



COMSATS Newsletter 1 2011

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

www.comsats.org

Jan. - Feb. 2011, Vol. 3, Issue 1
Islamabad, Pakistan.

Patron

Dr. Imtihan Elahi Qureshi, T.I.
Executive Director

Editors

Mr. Irfan Hayee
Ms. Farhana Saleem



Contributions from readers are welcome on any matter relevant to the mission of COMSATS, namely the promotion of South-South cooperation in science and technology for sustainable progress of the developing countries. The responsibility for the accuracy of any information rests with the original source. Views expressed in this publication do not necessarily reflect those of its editors, publisher or COMSATS.



COMSATS' delegation participating in the 14th General Assembly Meeting of COMSTECH (Page 4)

Inside this Issue

From the Executive Director's Desk	01
News/Activites/Highlights from COMSATS Secretariat	02
Special Section: COMSATS' Participation in 14 th General Assembly Meeting of COMSTECH	04
Activities/News of COMSATS' Centres of Excellence	07
Science, Technology and Development	10
Profile of COMSATS' International S&T Centre of Excellence - NRC, Egypt	11

From the Executive Director's Desk

At the beginning of the 2nd decade of 21st century, the promises and perils of the new World Order are becoming increasingly manifest. Developing nations across the world are clambering to achieve a modicum of prosperity for their populations that the West enjoyed for more than a century, owing primarily to its technological prowess. The status quo has to change in view of the appalling inequalities in the distribution of wealth, whereby the richest 20% are estimated to consume 80% of the world's resources. While the change is justified and desirable, it is well-understood that the accompanying political, social, economic and environmental stresses at the global level would not be avoidable.

Human ingenuity and resourcefulness offers a hope that viable solutions will be found to create a sustainable and equitable system, in which the earth's resources would be available for an increasing world-population. On the other hand, there is always a danger that human avarice would sink the humanity in an abyss of social, political and environmental turmoil. The scientific communities in the North, as well as those in the South, have to play a dual role – that of creating appropriate technologies for the future and also exerting the influence for the adoption of right choices by the political and civil-society leaders.

COMSATS has been ever-ready to play its part, within its limited financial resources, to make science work for humanity. The latest initiative in this regard has been the constitution of 'Thematic Research Groups' with the partnership of researchers in Member States. Two of these Groups have already held their foundation meetings, one each in Beijing (China) and Karachi (Pakistan). Brief news items about these meetings were included in the previous issue. In subsequent issues, a permanent section on the activities of thematic research groups that are functional would be highlighted subject to the availability of information. If sufficient support is extended by our readers, it would also be possible to start independent sections on 'Letters to the Editor', brief essays, activities of the national Focal Points, publications of Centres of Excellence, etc.

As always stressed, this Newsletter belongs to the entire COMSATS' community. The extent to which it is used for scientific networking is in the hands of our partners.

COMSATS Secretariat: Shahrah-e-Jamhuriat, Sector G-5/2, Islamabad - Pakistan

Tel: (+92-51) 9214515 to 17, Fax: (+92-51) 9216539, E-mail: comsats@comsats.org.pk, URL: www.comsats.org

NEWS/ACTIVITIES/HIGHLIGHTS FROM COMSATS SECRETARIAT

THE FEDERAL MINISTER FOR SCIENCE AND TECHNOLOGY VISITS COMSATS SECRETARIAT

The Federal Minister for Science and Technology, Government of Pakistan, H.E. Pir Aftab Hussain Shah Jilani, paid a visit to COMSATS Secretariat on 20th January 2011. The Minister, who had recently assumed charge of the Ministry, was invited to COMSATS Secretariat for a briefing on the organization's mission & objectives, the role it has been playing over the years for science-led socio-economic development and its future programmes.

In a multimedia presentation by the Executive Director, the Minister was informed about the organizational structure of COMSATS and the role that each organ plays for the organization's overall operation. The past and recent projects and programmes of COMSATS, scope of COMSATS' activities and the budgetary matters of COMSATS Secretariat were reviewed during the meeting. The Minister was informed that COMSATS has recently initiated its developmental research activities by means of its Thematic Research Groups. The Minister was also briefed about Dr. Qureshi's visits to COMSATS' Member States and S&T Centres of Excellence, as well as COMSATS' participation in the recently held 14th General Assembly Meeting of COMSTECH (January 2011, Islamabad - Pakistan) and the 5th Islamic Conference of Ministers of Higher Education and Scientific Research (October 2010, Kuala Lumpur - Malaysia). Dr. Qureshi recalled the recent meetings of COMSATS Coordinating Council held in Nigeria and Italy (2009 and 2010); the 1st Consultative Committee Meeting, held in Nigeria (2009), chaired by the then Federal Secretary Ministry of Science and Technology (MoST) and the support COMSATS had received for holding of 2nd Commission Meeting in 2010 (later postponed).

The Federal Minister acknowledged the role being played by COMSATS as an important S&T player and assured the Executive Director of his Ministry's continued support in the future, especially in connection with the holding of Commission Meeting.

THE AMBASSADOR OF THE REPUBLIC OF TURKEY TO PAKISTAN VISITS COMSATS SECRETARIAT

The Ambassador of the Republic of Turkey to Pakistan, H.E. Mr. M. Babur Hizlan, visited COMSATS Secretariat on

January 26, 2010. In a meeting with the Executive Director and senior officials of COMSATS, the Turkish Ambassador was apprised of the former's recent visit to Turkey (December 2010), during which he held meetings with the officials of TÜBİTAK and COMSATS' Centre of Excellence in Turkey, the Marmara Research Centre (MRC).

The Executive Director informed the Ambassador that his visit to Turkey was extremely useful with regard to strengthening COMSATS' scientific and technological cooperation with TÜBİTAK and MRC. He was of the opinion that Turkish S&T institutions were carrying out high-quality research work, which could be beneficial for COMSATS' Member States. In particular, participation of Turkish S&T institutions in COMSATS' Thematic Research Groups, especially in the field of 'earth sciences', could be of great use to COMSATS' Member States. Matters were also discussed to explore means for collaboration in the field of 'renewable energy technologies'. He noted that it is a matter of great pleasure that MRC will be hosting the 15th Coordinating Council Meeting, to be held in 2012. Dr. Qureshi opined that in order to further boost cooperation between Turkish S&T institutions and COMSATS, Turkey's accession to COMSATS will be of great benefit.



The Ambassador of Turkey to Pakistan during the meeting with the Executive Director COMSATS

The Ambassador thanked the Executive Director for inviting him for the meeting and sharing useful information on the benefits of enhancing future cooperation between COMSATS and Turkish S&T institutions. He appreciated the idea of Turkey becoming COMSATS' Member State and

pledged his full support in this regard.

MEETING OF THE EXECUTIVE DIRECTOR COMSATS WITH THE FEDERAL SECRETARY MoST

The Executive Director COMSATS was called upon by the Federal Secretary Ministry of Science and Technology (MoST), Government of Pakistan (GoP), to attend a meeting on February 15, 2011, held at MoST, for discussing matters relating to the current process of reviewing draft National S&T Policy of Pakistan. Also present in the meeting were the Heads of various Wings of MoST, and high officials of the Pakistan Council for Science and Technology (PCST) and COMSATS.

During the meeting, a presentation was made by the Executive Director COMSATS in order to acquaint the participants with major additions/improvements made in the draft S&T Policy by a sub-committee, which was constituted

by the then Minister for Science and Technology in February 2010, under the convenership of the Executive Director COMSATS. During the meeting, important decisions made by the high officials of GoP in the context of reviewing the draft National S&T Policy were recalled; the revised draft of the Policy prepared by the Sub-committee and the methodology adopted for the same were discussed; and the need of a strong political will for addressing constraints regarding the policy's implementation was stressed.

The Federal Secretary MoST, showed satisfaction over the efforts made by the sub-committee for reviewing and improving the draft Policy document, and expressed willingness of presenting the same to the Federal Cabinet of Pakistan for its approval and adoption, at the earliest.

THE EXECUTIVE DIRECTOR COMSATS VISITS THE SRI LANKAN HIGH COMMISSION IN ISLAMABAD

In preparation for his visit to Sri Lanka, the Executive Director COMSATS, Dr. Imtihan Elahi Qureshi, along with the Director General (I.A), Mr. Tajammul Hussain, called upon the Sri Lankan High Commissioner to Pakistan, Air Chief Marshal (R) Jayalath Weerakkody, on 4th January 2011. The meeting was held in Mr. Weerakkody's office at the Sri Lankan High Commission in Islamabad.

The purpose of this visit was to brief the High Commissioner about the issues to be taken up in the upcoming meetings of the Executive Director with Sri Lankan officials in Colombo. These include: signing of a protocol between COMSATS and Government of Sri Lanka; designation of a Sri Lankan S&T institution to join COMSATS' Network of Centres of Excellence, and cooperation with Sri Lankan institutions for holding of scientific workshops in 2011. It was highlighted that COMSATS, in collaboration with NAM S&T Centre and National Science Foundation of Sri Lanka, will be holding a joint Training Workshop on Nanotechnology in Sri Lanka (December 2011). Also, COMSATS intends to hold a scientific event in Sri Lanka under COMSATS-UNESCO South-South Regional (Asia-Pacific) Technical Cooperation Programme. COMSATS' financial support to Sri Lankan scientists for their participation in the Foundation Meetings of COMSATS' Thematic Research Groups, held in November 2010, was brought to light.

Appreciative of COMSATS' efforts for strengthening the scientific capacities in the developing world, the High

Commissioner assured the Executive Director that he will sensitize the concerned officials of Sri Lanka, in order to achieve the objectives of the visit.

COMSATS PARTICIPATES IN eHAP'S SECOND INTERNATIONAL eHEALTH CONFERENCE

A delegation of COMSATS' officers participated in the Second International eHealth Conference, held in Islamabad on 22nd & 23rd January 2011. The Conference that had been organized by eHealth Association of Pakistan (eHAP) was co-sponsored by COMSATS. This year, the Conference was given the theme "eHealth and the Road to Millennium Development Goals".



The Executive Director COMSATS chairing the Technical Session on "mHealth" during eHAP Conference

The Executive Director COMSATS, Dr. Imtihan Elahi Qureshi heading the COMSATS' delegation, also chaired one of the technical sessions on "mHealth", during which national and international speakers presented their R&D work on the application of mobile technology for healthcare. The other members of COMSATS' delegation included Mr. Asim Shahryar Husain, CEO COMSATS Internet Services; Dr. Azeema Fareed, Senior Medical Officer; and Mr. Nisar Ahmad, Senior Assistant Director (Systems).

COMSATS is honoured to announce that in recognition of the long standing relationship and continuous support of COMSATS for eHAP, Dr. Azeema Fareed (already a board member) has been elected as the Vice President for the next term and Trustee of eHAP.

COMSATS INTERNET SERVICES LAUNCHES "COLORS OF CIS"

COMSATS Internet Services (CIS) launched six new brands for Internet users in Pakistan on 3rd January, 2011. The brands given a staple theme of "Colors of CIS" are: Tornado (point-to-point wireless links); Hurricane (on-demand broadband); Freedom (Wi-fi DSL); Hawaii (domain and hosting); Comtrain (networking training); and Viacon (video-conferencing). Speaking on the launching ceremony, CEO of CIS, Mr. Asim Shahryar Husain announced that CIS' offer of on-demand broadband DSL would enable the customers to use broadband on a per-event basis. At present, CIS has Internet operations in 7 cities of Pakistan, including Islamabad, Rawalpindi, Lahore, Karachi, Faisalabad, Sialkot, and Peshawar, and will be launching operations in Multan by middle of 2011.

SPECIAL SECTION: COMSATS' PARTICIPATION IN 14TH GENERAL ASSEMBLY MEETING OF COMSTECH

A four-member delegation of COMSATS participated in the 14th General Assembly Meeting of the Organization of Islamic Conference (OIC) Standing Committee on Scientific and Technological Cooperation (COMSTECH), held in Islamabad from 11th to 13th January 2011. As a Ministerial Standing Committee, all the 57 member states of the OIC are members of COMSTECH, out of which 12 are also the members of COMSATS.

The COMSATS' delegation headed by the Executive Director COMSATS comprised: the Director General (International Affairs), Mr. Tajammul Hussain; Advisor (International Affairs), Dr. Hasibullah; and Senior Assistant Director (Programmes), Mr. Irfan Hayee. COMSATS was invited to the ministerial-level meeting in the capacity of an International Inter-governmental Organization.

Availing the presence of a large number of dignitaries in Islamabad, COMSATS' delegation held sideline meetings with the officials from the OIC member states. During the course of this event, the Executive Director COMSATS met 10 Ministers and 2 Deputy Ministers. Matters pursued during the discussions related to: COMSATS' Membership; the designation of more scientific institutions as a part of COMSATS' Network of S&T Centres of Excellence; participation in the Thematic Research Groups; COMSATS' country-specific programmes and activities; and other issues of mutual interest. Five developing countries previously approached with the offer of COMSATS' Membership were consulted during these meetings to ascertain the progress made in this direction, while three other developing countries were handed over invitation letters, along with pertinent documents to join COMSATS.

HIGHLIGHTS OF THE 14TH GENERAL ASSEMBLY MEETING

The 14th General Assembly Meeting of COMSTECH was hosted by the Ministry of Science and Technology, Government of Pakistan. The Inaugural Session of the meeting was held on 11th January 2011, was presided over by the Prime Minister of Pakistan, H.E. Syed Yousaf Raza Gilani, who is also the Co-chairman of COMSTECH. Prior to the inaugural speech by the Co-chairman, Prof. Atta-ur-Rahman (Coordinator General COMSTECH), Minister of Scientific Research of Senegal, H.E. Prof. Amadou Tidiane BA (Chairman OIC) and H.E. Prof. Dr. Ekmeleddin Ihsanoglu (Secretary General OIC) addressed the Assembly. A total of 32 member states of COMSTECH and 24 international organizations were represented in the meeting and over 275 delegates participated in its proceedings.

The Assembly Meeting spanned three days and was divided into 7 sessions that included an Inaugural Session, a

MAJOR OUTCOMES OF THE 14TH GENERAL ASSEMBLY MEETING OF COMSTECH

The 36-point resolutions adopted by the Assembly, inter alia, contained clauses on:

- Activation of National Commissions on science and technology, as well as Parliamentary Committees in order to promote science, technology and innovation;
- Promotion of Green-technology programmes to combat climate change and invitation of proposals for approval by the next meeting of Executive Committee of COMSTECH;
- Approval of Iran's proposals to establish Inter-Islamic Networks on Nanotechnology, Virtual Universities, and Technology Parks in Iran;
- Request for financial support from IDB for initiation of new programmes and to strengthen the existing ones;
- Invitation to all member states to join the Science, Technology and Innovation Organization (STIO);
- Appreciation of the pledges made by Iran, Pakistan, Kingdom of Saudi Arabia and Syria to offer US\$ 5 million for STIO programmes for 2011;
- Mobilization of the necessary political will and financial resources for the realization of Vision 1441H and the Ten-Year Programme of Action of COMSTECH.

Concluding Session and 5 intermediate Plenary Sessions. The first session was also presided over by the Co-chairman of COMSTECH. Four Vice-chairpersons and a Rapporteur General were elected after the approval of the Provisional Agenda of the General Assembly Meeting. The representatives from the member states elected as Vice-Chairs belonged to Egypt, Indonesia, Palestine, Senegal, while the head of delegation from Azerbaijan was entrusted with the responsibilities of Rapporteur General. Heads of delegations from 18 Member States presented their country-statements.



The Iranian Deputy Minister for Science, Research and Technology in a meeting with COMSATS' officials

SIDELINE MEETINGS WITH OFFICIALS FROM COMSATS' MEMBER STATES

The Iranian Deputy Minister for Science, Research and Technology, H.E. Dr. Abbas Taeb, who is also the Head of the Iranian Research Organization for Science and Technology (IROST) paid a visit to COMSATS Headquarters, along with his delegation members on the first day of the meeting. The discussions on this occasion had a special focus on the Thematic Research Group activities of COMSATS, wherein a more vigorous participation on part of IROST was requested. Dr. Taeb was informed about the commitment of COMSATS to sponsor the foundation meeting of the Thematic Research Group on 'Space Technology its Applications' in Iran.

COMSATS' delegation held a meeting with the Syrian delegation comprising the Syrian Minister for Higher Education, H.E. Prof. Dr. Ghias Barakat, and the Director of Syrian-COMSATS-COMSTech Information Technology Centre (SCCITC), Dr. Bassel Al-Khatib. The Rector COMSATS Institute of Information Technology (CIIT), Dr. S. M. Junaid Zaidi, who had contributed to the establishment of the Centre, also participated in the meeting. In a thorough discussion among these officials, matters relating to holding of a training workshop on 'Internet Security' in Syria (2011) and up-gradation of the level of excellence of SCCITC, as a higher institute of learning were deliberated upon. The Executive Director deemed the following as the possible retarding factors to the Centre's growth: i) the unavailability of a full-time Director of the institution; and ii) lack of representation of two important founding organizations – COMSATS and COMSTech – in SCCITC's Board of Management meetings. The Minister was of the view that measures should be taken in order to upgrade the Centre to the desired level of excellence. He invited Dr. Zaidi to Syria for consultation in order to enhance the Centre's stature. It was deemed appropriate that the schedule of the next meeting of the Board of Management may coincide with that



Meeting with the Syrian Minister for Higher Education

of the workshop on 'Internet Security'. It was agreed that both the events may be organized during July 2011 so that subject specialist from CIIT may be available for the necessary evaluation of the Centre and to offer consultations to the relevant officials of SCCITC.

Also on the sidelines of the General Assembly Meeting, matters of mutual interest were discussed with the visiting Honourable Egyptian Minister for Higher Education, H.E. Dr. Hany Mahfouz Helal, and Prof. Dr. Ashraf Shalaan, President of the National Research Centre (NRC), Egypt. The Executive Director was assured by the Egyptian Minister of the availability of funding for COMSATS' activities in Egypt. Prof. Shalaan was requested to initiate the activity of COMSATS' Thematic Research Group on 'Agriculture Biotechnology', of which NRC is the Lead Centre. It was noted that two other Groups on 'Natural Products Sciences' and 'Climate Change and Environmental Protection' have already initiated their group activity during November 2010.

Request letters to the relevant Ministries for designation of appropriate scientific institutions to join COMSATS' Network of Centres of Excellence were handed over to: Kazakhstan's Minister for Education and Science, H.E. Mr. Bakhytzhon Zhumagulov; Senegalese Minister for Higher Education and Scientific Research, H.E. Prof. Amadou Tidiane BA; and the Secretary to the Ministry of Science and ICT of Bangladesh, Mr. Abdur Rob Howlader. These officials were also informed about the benefits of joining COMSATS' Network of Centres of Excellence and its programmes.

CAMPAIGN FOR MEMBERSHIP

Earlier offers to join COMSATS' membership were followed up in the meetings with delegations of Algeria, Azerbaijan, Morocco, U.A.E. and Malaysia, while new membership offer-letters were handed over to the delegates of Afghanistan, Indonesia and Oman. The officials contacted in this regard include: H.E. Prof. M. Rachid Haraoubia, Minister



Meeting with the Malaysian Deputy Minister of Science, Technology and Innovation

for Higher Education and Scientific Research (Algeria); H.E. Prof. Dr. Ali Abbasov, Minister for Communications and Information Technology (Azerbaijan); H.E. Mr. Ahmed Akhchichene, Minister of National Education, Higher Education, Training and Scientific Research (Morocco); H.E. Mr. Suharna Surapranata, Minister for Research & Technology (Indonesia); H.E. Prof. Dr. Rawya Al Busaidi, Minister for Higher Education (Oman); H.E. Datuk Haji Fadillah bin Yusof, Deputy Minister of Science, Technology and Innovation (Malaysia); Dr. Sayed Sher Shah Sadaat, Head of Foreign Relation & International Affairs, Ministry of Higher Education (Afghanistan); and Mr. Saif Rashed Al Mazroui, Assistant Under Secretary for Institutional and Support Services (U.A.E.).

VISIT OF THE PARTICIPATING DELEGATES TO CIIT

On the last day of the General Assembly Meeting, a visit to CIIT was arranged by COMSATS Secretariat for the visiting delegates of OIC member countries and representatives of international organizations to highlight the progress of this flagship project of COMSATS and the benefits associated with having cooperative ties with CIIT. These included country-delegates and diplomats of Bangladesh, Iran, Sudan, Senegal and Syria and representatives from Islamic University in Uganda (IUIU) and the Academy of Sciences for the Developing World (TWAS).



Visiting delegates of the 14th General Assembly Meeting attending a presentation at CIIT

COMSATS' CONTRIBUTION TOWARDS THE ADMINISTRATIVE ARRANGEMENTS FOR THE GENERALASSEMBLY MEETING

Services of two officials of COMSATS Headquarters were requested by the Ministry of Science and Technology, Government of Pakistan, in order to provide efficient protocol to the visiting country-delegates. Mr. Nisar Ahmad, Senior Assistant Director (Systems) and Ms. Huma Balouch, Assistant Director (Programmes) of COMSATS Headquarters were appointed as the protocol officers for H.E. Prof. Dr. Ali Abbasov, Minister for Communications and Information Technology (Azerbaijan); and H.E. Dr. Rawya Al Busaidi, Minister of Higher Education (Oman), respectively.

OUTCOMES OF COMSATS' PARTICIPATION IN THE GENERALASSEMBLY MEETING

From COMSATS' perspective, the following were the major outcomes of this meeting:

- COMSATS' Membership offers were extended to Afghanistan, Indonesia and Oman. Official letters in this connection were presented to the Heads of country-delegations.
- Membership offers were followed up in meetings with heads/representatives of delegations from Algeria, Azerbaijan, Morocco, Malaysia and UAE.
- Matter of designation of appropriate institutions to become a part of COMSATS' Network was pursued with Kazakhstan, Senegal and Bangladesh.
- The workshop on 'Internet Security' to be held in Syria was scheduled for July 2011.
- The visiting Heads of the Lead Centres of COMSATS' Thematic Research Groups were requested to initiate the activity of their respective groups.
- The success of CIIT as COMSATS' flagship project was duly highlighted to some of the country-delegates and representatives of international organizations.

DELEGATES VISITING CIIT	
Country/ Institution	Delegates/Representatives
Iran	Dr. Mehdi Jawanmard, Head of Inter-Islamic Network of Virtual University
	Dr. Ali A. Tofigh, Inter-Islamic Network of Nanotechnology
Syria	H.E. Dr. Ghias Barakat, Minister for Higher Education
	Dr. Bassel AlKhatib, Director SCCITC
	Mr. Fadi Zedan (delegation member)
Sudan	Dr. Osama Alreyis (delegation member)
Bangladesh	Mr. Md. Abdur Rob Howlader, Secretary MoSICT
	Dr. AKM Asad uz Zaman, Joint Secretary MoSICT
	Mr. Shahidul Karim, Ministry of Foreign Affairs
Senegal	H.E. Prof. Amadou Tidiane BA, Minister for Higher Education and Scientific Research
	Prof. Tahir dit A. Diop, First Adviser to Minister for Higher Education and Scientific Research
	H.E. Ambassador Mohamadou Doudou LO, Ambassador of Senegal in Riyadh
Central African Republic	H.E. Mr. Zawa Aambroise, Minister for National Education
	Mr. Ankogui Mpoko Guy Florent, Director General, Ministry of National Education
TWAS	Prof. MHA Hassan, Executive Director
IUIU	Dr. Ahmed Kawasa Sengendo, V.C. IUIU
	Dr. Abdul Kaziba Mpaata, Vice Rector (FA) IUIU

ACTIVITIES/NEWS OF COMSATS' CENTRES OF EXCELLENCE

WATER EFFICIENCY MEASUREMENT LABORATORY ESTABLISHED AT RSS, JORDAN

On February 23, 2011, Water Efficiency Measurement Laboratory was inaugurated at the Royal Scientific Society (RSS) of Jordan. The U.S. Agency for International Development (USAID) provided its support to the Jordanian Ministry of Water and Irrigation and the Jordan Institution for Standards and Metrology (JISM) for the establishment of this unique laboratory in Amman. The inaugural ceremony was graced with the presence of Jordanian Minister of Water and Irrigation, Mohammad Najjar. Director General JISM, Dr. Yaseen Khayyat, and Assistant Director of Water & Environment Programme at USAID, Dr. W. Frank, also attended the ceremony.

The laboratory is equipped with latest instruments to measure the efficiency of a wide range of household and industrial water fixtures, as well as household electrical appliances consuming water. The establishment of the laboratory is expected to go a long way in ensuring conformity with national standards, technical specifications and requirements viz. water fixtures and appliances.

At the inauguration, Dr. Tareq Al Hadid, Executive Director - External Affairs of RSS, read a message from HRH Princess Sumaya bint El Hassan, the President of El Hassan Science City and RSS, that stressed the need to conserve the limited water resources. Underscoring importance of the establishment of this laboratory, it was noted that Jordan has one of the lowest levels of water resources in the world on a per capita basis. Furthermore, it was highlighted that RSS provides numerous technical services in the water-resources arena, including research, consultancy, and technical studies, as well as specialized testing services to various public and private institutions on cooperative arrangements.

This new laboratory, which is the first of its kind in the region, complements the vast number of specialized laboratories at RSS, serving regulatory and legislative institutions of Jordan for the protection of Jordanian consumer-base and supporting the competitiveness of national products and private-sector institutions.

EC FUNDED "IJERA" LAUNCHED BY RSS

The Environment Monitoring and Research Central Unit (EMARCU) of RSS has launched a new project funded by

the European Commission (EC) titled: "Integrating Jordan into the European Research Area" (IJERA). The IJERA is coordinated by RSS and brings together three partners namely the Higher Council for Science and Technology from Jordan, Europe for Business (EFB) from the United Kingdom, and Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA). At the launching ceremony, a welcome note was delivered by Dr. Tariq Al-Hadid, Executive Director of External Affairs, who highlighted the long and fruitful cooperation between Jordan and the EC, and the important aspects of the project in supporting water-related research.

The project's implementation will be conducted over a period of 24 months aiming at strengthening the capacities of EMARCU/RSS, while acknowledging it as an international centre of excellence in water research in the region. Also, the project will work on reinforcing the cooperation capacities and research activities in Jordan's water-sector by defining water research priorities to respond to the socio-economic needs, as well as facilitating Jordan's participation in European water research initiatives and inclusion in Euro-Mediterranean Research and Innovation Area. The projected outcome of this project will be a significant increase in the capacities of EMARCU in the domain of water related S&T cooperation for the Unit's participation in the seventh framework programme of EU (EU-FP7) and other funding schemes.



Audience during the Inaugural Ceremony of Water Efficiency Measurement Laboratory of RSS

ACTIVITIES OF CIF, COLOMBIA

During January-February 2011, the Biophysics and Biology of Membranes Research Group (headed by Dr. Marcela Camacho) of Centro Internacional de Física (CIF), Colombia, has won funding for two of its projects from COLCIENCIAS (Colombian Administrative Department of Science, Technology and Innovation). These projects are related to Leishmania parasitophorous vacuole membrane and chloride ionic channels as potential therapeutic targets in the same parasite model.

On the other hand, the Applied Physics and Technological Development Group of CIF participated in "The 3rd FAJR Regional Innovation and Inventions Exhibition 2011" held in the Islamic Republic of Iran, Tehran. The Director of the Group, Dr. José García, presented the PowerScan version 4

(FPGA: Field-Programmable Gate Array) device developed by CIF. The invitation to participate in the said exhibition in Tehran was extended to all the National Focal Points and Centres of Excellence by COMSATS Headquarters on the request of Director IOR-ARC Regional Centre for Science and Technology Transfer (RCSTT), Iran.

The Biotechnology Group of CIF, under the patronage of its Director, Dr. Marta Lucia Guardiola, began a native species reforestation project for quarry fields, where excavation at open field system was carried out. The Group hopes to obtain a successful model in order to recover ecosystem. Also, the Group plans to initiate a new project linked to private industry for optimization of processes, protocols and biological-safety indicators in a lyophilized polyvalent snake anti-venom serum.

ICCBS' INTERNATIONAL SYMPOSIUM ADDRESSES MOLECULAR MEDICINE AND DRUG RESEARCH

The 3rd International Symposium-cum-Training Course on Molecular Medicine and Drug Research was organized by the Dr. Panjwani Center for Molecular Medicine and Drug Research (PCMD), ICCBS, Pakistan, from 3rd to 6th January 2011.

The purpose of this symposium was to develop innovative technologies that will allow advanced research contents to be managed and disseminated efficiently throughout Pakistan. Over 350 scientists, including 35 researchers from 15 countries, participated in this event. International delegates from USA, Brazil, Germany, Singapore, Turkey and eminent scholars from the reputed institutions of Pakistan participated in the event, which provided a forum to bring together both young and experienced scientists for meaningful collaborations at regional and global levels.

The aspects of molecular medicine covered in this symposium included: Molecular Immunology; Molecular Oncology; Neurochemistry; Gene Therapy; Stem-Cell Therapy; Tissue Engineering; Infectious Diseases; Allergies and Asthma; Diabetes, Molecular Pharmacology and Drug Resistance Functional Genomics and Proteomics, Bioinformatics and Computational Biology and Translational Biomedical Research.

HIAST's WORKSHOP HIGHLIGHTS THE IMPORTANCE OF HIGH PERFORMANCE COMPUTING

The Higher Institute for Applied Science and Technology (HIAST), Syria, organized a workshop on "Using High Performance Computing (HPC) in Scientific Computation", between 14th-16th December 2010. The workshops aimed to accentuate the significance of HPC in different areas of science and technology. Speakers from many countries, like USA, Germany, Spain, Hungary, Turkey, and Syria, shared their experiences and ideas about HPC. More than 120 researchers from Syrian universities, research centres and establishments participated in this workshop. Topics discussed in the workshop included: new trends in HPC, clusters, grids, and clouds, in addition to infrastructural development for research and industry. Applications, such as real time, finite elements method (FEM), computer modelling in nanotechnology, computational chemistry, were also introduced. HPC and grid facilities at HIAST and the relevant services that HIAST can offer to the Syrian scientists was also deliberated upon. Another highlight of the workshop was a tutorial about HPC cluster-building and the use of Grid.



The V.C. Karachi University at the Inaugural Ceremony of the International Symposium of ICCBS

FACULTY OF CIIT WINS FUNDING FOR PROJECTS

The Higher Education Commission (HEC) of Pakistan has granted funding for three different research projects of COMSATS Institute for Information Technology. These projects are being supervised by Dr. Sadia Manzoor (Associate Professor, Department of Physics, Islamabad), Prof. Dr. Nasrullah Khan (Department of Electrical Engineering, Islamabad), and Dr. Abdul Jabbar Shah (Asstt. Prof. Department of Pharmacy, Abbottabad).

Dr. Sadia would be undertaking research on "Up-gradation of Magnetism Laboratory" at the Department of Physics, CIIT, Islamabad. The main aim of the project would be to upgrade the capabilities of the Magnetism Laboratory to include the fabrication and study of highly ordered two-dimensional magnetic nanoarrays using advanced techniques, such as magnetron-sputtering and photolithography. Her project received funding worth Rs. 633,132. Prof. Khan's research proposal, titled "A Hybrid Solar Water Heating System using CO₂ as Working Fluid" under Pak-US Joint Academic & Research Programme, is intended to show how solar energy can be harnessed effectively for heating purposes even in the solar-adverse



The Coordinators of the Erasmus Mundus Mobility with Asia in a meeting with Rector CIIT

regions like Northern Areas of Pakistan. HEC has granted funding of Rs. 6,546,393 for his project. Dr. Shah's project proposal, titled "Pharmacological Investigation of Medicinal Plants Available in Hazara Division and related Northern Areas based on their Medicinal Use in Cardiovascular Disorders", won funding of Rs. 2,523,520. The research is expected to lead to identification of some botanicals with the combination of activities, having synergistic potential and/or side-effect neutralizing capability.

Pakistan Science Foundation (PSF) has also approved a research grant of Rs. 2,648,250 for a project of CIIT on "Wheat Improvement Using Targeted Genomic Approaches", which will be supervised by Prof. Dr. Muhammad Maroof Shah (Department of Environmental Sciences, CIIT Abbottabad). Also, research grant of Rs. 75 Million was approved by Norwegian Research Council for developmental studies, to be supervised by Dr. Bahadar Nawab of CIIT-Abbottabad, under a project titled "Gender and Human Security in Post-Conflict Pakistan: Policy Implications of Local, Gendered Understandings of Security and Development".

CIIT SIGNS AN MOU WITH NDSU-USA

An MoU has been signed between CIIT and North Dakota State University, USA (NDSU-USA), on 7th of February, 2011. The purpose of the MoU is to establish cooperation and professional relations between the two institutions.

The collaboration will be based on exchange of faculty, research scientists and institutional managers for short periods; joint workshops, conferences, and seminars; and graduate studies at NDSU for CIIT students. For each CIIT fellow registered in full standing at NDSU, the latter would provide 100% fee-waiver.

For the mutual benefit of R&D and teaching activities, CIIT signed an MoU with Shifa College of Medicine on 20th January 2011. The cooperation will be in the areas of student/staff exchange, equipment exchange, collaborative research, joint publications, access of reference materials and educational facilities.

OTHER ACTIVITIES OF CIIT

The Coordinators of the Erasmus Mundus Mobility with Asia (EMMA), Prof. Marc Diener and Prof. Francine M. Diener of the University of Nice-Sophia Antipolis, France, visited CIIT. Prof. Francine Diener delivered a seminar on "Mathematical Modeling of Genes Regulatory Network". Prof. Marc Diener also gave a comprehensive presentation on EMMA. The French delegates showed interest in the research being undertaken at the Mathematics Department of CIIT. They deliberated on how CIIT could benefit from EMMA.

On February 4, 2011, Architect M. Afzal Ebrahim, Associate Professor at CIIT, Islamabad, Pakistan, delivered a lecture on "Green and Sustainable Buildings", at Colegio de Arquitectos de Costa Rica (Institute of Architects of Costa Rica) and at Universidad Latina, San Pedro Campus. The lecture was based on Dr. Ebrahim's recent research undertakings on thermal analysis of brick and adobe (mud) structures.

Mr. Ebrahim elucidated how passive strategies and building elements, such as shading, courtyards, wind towers, solar systems, can help address the energy needs of the developing world. A few examples of structures equipped with such elements in Karachi & Rawalpindi, Pakistan; Delhi, India; Ispahan, Iran; Sharjah, UAE; Phoenix, Tempe, & Tucson, USA and Jamaica were quoted. Architectures of Mr. Ebrahim incorporating cooling techniques, such as windtowers, courtyards and ventilation, were also presented. Emphasis was laid on the responsibility of architects and designers towards building structures that use minimum energy and water, reduce waste, use recycled and recyclable materials.



Dr. Afzal Ebrahim of CIIT delivering a lecture on "Green and Sustainable Building" in Costa Rica

SCIENCE, TECHNOLOGY AND DEVELOPMENT

WONDERS OF BIOENGINEERING

Scientists have bioengineered blood-vessels that have been tested successfully on animals and could be of great benefit to the human-health in the future. A research reported recently (*Science News*, 26th February 2011) shows that bioengineered vessels could greatly help the patients who need bypass heart surgery or kidney dialysis. To make these bioengineered vessels, the scientists cultured smooth muscle-cells obtained from human blood vessels in a biodegradable tube of micromesh, similar to the material used in dissolvable structures. After the cells had built a vessel by depositing collagen and other compounds on the mesh, the scientists removed the cells to leave behind a vessel of tough human proteins. With the living cells removed, immune attack on the vessels is considerably lower and also allows them to be stored in refrigerators for up to a year. The vessels have been tested for their structural strength, flexibility and capability to withstand pressure. The positive results on animals have encouraged further research. It is likely that bioengineered blood-vessels would be available off-the-shelf for heart bypass and kidney dialysis in the near future.

CORRELATION BETWEEN CARBON EMISSIONS AND RAINFALL QUANTIFIED

Climate change is increasingly posing serious challenges to the socio-economic stability all over the world, to which the developing countries are the most vulnerable. Mostly, they are deterred to make sound national climate-related policies due to inadequate quantifiable links between greenhouse gas emissions and the severe climatic variations, which have now been shown by scientists (*SciDev.Net*, 17th February 2011).

The report describes two studies. In the first study, scientists have compared rainfall data predictions from 8 climate models from weather-stations around the Northern Hemisphere. The interpretation is that scientists have some confidence to state that the increased rainfall-intensity in the latter half of the 20th century cannot be explained by the estimates of internal climate variability. In the second study, scientists have found that human-produced green house gas emissions "significantly increased" the likelihood of severe floods like the one that caused damage of around US\$2 billion in England and Wales, during 2000. The scientists have shown with a 66 per cent confidence-level that the emissions nearly doubled the risk of the floods in the year 2000. Similar attribution studies are underway for flood and drought risk in Europe, meltwater availability in the western US and drought in southern Africa. Such studies provide the necessary direction to the policy-makers and environmentalists in the developing countries for planning and strategies relating to climate change.

LIFESTYLE AFFECTS LIFE EXPECTANCY MORE THAN GENETICS

Everybody wants to live longer. Science and society have taken up this subject more often than any other. So far, many people are convinced with several scientific studies, which suggest that the genetics determine the length of life a person lives, as well as his predisposition to various ailments. However, a recent research (*Eureka! Science News*, 7th February 2011) suggests something on the contrary. It advocates the importance of man's lifestyle over his parental history. 'How long your parents lived does not effect how long you will live. Instead, how you live your life determines how old you will get', is the main message of the reported research.

According to the research, those who did not smoke, consumed moderate amounts of coffee and had a good socio-economic status at the age of 50 (measured in terms of housing costs), as well as good physical working capacity at the age of 54 and low cholesterol at 50, had the greatest chance of celebrating their 90th birthday. Earlier, many of the factors described above were identified to have been playing a role in cardio-vascular diseases, but the research shows for the first time that they are important for the survival, in general.

A STARK WARNING TO CIGARETTE-SMOKERS

A lot has been said and written about the grave health hazards caused by smoking. But such warnings are still taken lightly by many optimistic smokers. This ill-conceived optimism should finish immediately as the scientists are reporting that cigarette-smoke begins to cause genetic damage within minutes – not years – after inhalation into the lungs (*Eureka! Science News*, 15th January 2011). This report based on the first human study has appeared in 'Chemical Research in Toxicology', published by the American Chemical Society. It elucidates the way in which certain substances in tobacco cause DNA damage linked to cancer.

Lung cancer claims a global toll of around 3,000 lives each day, largely due to cigarette-smoking. Smoking is said to be linked to at least 18 types of cancer. Evidence indicates that harmful substances in tobacco-smoke, termed polycyclic aromatic hydrocarbons (PAHs), are one of the culprits in causing lung cancer. Until now, however, scientists had not detailed the specific way in which the PAHs in cigarette-smoke cause DNA damage in humans. The scientific evidence linking DNA damage and cigarette-smoking should serve as a stark warning to those who smoke and those who consider themselves as passive smokers. The study establishes that great socio-economic relief can be brought to millions of families by just quitting cigarette smoking and diverting the resources towards buying nourishing foods.

PROFILE OF COMSATS' INTERNATIONAL S&T CENTRE OF EXCELLENCE

NATIONAL RESEARCH CENTRE (NRC), EGYPT

Introduction

The National Research Centre (NRC) is the largest multi-disciplinary R&D centre in Egypt, devoted to basic and applied research within the major fields of national interest. The Centre was established as an independent public organization in 1956, with the aim to "foster basic and applied scientific research, particularly in industry, agriculture, public health and other sectors of national economy". NRC is headed by a President with status of a minister and is assisted by two Vice Presidents, one for research and the other for technical affairs. The Minister of State for Scientific Research is the Higher President of NRC. The Centre is the largest of all institutions affiliated with the Ministry of Scientific Research of Egypt, and employs about 60% of all scientists working in these institutions. During the later part of the twentieth century, six divisions of NRC developed into independent research institutes.

Vision & Mission

NRC is envisaged to correspond to the country's key production and services sectors through the research, conducted in different areas of science and technology, scientific consultation and training. The Centre has the mission to conduct basic and applied research within the major fields of national interest in order to develop production and service sectors.

Scientific Potential and Technical Capacity

The Centre is staffed with a sizeable workforce of over 4,800 research personnel and possesses an impressive infrastructure for scientific and technological research. It consists of 14 divisions and 111 departments covering the major areas of industry, health, environment, agriculture, basic sciences and engineering.

Training and Capabilities Development Unit (TCD): NRC has a Training and Capabilities Development Unit, which aims to develop scientific and technological capabilities at the national and regional levels in the various scientific fields. The Unit also extends its services to external authorities in Egypt, Arab and Commonwealth countries.

Central Unit for Analysis and Scientific Services (CUASS): The Central Unit for Analysis and Scientific Services (CUASS) of NRC is considered one of the Special Services Units that is financially, administratively and technically independent. The main purpose of establishing such a unit is providing analytical and functional services to support scientific research within the country and apply modern technologies to the production and service sectors, as well as raising the efficiency of research in the applied field, and testing the validity of products and their quality level.

The Unit also has a prominent role in serving the research plan of NRC by providing scientific services for research projects, within and outside various research departments and divisions of NRC. Through CUASS, M.Sc. & Ph.D. students from various universities and research centres of Egypt are facilitated to carry out measurements and lab tests, in pursuance of their research theses. The Unit also comprises two main Labs: Material Testing Laboratory and Central Services Laboratory.

Center of Excellence for Advanced Sciences (CEAS): The Center of Excellence for Advanced Sciences (CEAS) of NRC is a group of laboratories that offers basic and applied research facilities for 15 research groups in interdisciplinary sciences, mainly biotechnology, nanotechnology, renewable energy and pharmaceutical research. CEAS has two Research Service Units: Service Unit for Advanced Technologies; and LASER Technology Lab. The purpose of this Center is to provide advanced technology incubation services. The mission of CEAS is: creation of enabling scientific environment; reversing brain drain; providing decentralized administration; monitoring and evaluating performance based on standard criteria; fund raising; and networking with national, regional and international scientific research institutions and organizations.

Research Activities

NRC undertakes research activities at three tiers, in-house projects, national projects, and international projects.

In-House Projects: Under the Ninth Research Plan (2010 - 2013) of NRC, projects are being undertaken under 14 research groups on: Renewable Energy; Water; Nanotechnology and Advanced Materials; Biotechnology; Agriculture; Waste; Stem Cells; HCV; Obesity; Cancer; Diabetes; Human Genetics; Functional Food; and Polymers.

National Projects: The national-level research projects being undertaken by NRC are: Industrial Modernization R&D Programme; projects with the Academy of Scientific Research; projects funded by the Science, Technology & Development Fund; and collaborative work with the private sector.

International Projects: NRC encourages cooperation between its scientists and those from foreign countries – mainly developed countries. In this regard, Egypt-US Partnership Programme: "Science and Technology Transfer", and Egypt-Germany Partnership Programme are worth-mentioning. Most of the foreign cooperation takes place in the fields of textile and chemical industries, agriculture, environment, food industry, medical research, biotechnology and mineral resources.

International Agreements

Major international agreements of NRC for scientific and technological cooperation include: an MOU with CSTECH, China; an agreement for establishing a new Programme of Master of Science in Organic Farming in Egypt (NPMSOFE) with University of Bonn, Germany; and an agreement with INRA, France; besides other cooperative agreements with Evenor-Tech Company, Spain; and Institut National des Sciences et Technologies de la Mer (INSTM), Tunisia.

For further details, please contact:

Prof. Dr. Ashraf Shaalan

President

National Research Centre (NRC)

El-Bohouth Street (El-Tahrir Street),
Dokki, P.O. Box 12622, Cairo, Egypt.

Tel: (+20-2) 33371010/33354971, Fax: (+20-2) 33370931

URL: www.nrc.sci.eg, Email: president@nrc.sci.eg



SELECTED FORTHCOMING SCIENTIFIC EVENTS IN COMSATS' COUNTRIES

12-17 May 2011	The 5 th Symposium on Advances in Science and Technology, Mashhad, Iran (http://5thSASTech.khi.ac.ir)
18-20 June 2011	In Vitro Diagnostics Technology and Industry Development Summit, Shanghai, China (http://conference.echinachem.com/home.asp)
26 June - 02 July 2011	IUFRO Tree Biotechnology Conference 2011: "From Genomes to Integration and Delivery", Bahia, Brazil (http://www.treebiotech2011.com)
10-12 July 2011	The International Conference, Workshop and Exhibition in Nanotechnology - ICWEN Egypt 2011, Cairo, Egypt (http://www.nakaanetwork.page.tl)

14TH COORDINATING COUNCIL MEETING 26-27 May 2011, Bogotá, Colombia

The Commission on Science and Technology for Sustainable Development in the South (COMSATS) is pleased to announce the convening of its 14th Coordinating Council meeting in Bogotá, Colombia, on May 26-27, 2011. The meeting will be hosted by the International Centre of Physics (CIF). In this connection, invitation letters along with registration forms have been sent to the members of the Council. The Coordinating Council meets every year to review the activities of COMSATS' Network to follow up on the decisions and recommendations made in the last meeting and to outline the future course of action. For further information please write to cif.eposada@gmail.com or rivera.silvia@gmail.com.

36TH INTERNATIONAL NATHIAGALI SUMMER COLLEGE ON PHYSICS & CONTEMPORARY NEEDS 27 June - 08 July, 2011, Nathiagali, Pakistan

Pakistan Atomic Energy Commission (PAEC) and National Centre for Physics (NCP) are organizing the 36th International Nathiagali Summer College on Physics & Contemporary Needs from 27 June to 8 July 2011, in Nathiagali, Pakistan. The primary aim of the College is to break the isolation of the scientists in the developing countries by enabling them to interact with international faculty and counterparts from the Third World. This year, the College will cover the topics on: Particle Physics; Quantum Informatics Systems; Analytical Techniques for Nanomaterials; and Photovoltaics. For further details, please visit the website of the College: www.ncp.edu.pk/insc

CALL FOR PAPERS FOR COMSATS' JOURNAL – SCIENCE VISION

Science Vision is a biannual scientific journal of COMSATS. It primarily aims at highlighting the important scientific and technological developments that have a bearing on socio-economic conditions of the people. It invites research as well as review articles that have general scientific descriptions, with comprehensive elucidation of the impact of S&T discoveries and innovations for creating understanding of the contemporary issues and challenges. COMSATS invites scholarly contributions for the Vol. 16 of its journal. Scientists, researchers, policy-makers and young scholars from S&T organizations and R&D institutions are encouraged to contribute articles on any scientific field of interest relevant to the focus of the journal. As per the policy of the journal, contributors are compensated for their time and efforts with a modest amount of honorarium.

For more details, please visit COMSATS' official website: www.comsats.org or the journal's website: www.sciencevision.org.pk. Contributions may be sent to the Chief Editor at: comsats@comsats.org.pk.

A BRIEF ON COMSATS

The Commission on Science and Technology for Sustainable Development in the South (COMSATS) is an inter-governmental organization, with its Secretariat located in Islamabad.

COMSATS, currently, has 21 countries as its members, spread across three continents, i.e., Latin America, Africa and Asia. A network, of 16 International Science and Technology Centres of Excellence, is also affiliated with COMSATS to contribute to scientific development of its Member States. For detailed information, please visit COMSATS' website: www.comsats.org.

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

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