested by the Executive Director COMSATS to nominate one of its officials as a member of the Management Committee. The Chinese Ministry of Science and Technology appointed, Mr. Zhang Qi, the First Secretary, Science and Technology Section of the Embassy of the People's Republic of China (in Islamabad), who attended the 29th meeting of the Management Committee. The meeting that was especially held to discuss the budget of COMSATS Secretariat for the period 2009-10 also reviewed the current administrative and financial matters, such as revision in mileage allowance, grant of ad-hoc relief allowance for staff of CPS 1-15, COMSATS' medical attendance and treatment rules, as well as disposal and replacement of vehicles under official use, etc. The Committee also deliberated upon the financial needs of COMSATS' upcoming activities and collaborative events.



2

SCIENCE AND TECHNOLOGY EVENTS WITH COMSATS' SUPPORT

- First Meeting of the Coordinators of the Scientific Thematic Groups for Enhancing Cooperation among Islamic Countries 18
- National Seminar on 'Policies and Strategies for Successful Implementation of Employment Generating Programmes in Renewable Energies, Biotechnology, Agriculture, Environment and ICTs' 20
- COMSATS-COMSTECH National Meeting on Challenges for Socio-economic Development in Pakistan: Role of Science and Technology 23
- ISESCO-COMSATS International Seminar at HIAST, Syria 28
- COMSATS' Collaborative Activity with UNESCO and ISESCO in Nigeria 28
- COMSATS' Participation in PCST-ISESCO Workshop in Pakistan 29
- COMSATS' Participation in 4th Meeting of SAARC Technical Committee on Science and Technology 29
- COMSATS' Contribution to the 12th Sustainable Development Conference of SDPI 30

COMSATS from time to time organizes and sponsors national and international events of scientific importance pertinent to the needs of its member countries.

SCIENCE AND TECHNOLOGY EVENTS WITH COMSATS' SUPPORT

First Meeting of the Coordinators of the Scientific Thematic Groups for Enhancing Cooperation among Islamic Countries, Islamabad, Pakistan

The Commission on Science and Technology for Sustainable Development in the South (COMSATS) and the Islamic Educational, Scientific and Cultural Organization (ISESCO) jointly organized a 3-day international meeting of the "Coordinators of the Scientific Thematic Group for Enhancing Cooperation among Islamic Countries", from 10th to 12th March 2009.





The meeting was formally inaugurated by the Federal Minister of Science and Technology, Government of Pakistan, Dr. Muhammad Azam Khan Swati, who in his opening speech showed his confidence in the efforts made by ISESCO and COMSATS, for enhancing cooperation among Islamic countries. Executive Director COMSATS, Dr. Imtinan Elahi Qureshi and Director (Sciences) ISESCO, Dr. Faiq Billal, appreciated the coordinators of the thematic groups for voluntarily taking up this responsibility.



The meeting was intended to serve as the foundation for the establishment of the virtual 'Scientific Thematic Groups', initially in nine areas: New and Renewable Energy; Bio-sciences/Biotechnology and Genetic Engineering; Bioethics; Environment; Mathematics; Water Management; Nanotechnology; Science Academies; and ICTs in Science and Technology. These thematic groups have been created for the purpose of providing a permanent forum for researchers and scientists to interact with each other, share knowledge, address common concerns, as well as develop and organize realistic joint programmes for achieving excellence in scientific research that would result in science-led economic growth. The role of coordinators is to monitor knowledge-sharing and foster collaboration between the group members by conducting and facilitating discussion forums, chat sessions, information dissemination, etc.



The organizers of the meeting held training courses for the coordinators to familiarize them with the basic operations related to the thematic groups on the web-portal, Islamic World Science Net (http://www.icpsr.org.ma/). Furthermore, there were technical sessions comprising presentations by the coordinators related to their specific thematic groups and/or scientific fields. Scientists from Jordan, Egypt, Pakistan, and Malaysia participated as coordinators in the meeting.



The six Coordinators out of a total of thirteen that attended the meeting were: Mr. Tajammul Hussain, Director General (International Affairs), COMSATS; Dr. Bahar-ud-din Ali, Solar Energy Research Institute (SERI), Malaysia; Prof: A. Z. Elabidin Abdelsalam, Dean of Biotechnology, Misr University for Science and Technology (MUST), Egypt; Dr. Muhammad Khurshid, Deputy Secretary, Economic Affairs Division, Govt. of Pakistan, Pakistan; Dr. Saleem Asghar, Dean, Mathematics Department, COMSATS Institute of Information and Technology (CIIT), Pakistan; and Ms. Laila H. Abuhassan, Physics Department, University of Jordan, Jordan.





National Seminar on 'Policies and Strategies for Successful Implementation of Employment Generating Programmes in Renewable Energies, Biotechnology, Agriculture, Environment and ICTs'

COMSATS joined hands with the OIC Standing Committee on Scientific and Technological Cooperation (COMSTECH), to organize a two-day national seminar on 'Policies and Strategies for Successful Implementation of Employment Generating Programmes in Renewable Energies, Biotechnology, Agriculture, Environment and ICTs'. The two-day seminar was held at COMSTECH Secretariat, Islamabad, on August 11-12, 2009.



The seminar was inaugurated on 11th August 2009 by Dr. Ishfaq Ahmad, a leading Pakistani scientist and the Advisor on Science and Technology, Planning Commission of Pakistan, during a formal ceremony held at COMSTECH Secretariat. Prof. Dr. Atta-ur-Rahman, Coordinator General COMSTECH and Dr. I. E. Qureshi, Executive Director COMSATS, as well as other distinguished members of the scientific community were also present on the occasion.

The objectives of the seminar, inter alia, were to review existing national policies and strategies for employment generating programmes in targeted areas of the economy; to identify practicable policies and strategies in the developing countries' prevailing socio-economic circumstances for promoting employment generating programmes related to renewable energy, biotechnology, environment, IT and agriculture and; to identify specific recommendations that can ensure formulation of employment generating programmes.

This particular national seminar focused on the core issue of creating jobs for skilled and semi-skilled manpower, in the areas having potential for fast economic growth and future large-scale job openings in the context of Pakistan. As such, the goal was to explore suitable policies and strategies under the prevailing socio-economic circumstances for promoting employment generating programmes related to renewable energies, biotechnology, agriculture, environment and ICTs by realizing the large potential that exists prevalent in developing countries like





Pakistan and to create productive jobs in all areas of economy and for all levels of skills and education.

The two-day seminar comprised six technical sessions, each focusing on a specific scientific area, in addition to a common theme of 'Promotion of Employment Generation'. Each technical session was followed by a panel discussion. Twenty seven resource persons, predominantly scientists, industrialists, government representatives, policy-makers and scholars from renowned scientific institutions and/or organizations of Pakistan participated in the meeting. These resource persons actively participated and deliberated upon the best practices, policies and strategies to maximize the employment opportunities in the country, on a sustainable basis. A total of 36 institutions/organizations were collectively represented by the resource persons and the participants of the meeting.

The outcome of the seminar was a set of concrete proposals and recommendations from the subject experts for the best practices and technologies having the potential to uplift the socio-economic status of the country by creating large-scale employment opportunities for people of all skill levels. Some of the general recommendations of the meeting as given below are of interest to all COMSATS member countries:

- The role of government in the subject areas of the seminar should be strengthened through dialogues between policy-makers and politicians. Efforts should also be made to reduce the communication gap between local governments for effective coordination of national-level programmes and projects.

- Successful implementation of development initiatives, such as employment generating programmes, chiefly require a shift in thinking patterns, which can be brought by inculcating the willingness in people to change or bring change. It also requires a strong political will and capable leadership with a vision to promote 'conceptual economy'.

- An interdisciplinary mode of working should be adopted at all levels and









coordination/sharing/networking mechanism must be improved. Employment generating programmes should be developed through an integration of various stakeholder, including policy-makers, members from academia and R&D circles, industries and private sector.

- Clusters of manpower and industry should be established, which should also involve people from the academia.
- The methodology of 'action-oriented research' should be promoted that leads to developmental projects having an integrated feature of employment generation for masses.
- Government agencies and academia should initiate the process of gathering sector-wise data and information related to availability of skilled and semi-skilled human resources that should be upgraded periodically for an improved and effective policy-making and planning.






- Efforts should be made to enhance the intellectual capacities of the policy-makers through trainings and networking with the think-tanks. Emphasis should be laid on local resource development and conservation.
- Innovative entrepreneurship must be encouraged. Entrepreneurs must be encouraged to get involved in the development process and the concept of 'clustering' should be promoted. A shift in focus must be made from 'produce' to 'products'. The four parameters that must be taken into consideration are: quality, cost, innovation and speed.



- Local manpower should be involved in the setting up of industries. Feasibility reports should be made and provided at-a-cost basis to the respective entrepreneurs.
- Reliance should not totally be on government support; initiatives must be taken independently by private sector.

COMSATS-COMSTECH National Meeting on Challenges for Socio-economic Development in Pakistan: Role of Science and Technology

COMSATS organized a national meeting on "Challenges for Socio-economic Development in Pakistan: Role of Science and Technology" in collaboration with the OIC Standing Committee on Scientific and Technological Cooperation (COMSTECH) and the Higher Education Commission (HEC) of Pakistan, from 26th to 28th October 2009, in Islamabad.



The objectives of this meeting were to: (a) enable the educated youth of Pakistan to express their opinion on the priority socio-economic challenges of Pakistan; (b) elicit their views on the practicable S&T-based solutions of the identified challenges; (c) provide a forum to the young participants of the meeting for continuing their interaction to evolve further ideas on the subject of the meeting; and (d) interject the opinion of the resource persons into the debate, in order to enrich the outcome of the meeting with the knowledge and experience of the resource persons.



Although the meeting was Pakistan-specific and youth-centric, the issues debated were of relevance to other developing countries, specifically the COMSATS' Member States. The young participants chosen were students, researchers, educationists and doctors of post-graduate level who represent a significant proportion of Pakistan's society and are to shoulder the responsibility of shaping the future socio-economic landscape of Pakistan. The meeting provided the young participants with an opportunity to deliberate on the socio-economic challenges of Pakistan as a developing country.

The national meeting was inaugurated on October 26, 2009, at COMSTECH Secretariat, Islamabad. Chairing the opening session, the Executive Director COMSATS, Dr. Imtinan Elahi Qureshi, deemed self-reliance in science and technology necessary for a substantial socio-economic development of Pakistan. He urged the young participants to remain committed to the country's development. Advisor Science COMSTECH, Dr.





Anwar Nasim, and Advisor (International Affairs) COMSATS, Dr. Hasibullah, highlighted the importance of the meeting in their Welcome Remarks and Introductory Speech, respectively.

The group of participants of the meeting comprised 25 young discussants and 12 eminent subject-experts. The six key subjects chosen for the technical sessions were education, health, ICTs, economy and S&T issues, agriculture and environment, and energy. A total of 25 presentations were made by the young participants in six technical sessions. The subject-experts gave keynote addresses in the beginning of the sessions. Each technical session had about one-and-a-half hour for discussions and brain-storming.



The highlights of the meeting included inspirational talks by three reputed Pakistani scientists, Prof. Dr. Atta-ur-Rahman, Dr. Samar Mubarakmand and Dr. N. M. Butt. These guest speakers were hopeful of meeting the challenges currently being faced by Pakistan through a proper utilization of its S&T capacities and advised the youth to let integrity, hardwork and innovation be the guiding principles in their lives and careers. The need for indigenization of technical resources was also elucidated.



…….. I must also appreciate Dr. Anwar Nasim and Dr. Hasibullah who during the meeting gave us maximum opportunities to express ourselves. Despite the fact that they themselves did have enormous knowledge about the subject being discussed but they still gave maximum opportunity to the youth to express themselves ……..

Muhammad Iqbal
Small and Medium Enterprise Development Authority, Quetta

The meeting resulted in identification of major hurdles impeding Pakistan's development that included: ineffective educational system; poor S&T infrastructure, lack of health amenities, inadequate farm machinery and usage of redundant technologies and processes in the fields of agriculture and environmental management; as well as the ongoing energy crisis and uncertain security situation. During their presentations, the participants also came up with viable S&T-based solutions regarding educational reforms, improved policy-planning and good governance to overcome these challenges. The following observations

…….. I would like to say that this National meeting was successful in providing a forum to discuss the socio-economic challenges faced by Pakistan and their solutions in the context of science and technology. Being a policy researcher, I learned a lot during this activity by sharing new ideas with policy-makers and several young scholars from different provinces of Pakistan ……..

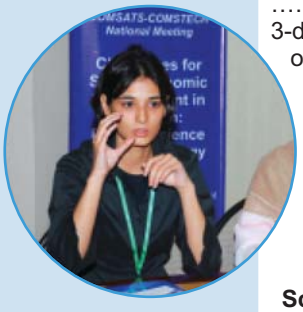
Wahid Bux Mangrio
Mehran University of Engineering & Technology, Jamshoro





and recommendations were made:

- Pakistan's socio-economic fabric is being seriously eroded due to the crisis-level challenges related to education, health, agriculture, energy and environment, etc. These challenges are badly restricting Pakistan to come out of the abyss of poverty, hunger, ignorance, backwardness, extremism and law and order deterioration. Science and technology can play a crucial and effective role in eliminating or reducing these problems.



…….. It was positive to see a complete 3-day event focusing more on the ideas of the youth. The conference not only provided me a platform to express my ideas but also gave me an opportunity to listen to the views of many others from across the country ……..

Samar Min Allah
SCEE, National University of Science and Technology, Islamabad



…….. Overall I gained a lot from this meeting even in my own area, the exploitation of new plant species for biofuel production as discussed by Dr. Atta-ur-Rahman, and the use of plants for production of alternative energy resources, i.e., through Dye Sensitized Solar Cells (DSSC) ……..

Hina Fazal
Pakistan Council of Scientific and Industrial Research, Peshawar

- The main technologies which can be useful for the identified socio-economic challenges are biotechnology, hydrology, mining engineering, electrical and electronic engineering, civil engineering, medicinal and chemical process engineering, alternative energy technologies, nanotechnology and ICTs. Result-oriented applied research and development is necessary for this purpose. Adaptation and assimilation, rather than only basic research, will be more profitable for Pakistan under the present circumstances.

- Institutional capacity-building and human resource development for identified skill-development in targeted fields of interest should be given priority.

- Educational reforms, eliminating class-system in schools and enriching curricula with science teaching at primary and secondary school level, preferring English as language of teaching should be adopted so that proper manpower should be produced to understand

…….. It was a marvelous and wonderful occasion when there were many young brains thinking about doing something special. Presence of subject experts was also beneficial otherwise it would have been very difficult for youngsters to discuss problems all alone since they still lack experience ……..
…….. Dr. Samar Mubarakmand and Dr. Atta-ur-Rahman both are an asset for Pakistan and they shared valuable information with all the young participants of the event. We feel lucky to have been able to interact with them ……..



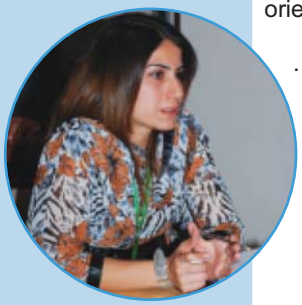
Muhammad Kashif Munir
KEMU Mayo Hospital, Lahore.



and apply science and technology to solve socio-economic problems being faced by Pakistan.

- Policy, planning and strategies for applying science and technology to solve identified socio-economic problems of Pakistan should be carefully made and all the relevant stakeholders should be involved in this process. Strong emphasis should be given to implementation and evaluation. Access of the common man to the proposed technologies for solving socio-economic problems should be made easier.

- Corruption is the major retarding factor for Pakistan's progress. Technologies like e-governance and e-management in public and private sector should be extensively applied.



…….. The need of the day is knowledge-oriented business approach.

……We should start with small knowledge-based businesses and then aim for bigger achievements. The mentality to resort to being an employee should be shifted towards trying to be an employer instead ……..

Shaima Akhlaq
Forman Christian College University, Lahore



…….. I believe that the young people of our nation have all the potential to lead the country out of the present-day crisis. COMSATS and COMSTECH rightly realized this and invited young participants from across the country on merit basis, and are now going in the right direction to establish a think-tank and a web-portal ……..

Muhammad Masood Azeem
University of Agriculture, Faisalabad

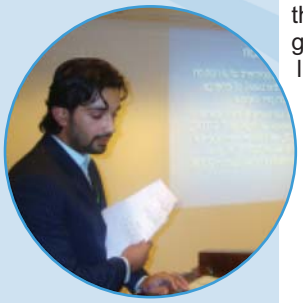
- Government of Pakistan should make serious efforts to promote university-industry linkages. Utilization of academic potential for industrial growth in the current era of globalization and world competitiveness will be in the best interest of Pakistan.

- The meeting unanimously agreed to continue the present debate through a think-tank which should be established as early as possible. More young students, researchers and thinkers from all walks of life should be included in the debate. A follow-up project should be made to create a web-portal dedicated to the work of the prospective think-tank. Many young participants volunteered to help COMSATS and COMSTECH for continuing the interaction and

connectivity among the present and future groups of the participants and to implement the programmes agreed for the think-tank.

- The participants showed strong desire that the findings and Recommendations of the meeting should be brought to the attention of policy and decision-makers of the country for their effective implementation.

The proceedings of the meeting will be disseminated to COMSATS' member countries also, since many of the issues discussed in the context of Pakistan are also relevant for other developing countries.



…….. One of the main considerations for think-tanks is their relationship with governments. Strong connections might limit the intellectual independence of researchers by politicizing their research priorities, while too much distance between a think-tank and the government may result in research irrelevant to policy-making ……..

Kaleem Anwar Mir
Global Change Impact Studies Centre, Islamabad



…….. The organizers should form a Youth Volunteer Force through out Pakistan to implement the field-based practicable ideas of the think-tank. Web-portal in this regard can play a very good role. They may motivate the Youth Volunteer Force for playing its role by giving them rewards and honours for their achievements for meeting the goals set for this think-tank ……..

Shabeh ul Hasson
Global Change Impact Studies Centre, Islamabad



…….. I would recommend that the think-tank should be formulated with a somewhat narrower but more pragmatic vision and objectives, by doing so the members would be able to jointly contribute to an endeavour that would result in a tangible impact ……..

Syed Safwan Khalid
COMSATS Institute of Information Technology, Islamabad



ISESCO-COMSATS International Seminar at HIAST, Syria

The Higher Institute for Applied Science and Technology (HIAST) organized a three-day international seminar on "Bridging Gaps for Industrial Development: Interface between Academia, Policy Making, and Industry", from 27th to 29th July 2009, in Damascus, Syria, under the aegis of the Islamic Educational, Scientific and Cultural Organization (ISESCO) and the Commission on Science and Technology for Sustainable Development in the South (COMSATS).



The purpose of the seminar was to create awareness and highlight the usefulness of industrial development in the developing economies. Besides the host country, Syria, participants from Egypt, Iran, Jordan, Lebanon, Pakistan and Sudan, took part in this event and presented papers on the subject covering its various aspects.

A strong participation from the Syrian industrial sector, ministries and educational institutions, apart from foreign delegates, played a vital role in the success of the seminar. The recommendations that were made provided useful guidelines for scientific research, suggested improvements in educational system and curricula and, took under consideration the avenues for transforming scientific research into industrial applications.

COMSATS' Collaborative Activity with UNESCO and ISESCO in Nigeria

The National Office for Technology Acquisition and Promotion (NOTAP) of Nigeria, under the aegis of the Islamic Educational, Scientific and Cultural Organization (ISESCO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) organized the 1st national workshop on "The Establishment of Science and Technology Parks for Development", from 13th to 16th July 2009 in Abuja, Nigeria. In connection with its cooperation programme with ISESCO, COMSATS sponsored the expenses for some local participants and resource persons in this workshop.

The workshop, inter alia, endeavoured to explore ways and means to: consolidate the understanding of S&T parks and their role in linking R&D to industry for socio-economic development; highlight the role of S&T parks in the creation and growth of companies committed to innovation, incubation and development process, and exchange experiences among participants in order to create a synergy between different stakeholders in designing programmes on science parks in Nigeria.

The honourable Minister for Science and Technology, Government of Nigeria, H.E. Dr. Alhassan Bako Zaku inaugurated the event, which was attended by various government agencies, academia, National Commission for UNESCO and many others.

COMSATS' Participation in PCST-ISESCO Workshop

COMSATS participated in a workshop jointly organized by the Pakistan Council for Science and Technology (PCST) and the Islamic Educational, Scientific and Cultural Organization (ISESCO). The workshop was held on 5-7 May 2009, in Islamabad, on the theme of 'S&T Statistics and Policy Making'. While representing COMSATS on the occasion, the Executive Director COMSATS, presented a paper on "Engagement in International Collaborations as a Measure of S&T Capacity". The key point of his paper was that the countries that are involved in international scientific collaborations are the ones with a relatively sound indigenous scientific base. Dr. Qureshi said that as a policy matter international engagements are desirable and can be facilitated by organizations such as COMSATS.



Delegates from Iran, Jordan, Kazakhstan, Oman, Saudi Arabia, Sudan, Turkey, in addition to various S&T/R&D organizations of Pakistan, participated in the workshop. The workshop concluded on a note to promote closer cooperation and information sharing among the participating states in developing S&T indicators, thus, facilitating better S&T policy-making.

COMSATS' Participation in 4th Meeting of SAARC Technical Committee on Science and Technology

Technical Committee on Science and Technology of the South Asian Association for Regional Cooperation (SAARC) held its 4th meeting on June 29-30, 2009, in Islamabad, Pakistan. Dr. Muhammad Azam Khan Swati, Federal Minister for Science and Technology, Government of Pakistan inaugurated the meeting that was hosted by the Government of Pakistan. Delegations from SAARC member countries, including Pakistan, Bangladesh and Sri Lanka, which are also the members of COMSATS, attended the Meeting.

The Executive Director COMSATS, participated in the meeting as a member of the Pakistani delegation. Besides taking into consideration important agenda items of the meeting, the Committee reviewed the status of implementation of the decisions taken in the 3rd Meeting of SAARC Technical Committee on Science and Technology, held in New Delhi, India, on 15 September 2008.

COMSATS' Contribution to the 12th Sustainable Development Conference of SDPI

In view of the agreement made between Sustainable Development Policy Institute (SDPI) and COMSATS through a recently signed MoU, COMSATS participated in the organization of a special session on the theme 'Renewable Energy for Sustainable Development in South Asia' in SDPI's annual conference, titled "Fostering Sustainable Development in South Asia: Responding to Challenges", held on December 21-23, 2009.

In this technical session, a panel of experts focused on the energy needs and requirements of the developing countries with special reference to the countries of South Asia and accordingly suggested solutions based on environment-friendly renewable energy technologies. The panel comprised four Pakistani speakers: Mr. Arif Alaudin, C.E.O Alternative Energies Development Board; Dr. Pervez Akhter, former D.G. Pakistan Council for Renewable Energy Technologies; Mr. Zafar Iqbal Zaidi, D.G. Pakistan Council for Renewable Energy Technologies; and Mr. Irfan Mehmood from Pakistan Atomic Energy Commission, in addition to three discussants: Mr. Irfan Yousaf, Deputy Director Alternative Energy Development Board; Mr. Mohammad Khurshid, Deputy Director Economic Affair Division of Ministry of Economic Affairs & Statistics; and Mr. Tajammul Hussain, Director General (I.A) COMSATS. Highlighting the role of renewable energy technologies, the speakers gave presentations to address issues such as: energy conservation; energy sustainability; environment; and Pakistan's Energy Policy. About 60 people attended and participated in the proceedings of the session. The presentations were followed by a Q&A session that rendered a conclusive set of recommendations. The panelists and audience also highlighted the need to make efforts for implementation of efficiency-improvement activities in energy-production sector and recommended that renewable energy should be given due consideration while making energy policies. The audience reached a general consensus that optimal and judicious use of renewable-energy technologies provides the key to sustainable development in developing countries.



Also, a separate session on 'National Sustainable Development Strategy' was chaired by Executive Director COMSATS. In that session, the officials of Ministry of Environment discussed the salient features of the 'Strategy Document' released by the Government of Pakistan on World Environment Day in June 2009.

Sponsorship/Travel Grants given by COMSATS during the year 2009

Contribution Made to		Event		Organizer	
Name	**Country**	**Title**	**Held in**	**Name**	**Country**
Dr. Arnoldo K. Ventura	Jamaica	1st meeting of the Consultative Committee of COMSATS, Abuja , April 27, 2009	Nigeria	NMC	Nigeria
				COMSATS	
Prof. Xianzu Gong Institute of Plasma Physics, Chinese Academy of Sciences	China	34th International Nathiagali Summer College on Physics & Contemporary Needs, Nathiagali , 22nd June to 4th July, 2009	Pakistan	NCP & PAEC	Pakistan
Prof. Xiang Gao Institute of Plasma Physics, Chinese Academy of Sciences	China	34th International Nathiagali Summer College on Physics & Contemporary Needs, Nathiagali , June 22 to July 4, 2009	Pakistan	NCP & PAEC	Pakistan
2 Experts and 4 Participants from Nigeria	Nigeria	National Workshop on Establishing a Pilot Project for Science Park Development, Nigeria, July 06 to 09, 2009	Nigeria	NOTAP	Nigeria
				COMSATS	Pakistan
Mr. Mohammad Ahsen Mirza, CIIT, Islamabad	Pakistan	An international seminar on "Bridging Gaps for Industrial Development-interface between Academia, Policy Making and Industry", Damascus, July 27-29, 2009	Syria	ISESCO	Morocco
				COMSATS	Pakistan
Mr. E. Hasan Zain Al Abden Omar	Sudan	An international seminar on "Bridging Gaps for Industrial Development-interface between Academia, Policy Making and Industry", Damascus, July 27-29, 2009	Syria	ISESCO	Morocco
				COMSATS	Pakistan
Eng. Khaleel Alnajjar	Jordan	An international seminar on "Bridging Gaps for Industrial Development-interface between Academia, Policy Making and Industry", Damascus, July 27-29, 2009	Syria	ISESCO	Morocco
				COMSATS	Pakistan
Eng. Najeeb Al-Atiyat	Jordan	An international seminar on "Bridging Gaps for Industrial Development-interface between Academia, Policy Making and Industry", Damascus, July 27-29, 2009	Syria	ISESCO	Morocco
				COMSATS	Pakistan
Shah Abdul Latif University, Khairpur, Sindh	Pakistan	1st National Conference of Microbiology, Shah Abdul Latif University, Khairpur, Sindh, November 21-22, 2009	Pakistan	Shah Abdul Latif University, Khairpur, Sindh	Pakistan
Mr. Muhammad Ayaz, National Agro meteorological Centre, Islamabad	Pakistan	International training course on "Agro-meteorology", Nanjing, November 16 to December 04, 2009	China	World Meteorological Organization, RTC, Nanjing	China

3

COLLABORATION WITH NATIONAL AND INTERNATIONAL ORGANIZATIONS

- COMSATS-ICGEB Synergy for Scientific Collaboration 34
- COMSATS-NAM S&T Centre Agreement on South-South Cooperation 35
- COMSATS-ISESCO Cooperation for Enhancement of IWSN 36
- COMSATS-ICCBS Cooperation for Chemical and Biological Sciences 37
- COMSATS-TUSDEC Strengthen Technological Cooperation 38
- COMSATS-SDPI: Mutual Assistance on Sustainable Development Issues 38

COMSATS has been endeavouring to expand the network of its national and international working partners for collaboration in science and technology for sustainable socio-economic development of the Members States and to enter into new programmes with its own Centres of Excellence.

COLLABORATION WITH NATIONAL AND INTERNATIONAL ORGANIZATIONS

COMSATS has been endeavouring to expand the network of its national and international working partners for collaboration in science and technology for sustainable socio-economic development of the Members States and to enter into new programmes with its own Centres of Excellence.

During the year 2009, memoranda of understanding were signed with: International Centre for Genetic Engineering Biotechnology (ICGEB); Technology Upgradation and Skill Development Company (TUSDEC); Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre); Sustainable Development Policy Institute (SDPI); and International Center for Chemical and Biological Sciences (ICCBS). COMSATS and ISESCO carried out a number of joint programmes in their common member countries, including international workshops/ seminars, development and maintenance of IWSN web portal and activation of thematic virtual groups.

COMSATS-ICGEB Synergy for Scientific Collaboration

COMSATS and the International Centre for Genetic Engineering Biotechnology (ICGEB), Trieste-Italy, renewed their commitment to initiate and strengthen collaboration and explore avenues for joint initiatives. The Memorandum of Understanding initially signed in June 2005, has been extended for an indefinite period with effect from 1st January 2009.



ICGEB, with its two components in Cape Town (South Africa) and New Delhi (India), provides scientific and educational environment of high international standards, and conducts basic and applied research in biotechnology and genetic engineering for the benefit of developing countries. It strengthens the research capability of its member countries through various collaborative academic and research programmes, as well as services for a comprehensive approach to promoting biotechnology internationally.



COMSATS and ICGEB have agreed to:

- Cooperate for promotion of science and technology in areas of mutual interest by undertaking joint capacity-building initiatives, human resource development and technology transfer programmes;
- Facilitate exchange of experts and training of scientists in S&T research;
- Cooperate on joint projects and programmes aimed at technology transfer, demonstration and sharing of technical know-how;
- Undertake collaborative work in accordance with mutually agreed plans and projects that may be developed jointly;
- Strive for mutual cooperation aimed at the enlargement of the constituency of both organizations.

COMSATS-NAM S&T Centre Agreement on South-South Cooperation

COMSATS and the Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre), signed a Memorandum of Understanding (MoU) on 2nd February 2009. The two inter-governmental organizations aim to promote South-South cooperation in science and technology for socio-economic uplift of the developing countries. The MoU establishes the scope for the two organizations to:

- Consult and cooperate with each other for the development of activities of common interest designed to foster and promote human resource development, capacity building in S&T and facilitate South-South cooperation;
- Jointly organize international events to facilitate exchange of information and expertise;
- Organize and implement training programmes for young scientists, and institute fellowship programmes;
- Jointly undertake R&D programmes and projects for transfer of technology, generation and dissemination of information, and to carry out case studies, as well as prepare state-of-the-art reports; and
- Facilitate knowledge building and sharing in specialized fields of mutual interest.

NAM S&T Centre is based in New Delhi (India) and has 44 developing countries as its members. NAM S&T Centre in collaboration with Universiti Putra Malaysia organized the international symposium on "Lightening Protection and Electro Magnetic Compatibility" from 21st to 24th July 2009. COMSATS sponsored the travel expenses of two scientists from COMSATS' two member countries (Pakistan and China).

COMSATS-ISESCO Cooperation for Enhancement of IWSN

The agreement, "Strengthening of the Islamic World Science Net (IWSN)", between COMSATS and the Islamic Educational, Scientific and Cultural Organization (ISESCO) was extended for the year 2009. The webportal, IWSN, was established in 2007 with the concerted efforts of the two organizations. Earlier this year, COMSATS and ISESCO jointly organized a 3-day international meeting of the "Coordinators of the Scientific Thematic Groups for Enhancing Cooperation among Islamic Countries", whereby virtual scientific thematic groups were launched to facilitate networking of scientists across the Islamic World for its socio-economic progress. Under the renewed agreement, the two organizations worked together to update and monitor the web-portal and thematic forums would be formulated in light of the recommendations made in the first meeting of the Coordinators of these thematic groups. COMSATS would provide the technical expertise for updating and maintaining the portal, while ISESCO would ensure the necessary financial contribution, besides providing the required content.

COMSATS-ICCBS Cooperation for Chemical and Biological Sciences

The Executive Director and Director General (I.A) visited COMSATS' Centre of Excellence, the International Center for Chemical and Biological Sciences (ICCBS). The 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 visit had a dual purpose as it served as the first leg of the Executive Director's visits to the Centres of Excellence as well as an opportunity to see the latest research facilities in the Center and to discuss the available opportunities for training that can be utilized by scientists in Member States. On this occasion, an MoU was signed to specify the modalities of training programmes and services offered to analyze samples using advanced analytical facilities. The areas of collaboration as defined in the MoU are:

- To enhance research capacity in chemical and biomedical sciences through the use of relevant high-tech equipment and the training to maintain such equipment in prime working condition;
- To provide services for the analysis of samples using the advanced analytical facilities available at ICCBS;
- To offer short series of lectures on specialized topics through personal visits or video-conferencing by ICCBS faculty.



The matters that came under discussion during elaborate discussions with the Director ICCBS, Dr. M. Iqbal Choudhary included: sponsorship for the trilateral project involving NRC-Egypt, NCR-Sudan and ICCBS-Pakistan; organization of first meeting of the thematic group on 'Natural Products'; equipment maintenance training for technicians; and lectures programme by ICCBS' scientists in interested Member States.

COMSATS-TUSDEC Strengthen Technological Cooperation

COMSATS signed an MoU with the Technology Upgradation and Skill Development Company (TUSDEC), based in Pakistan, for scientific collaboration. The MoU was signed in a formal ceremony held at COMSATS Secretariat on 21st January 2009. TUSDEC's mission is to upgrade technology and enhance skills of key and strategic industrial clusters, as well as to connect Pakistan to the global value-chain. COMSATS and TUSDEC intend to work together with an aim to coordinate their efforts and pool available multiple resources for helping the industry in Pakistan to enhance its capacity in industrial technologies and competitiveness.



The objectives of the MoU are to:

- Identify skill and technology gaps in targeted industrial clusters by conducting joint studies;
- Utilize Common Facility Training Centres (CFTCs) through mutual collaboration in selected industrial clusters;
- Create and provide a pool of local and expatriate experts/consultants in selected industrial sector;
- Develop industry-academia linkages for sustained economic growth and technological advancement; and
- Utilize each other's existing network, infrastructure and other facilities for achieving common goals.

COMSATS-SDPI: Mutual Assistance on Sustainable Development Issues

COMSATS and Sustainable Development Policy Institute (SDPI), Islamabad, have signed a Memorandum of Understanding (MoU), based on the common interests and focus on sustainable development. SDPI is a highly reputed non-governmental organization with a wide-spectrum of activities geared towards the representation of Pakistan as well as South-Asia as a whole, in the global sustainable-development community. It undertakes research programmes, policy advice and advocacy of

social developmental issues.



The agreement aims at strengthening institutional networking; enhancing organizational capacities and extending out-reach. Dr. Imtinan Elahi Qureshi, Executive Director COMSATS, and Dr. Abid Qaiyum Suleri, Executive Director SDPI, signed the MoU on behalf of their respective organizations in a ceremony that took place at COMSATS Secretariat on 15th December 2009. According to the MoU, the two organizations will collaborate in the areas of education, healthcare and population, food and agriculture, renewable energy, institutional capacity building, information and communication technologies, employment generation, environment and South-South cooperation. The collaboration, as agreed by the two organizations, includes:

- Exchange of information, knowledge and expertise;
- Assistance for educational and training opportunities;
- Holding of national and international events;
- Formulation of strategy and policy advice; and
- Support in media and public relations.

Both organizations will work within their respective mandates while conducting joint activities.



4

ACTIVITIES OF CENTRES OF EXCELLENCE

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A group of sixteen 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 COMSATS as its engine for S&T-led development, while following their own agendas of scientific research and development.

ACTIVITIES OF CENTRES OF EXCELLENCE

COMSATS Network of S&T Centres of Excellence that comprises sixteen internationally recognized R&D institutions from various developing countries, predominantly COMSATS' Member States, possess significant scientific expertise in diverse fields of science and technology. These Centres serve COMSATS as its resource pool for S&T-led development, while following their own agendas of scientific research and development. The focus and scope of the activities of these Centres vary significantly; however there is a common objective of building indigenous scientific capacities in their respective countries. Some of their activities having relevance with the COMSATS programmes are given in this section.

COMSATS Institute of Information Technology (CIIT), Pakistan

A high-tech national-level scientific event, TechnoMoot-2009, was organized by COMSATS Institute of Information Technology (CIIT), on May 11 & 12, 2009 at its campus in Abbottabad, Pakistan. This event, comprising seminars, symposia, student competitions and exhibitions, was a gathering of people from various fields of science and technology. TechnoMoot-2009 was inaugurated by Dr. Imtinan Elahi Qureshi, Executive Director COMSATS. The activities undertaken during the event were: Embedded Systems, Microcontrollers and Telecommunications exhibition and competition; Computational Complexities, Innovation & Solutions; Conference of Software Enterprises; Managing Innovations, Leadership, Entrepreneurship & Strategies; Vision Information & Communication Technology, and Science for Development.





The Department of Biosciences of CIIT Islamabad Campus is carrying out research on Mental Retardation, specifically Autosomal Recessive Non-syndromic Mental Retardation, at the Human Molecular Genetic Lab. The research focuses on the genetic mapping of candidate genes involved in Autosomal Recessive Non-syndromic Mental Retardation prevalent in various families of Pakistan. The Principal Investigator, Dr. Asif Mir, is collecting samples from a range of families in different areas of Pakistan for carrying out the benchmark work, in which he is genotyping the samples with micro satellite markers and trying to identify the locus or gene involved in the disorder in a specific family.

UNICEF entrusted CIIT Abbottabad with a project namely: 'Water Quality Improvement and Promotion of Hygiene (WAQIPH)'. Nearly Rs. 5 million has been granted for this project, which is expected to be completed within three months of its commencement. CIIT Abbottabad bid for this project, which would undertake water quality testing, sanitary inspection and gathering GPS-coordinates of 342 water supply schemes in Bagh and Poonch Districts of Azad Jammu and Kashmir (AJK). This project is being jointly undertaken by the Department of Chemistry, the Department of Environmental Sciences and the Department of Development Studies of CIIT Abbottabad Campus.

The 4th International Symposium on Quantum Optics was held on August 3 & 4, 2009 at the Centre for Quantum Physics of CIIT Islamabad Campus. It was jointly organized by the Centre of Quantum Physics and the National Centre for Physics under the joint patronage of CIIT, COMSTECH, HEC and Pakistan Academy of Sciences. This symposium was the fourth of the series, the first three of which were organized in January 2007, August 2007 and August 2008. The purpose of these symposia has been to create awareness about the recent developments in the field of quantum optics. This year seven international subject experts from USA, Hong Kong and China, in addition to 80 participants from different Pakistani universities and R&D institutions in quantum optics and related fields, participated in the symposium.

The Department of Biosciences of CIIT is working on a project: "Development of Tissue Culture Protocols and Methodology of Tea Plant (Camillea sinensis) for Micropropagation in Pakistan" in active collaboration with one of its industry partners. Prof. Dr. Asrar M. Khan, an eminent scientist working at CIIT has been involved with the private sector in the past for cultivation of tea in Pakistan. He has developed this

project in collaboration with a private sector enterprise for mass supply of tea saplings. The project is supported and funded by the Higher Education Commission (HEC) of Pakistan under the University–Industry Technology Support Programme (UITSP). Laboratory facilities have been established and tissue culturing of tea plants has already started. Once the technology is fully developed, it will be transferred to the industrial partners for mass propagation.

In its attempt to bolster innovation, every year CIIT holds the award – CIIT Medals for Innovation (CIMI). Instituted in 2006 to honour and acknowledge creativity in various academic fields, these medals are awarded to appreciate outstanding and original contributions of faculty members, staff and students of CIIT. CIMI awards were first announced by the Rector CIIT during the visit of the Nobel Laureate Physicist, Dr. Ivar Giaever to the institute in 2006. International Liaison Office (ILO) of CIIT acts as the Secretariat for these Awards. A Golden Medallion, a certificate and a cash award upto Rs. 100,000 were given to the awardees for their original contributions to innovation in the fields of Mathematics, Physics, Management Sciences, Electrical Engineering and Information Technology.

Embrapa Agrobiologia, Brazil

Embrapa Agrobiologia, in Rio de Janeiro, was chosen as one of the thirty most admired companies in major sectors of the economy of Brazil in 2009. The inference was made after a careful evaluation of the interviews of business owners, executives and economists carried out by the Daily Journal Commerce, Industry & Services (DCI). A survey was made whereby 4,448 people were interviewed from January to November 2009 and Embrapa was found to be most the commonly cited by consultants, accountants and auditors. Highlighting its competence and national and international programmes, Embrapa was referred to as a 'national pride' during the award ceremony held on November 30, 2009.

The Nutrient Cycling Studies Group at the Embrapa Agrobiologia completed a study on the emissions of fossil carbon dioxide (CO_2) and other greenhouse gases (GHGs) involved in the whole 'life-cycle' of bioethanol, from its production from sugarcane to its consumption as a fuel, under the Brazilian conditions. The Group studied the total amounts of: fossil fuel (principally diesel) utilized in the ploughing, harvesting and other field operations; energy used to produce fertilizers & pesticides and operate the machinery; as well as, the fuel used to transport

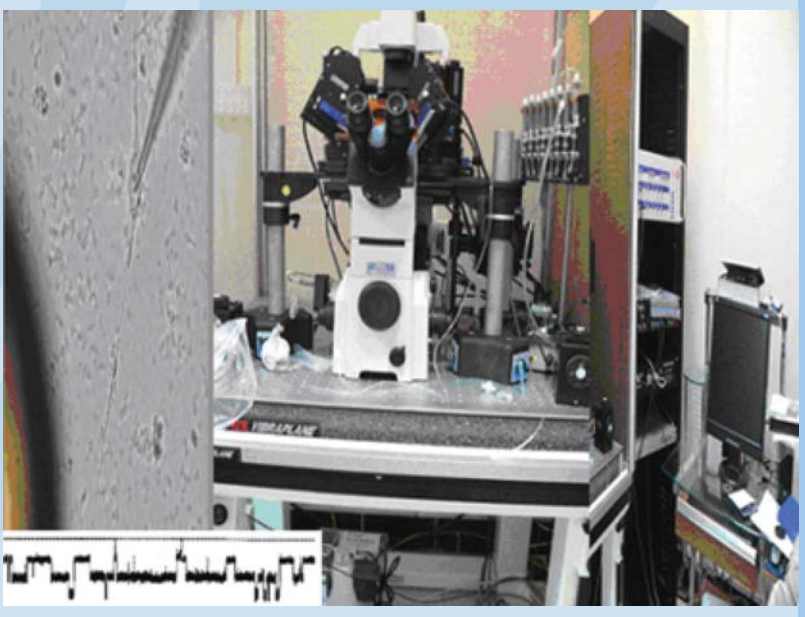


sugarcane to the mills. The research shows that fossil energy is required only to manufacture chemicals used in processing and constructing the factory. Moreover, it identified methane (CH_4) and nitrous oxide (N_2O) to be the other significant GHGs, besides CO_2. Methane was estimated for its amount when cane is burned before harvest and when distillery waste is applied, while amount of N_2O emissions was calculated from soil after the applications of nitrogen fertilizer and distillery waste. The study also concluded that if a car is run for 100 km on Brazilian bioethanol, the resulting total amount of GHGs (CO_2, CH_4 and N_2O) emitted is 80% less than that of the same car when purely driven on gasoline for the same distance. In Brazil, all gasoline contains approximately 24% of bioethanol, which already reduces GHG emissions by 18%.

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

Researchers at the International Center for Chemical and Biological Sciences (ICCBS), Karachi Pakistan successfully developed a bio-pesticide, Biosal, and a biofertilizer, Neemex. These products have proved to be very effective in protecting crops like rice, cotton, sugarcane, vegetables, such as egg plant, tomato, cucumber, green-chilies, lady finger, cabbage and peas, against pests that result in various diseases in plants and eventually damage the whole crop. On the other hand, another group of scientists at ICCBS have discovered many new base pairs of DNA sequences of Mango. Such valuable research is believed to help in enhancing the production of mangoes in the country.

Having biological and chemical sciences as its thrust areas, ICCBS organized a series of lectures on the subject of Proteomics during October 2009. These lectures were delivered by Prof. Dr. Aftab Ahmed, a senior professor of the University of Rhode Island, USA. Also, a lecture titled "An Experience with Chromatography and Capillary Electrophoresis as Powerful Analytical Technique" was delivered by Prof. Dr. M. Y. Khawar, Director of the Institute of Advanced Research Studies in Chemical Sciences at the University of Sindh, Jamshoro, Pakistan. This lecture was organized in collaboration with the Pakistan Academy of Sciences on October 3, 2009.



Dr. Panjwani Center for Molecular Medicine and Drug Research (PCMD) of ICCBS, in collaboration with COMSTECH, organized a workshop to introduce Nobel Prize

winning Patch Clamp Technology on December 21-23, 2009. The Patch Clamp Technology is being used all over the world by the giant pharmaceutical companies, such as GSK, Merck, Pfizer and Eli Lilly & Co. In addition to the local participants, over 90 researchers and national decision-makers in the field of ICTs from: France, UK, Greece, Cyprus, Germany, Austria, Italy, Denmark, Canada, Egypt, Lebanon, Syria, Palestine, Algeria, Tunisia and Morocco attended the event. In order to educate people and provide latest information about this technology, Prof. Dr. Frances Edwards from the Department of Neurophysiology, University College of London (UK) and Prof. Dr. Andrew Moorhouse from University of New South Wales, Sydney (Australia), actively contributed to this workshop. The purpose of organizing this workshop at PCMD, where the Patch Clamp Unit is fully functional, was well-served as a large number of scholars of various institutes, colleges and universities from all over Pakistan received training.

Industrial Research and Consultancy Centre (IRCC), Sudan

Industrial Research and Consultancy Centre (IRCC), Sudan, organized a one-day workshop on the novel theme of 'Engineering and Industrial Design: A Path towards Self-Reliance', on February 8, 2009, in Khartoum, Sudan. The highlight of this event was the display of three prototype equipments designed by IRCC: CFC recovery and recycling unit; wasted paper recycling equipment; and evaporative distillation unit for essential oils.

Also, in collaboration with UNESCO Chair on Transfer of Technology (UNESCOTT), IRCC organized two of its monthly Forums on the themes: 'Aspects of Ethanol Production in Sudan' and 'Challenge of Beet Sugar Industry in Sudan: Beet-Durability and Beet-Storage'. The discussion forums were tailor-made keeping in view issues and challenges of the industrial sectors in Sudan. During February 2009, Leather Research and Technology Centre of IRCC concluded the 'First Training Programme for the Disabled on Leather Handicrafts Design and Manufacturing'. The programme was launched on 24th December 2008 and lasted 6 weeks.



From March 22-25, 2009, IRCC participated in a Conference on: 'The Promotion of Inventions and Industrial Innovations'. The Director General IRCC, Dr. Ahmed Obeid Hassan was the keynote speaker at the conference, who also presented a paper on: 'The Role of Research Organizations in the Promotion of Creativity & Industrial Innovation Culture'. The conference that was co-organized by the Ministry of Industry and the Union of the Sudanese Inventors, was followed by an exhibition. IRCC participated in the



exhibition and presented one of its projects that was later adopted for implementation by the Africa Technology City (ATC). Another meeting was held to promote a website on Sudanese knowledge (URL: www.sudanknowledge.org), which has curricula vitae of scientists of Sudanese origin. During the meeting researchers were briefed on the subject by Dr. Allam Ahmed – a Sudanese working at Sussex University, UK. Besides, the researchers were also briefed about the new international journal of 'Sudan Research Policy and Sustainable Development' (www.inderscience.com/ijsrpsd/). The Director General IRCC has been included as a member of the editorial board of this journal.

A five-day training course on 'Physico-Chemical Quality Control of Food Products' was organized at IRCC during 2009. The event, held at the Food Research Department of IRCC, aimed to: provide training in the field of physicochemical quality control of processed food; study the general trends in the changes that occur during the packaging and storage; create links between IRCC and governmental & private sectors of the food industry; and get the maximum benefits from the industrial links in food processing factories. Twenty four participants from different food processing factories and related industries attended the course that was coordinated by Dr. Mazahib Adam Mohamed of IRCC.

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

The Iranian Research Organization for Science and Technology (IROST) organized the award-distribution ceremony of the 22nd Khwarizmi International Award (KIA) on February 3, 2009, in Tehran, Iran. The Award is organized annually in the memory of Muhammad ibn Musa al Khwarizmi, the 8th century Iranian mathematician and astronomer, in order to recognize and honour the outstanding scientific achievements and excellent research contributions by scientists, researchers, innovators and inventors from all over the Islamic World in various fields of science and technology. The research work evaluated for the Award belongs to the categories of Invention, Innovation, Applied Research, Fundamental Research and Development Research. Every year, the Award is sponsored, by several international organizations, including COMSATS.

COMSATS has been supporting this Award since 1997 by sponsoring two cash prizes for 'Major/Significant Technological Innovations having Proven Economic Benefits'. IROST will be organizing the 23rd Khwarizmi International Award (KIA) in February 2010.

Throughout 2009, IROST has continued its intensive research programme through the "Institute of Advanced Technology", with the main focus on the commercialization of advanced technologies. Some of the projects that achieved major successes include: 4th Generation Haemodialysis Machine; Mesbah Satellite integration; Green Fuels and appropriate engines for Bio-diesel; Nature Biotech products including Biological Control of Malaria; and various renewable energy products based on advanced materials.

Marmara Research Centre (MRC), Turkey

Researchers from TÜBİTAK Marmara Research Centre (MRC), Istanbul University and Uludag University successfully produced the first Turkish cloned calf after 4 years of research. The study was carried out under their joint project titled "Cloning of Anatolian Native Cattle Breeds", which aims to serve conservation studies of Anatolian native cattle breeds. Weighing almost 25 kgs, the male Turkish grey calf 'Efe' was born on 19th August 2009 by cesarean section. Efe is the first cloned Anatolian calf both in Turkey and in the world. In addition, the calf is a living example that one cell from the National Animal Gene Bank established in TÜBİTAK can produce a live animal. Detailed information is available at www.turkhaygen.gov.tr.



National Mathematical Centre (NMC), Nigeria

The National Mathematical Centre (NMC) of Nigeria introduced 'mental arithmetic' in its educational system. In this regard, NMC organized a one-month pilot training programme in partnership with Adroit Resources Development Ltd., from 19th October to 16th November 2009. Sixty six pupils of different age groups and classes were drawn from different parts of the country as participants in this training programme. They benefited from the following features of the programme: (i) enhancement of mathematical skills and intelligence; (ii) sharpening the power of focus, concentration and memory; (iii) enhancing self-confidence, thinking-skills and creativity; (iv) stimulating audio, visual and other kinaesthetic senses; (v) boosting imaginative powers and responses/reflexes; (vi) ensuring pupils' balanced development with high IQ/EQ.

National Research Centre (NRC), Egypt

The influenza research team at the Centre of Excellence for Advanced Sciences (CEAS) of National Research Centre (NRC), Egypt, developed an Egyptian veterinary vaccine against Avian Influenza H5N1, which is spreading in Egypt. The

vaccine was prepared by Plasmid-Based Reverse Genetics Technology as a result of Egypt – USA cooperation. The newly developed vaccine was tested at NRC labs and was compared with the foreign imported vaccines, and proved comparable. On April 30, 2009, NRC signed a contract to produce this vaccine with the holding company for biological product and vaccines – VACERA.

CEAS was able to secure two national and three international patents during 2008-2009.

With an impressive manpower of 4300 research staff, NRC plays a major role in the R&D sector of Egypt in areas of Basic Sciences, Health and Environment, Agriculture Engineering and Pharmaceuticals.

Royal Scientific Society (RSS), Jordan

Royal Scientific Society (RSS) participated in the '6th International Machines and Electro-mechanical Exhibition – JIMEX 2009', from June 14-17 2009. The exhibition was held under the patronage of H.E. Nader Al-Dahabi, Prime Minister of Jordan. The event was a joint venture of Jordan Engineers Association, National Energy Research Centre, and Tuyap of Turkey, among others. The event exhibited latest products and developments in construction and industrial machines, electricity, energy, renewable energy, automation, electrical installation, water technology and electro-mechanical equipment. RSS presented its products and services at a special booth. During May-June 2009, the Quality Assurance Department of RSS conducted two training courses at its premises. The first training course: 'ISO /IEC 17025:2005 Standard Fields of Applications and Requirements' was conducted on May 27 and 28, 2009. The course was meant for lab-technicians, quality managers, quality auditors & assessors and personnel of non-accredited laboratories, and laboratories with ISO 9001:2000 certification that are considering or would like to know more about laboratories accreditation. The second course: 'Practical Application in Total Quality Management (TQM)' was held from June 14-18, 2009, with an objective to educate corporate executive directors, heads of departments, quality managers and engineers in the concept and philosophy behind Total Quality Management, Quality Awards and Quality Certification, as well as





integration between different management systems within an organization.

In September 2009, RSS was granted two Jordanian patents in the field of industrial chemistry. The two patents are titled “A Process for Producing a Dark Violet Iron Oxide Pigment" and "Red Rouge Iron Oxide pigment". These have been developed due to the efforts of the researchers at RSS to enrich its share in applied research and to support its rapidly growing patent portfolio.

International Networking Event on Med-EU Information and Communications Technology Cooperation was organized by RSS at El-Hassan Science City in Amman, Jordan, on December 5-7, 2009. This networking activity aimed at establishing sustainable research network of the scientists working in the field of ICTs in the countries of the European Union and the Mediterranean. Experts and researchers from Europe, the Middle East and North Africa gathered to discuss joint priorities in the field of ICTs to support a coordinated policy for addressing the key challenges to attain sustainable development. They also discussed ideas and defined core consortia to respond to future EU Framework Programme for funding. The event focused on the priorities, which are of high importance to Jordan for its scientific networking in terms of digital libraries and content; sustainable and personalized healthcare; ICTs for mobility, environmental sustainability and energy efficiency.



In addition to the local participants, over 90 researchers and national decision-makers in the field of ICTs, from: France, UK, Greece, Cyprus, Germany, Austria, Italy, Denmark, Canada, Egypt, Lebanon, Syria, Palestine, Algeria, Tunisia and Morocco, attended the event.

The dynamic leadership of the President of RSS, HRH Princess Sumaya has been recognized internationally through the award of ‘Lazio Prize’ in July 2009.

5

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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 and COMSATS Internet Services.

REPORTS OF SPECIAL ASSIGNMENTS

COMSATS' Future Strategy (2010-2014) for its Technical Cooperation Programmes

One of the main policy-objectives of COMSATS is to promote sustainable socio-economic development in its Member States through the application of science and technology employing the mechanism of South-South cooperation. In order to implement this policy, COMSATS has utilized the support of sixteen highly advanced R&D institutions affiliated with it as its Network of International S&T Centres of Excellence located mostly in its various Member States. These Centres of Excellence possess adequate capacity to undertake technical projects, which have a great potential to benefit the socio-economic programmes being pursued by the Member States. The Centres of Excellence have an additional advantage that they work under a well-defined charter, approved by the Commission and contained in its Foundation Documents. The presence of such a vast technical and administrative infrastructure in COMSATS' Member States offers a great promise of collaborative scientific and technological projects to be undertaken on a regular basis for the fulfillment of COMSATS' mission and objectives.

Realizing the need and importance of a comprehensive strategy to implement COMSATS' policies, related to the technical cooperation through South-South and possibly North-South collaboration, the 10th Coordinating Council Meeting held in Cairo, in 2007, made a decision and asked the Secretariat to prepare a five-year strategy plan. Several Member States gave their valuable inputs regarding the nature and contents of the strategy. The mandate given to the Secretariat for the preparation of the strategy document was further reinforced in the 11th Coordinating Council Meeting held in Beijing, in 2008 that gave suggestions on the text of the document for

further improvements. It was decided that the views and comments of the Member States should be incorporated in the text and the document should be finalized in 2009. In order to take the final inputs from the Member States, the matter was further discussed in the 12th Coordinating Council Meeting held in Abuja, Nigeria in the year 2009 and it was decided that the Secretariat will finalize the text of the strategy document by the end of 2009 if no new suggestions were received by June 2009. As no new inputs were received from the Member States by that time, the Secretariat has proceeded to finalize the document in 2009. The final draft will be presented to the 13th Coordinating Council Meeting scheduled to be held in Trieste, Italy, in May 2010 for its consideration and subsequent approval of the Member States.

The main features of the future COMSATS' strategy document (2010-2014) include overarching objectives, agreed core technical cooperation programmes based on seven thematic areas having direct link with socio-economic development in the Member States with clustered participation of Centres of Excellence, project monitoring through well-defined performance indicators, responsibilities, roles and functions of each project participating entity, impact-study strategy, dissemination of knowledge and expertise generated at the end of the project and public awareness strategy for COMSATS' wider publicity. The document is supplemented with an action plan based on various components of project implementation alongwith the functions and responsibilities of the main operators of the technical projects.

This task on the preparation of the COMSATS' strategy document has been accomplished with the deep interest and active participation of the Member States, and the Secretariat, the Chairperson of the Coordinating Council and the Executive Director COMSATS. The preliminary version of the document was also introduced in the 1st Consultative Committee meeting held in Abuja, Nigeria, which found it useful for COMSATS' technical cooperation programme. It is hoped that all the Network will be able to allocate sufficient human and financial resources to undertake the major component of the strategy – joint thematic research projects in specified areas of technology.

COMSATS Internet Services

COMSATS Internet Services (CIS) was established in 1996 and soon became one of the leading Internet service providers in Pakistan. It served as a pioneer in launching Internet backbone in a number of cities across Pakistan. Although being in a cut-throat competition with a number of ISPs and with no subsidy from the government, CIS is providing excellent technical services to its large clientele in 10 cities of Pakistan. Internet services provided by CIS range from dial up to leased lines, broadband connectivity using DSL, as well as Wi-Fi. CIS also offers co-location facilities and web-hosting services. Total bandwidth currently used by CIS is 155 Mbps. It was declared number one ISP in Islamabad & Sialkot during 2006-2007, and during 2008 in Karachi, Faisalabad, Lahore and Sialkot, by the Pakistan Telecommunication Authority (PTA) for the quality of its service.

CIS has a staff comprising 158 engineers, executives and technicians countrywide. Its clients include national and international organizations, private companies, foreign missions, educational institutions, NGOs, as well as a large section of end-users. In August 2009, PTA granted CIS the license for video-conferencing enabling it to render this facility to its clientele.



In 2009, CIS shifted its Internet bandwidth from the one provided by Pakistan Telecommunication Company Limited (PTCL) to that of Wateen Telecom, which will save almost ten million rupees per annum.

The current emphases of CIS are to: (1) concentrate on corporate customers instead of individual clients; (2) get maximum possible business from Government and Public enterprises; and (3) focus on business activities, like (i) video-conferencing; (ii) co-location services; (iii) wireless broadband; (iv) fibre-optic based services by hiring fibre-optic links from other companies as CIS does not have its own media.

A number of projects are in pipeline, for which the Government of Pakistan has agreed to support CIS. These include:

- Construction of Internet House: The project of Construction of Internet House is under progress. A building, comprising five storeys and a basement, is being constructed on a 2,222 square yard plot covering an area of 45,500 square feet. Besides CIS, it will accommodate a Technology Park and Data Centre.

- Wi-Fi Broadband Services.
- Tele Health Services: Rural Clinics will be linked to main Tele-Health Centres at Islamabad, Peshawar, Sialkot, Karachi and Multan. Doctors will provide consultations to patients through a live video conference and patient information data transmission system. Preventive health & nutritional advice will also be a part of the services offered.
- Information Technology Research Centre: A project proposal of CIS on Information Technology Research Centre is likely to be approved in the near future by Ministry of Science and Technology, Government of Pakistan.

In future, CIS plans to launch WiMax services, which require frequency allocation from the government.

Also, an Inter-Ministerial Committee has been formed by the Government to: study the performance of CIS and its future plans towards the promotion and use of ICTs in Pakistan; take into account impediments faced by CIS to upgrade its services and recommend ways and means to overcome them; study various types of services offered by CIS and recommend how the government organizations can utilize them to their best advantage; and consider the request of CIS for frequency allocation by PTA to upgrade its services and recommend a methodology for such an allocation.

The Committee is chaired by the Minister for Science and Technology co-chaired by the Minister for Information Technology, Government of Pakistan. CIS is likely to benefit from the recommendations of this Committee.



COMSATS' Tele-health Programme

Background

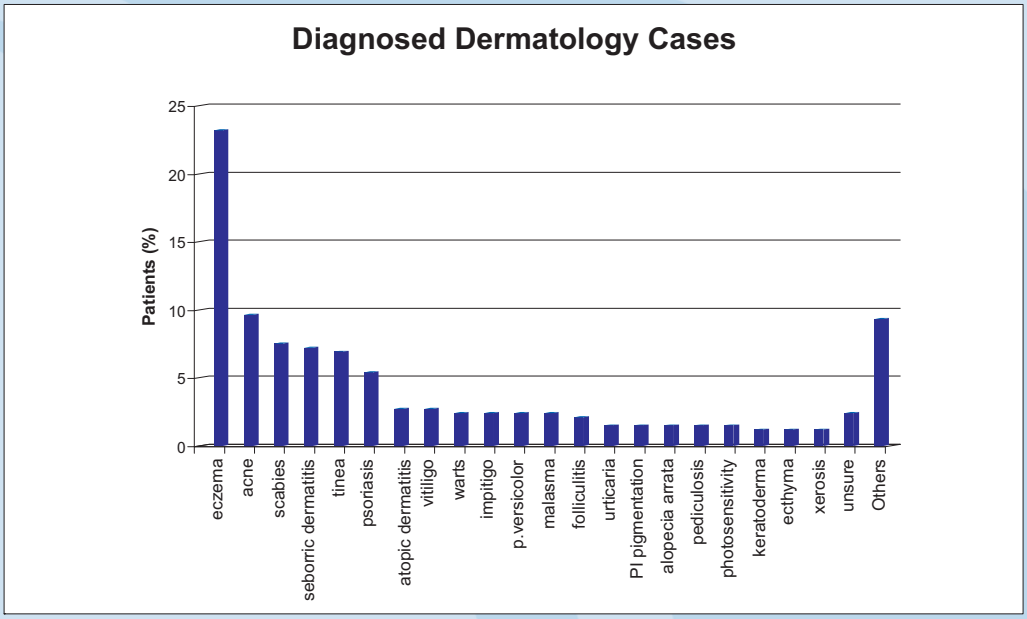
COMSATS is a pioneer of Tele-health services in Pakistan. Its Tele-health programme started back in 2001 as a pilot-project with indigenous resources and efforts. All technical aspects and medical requirements were successfully worked out, while providing tele-consultation form Islamabad to a nearby small town, Gujar Khan. About 100 students also received training on information technology through distance learning activity under the umbrella of this programme.

Later in 2004, this experience was utilized for establishing Tele-health services at a far-flung location in the Northern Areas of Pakistan, under a project titled, "ICTs for Rural Development in Mountainous and Remote Areas of Northern Pakistan", linking Skardu with Islamabad. The project proved to be a success in terms of achieving its objective of providing specialist medical consultations through synchronous (live) and asynchronous (store-and-forward) methods. The project was completed in 2007 yet COMSATS managed to continue the service throughout 2009.

The consultations were carried out using store-and-forward (asynchronous) method through FTP server and telephonic conference by the qualified dermatologists from Pakistan Institute of Medical Sciences (PIMS), based in Islamabad.

Facts and Figures of the Tele-health Services in Skardu during 2009

- During the period from January to December 2009, a total number of 333 specialist consultations were given. A large number of patients were diagnosed as suffering from eczema, a skin disorder causing reddening, itching, swelling and scaling. It is worth noting that there were only 2.4 % of the cases where the dermatologist was not sure of the diagnosis and in all of these cases patients were advised to get skin biopsy.
- Around 4% of the total consultations, given during the year 2009, were follow-up visits of the patients already treated at the Tele-health Centre (Skardu). The number of follow-up visits shows the trust of the beneficiaries in this service.
- A fewer number of patients turned up for the Tele-health consultations during the summer season owing mainly to the presence of medical camps, from all over the country, during these months.
- Youth and adults constitute a majority of the patients turning up for the tele-dermatology consultations. A significant number of these patients lies between the ages 12 to 40 years.
- As noted in the previous years, the highest number of patients was diagnosed as suffering from eczema. Eczema can occur for various reasons, especially due to exposure to various allergens. In addition, acne, scabies, fungal



infections, dryness of scalp and face were among the common conditions that were diagnosed by the dermatologist during Tele-consultations.

Achievements and Issues

- The consistent influx of the patients coming for tele-dermatology consultation, despite the unavailability of live-consultations, shows that store-and-forward method can effectively serve the need. There is no issue of diagnostic accuracy and the patient-management decisions being made are comparable to those made during in-person clinical consultations. The live video-consultation might have had an effect on the satisfaction level of the patient but it did not affect their number.

- The Tele-health services have definitely improved access to healthcare since there is no dermatologist in Skardu. The dermatology cases treated through Tele-health included some patients that had been mishandled by the local physicians.

- No issue of acceptance was raised during Tele-consultations, either by patients or the physician at COMSATS' resource centre.

- Store-and-forward consultations conducted were less time consuming than it is assumed to be, as analysis of patients' data containing pictures and history was supported by telephonic conversation with the remote health professionals.

- Store-and-forward technique provided convenience and flexibility to the specialists in terms of timings.



Networking

- COMSATS joined the International Society for Telemedicine and eHealth (ISfTeH) as an 'institutional member'. ISfTeH is a non-governmental and not-for-profit society, working to facilitate the dissemination of knowledge and experience in eHealth and provides access to recognized experts in this field in close collaboration with World Health Organization (WHO) and International Telecommunication Union (ITU).

- On the national level, COMSATS played an active role in the newly formed eHealth Association of Pakistan (eHAP). COMSATS also hosted a number of board meetings of the Association at its premises using COMSATS' video-conferencing facility to connect COMSATS Headquarters, Islamabad, and Agha Khan University, Karachi. In January 2010, COMSATS also participated in the 'International Conference on eHealth' organized by eHAP that was held in Karachi, Pakistan.

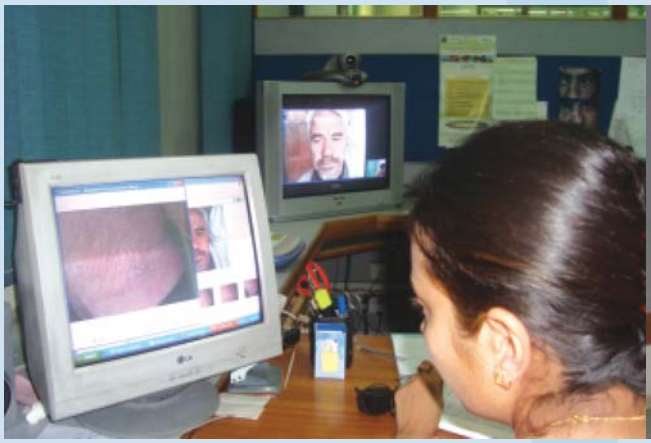
New Proposals

- A project proposal to provide Tele-health services in North-West Frontier Province (NWFP) of Pakistan was submitted to the Government of NWFP in collaboration with the Directorate of Science and Technology and Information Technology, NWFP. The proposal was presented in the meeting of Departmental Development Working Party (DDWP) in October 2009. Currently, revisions are being made to the document according to the guidelines provided during the meeting.

- Another proposal is in pipeline to further extend the Tele-health services to various regions of Gilgit and Baltistan. Efforts are being made to establish links with the local organizations to develop similar Tele-health projects. A proposal has already been submitted to Japan International Cooperation Agency (JAICA) for provision of Tele-health services.

Focus Areas for Future Activities

- Extending the coverage of Tele-health services to Azad Jammu and Kashmir.
- Introduction of new specialties in Skardu, such as Psychiatry and Gynecology, as well as a clinic for diabetes. Efforts are being made to involve a Karachi-based organization to provide voluntary Tele-health consultations in the field of Psychiatry.
- Finding and implementing a workable low-cost solution for audio-visual connection to provide Tele-consultations.
- Improvement in Web-based 'Patient Information Management System' and its implementation to full extent.
- COMSATS' member countries will be invited to make use of the eHealth expertise developed by COMSATS Headquarters.





Update on Islamic World Science Net (IWSN) Web-portal and Virtual Scientific Thematic Groups

Islamic World Science Net (IWSN) web-portal (www.iwsn.info) was launched in 2007, as a result of combined efforts of ISESCO and COMSATS. Since then, COMSATS has been regularly updating and maintaining this portal on behalf of ISESCO.

The portal, at present, is hosting S&T profiles of 57 OIC member countries, highlighting their scientific capacities, such as the R&D institutes, universities and academies of science, in these countries.



The distinctive features of this Islamic web-portal include Scientific Indicators of OIC member countries: a total of fifty eight indicators belonging to nine different categories, i.e., general, scientific, economic, educational, healthcare, agricultural, industrial, telecommunication and environmental have been maintained. Besides these, the portal also has information on 674 R&D institutes in these countries. There are records of about 769 universities existing in OIC member countries. To achieve its goal of information sharing, the portal also hosts a number of publications and shares the research and scientific findings. At present, there are about 1,433 research references, science journals and research papers available on this portal.

Cognizant of the importance of networking among the scientists and researchers of the Islamic World, COMSATS and ISESCO jointly launched virtual scientific thematic groups during a meeting, “First Meeting of the Coordinators of the Scientific Thematic Groups for Enhancing Cooperation among Islamic Countries”, held in Islamabad, in March 2009.



ISESCO has shown confidence in the efforts of COMSATS, especially the ones made under the activity “Strengthening of the Islamic World Science Net” and has graciously extended it for 2010, which has also been included in the ISESCO-COMSATS joint activities for the year 2010. In this regard, COMSATS’ team has carefully designed and submitted an Action Plan-2010 for the activities to be undertaken for consolidation of IWSN. The proposed action plan includes cooperation for technical up-gradation,





maintenance, updating, monitoring and verification of the content to facilitate the networking scientific institutes and scientists in Islamic countries through knowledge-sharing and exchange of expertise. The same would result in making the portal a virtual platform for international collaboration in various disciplines of science and technology.

At present, there are thirteen thematic groups on the web-portal with registered members in each group as follows:

- New and Renewable Energy – 150
- Science and Research Policy – 6
- Bio-sciences / Biotechnology and Genetic Engineering – 67
- Bioethics – 4
- Environment – 65
- Mathematics – 10
- Water Management – 5
- Nano-Technology – 11
- Science Park Managers – 5
- ICTs in Science and Technology – 4
- Universities – 4
- Science Academies – 7
- Science Women – 5

New features are continuously being added to this information gateway. Recent additions include expert data-bank of researchers and scientists, and a global chat-room to facilitate instant information sharing between scientists and students. As indicated by the data collected through analytical tools, the portal has successfully created recognition among scientific community in Islamic countries, in particular, and in other countries, in general. However, recent observations of the web-portal have revealed that some groups are active while others need to gear up and play a more



proactive role for their membership campaign. These observations would be taken up during the '2nd Meeting of the Coordinators of the Scientific Thematic Groups for Enhancing Cooperation among Islamic Countries', which is scheduled to be held in Morocco, during November 2010.



6

PUBLICATIONS AND INFORMATION DISSEMINATION

- COMSATS Newsletter 64
- Science Vision 66
- COMSATS' Series of Publications on Science and Technology 67
- COMSATS' Website 68

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

PUBLICATIONS AND INFORMATION DISSEMINATION

Various tools of information dissemination of COMSATS enable it to timely and effectively convey information to all stakeholders. These tools are COMSATS Newsletter, Science Vision, COMSATS' Series of S&T Publications and COMSATS official website. Furthermore, the promotional material of COMSATS is constantly updated. In 2009, the flyer 'COMSATS…. at a glance' has been revised twice, while COMSATS' brochure has been improved for its content and layout. Also, all the national and international events of COMSATS were highlighted in the print media through carefully prepared press releases.

COMSATS Newsletter



The decision to launch a bi-monthly COMSATS Newsletter was taken with an aim to project the image of COMSATS as an international/inter-governmental organization of 21 developing countries striving to achieve science-led development of its member countries and creating greater awareness about COMSATS' programmes and scope of its activities. The Newsletter was given a structure to highlight the developmental issues confronting the member States and their technology-based solutions adopted by different countries. In

accordance with the primary mission of COMSATS, the Newsletter is an attempt to disseminate information and generate cooperative activities that contribute towards socio-economic development. An editorial team was especially tasked to take necessary actions for the publication of the Newsletter, which involves regularly making necessary correspondence with the Centres of Excellence of COMSATS to seek reports on their latest activities, compiling and editing information for various sections of the Newsletter and making a list of forthcoming scientific events in the Member States. The team works under the direct patronage of the Executive Director of COMSATS. All the Centres of Excellence were apprised of this initiative of the Secretariat and pertinent contributions are being formally requested since then.


COMSATS Newsletter, July - August 2009

ACTIVITIES/NEWS OF COMSATS' CENTRES OF EXCELLENCE

COMSATS Newsletter, July - August 2009

Various sections of the Newsletter cover the activities of the Secretariat, COMSATS' Centres of Excellence and the S&T related developments, pertinent to COMSATS' mission of sustainable development of the South, taking place around the globe. The Newsletter has been divided into following sections:

From the Executive Director's Desk: contains an insightful editorial from the Head of the Secretariat, which also provides inkling to the latest development of the organization as well as introduces the highlights of the issue of the Newsletter in hand.

News/Activities/Highlights of the Secretariat: highlights the activities in which the Secretariat is directly involved, including various engagements of COMSATS' officials, sponsorships/grants and national collaborative events, etc.

Activities/News of COMSATS' Centres of Excellence: carries news on various institutions affiliated with COMSATS as members of its Network of International S&T Centres of Excellence, also known as its Network members. For each issue, the Secretariat requests the Network members to timely report their news and events, which may have taken place during a couple of months' time, for coverage in the Newsletter. Also, the websites of each Network member are screened for any latest reportable material.

Science, Technology and Development: provides a selection of latest S&T developments reported internationally having a direct impact on the socio-economic conditions in the developing world.

Profile of COMSATS' International S&T Centre of Excellence: is dedicated to covering various aspects of the COMSATS' Network members. The organizational aspects of these institutions are highlighted with a special emphasis on their academic strengths and technical capacities. In 2009, six Centres of Excellence were given coverage through this section of the Newsletter, namely: Industrial Research and Consultancy Centre (IRCC), Sudan; Royal Scientific Society (RSS), Jordan; TUBITAK Marmara Research Centre (MRC), Turkey; COMSATS Institute of Information Technology (CIIT), Pakistan; Iranian Research Organization for Science & Technology (IROST), Iran; and International Center for Chemical and Biological Sciences (ICCBS), Pakistan. Announcements: comprises announcements on various scientific events that are to take place in the near future in various member countries and Centres of Excellence of COMSATS, as well as the ones planned by the Secretariat itself.

Besides these regular sections, whenever a need is felt, a special feature is published. One such instance is the second issue of the Newsletter (March-April 2009), wherein a four-page special feature covered the proceedings of Abuja meetings of COMSATS held in April 2009. Furthermore, in order to publicize the information contained in the Newsletter, each issue of the Newsletter is made available on COMSATS' official website, besides being widely circulated to various member countries, Centres of Excellence of COMSATS and S&T institutions/organizations.

Science Vision

It was decided in early 2009, that COMSATS would resume its scientific journal, Science Vision, which had been published since 1995. It primarily aims at highlighting the important scientific and technological developments that have a bearing on socio-economic conditions of the people. Over the years, the journal has been covering various aspects of science and technology by means of scholarly literature contributed by various erudite scientists and researchers from COMSATS' member countries. It invites research as well as review articles that have basic scientific descriptions, with comprehensive elucidation of the impact of S&T discoveries and innovations for creating understanding of the contemporary issues and challenges, but also for stimulating joint activity for the provision of practical needs. The journal has an editorial board comprising renowned scientists and members of COMSATS Network of S&T Centres of Excellence.



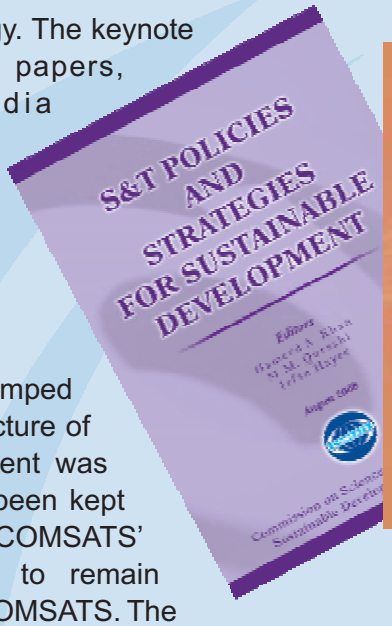
The Secretariat's initiative to resume the journal was appreciated and approved by the 12th meeting of the Coordinating Council. It was decided that the journal should be given a thematic character to depict the role of science in the sustainable development of society and the impact of latest developments in S&T on the economy of a country. Also, the frequency of the journal was changed from quarterly to bi-annual. The journal has an international readership as it is widely circulated among the scientific circles, policy-makers, academic and R&D organizations in the developing countries, especially the 21 member countries of COMSATS. Letters were written to over a 100 relevant persons from various S&T organizations and Centres of Excellence as well as fellows and members of Islamic Academy of Sciences (IAS) and Pakistan Academy of Sciences (PAS). The Executive Director had personally requested many local and international scientists to write for the Journal. Also, the authors who had written for the previous issues of the Journal were approached. Prior to its publication on thematic lines, a special issue of Science Vision, which is a composite of volumes 13 & 14, was brought out in the later half of 2009 to cover the time lapse in its publication. The lists of contents and indices of books published by COMSATS during the previous two years were given in volume 13, while volume 14 contains articles devoted to topics in the disciplines of Agriculture, Medical Sciences, Education and Social Sciences. The first two thematic issues of Science Vision, i.e., 15(1) & 15(2), which have been dedicated to the themes of "Environmental Challenges for the Developing World" and "Renewable Energies Cleaner and Cheaper Source for World Energy Needs for Development" will be published soon. Scientists, researchers, policy-makers and young scholars from S&T institutions have been invited to write for the journal in line with its theme. Also, it is encouraging to see that scholars and scientists from COMSATS' Network members have shown their consent to write for the journal. For each thematic issue, a particular group of experts having similar scientific background have been contacted and requested for contributions. Contributions for Science Vision are also being sought through COMSATS Newsletter and COMSATS website.

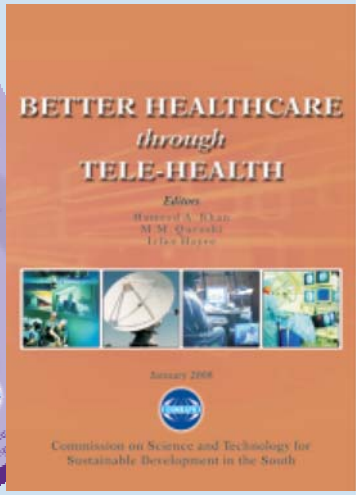


COMSATS' Series of Publications on Science and Technology

Two new additions will be made to COMSATS' Series of Publications on Science and Technology. The proceedings of the two national events of COMSATS held in collaboration with COMSTECH, discussed in detail in the earlier parts of this report are to be published under this series. These events were: National Seminar on Policies and Strategies for Successful Implementation of Employment Generating Programmes in Renewable Energies, Biotechnology, Agriculture, Environment and ICTs and National Meeting on Challenges for Socio-economic Development in

Pakistan: Role of Science and Technology. The keynote addresses/presentations, research papers, technical summaries, multimedia presentations and recommendations as well as lists of speakers and resource persons of these events comprise the content of these books.

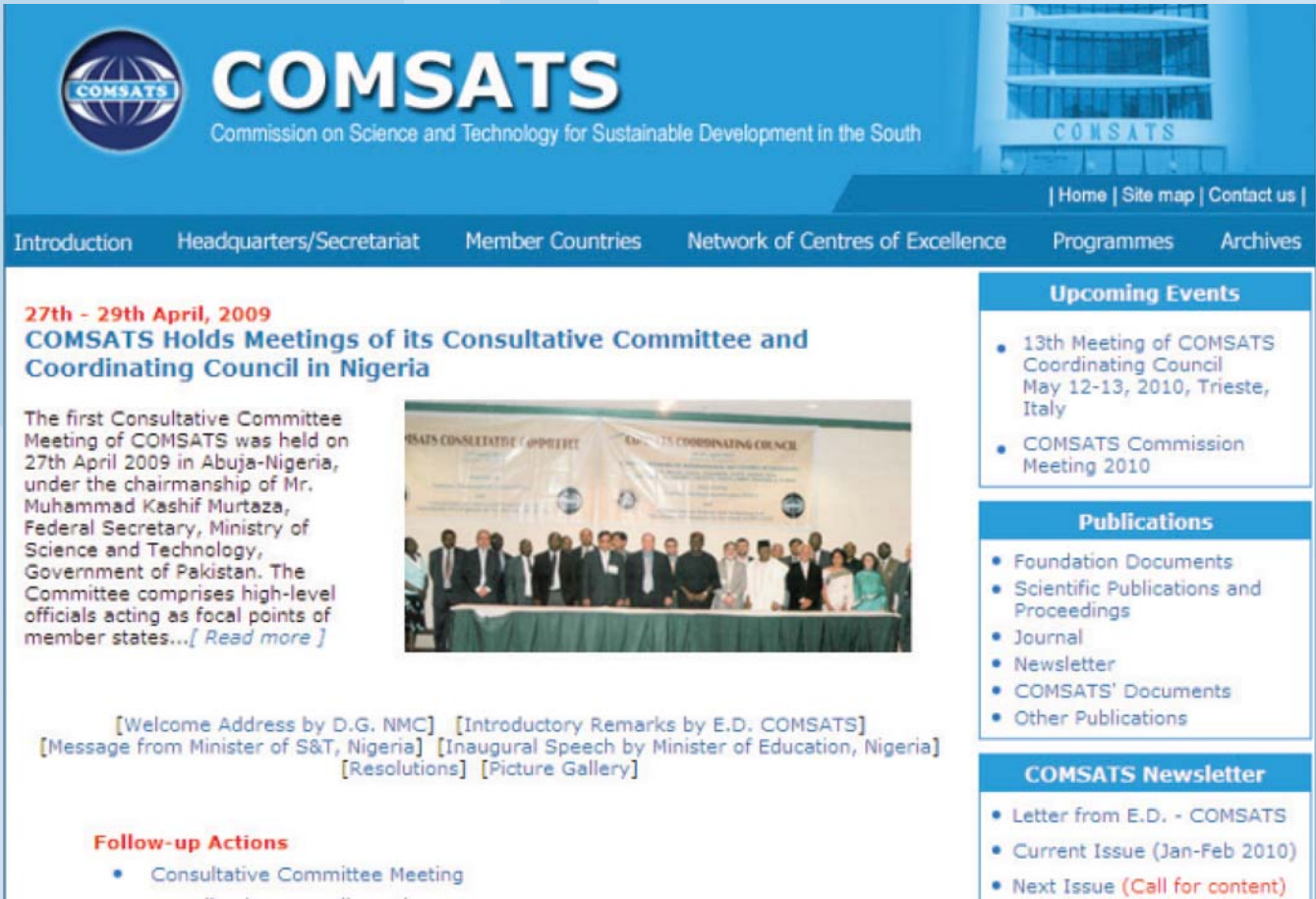




COMSATS' Website

Official website of COMSATS was revamped and launched in January 2009. The structure of the content was revised and new content was uploaded. Since then, the website has been kept updated to enable all readers, specifically COMSATS' Focal Points and Network members to remain cognizant of the events and activities of COMSATS. The in-house mechanism for updating the website ensures the alacrity of reporting and constantly checks the website for the currency of its content. Web content is carefully evaluated before posting on the website.

Besides prompt reporting of the latest activities of the Secretariat and other organs of COMSATS, the website carries the PDF files of the COMSATS' Foundation Documents, COMSATS Newsletter and Science Vision and the books published by COMSATS' series of S&T publications, as well as other information material. The website also offers an FTP link for the Centres of Excellence to contribute content for the Newsletter.



7

FINANCIAL AFFAIRS OF COMSATS

- Audit and Management of COMSATS' Accounts 70
- Member States' Contributions 71

Since the establishment of COMSATS, the Finance and Accounts Department of the Secretariat is managing the financial activities related to COMSATS Secretariat, 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 member countries of COMSATS.

FINANCIAL AFFAIRS OF COMSATS

The Government of Pakistan, during the Foundation Conference of the Commission on Science and Technology for Sustainable Development in the South (COMSATS) held on October 4-5, 1994, offered to host the Secretariat of the Commission in Islamabad, and bear its yearly running expenses. Since the establishment of COMSATS, the Finance and Accounts Department of the Secretariat is managing the financial activities related to COMSATS Secretariat, 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 member countries of COMSATS.

Audit and Management of COMSATS' Accounts

The accounts of COMSATS Secretariat are maintained as per the International Accounting and Financial Standards. The fiscal year of COMSATS starts from July 1st and ends on June 30th.

After closing the accounts on 30th June every year, COMSATS gets its accounts audited by a reputed Chartered Accountant firm. The audited accounts along with auditors' report are presented before the Management Committee of COMSATS. Subsequently, these are submitted for the approval of COMSATS Coordinating Council in its annual meetings.

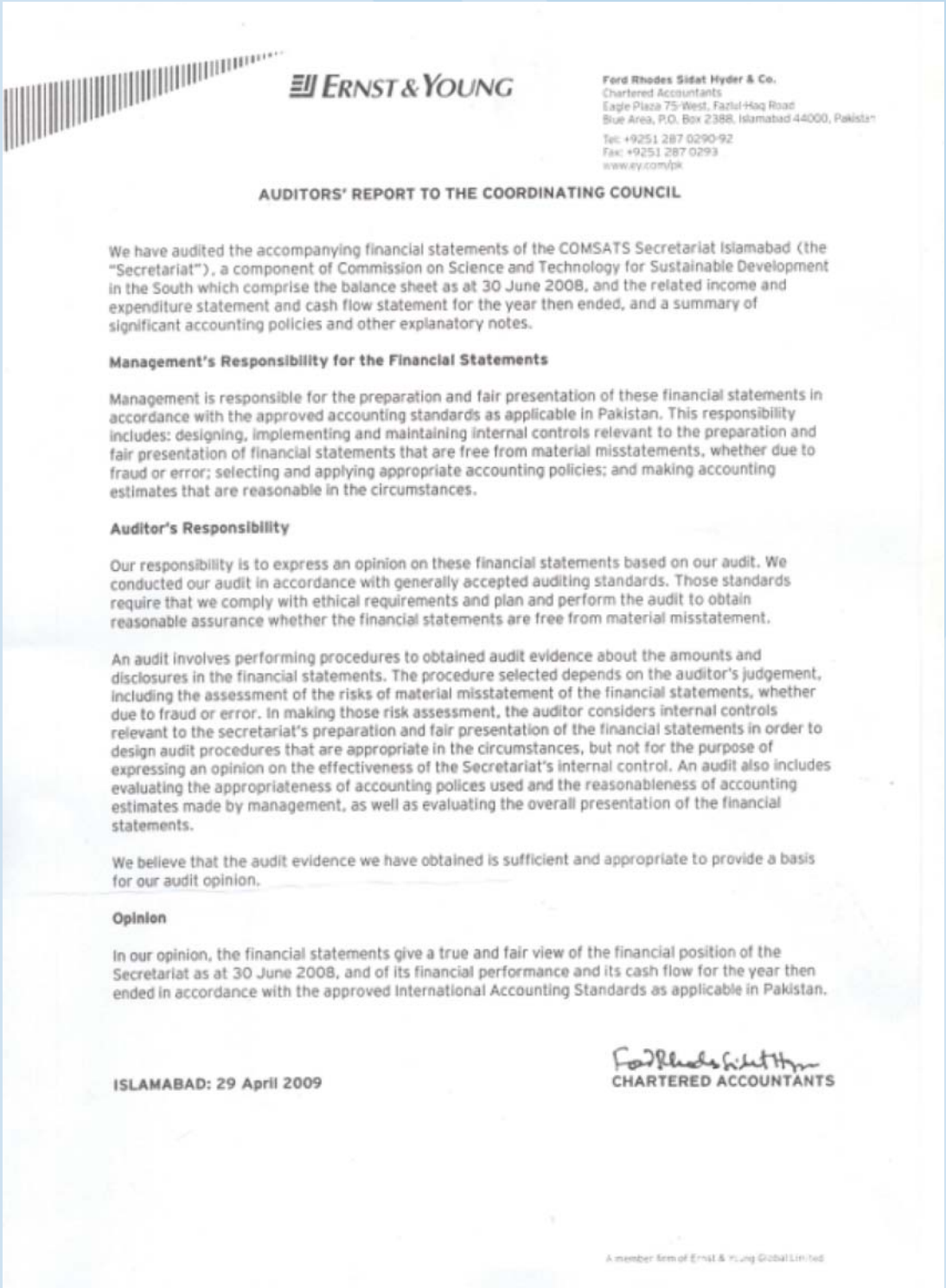
Over the years, COMSATS Secretariat has hired the services of M/s Khalid Majeed Hussain Rehman (1994/5-1998/9), M/s A. F. Ferguson & Co. (1999/2000-2000/01), and M/s Ernst & Young Ford Rhodes Sidat Hyder & Co. (2001/2-2008/9). Recently, M/s Ernst & Young Ford Rhodes Sidat Hyder & Co., has audited the accounts of COMSATS Secretariat for the financial year that has ended on June 30, 2009. However, the auditors' report is still awaited.

The auditors' report and audited financial statements of COMSATS Secretariat for the

financial year ended on June 30, 2008 are given in this report.

Member States' Contributions

The Member States of COMSATS voluntarily contribute towards the activities of COMSATS. The contributions of Member States are kept as a trust fund in foreign currency accounts. The contribution from each Member State is spent on COMSATS technical activities for the same country. Member countries have contributed US$ 518,632.00 up to December 31, 2009, out of which an amount of US$ 354,347.00 has been spent on COMSATS technical activities related to member countries. During 2009, only the Government of People's Republic of China contributed US$20,000/- to the trust fund. The host country Pakistan, contributes US$ 0.5 million per annum.



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AUDITORS' REPORT TO THE COORDINATING COUNCIL

We have audited the accompanying financial statements of the COMSATS Secretariat Islamabad (the "Secretariat"), a component of Commission on Science and Technology for Sustainable Development in the South which comprise the balance sheet as at 30 June 2008, and the related income and expenditure statement and cash flow statement 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 the approved accounting standards as applicable in Pakistan. This responsibility includes: designing, implementing and maintaining internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatements, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with generally accepted auditing standards. 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 obtained audit evidence about the amounts and disclosures in the financial statements. The procedure selected depends on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessment, the auditor considers internal controls 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 polices 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.

Opinion

In our opinion, the financial statements give a true and fair view of the financial position of the Secretariat as at 30 June 2008, and of its financial performance and its cash flow for the year then ended in accordance with the approved International Accounting Standards as applicable in Pakistan.

ISLAMABAD: 29 April 2009

CHARTERED ACCOUNTANTS

A member firm of Ernst & Young Global Limited

COMMISSION ON SCIENCE AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT IN THE SOUTH - ISLAMABAD SECRETARIAT

BALANCE SHEET
AS AT 30 JUNE 2008

	Note	2008	2007
		Rupees	
ASSETS			
NON CURRENT ASSETS			
Tangible fixed assets			
Property and equipment	4	34,291,961	35,674,755
Long term investment	5	1,132,088	1,132,088
Long term loans	6	32,000,000	32,000,000
CURRENT ASSETS			
Current portion of long term loan	6	-	900,000
Advances, deposits and prepayments	7	4,818,775	2,508,077
Other receivables	8	30,475,992	27,882,984
Cash and bank balances	9	15,430,834	17,964,162
		50,725,601	49,255,223
TOTAL ASSETS		118,149,650	118,062,066
FUND AND LIABILITIES			
FUND AND RESERVE			
Technical assistance fund	10	32,000,000	32,000,000
Accumulated surplus	11	51,521,077	50,575,023
NON CURRENT LIABILITIES			
Deferred grants	12	26,532,089	27,761,534
Deferred liabilities	13	4,588,381	3,736,797
Unearned income	14	762,143	686,616
		31,882,613	32,184,947
CURRENT LIABILITIES			
Trade and other payables	15	2,745,960	3,302,096
CONTINGENCIES AND COMMITMENTS	16	-	-
TOTAL FUND AND LIABILITIES		118,149,650	118,062,066

The annexed notes from 1 to 23 form an integral part of these financial statements.

DEPUTY DIRECTOR (FINANCE & ACCOUNTS)

EXECUTIVE DIRECTOR

COMMISSION ON SCIENCE AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT IN THE SOUTH - ISLAMABAD SECRETARIAT

INCOME AND EXPENDITURE STATEMENT FOR THE YEAR ENDED 30 JUNE 2008

	Note	2008	2007
		Rupees	
INCOME			
Grant income	17	21,933,098	14,018,579
Other income	18	15,564,339	13,750,757
		37,497,437	27,769,336
EXPENDITURE			
Administrative and project costs	19	35,779,932	31,382,717
Finance costs	20	9,359	6,161
Exchange loss		762,092	13,521
		36,551,383	31,402,399
EXCESS OF EXPENDITURE OVER INCOME FOR THE YEAR		946,054	(3,633,063)

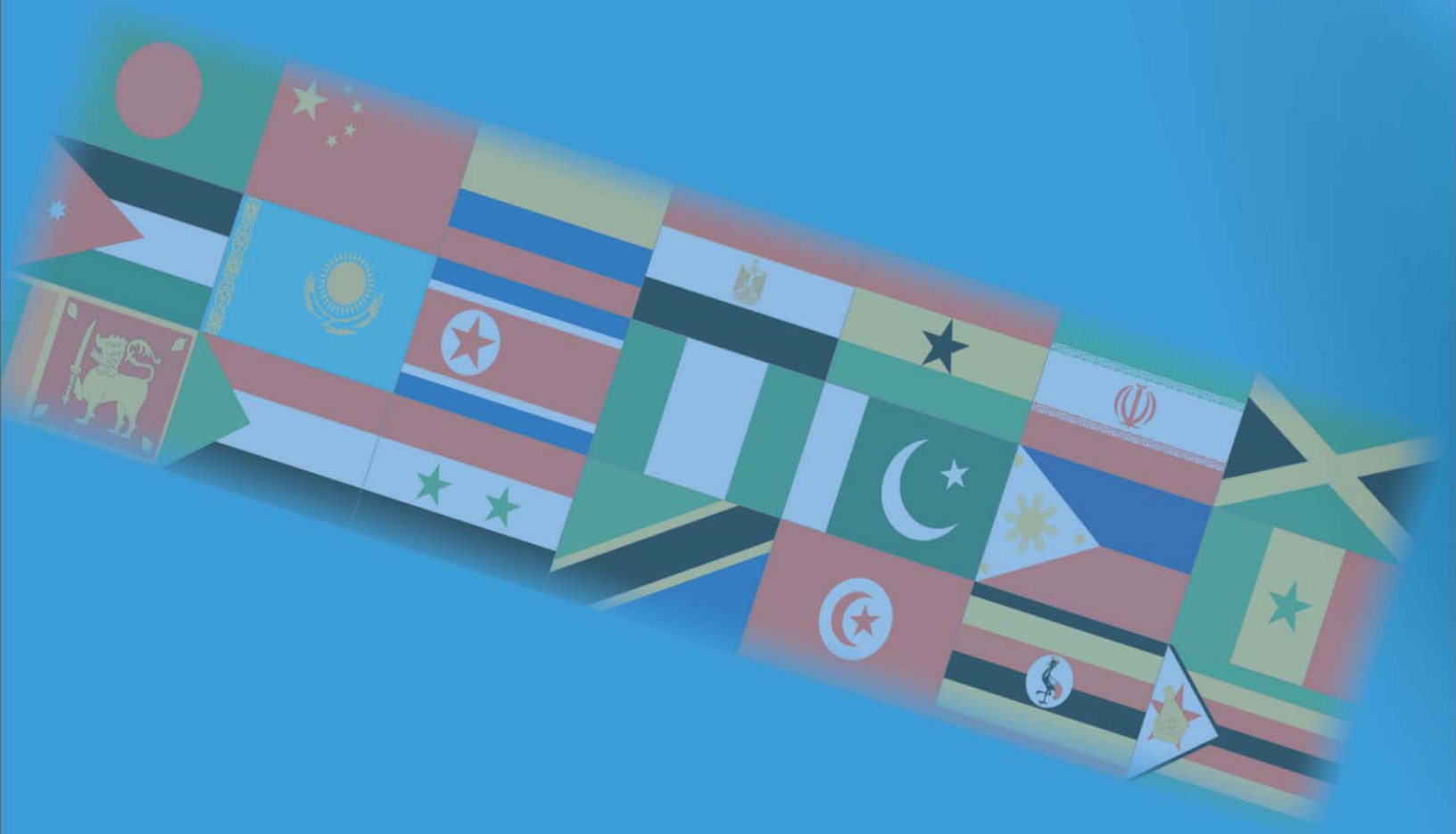
The annexed notes from 1 to 23 form an integral part of these financial statements.

DEPUTY DIRECTOR (FINANCE & ACCOUNTS)

EXECUTIVE DIRECTOR

LIST OF COMSATS NETWORK OF INTERNATIONAL S&T CENTRES OF EXCELLENCE

- The Biosphere Reserve – Beni Biology Station (BBS), Bolivia
- Embrapa Agrobiologia, Brazil
- International Centre for Climate & Environmental Sciences (ICCES), China
- Centro Internacional de Fisica (CIF), Colombia
- National Research Centre (NRC), Egypt
- International Centre for Material Science and Technology (ICMST), Ghana
- Iranian Research Organization for Science and Technology (IROST), Iran
- International Centre for Environmental and Nuclear Sciences (ICENS), Jamaica
- Royal Scientific Society (RSS), Jordan
- National Mathematical Centre (NMC), Nigeria
- International Center for Chemical and Biological Sciences (ICCBS), Pakistan
- COMSATS Institute of Information Technology (CIIT), Pakistan
- Industrial Research and Consultancy Centre (IRCC), Sudan
- Higher Institute for Applied Science and Technology (HIAST), Syria
- Tanzania Industrial Research and Development Organization (TIRDO), Tanzania
- Marmara Research Centre (MRC), Turkey



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