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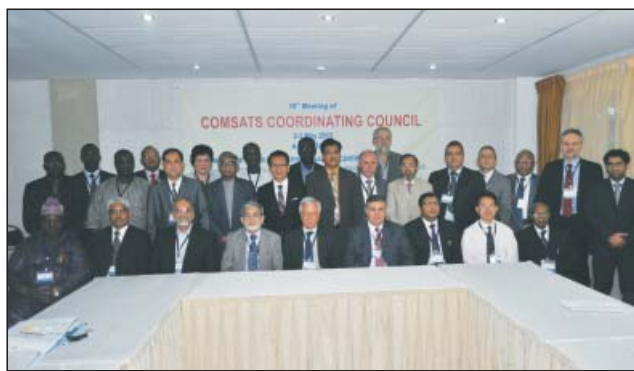
Patron

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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.



Members and Participants of the 16th COMSATS Coordinating Council Meeting held in Accra, Ghana (2 -3 May 2013)

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From the Executive Director's Desk

Among the developing countries of Africa, Ghana occupies a special place. It is a country with huge natural resources, stable political system and surging economy. As the Head of United Nations for 10 years, the eminent son of Ghana, Kofi Annan, portrayed the spirit of his native land through sterling qualities of head and soul. Earlier, Africa saw a leader of Ghana, Kwame Nkrumah, playing the role of a liberator and a visionary statesman with boundless courage and ambition for the development of his country, as well as the African continent as a whole. Nkrumah's success in making Ghana the first Sub-Saharan country to achieve independence from colonial rule inspired countless Africans and their leaders. The incumbent President of Ghana, H.E. Mr. John Dramani Mahama, who is an eminent historian, environmentalist and political thinker, has all the attributes of a Statesman that can lead his country through the crucial period of rapid socio-economic transition. The Member countries of COMSATS can also benefit from his vision in view of his position as the Chairperson of COMSATS for the three-year period with effect from April 2012.

It was, therefore, highly significant that the 16th meeting of COMSATS Coordinating Council and the 2nd Consultative Committee meeting were held in Accra from 1st to 3rd May

2013 (see pages 4 to 9). The honourable Minister for Environment, Science, Technology, and Innovation (MESTI), H.E. Dr. Joseph Oteng Adjei, in his meeting with the Executive Director COMSATS expressed the resolve of his country to devote sufficient financial resources for rapid developments in S&T sector through improved infrastructure and better working conditions for the scientists. Holding the Chair of an international organization, dedicated to S&T capacity-building, is an excellent opportunity for Ghana to play its historic role of promoting Pan-African development agenda. The Minister, in his capacity as the liaison of the Chairperson COMSATS, has expressed faith in the effectiveness of COMSATS as a platform for promoting South-South cooperation.

Indeed, the Council Meeting of COMSATS is a unique opportunity for the Heads of R&D organizations in developing countries affiliated with COMSATS Network to exchange views and explore collaboration opportunities. The fact that such a meeting is held every year in a different country by one of COMSATS Centres of Excellence means that all senior officials of the host institution get to know their peers and develop personal

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NEWS/ACTIVITIES/HIGHLIGHTS FROM COMSATS SECRETARIAT

GHANAIAN MINISTER BRIEFED ABOUT COMSATS' PROGRAMMES AND RECENT ACTIVITIES

A meeting was held between the Executive Director COMSATS, Dr. Imtihan Elahi Qureshi, and H.E. Dr. Joseph Oteng Adjei, Minister for Environment, Science, Technology and Innovation (MESTI), Government of Ghana, in the latter's office in Accra on 3rd May 2013. The meeting was attended by the Director of one of the institutes of COMSATS' Centre of Excellence in Ghana, the Council for Scientific and Industrial Research (CSIR), Dr. Eugene Atiemo. Also present on the occasion was the outgoing Director for Science, Technology and Innovation (MESTI-Ghana), Dr. Benony Komla Kortatsi.

The discussions in the meeting revolved around the ongoing and future programmes of COMSATS with special reference to Ghana's participation. While thanking the honourable Minister for hosting COMSATS' two statutory body meetings, from 1st to 3rd May 2013, in Accra, Dr. Qureshi emphasized the need for Ghana to exercise its leadership as the Chair of COMSATS and direct COMSATS Secretariat to achieve specific targets of S&T cooperation in member countries, especially in Africa.

The Minister expressed his delight at the presence of high-level officials and eminent scientists in Accra for COMSATS' statutory body meetings. He also assured the Executive Director of his personal commitment to support COMSATS' activities in Ghana. Among other matters that were agreed upon during the meeting included:

- i) Preparations for a meeting of COMSATS' officials with the Chairperson COMSATS;
- ii) Closer contacts with COMSATS Secretariat through the office of the relevant Deputy Minister at the Ministry of Environment, Science, Technology and Innovation (MESTI), Ghana;



ED COMSATS presenting COMSATS' Publications to Minister, MESTI, Ghana

- iii) Consideration of setting up video-conferencing link between MESTI and COMSATS Secretariat;
- iv) Review of the possibility of launching the International Thematic Research Group on "Construction Materials", under the lead of Building and Road Research Institute, Ghana;
- v) Exploring the possibility of deputing an officer of MESTI on secondment at COMSATS Secretariat; and
- vi) Placement of Ghanaian students in the graduate studies programme of COMSATS Institute of Information Technology.

COMSATS-UNESCO PARTNERSHIP DISCUSSED AT UNESCO HEADQUARTERS

On 6th May 2013, the Executive Director COMSATS held a meeting with Mr. Stoyan Bantchev, Chief of UNESCO's Participation Programme Section at UNESCO Headquarters in Paris. He was accompanied by Ms. Humaira Zia Mufti, Deputy Permanent Delegate of the Islamic Republic of Pakistan to UNESCO.

Among the major points discussed on the occasion were: joint capacity-building activities by COMSATS during the past few years held under UNESCO's Participation Programme; and future role of COMSATS in relation to UNESCO's international activities for promotion of scientific research and education.

Briefing Mr. Bantchev about the 16th Coordinating Council meeting of COMSATS, Dr. Qureshi emphasized that the Council meetings, attended by the Heads of COMSATS' Centres of Excellence, provide a platform for South-South cooperation in S&T-led development. He thanked UNESCO for sending an observer to participate in the Accra meeting. The UNESCO representative at the 16th Council meeting, Mr. Yoslan Nur, had made a power point presentation outlining the role of ST&I Policy for Sustainable Development from UNESCO's perspective.

Mr. Bantchev noted that COMSATS' previous engagements with UNESCO, under its Participation Programme that were coordinated by Pakistan National Commission for UNESCO (PNCU), have been very productive. With respect to the biennial 2012-13, for which the approval of COMSATS' proposal is still pending, he cited UNESCO's budgetary constraints and some pending issues with PNCU. Nevertheless, he assured the Executive Director that COMSATS' project will be accorded high priority on the recommendation of the Deputy Permanent Delegate of Pakistan, Ms. Humaira Mufti.

In the end, Dr. Qureshi expressed his desire to create stronger institutional relations between COMSATS and UNESCO.



Mr. Stoyan Bantchev and Dr. Qureshi during their meeting in Paris

SECOND MEETING OF COMSATS' INTERNATIONAL THEMATIC RESEARCH GROUP ON 'NATURAL PRODUCTS SCIENCES'

The Second Meeting of COMSATS' International Thematic Research Group (ITRG) on 'Natural Products Sciences' was held on 6th June 2013. The meeting was chaired by the Group Leader, Prof. Dr. M. Iqbal Choudhary, Director of COMSATS' Centre of Excellence International Center for Chemical and Biological Sciences (ICCBS), Karachi-Pakistan and co-chaired by Prof. Munir Ozturk of the host institution – Ege University, Turkey. The meeting was attended by 24 participants in all from Algeria, Indonesia, Iran, Kazakhstan, Libya, Nigeria, Pakistan, Sudan, Tunisia and Turkey.

The agenda-items that formed the basis of the meeting related to: Instrument Sharing Programme for member institutions; Bioassay Screening Programme for member institutions; Screening of plant extracts in antimicrobial and anti-parasitic assays in order to discover new lead compounds against infections; and training-visits for

scientists and technicians involved in the group-research activities.

During the meeting, the participants offered their research facilities and expertise to achieve various tasks of the joint project. An open offer was made to all the Group members to avail the facility of bioassay screening of medicinal plants at ICCBS or any other member institution of the Group where such facilities are available.

The meeting reviewed the activities of the Group during the period 2011 to 2013 and deliberated on the future plans of the joint research project, titled 'Drug Discovery from Nature for Neglected Diseases'. A Memorandum of Understanding was signed by 18 group members at the end of the meeting.

It was also decided, in principle, that the next meeting of the Group will be held at Universiti Putra Malaysia (UPM), Malaysia, in 2014.

EXECUTIVE DIRECTOR COMSATS MAKES A BRIEFING ON STIP (2012) DURING A NATIONAL CONFERENCE

A two-day National Conference on "Technology Foresight and Critical Issues Related to S&T in Pakistan" was organized by the Pakistan Council for Science and Technology (PCST), on 25th and 26th June 2013, at National University of Sciences and Technology (NUST), Islamabad. In the first session of the Conference, Dr. I. E. Qureshi, Executive Director COMSATS, made a keynote presentation on the "Salient Features of Science, Technology and Innovation Policy (STIP) – 2012", elaborating the holistic approach adopted in its preparation. Dr. Qureshi considered the 'Action lists' recommended in the Policy to be effective guidelines for planning the policy implementation. Dr. Qureshi urged the Government of Pakistan to show its political will for S&T development through a declaration that the central proposition of the policy, namely, to spend 1% of the GDP on R&D in different S&T sectors, will be honoured.

contd. from page 1 ... 'From the Executive Director's Desk'

rapport with the visitors. The guest scientists, on the other hand, attend the meeting as well as avail the opportunity to visit and physically inspect the research facilities of the host institution, the working conditions of the scientists and the projects being undertaken by them. Such a close interaction inevitably leads to a better understanding of how to share resources and to offer or request technical assistance. Nothing can be more pragmatic for the promotion of South-South cooperation in Science and Technology than the first-hand knowledge of one another's scientific programmes and capacities.

COMSATS Coordinating Council also acts as a controlling body to supervise financial matters of the organization. It is, therefore, natural that the status of grants and contributions from Member States is thoroughly deliberated upon in the Council meetings. It is always hoped that the Member Countries will ensure continuity of their financial and intellectual contributions, because the success of an initiative that is undertaken jointly and voluntarily by a group of countries depends on the full support of all stakeholders. The mutual benefits that accrue from such a cooperative action far exceed the investment made and that should be the driving force behind COMSATS' sustained vigour and impact.

SPECIAL SECTION: COMSATS' MEETINGS HELD IN GHANA - 2013

INTRODUCTION

COMSATS' meetings play a pivotal role in giving impetus and direction to the projects and programmes of the organization for realizing its mission of science-led socio-economic development. This year two important statutory bodies of COMSATS, the Consultative Committee and the Coordinating Council, met in Ghana, from 1st to 3rd May 2013, to deliberate on relevant agendas during their 2nd and 16th meetings, respectively.

The Consultative Committee comprises the national scientific 'Focal Points' of 21 member countries of the Commission. The functions of the Committee include, inter alia, the formulation of general policies of the COMSATS' Network of International S&T Centres of Excellence and facilitation of the provision of services of these Centres in line with the Member countries' developmental needs. At present, COMSATS Network comprises 18 Centres of Excellence from four continents. The membership of Coordinating Council comprises the Heads of these Centres. Apart from deliberating on matters affecting the membership of the Network, the Council makes decisions on the programmes and budget of the Network, and makes rules and regulations governing its own procedures.

The meetings were hosted by COMSATS' Ghanaian Focal Point and Centre of Excellence, the Ministry of Environment, Science, Technology and Innovation (MESTI), and the Council for Scientific and Industrial Research (CSIR), respectively. In addition to members or representatives of the Committee and the Council, officials of TWAS and UNESCO, and a member of COMSATS Technical Advisory Committee (TAC), attended the meeting as observers. As per practice, the relevant Ministries of the host country – Pakistan – and the diplomatic missions of the Member States in Islamabad were sensitized earlier about the Ghana meetings. In this regard, meetings were held with high officials of Government of Pakistan and a dinner was hosted in honour of the Ambassadors of COMSATS' Member States

in Islamabad.

JOINT INAUGURAL CEREMONY

The two Ghana meetings were jointly inaugurated on the morning of May 01, 2013, in Accra. The inaugural ceremony was attended by representatives of universities and R&D institutions, and senior officials of diplomatic community in Accra, as well as the participants of the two meetings.

The joint inaugural ceremony featured a Welcome Speech by Dr. A. B. Salifu, Chairperson CSIR, Ghana; Introductory Remarks by Dr. I.E. Qureshi, Executive Director COMSATS; an Address by Mr. Akhlaq Ahmad Tarar, Chairperson Consultative Committee and Federal Secretary, Ministry of Science and technology, Government of Pakistan; and an Address by Dr. Eduardo Posada, Chairperson Coordinating Council and Executive Director Centro Internacional de Fisica (CIF). A message by the Ghanaian Minister for Environment, Science, Technology and Innovation, Dr. Joseph Oteng Adjei, was also read out on the occasion.

Other distinguished guests of the inaugural ceremony included the Ambassador of Zimbabwe; Deputy High Commissioner of Nigeria in Accra; and the Director (Science, Technology and Innovation), MESTI, Ghana.

The ceremony was followed by proceedings of the 2nd Consultative Committee meeting.

2ND MEETING OF COMSATS CONSULTATIVE COMMITTEE

The Consultative Committee meeting was chaired by Mr. Akhlaq Ahmad Tarar, Federal Secretary, Ministry of Science and Technology, Government of Pakistan, in his capacity as the Focal Point from the host country of the Secretariat, Pakistan. The Executive Director COMSATS, Dr. I. E.



Guests of Honour of the Inaugural Ceremony

"Hopefully, this meeting will assist us to develop strategies to further strengthen science and technology to achieve sustainable development in the south, to enhance agricultural and industrial productivity and increase food security, self-reliance, enhanced livelihoods and poverty reduction in our communities."

Dr. A.B. Salifu, Chairperson CSIR, Ghana

"I am very glad to report that COMSATS is making steady progress to enhance its international role. The Membership of the Commission, as well as the Membership of the Network of S&T Centres of Excellence is increasing, the capacity-building programmes are on the rise and financial sponsorship from Member states has considerably improved."

Dr. I.E. Qureshi, Executive Director COMSATS

"...It is understood that the elevation of a country to become a knowledge society is unachievable without international partnership. A huge amount of financial resources and human efforts can be spared by getting into North-South and South-South cooperation programmes."

Mr. Akhlaq Ahmad Tarar, Chairperson COMSATS Consultative Committee

"...The benefits of modern scientific knowledge have the potential of changing the destinies of nations by reinvigorating economies, improving the health and nutrition of populations and providing means for decent living."

Dr. Eduardo Posada, Chairperson COMSATS Coordinating Council



Chairperson Consultative Committee presiding over a technical session

Qureshi, performed his functions as the Secretary of the Committee during its deliberations. Apart from the senior officials of COMSATS Secretariat, the Committee meeting was attended by representatives of COMSATS' Focal Points in Bangladesh, Colombia, Egypt, Ghana, Iran, Kazakhstan, Nigeria, Pakistan, Senegal, Sri Lanka, Sudan and Uganda.

"It... gladdens my heart that these COMSATS meetings have facilitated the congregation of scientists, mathematicians, technologists and other distinguished scholars, under the COMSATS' platform for the promotion of Science, Technology and Innovation for the sustainable development of the South".

Hon. Joseph Oteng Adjei, Minister for Environment, Science, Technology and Innovation, Ghana

The meeting deliberated upon a nine-point agenda during its two technical sessions. The important matters discussed during the meeting pertained to the review of the five-year Strategy of COMSATS, approved by the Coordinating Council in its 15th meeting (Turkey, 2012); strengthening the



2nd Consultative Committee Meeting in progress

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 facing COMSATS; overview of COMSATS' activities and update on the follow-up of 2nd Commission Meeting of

COUNTRY STATEMENTS PRESENTED DURING THE 2ND CONSULTATIVE COMMITTEE MEETING

"The strong liaison between COMSATS and BCSIR... has not only proved to be extremely useful for the efficient functioning of COMSATS, but has also provided tangible benefits for the people of our country."

**Mr. Shahid Hasan, Deputy Secretary
Ministry of Science and Technology, Bangladesh**

"The situation of Science and Technology in Colombia has substantially improved in the last years... hands-on science centers have been developed successfully in Colombia... This experience can be transferred to other COMSATS' countries and even a specific programme can be established."

**Dr. Eduardo Posada
Executive Director CIF, Colombia**

"Egypt supports COMSATS' programmes through joint research work, Training facilities, technology transfer, patents application, and it can serve as a hub for international relations with other countries, especially Germany, France, Japan and Italy."

**Prof. Yasser R. Abdel Fattah
Secretary General, Supreme Council for Research
Centers and Institutes, Egypt**

"Ghana is ready for collaboration not only with countries in the South, but also with countries from the North and far East to use Science and Technology to create better life for mankind."

**Dr. Benony Komla Kortatsi
Director MESTI, Ghana**

"... (Iranian institutions) would be delighted to have joint research depending on (the needs of) COMSATS' member countries. The IROST would be pleased to make arrangements to collaborate with Member States based on their interest."

Dr. Ahmad Akbari
President IROST, Iran

"Nigeria is blessed with a good number of academic and research centres that are carrying out research activities in order to address the country's multifarious societal challenges."

Prof. A.R.T Solarin
Director/Chief Executive NMC, Nigeria

"Pakistan has made over the years a substantive investment in the National STI system, with determined efforts to develop new institutions, as well as enhancing capacities in the existing R&D institutions."

Mr. Amjad Hussain
Joint Scientific Adviser (IL), MoST, Pakistan

"The policy of scientific and technological research is (important for) the promotion and coordination of fundamental and applied research, (and) can stimulate the vital sectors of the economy... Senegal ... is willing to work with all the members of our common organization."

Prof. Tahir Diop
Directeur de la Recherche, Direction Générale de l'Enseignement Supérieur, Ministère de l'Enseignement Supérieur et de la Recherche, Senegal

...the key elements of Sri Lanka's Science, Technology & Innovation Strategy (2011-2015) include: directed R&D for socio-economic development; capacity building through Advanced Technology Initiative, Techno-entrepreneurship initiative, STI infrastructure modernization initiative, International partnerships in STI, coordinated timely funding mechanisms, science popularization, etc.

Prof. Vijaya Kumar,
Chairman, Industrial Technology Institute, Sri Lanka

...some of the recent initiatives of Sudanese Ministry of Science and Communications for the development of S&T sector include encouraging the establishment of technology incubators and science parks; ensuring adequate infrastructure for S&T development; etc.

Prof. Dr. M. Galal Mohamed Ahmed
President Council of S&T and D.G NCR, Ministry of Science and Communications, Sudan



Group photo of the participants of 2nd Consultative Committee Meeting

Prof. Yasser R. Abdel Fattah, Secretary General, Supreme Council for Research Centers and Institutes, Ministry of Scientific Research, Egypt; and Mr. Isaac Kofi Yankson, Scientific Secretary, Building and Road Research Institute (BRRI), CSIR, Ghana, were appointed as the Rapporteurs of the meeting. The Rapporteurs compiled the recommendations and decisions made during the meeting, which related to: regular payments of Annual Membership Contributions to COMSATS by Member States, as well as contributions towards the Endowment Fund; constitution of a Technical Advisory Group, comprising the Focal Points in China, Colombia, Egypt, Iran and Nigeria; nominations of renowned R&D/S&T institutions as potential Centres of Excellence by Member States that are, at present, not represented in the Coordinating Council; as well as endorsement of COMSATS' Future Strategy.

The meeting noted with satisfaction the organization of the 2nd Commission Meeting of COMSATS at the level of representatives of Heads of State/Government in April 2012, and rotation of the Chairpersonship of COMSATS to Ghana. The members of the Committee hoped that Ghana's leadership will strengthen the organization, especially in the African region. The Committee also appreciated Pakistan's pledge to contribute US\$ 1 million towards the Endowment Fund, made during the 2nd Commission Meeting in 2012 by the then honourable Prime Minister of Pakistan.

Salient decisions of the meeting were:

- Endorsement of the five-year Strategy of COMSATS (2012-2016).
- Request to the honourable Chairperson of COMSATS, H.E. John Dramani Mahama, the President of the Republic of Ghana, to send letters to all Commission Members, to seek their technical and financial support for the programmes and activities of COMSATS.
- Urging the Focal Points in member countries to make

COMSATS (2012); and implementation status of the decisions of the 1st meeting of COMSATS Consultative Committee (2009). Moreover, the participating delegates presented Country Statements that covered their respective government's stance on S&T-led sustainable development and recommendations for enhancing the effectiveness of programmes and activities of COMSATS in its Member States.



necessary funds available to their respective Centre of Excellence for them to play an active role in COMSATS' programmes and activities.

- Selection of the Chinese, Colombian, Egyptian, Iranian and Nigerian Focal Points of COMSATS as members of the Technical Advisory Group, mandated to advise the Secretariat on matters related to identification and prioritization of the needs of the Member States; designing COMSATS' programmes to synergize with ongoing programmes of other organizations; and formulating technical and economic work plans for topics focusing on problem solving in areas related to socio-economic development.

16TH MEETING OF COMSATS COORDINATING COUNCIL

The 16th meeting of COMSATS Coordinating Council was held on May 2-3, 2013, in Accra, Ghana. The meeting was chaired by Prof. Dr. Eduardo Posada, Executive Director CIF, Colombia. The Executive Director COMSATS, Dr. I. E. Qureshi, co-chaired the meeting in his capacity as the Secretary of the Council.

The meeting was attended by Council Members or their representatives from 12 Centres of Excellence of COMSATS; BCSIR-Bangladesh, Embrapa Agrobiologia-Brazil, ICCES-China, CIF-Colombia, NRC-Egypt, CSIR-Ghana, IROST-Iran, NMC-Nigeria, ICCBS-Pakistan, CIIT-Pakistan, IRCC-Sudan, and TÜBITAK MAM-Turkey, as well as the senior officials of COMSATS Headquarters. Moreover, the senior officials of the Industrial Technology Institute (ITI), Sri Lanka, and the Center of Earth Sciences, Metallurgy and Ore Beneficiation (CESMOB), Kazakhstan, attended the meeting in order to formally present their requests for induction in COMSATS' Network.

The meeting in its three technical sessions deliberated on a 14-point agenda. Under the agenda-item related to the Future Programmes of COMSATS, the Council discussed at length different ways and means for effective implementation of the new initiatives of COMSATS; namely, establishment of COMSATS Technology Park at CIIT, Pakistan; launching of COMSATS' Distinguished Professors Scheme; and constituting a Network of experts on 'Science, Technology and Innovation Policy'. During a separate agenda-item, progress reports of the three operational International Thematic Research Groups (ITRGs) on 'Climate Change and Environmental Protection'; 'Information and Communication Technologies'; and 'Natural Products Sciences', were presented to the Council by their respective Lead Centre. Also, matters related to the launching of remaining ITRGs were discussed.

As per the standard format of the meeting, the Executive Director COMSATS presented COMSATS' Annual Activity Report (May 2012 – April 2013); the Heads/representatives of the Centres of Excellence made presentations on the scientific activities of their respective Centres during the period since the last Council meeting; and the Advisor (Programmes) COMSATS briefed the Council on the administrative and financial matters of COMSATS, as well as the implementation status of the decisions taken by the Council in its previous meeting in 2012.

The key decisions taken by the 16th Coordinating Council meeting include:

- Induction of ITI - Sri Lanka in COMSATS' Network;
- Approval of the proposed amendments in the Charter of the Network of International S&T Centres of Excellence;
- Re-election of Dr. Eduardo Posada Florez, Executive Director CIF, Colombia, as the Chairperson of





Council meeting in progress

Coordinating Council for a further term of three years;

- Removal of the Biosphere Reserve - Beni Biology Station (BBS), Bolivia, from COMSATS' Network;
- Consideration of possibility to depute officials from the Centres of Excellence to work at COMSATS Secretariat for a period of 3 to 6 months;
- One-year extension of the tenure of the present members of COMSATS Technical Advisory Committee (TAC);
- Approval of a mechanism for the functioning of 'COMSATS Distinguished Professors' Scheme.
- Agreement to send a condolence message to the grieved family of late Prof. Lewis T. Chadderton, who served COMSATS as TAC member.

A Communiqué was unanimously approved at the conclusion of the meeting (Page 9). It was decided that the next (17th) meeting of the Coordinating Council will be hosted by the Iranian Research Organization for Science & Technology (IROST), Iran. The COMSATS Institute of Information Technology (CIIT), Pakistan, was chosen as an alternative host.



The Council Meeting being presided over by Dr. Posada

Participants of the 16th Coordinating Council Meeting

- Prof. Dr. Ahmad Ismail Mustafa, Chairman BCSIR, Bangladesh
- Dr. Robert Michael Boddey, Research Scientist Embrapa Agrobiologia, Brazil.
- Prof. Lin Zhaohui, Director ICCES, China.
- Dr. Eduardo Posada F., Director CIF, Colombia.
- Prof. Dr. Ashraf Shaalan, President NRC, Egypt.
- Prof. Hosam El-Sayed, Assistant Vice President for Research, NRC, Egypt.
- Dr. Abdulai Baba Salifu, Director-General CSIR, Ghana.
- Dr. Eugene Atiemo, Director BRRI, CSIR, Ghana.
- H.E. Dr. Ahmad Akbari, President IROST, Iran.
- Dr. M. Molanejad, Acting President for International Cooperation, IROST, Iran.
- Dr. Akgul Darisheva, Head, Department of Intellectual Property and International Cooperation, CESMOB, Kazakhstan.
- Prof. A.R.T. Solarin, Director/Chief Executive NMC, Nigeria.
- Mr. Olutunji Oladejo, Principal Programmer NMC, Nigeria.
- Mr. O. G. Obayomi, Special Assistant to Director, NMC, Nigeria.
- Prof. Dr. M. Iqbal Choudhary, Director ICCBS, Pakistan.
- Dr. Haroon Rashid, Pro-Rector CIIT, Pakistan.
- Prof. Dr. Sajjad Mohsin, Dean, Faculty of Information Sciences & Technology, CIIT, Pakistan.
- Prof. Vijaya Kumar, Chairman ITI, Sri Lanka.
- Dr. Azhari M. Elbadawi, Director General IRCC, Sudan.
- Assoc. Prof. Dr. Fehmi Akgün, Chief Senior Researcher, Energy Institute, MAM, Turkey.
- Assoc. Prof. Dr. Semih Ergintav, Deputy Director, Earth and Marine Sciences Institute, MAM, Turkey.
- Dr. Jean-Pierre Revol, Senior Physicist, CERN, Switzerland.
- Prof. K. E. Mshigeni, Vice-President for Africa, TWAS, Tanzania.
- Dr. Yoslan Nur, Programme Specialist, Science Policy Studies and Foresight Section, UNESCO, France.
- Dr. Imtihan Elahi Qureshi, Executive Director COMSATS, Pakistan.
- Mr. Tajammul Hussain, Advisor (Programmes), COMSATS Headquarters, Pakistan.
- Mr. Farhan Ansari, Assistant Director (Programmes), COMSATS Headquarters, Pakistan.

Feedback from the participants of the Meetings

"Thanks for the opportunity to meet you and expand my horizon of the world. Let's keep the torch aflame. I was inspired to do more for my country, Africa and the Network", writes Prof. A.R.T. Solarin, Director/Chief Executive National Mathematical Centre, Nigeria, to COMSATS' colleagues after the meeting.

"I was impressed with the organization of the meetings with the quality of the shared documents, and with the achievements of COMSATS in the context of the original vision of Prof. Abdus Salam", writes Prof. Keto Elitabu Mshigeni, Vice-President for Africa, TWAS, to the Executive Director TWAS.

**Communiqué of the
16th Coordinating Council Meeting of COMSATS
(2-3 May, 2013, Accra, Ghana)**

The Members of the Coordinating Council of COMSATS participating in the 16th meeting of the Council organized by the COMSATS' Centre of Excellence in Ghana, the Council for Scientific and Industrial Research (CSIR), after having deliberated upon the issues of common interest on 2nd and 3rd of May 2013 in Accra, wish to express their unanimous views as under:

1. The arrangements made for the 16th Council meeting and the hospitality extended to the Council members by CSIR and its parent department, the Ministry of Environment, Science, Technology and Innovation (MESTI) are highly appreciated.
2. Thanks are due to the Government of Ghana for patronizing COMSATS through the office of the Chairperson of COMSATS, the honourable President of Ghana, H.E. Dr. John Dramani Mahama.
3. The leadership provided by Professor Dr. Eduardo Posada F., as the Chairperson of the Council during the period (2010 – 2013) has been outstanding. His re-election for the same position for a second tenure of 3 years is warmly welcomed.
4. The Council welcomes the induction of a new Centre of Excellence in the Network; namely, the Industrial Technology Institute (ITI) of Sri Lanka. The continuing expansion of the Network is indication of the success of S&T cooperation mechanism through interactivity among the leaders of R&D organizations, afforded through Council meetings.
5. The efforts of COMSATS Secretariat to meticulously prepare necessary documentation for the Council meeting and effectively engage Council members as well as the host Institution in order to ensure successful organization of the meeting are noted with appreciation.
6. The scope of scientific R&D being undertaken by various Institutes under CSIR is very encouraging. Considering that the CoE in Ghana has been re-designated since 2011, it is strongly recommended that apart from Building Road Research Institute (BRRRI), other Institutes under CSIR should be encouraged to get into cooperative R&D activities with Members of the Network of CoEs.
7. The COMSATS' Centres of Excellence are undertaking R&D work in different disciplines of S&T according to their mandates and the national priorities of respective Member States. However, the number of scientific collaboration visits among the Network Members need to be encouraged and enhanced.
8. The Council appreciates the standing offers of 100 postgraduate scholarships per year by CIIT-Pakistan, and seven PhD scholarships and five post-doctoral fellowships by IROST-Iran, and encourages other Centres of Excellence to offer such scholarships/fellowships to researchers/students from COMSATS' Member Countries in order to promote the exchange of knowledge, expertise and resources.
9. The partnership of International organizations in the capacity-building workshops and training programmes undertaken by COMSATS is acknowledged with gratitude. In particular, strong mutual cooperation between COMSATS and ISESCO leading to six joint activities in 2012, is highly encouraging. In this connection, the ISESCO medal awarded to COMSATS is much appreciated.
10. The Council encourages COMSATS Secretariat to continue its efforts towards enhancing the Membership of the Commission and the Network of Centres of Excellence.
11. The Council has noted the efforts of COMSATS Secretariat to implement COMSATS five-year strategy and advises all Centres to extend full support to the Secretariat in this regard. In particular, the launching of more International Thematic Research Groups should be expedited by all concerned Lead Countries.
12. The progress reported by the leaders of three active International Thematic Research Groups, in the areas of Climate Change, Natural Products and ICTs are praiseworthy. The relevant group leaders are requested to acknowledge COMSATS in their research publications.
13. A Committee, which was constituted during the 15th Council meeting, and entrusted to recommended amendments in the Charter of the Network completed its work in time to make it possible for the Council to unanimously adopt these amendments in the 16th meeting. All members of the Committee are thanked for their valuable contributions.
14. The Council has noted the Secretariat's request regarding the participation of Centres of Excellence in COMSATS' publications and emphasizes the need to contribute news reports and scholarly articles for publication in COMSATS' two-monthly newsletter and biannual journal, 'Science Vision'.
15. While appreciating the generous in-kind contributions towards COMSATS' activities made by Member States and Centres of Excellence alongwith the annual grant of 0.4 Million US \$ from the Government of Pakistan, the budgetary handicap of the organization to fulfil all provisions of its mandate is noted with concern. It is strongly advised that the efforts to seek voluntary Annual Membership Contribution may be enhanced, and avenues be found to operationalize the Endowment Fund approved during the Second Commission meeting.
16. The Council reiterates its firm commitment to enhance S&T capacity of all Member States through mutual cooperation and assistance to one another through the platform of COMSATS. In turn, the Council calls upon Member States to increase funding for the development of their S&T sectors with a clear target of achieving a level of 2% of GDP to be spent as Gross Expenditure on Research and Development (GERD).

BIOGRAPHIES OF EMINENT SCIENTISTS: DR. SALIMUZZAMMAN SIDDIQUI

Salimuzzamman Siddiqui was born in Subeha (Barabanki District) near Lucknow, on 19th October 1897. He received his early education from Lucknow, both in the Urdu and Persian languages, and soon developed interest in literature, poetry and calligraphy from his father Sheikh Muhammad Zaman. He graduated in Philosophy and Persian language, from M.A.O College (that would later become Aligarh Muslim University) in 1919. In 1920, Siddiqui proceeded to University College London to study medicine. However, after one year of premedical studies, he moved to Frankfurt University in 1921 to study chemistry. In 1924, he married his German classmate, Ethel Wilhelmina Schneeman. Salimuzzamman Siddiqui received Doctor of Philosophy under the supervision of Prof. Julius Von Bram in 1927. On his return, he established the Ayurvedic and Unani Tibbi Research Institute at the Tibbia College Delhi, under the guidance of Hakim Ajmal Khan. He was appointed its first Director. However, soon after the death of Hakim Ajmal Khan, Siddiqui left the post. In 1940, he joined Indian Council for Scientific and Industrial Research where he worked until 1951 when he migrated to Pakistan on the request of the then Prime Minister, Liaquat Ali Khan.



Dr. Siddiqui's first breakthrough in research came when he successfully isolated an antiarrhythmic agent in 1931 from the roots of Rauwol fiaserpentina. He named the newly discovered chemical compound as Ajmaline, after his mentor Hakim Ajmal Khan, who was one of the illustrious practitioners of Unani system of medicine in South Asia. Later, Dr. Siddiqui also extracted other alkaloids from Rauwol fiaserpentina that included Ajmalinine, Ajmalicine ($C_{21}H_{24}N_2O_3$), Isoajmaline, Neoajmaline, Serpentine and Serpentinine. Many of these are still used worldwide for treatment of mental disorders and cardiovascular ailments, especially as antiarrhythmic agents in Brugada syndrome.

Dr. Siddiqui was the first scientist to bring the anthelmintic, antifungal, antibacterial, and antiviral constituents of the Neem tree to the attention of natural products chemists. In 1942, he extracted three bitter compounds from neem oil, which he named as nimbin, nimbinin, and nimbidin. Dr. Siddiqui identified nimbidin as the main active anti-bacterial ingredient, and the highest yielding bitter component in the neem oil. These compounds are stable and found in substantial quantities in Neem. They also serve as natural insecticides. In acknowledgement of these revolutionary discoveries, he was awarded the Order of the British Empire in 1946. In his later career, Dr. Siddiqui continued to discover and isolate numerous unique antibacterial compounds from various parts (leaves, bark, etc.) of the Neem and other plants. He had more than 50 chemical compounds patented in his name in addition to those

discovered as a result of his joint research with other colleagues and students. Most of these discoveries still remain vital natural ingredients of various medicines, as well as biopesticides.

After the emergence of Pakistan in 1947, Siddiqui was entrusted by the Government of Pakistan in 1951 to organise scientific research activities. In 1953, he founded the Pakistan Academy of Sciences as a non-political think tank of distinguished scientists in the country. During the same year, he also established the Pakistan Council of Scientific and Industrial Research (PCSIR) in Karachi. The aim of PCSIR was to support the industrial infrastructure through research and development. The regional laboratories of the institution were located in Dhaka, Rajshahi and Chittagong (formerly East Pakistan), and in Lahore and Peshawar (formerly West Pakistan).

In recognition of his scientific leadership, Frankfurt University granted him the degree of D.Med. Honoris causa in 1958. Also in 1958, the Government of Pakistan awarded him with *Tamgha-e-Pakistan* (civil award of Pakistan). In 1960, he became the President of Pan-Indian Ocean Science Association. The next year, in 1961, Siddiqui was made Fellow of the Royal Society, following which he was given the *Sitara-e-Imtiaz* (civil award of Pakistan) for distinguished merit in the fields of science and medicine, in 1962. Dr. Siddiqui remained the Director and Chairman of PCSIR until the time of his retirement in 1966. In that year, the President of Pakistan awarded him the Pride of Performance Medal for the recognition of his services.

In 1967, Dr. Siddiqui was invited by the University of Karachi to set up a Postgraduate Institute of Chemistry in affiliation with the University's Department of Chemistry. He was designated as the institute's Founder Director, whereas the additional research staff was provided by PCSIR. In 1976, the institute was offered a generous donation from Husein Jamal Foundation, as a result of which it was renamed as Husein Ebrahim Jamal Research Institute of Chemistry. In due time, Dr. Siddiqui transformed the institute into a distinguished international centre of excellence in the field of chemistry and natural products. In March 1975, he headed the National Commission for Indigenous Medicines. His tireless efforts for the promotion of Science and Technology earned him *Hilal-e-Imtiaz* (civil award of Pakistan) by the Government of Pakistan in 1980. In 1983, he played a major role in the establishment of the Third World Academy of Sciences (TWAS) and became its Founding Fellow. He remained the Director of the Husein Ebrahim Jamal Research Institute of Chemistry until 1990. Later, he continued research in his personal laboratory.

Dr. Siddiqui died on 14th April 1994 due to cardiac arrest after a brief illness in Karachi. Despite his death, the academic and research institutes that he founded, during more than 65 years of his research career, are still contributing to the international level research in natural products chemistry.

Courtesy: [Technology Times \[October 2011 Edition\]](#)

ACTIVITIES/NEWS OF COMSATS' CENTRES OF EXCELLENCE

PROF. SOLARIN OF NMC-NIGERIA ELECTED AS PRESIDENT OF THE AFRICAN MATHEMATICAL UNION

During the Pre-congress Assembly of the 8th Pan-African Congress of Mathematicians (PACOM 2013) in Abuja, Nigeria, held from 30th June to 7th July 2013, Professor A.R.T. Solarin, Director/Chief Executive of the National Mathematical Centre (NMC), Abuja, was elected as the President of the African Mathematical Union (AMU). Founded in 1975 during the 1st Pan-African Conference of Mathematicians in Rabat, Morocco, AMU is the umbrella body of all African mathematicians in different African countries and the diaspora. Succeeding Professor Saliou Toure of Cote d' Ivoire (Ivory Coast), Professor Solarin would be holding the position for the next four year.

PACOM 2013 was organized by the AMU in cooperation with entire mathematical community in Nigeria and hosted by the NMC, Abuja, Nigeria. This event attracted about two hundred distinguished African Mathematicians and invited Guest Speakers (Mostly Professors of Mathematics) from all over the world.

RSS-JORDAN CO-ORGANIZES REGIONAL STAKEHOLDERS' WORKSHOP OF BLUE PEACE PROJECT

In June 2013, Royal Scientific Society (RSS), Jordan, in cooperation with the World Meteorological Organization (WMO) and the Swiss Agency for Development and Cooperation, held a regional stakeholders' workshop of the Blue Peace Project, titled "Water Security in the Middle East: Strategic Management of Hydrological and Meteorological Data and Information Product Generation through Assessment of Weather, Climate and Hydrology Service and Capacities in Lebanon, Jordan (and Syria) with engagement of Turkey and Iraq." The Blue Peace Project aims at strengthening the delivery of weather, water, and climate services in Middle Eastern countries, in order to support economic development and disaster risk management.

The event was organized under the Patronage of HRH Prince El Hassan bin Talal, the Chairman of UN Advisory Board on Water and Sanitation (UNSGAB). Also present on the occasion was HRH Princess Sumaya bint El Hassan, the President of RSS. The workshop was attended by a group of experts in water, weather, climate and hydrology from Egypt, Iraq, Jordan, Lebanon, Saudi Arabia and Turkey, in order to discuss and agree on a prioritized plan, a memorandum of understanding and exchange of relevant experiences in the

issues related to the regional cooperation in these fields.

ITI - SRI LANKA HOSTS UNIDO SPONSORED STUDY TOUR FOR QUALITY MANAGERS AND MICROBIOLOGISTS FROM PAKISTAN



Prof. Solarin addressing the participants of PACOM 2013

In an effort to promote the transition towards sustainable economic development in developing and transition countries by improving the quality infrastructure and laboratory quality management of businesses and other organizations, the Industrial Technology Institute (ITI) of Sri Lanka, during March 2013, conducted a ten-day study tour for the Quality Managers and Microbiologists from Pakistan, under the sponsorship of Trade Related Technical Assistance (TRTA) Programme of United Nations Industrial Development Organization (UNIDO), Pakistan. The programme specifically focused on providing hands-on experience on implementation of laboratory quality management system

in conformity to ISO 17025:2005 standard for testing laboratories.

Seven participants attended the programme and the group was composed of 3 quality managers and 4 microbiologists from Pakistani government institutions. Dr. Upali Samarajeewa and Ms. Subadra Jayasinghe, UNIDO International experts for implementation of laboratory accreditation in Pakistan, were also present at the opening ceremony and provided the much needed guidance to make this venture a success. The training programme provided the participants much needed exposure by interacting with the ITI scientists and laboratory staff who have striven to achieve international accreditation status for their laboratories since 2002.

The study tour was planned on the advice of the UNIDO International Expert on Laboratory Accreditation, Dr. Upali Samarajeewa who strongly believes that such an exposure visit will be immensely helpful for Pakistani scientists to achieve significant strides through the implementation of ISO 17025 laboratory quality management system in their organization. ITI had been closely associated with training Pakistani scientists in the field of Laboratory Accreditation since 2005 and this is the fifth group to benefit from the experience of ITI along with several other groups of scientists from Vietnam, Nigeria, West Africa and Laos (through UNIDO) and Maldives.

Dr. Ali Abbas Qazilbash, Programme Officer, Laboratory Accreditation & SPS Compliance, Trade Related Technical

Assistance (TRTA) Programme, UNIDO, Pakistan, facilitated the initiation of the programme. In the welcome address of Dr. G. A. S. Premakumara, Director of the ITI, drew the participants' attention to the overall objective of the programme of implementation of ISO 17025 at their laboratories and the long term friendship between the two countries.

Project Coordinator, UNIDO Integrated Industrial Development Project of Sri Lanka, Mr. Sarath Abeysundara, addressing the ceremony stressed the importance of scientific institutions-partnerships in supporting the development of the countries in the region and the role of UNIDO intervention in such endeavours.

CIF-COLOMBIA HELPS TO MITIGATE THE IMPACT OF CLIMATE CHANGE IN COLOMBIA

A project of Centro Internacional de Física (CIF) to help small farmers to adapt to and mitigate the impact of climate change in a vulnerable region in Central Colombia has been awarded with USD 2.2 million grant by the Government of Colombia. CIF's biotechnology group has been working in that region for several years with coffee and sugarcane growers, as well as cattle breeding farmers, with an aim to improve their productivity and, at the same time, protecting the environment.

In the light of registered deforestation in Central Colombia, and the heavy rains in 2011 that caused landslides and floods, costing hundreds of human lives, CIF scientists have proposed a research project to come up with strategies to mitigate the impact of climate change in the Rio Negro basin, where rural communities work for mainly producing coffee, brown sugar and livestock.

The project would be funded under the recent reform of the Colombian constitution, which devotes 10% of the mining royalties to science, technology and innovation.

CIIT-PAKISTAN WINS THE 1ST FPCCI ACHIEVEMENT AWARD

COMSATS Institute of Information Technology (CIIT), Pakistan has won the 1st FPCCI Achievement Award. CIIT is the only higher education institute to receive this award for its outstanding services in Education and Training for the year 2012. Mr. Muhammad Raza Ahmad Khan, General Manager (University Industry Linkages) at Office of Research, Innovation and Commercialization (ORIC) received this award on CIIT's behalf at a ceremony hosted in Karachi, Pakistan, on 22nd June 2013. Renowned Pakistani scientist, Dr. Abdul Qadeer Khan, was the chief guest on the occasion.

The Federation of Pakistan Chambers of Commerce and Industry (FPCCI), the apex body of trade and industry of

Pakistan, launched the FPCCI Achievement Award to recognize and honour the dedicated and enterprising organizations that have made a sustained and long-lasting contribution to Pakistan's economy and its development.

FPCCI's recognition of CIIT also manifests the resolve of corporate community in Pakistan to promoting higher education and developing strong academia-industry linkages. This award is recognition of CIIT's efforts to create longstanding partnership with industry.

CIIT LAUNCHES COMSATS ASSOCIATION OF AMERICAN GRADUATES (CAAGs)

CIIT, Pakistan officially launched COMSATS Association of American Graduates (CAAGs) on 12th June 2013 at CIIT, Islamabad. Inaugurated by Mr. Richard E. Hoagland, Deputy Chief of Mission, US Embassy in Islamabad, the launch ceremony of CAAGs, was attended by the Rector CIIT, Dr. Junaid Zaidi, alumni members of American universities who now belong to the CIIT community, as well as the Directors and Deans of CIIT Campuses. The officials of the US Embassy present on the occasion included the Deputy Cultural Attaché.



The Deputy Chief of Mission presiding over the launching ceremony of CAAGs

EVENTS ORGANIZED BY CIIT

Apart from observing the World Environment Day on 5th June 2013, CIIT organized its seventh high-tech national level event consisting of seminars, symposia and exhibitions – TechnoMoot 2013, from May 27-28, 2013. The two-day event attracted participants from various renowned universities of Pakistan.

From May 21-22, 2013, CIIT's Department of Mechanical Engineering conducted a two-day workshop on "Renewable Energy Utilization to Resolve Energy Crisis Scenario in Pakistan".

BANGLADESHI STUDENT-DELEGATION VISITS ICCBS-PAKISTAN

A Bangladeshi delegation paid visit to the International Center for Chemical and Biological Sciences (ICCBS), to receive training at the Centre, under the Higher Education Commission Youth Exchange Programme. Registrar Rajshahi University Bangladesh, Mr. Ikram Hossain, alongwith Deputy Registrar Academics, Mr. Aslam Hossain, led the delegation comprising 39 students belonging to four universities of Bangladesh, including Rajshahi University, Chitagang University, Dhaka University, Jahangirangar University and South Asia Youth Forum for Peace and Prosperity.

Bangladeshi delegates appreciated the research facilities and standard of the ICCBS. As many as 37 foreign students have received training at ICCBS for research of their projects during 2012. These students belonged to Burkina Faso, Cameron, Egypt, Iran, Jordan, Kazakhstan, Lebanon, Malaysia, Myanmar, Nepal, Nigeria, Scotland, Sri Lanka, Sudan and Turkey.

BCSIR-BANGLADESH WINS THE NATIONAL ENVIRONMENT AWARD 2013

The Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh, won the national award in recognition of its tremendous effort headed for "Green and Clean Environment". The novel developments of BCSIR: (i) improved cooking stove; and (ii) biogas plant, were highly appreciated and selected for the National Environment Award 2013.

On May 5-9, 2013, the scientists of BCSIR have won the third prize at the poster presentation session of the "19th Islamic World Academy of Sciences".



Group photo on the occasion of BCSIR winning National Environment Award 2013

RSS-JORDAN ESTABLISHES A NATIONAL SOFTWARE QUALITY ASSURANCE CENTRE

The National Software Quality Assurance Centre (NSQAC) was established at the Royal Scientific Society in 2013 as a 3rd party provider of consultancy and quality assurance services related to software testing. RSS – the largest applied research institution, consultancy, and technical support service provider in Jordan – hosts NSQAC that works to provide software development houses a predictable software quality resulting in measured and directed spending on testing, together with innovative best-practices and standardized test process. The NSQAC is equipped with a state-of-the-art infrastructure based on HP Converged Cloud architecture, providing highly-scalable cloud-based services.



The NSQAC offers software testing lifecycle management services that would enable a wide variety of public and private organizations across the region to test their software systems and to ensure that they run efficiently and cost-effectively before going live. This will enable NSQAC clients to minimize the risk of failure of applications and software products through using different highly advanced technical tools, such as: HP Cloud System MATRIX, HP Quality Center/ Application Lifecycle Management, HP Quick Test Professional, HP LoadRunner, Microsoft Team Foundation Server and other open-source tools.

The Centre was established with a vision to become a beacon of excellence and innovation in software testing and quality assurance services across the region, to ensure the highest quality service and to contribute even further to national capacity-building efforts and regional professional development in this key technological domain. The mission of this unique Centre is to strive towards perfection in the delivery of quality-assured "defect-free" software products and to constantly seek better methods and processes to manage software quality, reduce software development costs, and minimize time to market software products.

The NSQAC team possesses extensive experience in testing relating to web services, desktop and client-server applications, and mobile applications to deliver quality-assured testing services from NSQAC's data centre in Amman. The team also establishes the cloud-based testing environment for RSS clients, in addition to providing the following services:

Test Consulting: End-to-End Test Management; Business Process Management; Code Quality Analysis; Test Coverage Analysis; Test Requirements Assessment; Requirements Traceability Matrix Analysis.

Test Automation: Identification of Test Automation Scenarios; Script Development; Script Maintenance.

Performance Testing: Load Testing; Stress Testing.

Specialized Test Services: Web Services Testing; Security Testing; Supportability Testing; Localizability Testing; Mobile Testing.

Managed Testing Services: System Integration Testing; User Acceptance Testing; Functional Testing; Regression Testing; Usability Testing.

SCIENCE, TECHNOLOGY AND DEVELOPMENT

NEW CATALYST NEUTRALIZES GASES RESPONSIBLE FOR CLIMATE CHANGE

New technology, developed by the Research Group on Carbon Materials and Environment at the University of Alicante, Spain, prevents nitrous oxide from decomposing into nontoxic products, says a report published in *Science Daily* on June 13, 2013. The catalytic system is active, efficient and stable over time and upscalable.

Nitrous oxide is harmful to the environment. "Deleting all nitrous oxide emitted to the atmosphere due to human activities would be equivalent to reducing all emissions of greenhouse gases agreed in the Kyoto Protocol", Agustín Bueno López, a researcher in the Group explains.

Aiming to overcome the limitations of production of catalytic inhibitors at low temperature decomposition of nitrous oxide, the present invention provides a novel catalyst system capable of working in the presence of inhibitors, such as oxygen, other oxides of nitrogen and water vapours at temperatures below 450°C, so it can be used in most of the sources of this pollutant gas.

The technology has been successfully tested in a real plant production of nitric acid and in the exhaust pipe of a state-of-the-art diesel engine. It can also be applied to various processes involving oxidation with ammonia, combustion processes and vehicle emissions among others.

MICRO-ORGANISMS IN COW DUNG DETOXIFY ARSENIC SLUDGE

Bangladeshi scientists have found in cow dung an efficient agent to treat the toxic sludge that is generated by the removal of naturally-occurring arsenic in groundwater. According to a June 5, 2013, report of *SciDev.Net*, Dr. Mohammad Azizur Rahman, research scientist at the geosciences centre of the Georg-August Universität Göttingen, Germany, states that certain micro-organisms present in cow dung volatilise arsenic in the sludge. Cow dung, available abundantly from cattle in the rural areas of Bangladesh, retains nutrients that attract organisms capable of gasifying arsenic through methylation.

Disposal of arsenic sludge in cow dung beds could be a management option for Bangladesh, a country that suffers from widespread arsenic contamination of its drinking water sources. According to a survey carried out in 2010 by the Bangladesh Bureau of Statistics and UNICEF, about 20 million people drink water contaminated with arsenic that can cause chronic poisoning, skin lesions, respiratory and cardiovascular disease and cancers.

After the field trials, this method of arsenic sludge treatment could be upscaled for meeting larger water requirements.

KENYAN SCIENTIST DEVELOPS PARASITE-RESISTANT MAIZE 812

Two new varieties of hybrid maize that are resistant to the deadly parasitic Striga weed have been developed by a Kenyan scientist, says the 29th May 2013 report of *SciDev.Net*. Striga weed, also known as witch-weed destroys crops estimated to be worth US\$10 to 38 million per year in Kenya. The weed affects cereal crops in many parts of Africa and is a major cause of crop failure in East Africa, where climate change has caused the weed to grow more during the recent years.

The two maize varieties have been developed at Maseno University capable of producing a natural chemical that suppresses the growth of Striga weed. The varieties are undergoing Distinctness Uniformity and Stability tests by seed regulators. With increased food crop yields, the new varieties, which will be available for commercial production by the end of 2014, could contribute to food security and poverty alleviation in Kenya and the entire East Africa region.

RESEARCHERS DEVELOP CATALYST MATERIAL FOR FUEL CELLS: EFFICIENT AND INEXPENSIVE

Scientists from Forschungszentrum, Jülich, and Technische Universität, Berlin, have succeeded in developing efficient metallic catalyst particles for converting hydrogen and oxygen to water using only a tenth of the typical amount of platinum that was previously required, says a report of *Science Daily* published on June 17, 2013. The researchers published in a recent issue of *Nature Materials*, results of electron microscopy, implying that the function of nanometre-scale catalyst particles is decisively determined by their geometric shape and atomic structure.

The new catalyst for hydrogen-powered fuel cells consists not of the round nanoparticles that were in widespread use, but of octahedral-shaped platinum-nickel alloy nanoparticles. Researchers discovered that the unique manner in which the platinum and nickel atoms arrange themselves on the surfaces of these particles, optimally accelerates the chemical reaction between hydrogen and oxygen in the fuel cell. Round or cubic particles have a different atomic arrangement at the surface and are less effective catalysts for the chemical reaction, something which has to be compensated by using higher amounts of the metal.

The latest experiments from the research group indicate that substantial increases in efficiency may also be possible for the reaction splitting water to produce oxygen in electrolyzers, for which the even more expensive noble metal iridium is used.

PROFILE OF HEAD OF COMSATS' S&T CENTRE OF EXCELLENCE

DR. ABDULAI BABA SALIFU, DIRECTOR-GENERAL CSIR, GHANA

Dr. Abdulai Baba Salifu is the Director-General of Council for Scientific and Industrial Research (CSIR), the biggest and foremost research and development institution of Ghana and a Centre of Excellence of COMSATS. CSIR became a part of COMSATS in 2012 when its membership was approved by COMSATS Coordinating Council in its 15th Meeting, held in Gebze, Turkey. The focus areas of the 13 research institutes of CSIR are: agriculture, environment, forestry, fisheries, health and medicine, industry and natural sciences, and social sciences.



Dr. Salifu had his first degree from the University of Cape Coast in 1979, where he graduated with a B.Sc (Hons) Degree in Applied Zoology and a Diploma in Education. He continued his education at the University of Ghana in 1980, graduating with an M.Sc in Agricultural Entomology. In order to become an accomplished scientist, he enrolled for Ph.D in Agricultural Entomology at the University of London, United Kingdom, in 1982, completing it in 1986. Dr. Salifu also took a number of short-courses, some of which included a Certificate Course in Farming Systems Research Development at the International Agricultural Centre (IAC)/International Centre for development oriented Research in Agriculture (ICRA), Holland; and a Certificate Course in Integrated Crop Protection through Pest Management at the Oregon State University, Corvallis, USA.

As an agricultural entomologist, Dr. Salifu held several positions at the Savanna Agricultural Research Institute (SARI) of CSIR, where he worked from 1989 to 2008. Some of these positions were: Head of the Entomology Unit of the Institute; National Coordinator for Cotton Research; Host Country Principal Investigator, Clemson University/SARI Cowpea Integrated Pest Management Project; Team Leader, Northern Region Farming Systems Research Group of SARI; Research Advisor for Field Entomology: Bean/Cowpea CRSP West Africa Project; and National Coordinator, International Institute of Tropical Agriculture (IITA/SARI) West Africa Cowpea Project.

As an entomologist, Dr. Salifu's research interest has been towards finding techniques to exclude or minimize insect damage to individual crops and/or the sequence of crops in the entire farming system. His attention has also been focused on the study of naturally occurring predators, parasites, secondary plant products, and crop manipulations, as possible techniques to reducing insect damage. Dr. Salifu has made significant contributions in

these areas of research, which is evident from the number of his scientific publications in popular scientific journals, conference proceedings and technical reports. He has about 18 journal articles and about 50 conference papers, workshop and seminar reports to his credit.

Dr. Salifu serves and chairs the boards of several institutions. Currently, he is Chairman of the Governing Council of the University for Development Studies. He was also the Acting Chairman of the Tamale Polytechnic Governing Council. He is a member of a number of professional associations including African Association of Insect Scientists, and the American Peanut Research and Education Society.

Dr. Salifu served as the Presiding Member of the Tamale Metropolitan Assembly from 1995 to 1997, and continued for a second term from 1997 to 1999.

Dr. Salifu's commitment to his work has won him several awards, some of which include:

- Award for Outstanding Contribution to Agricultural Research by the CSIR/Ministry of Environment, Science, and Technology in 1997;
- Award for 'Best Paper by a Senior Scientist' by the African Association of Insect Scientists and the Entomological Society of Southern Africa, during the Joint Congress of the Entomological Society of Southern Africa in 1997; and
- Research Services Award given by the Organization of African Unity (now African Union) Scientific, Technical and Research Commission on 14th March 1991, at Niamey, Niger.

In December 2002, Dr. Salifu was appointed the Director of the Savanna Agricultural Research Institute of CSIR as the administrator of the Institute. He held this position till his appointment as the Director-General of the CSIR in 2008.

Dr. Salifu has contributed a lot to Ghana and the scientific research community and continues to contribute towards shaping the direction of research at the CSIR.

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COMSATS' BRIEF AND ANNOUNCEMENTS

SELECTED FORTHCOMING SCIENTIFIC EVENTS IN COMSATS' COUNTRIES

18-22 August 2013	National Training Workshop on "Repair and Maintenance of Scientific Engineering Equipment in Universities, Research Institutes and Small Scale Industries Khartoum, Sudan (www.comsats.org)
04 - 06 Sept. 2013	WCMCS 2013 — World Congress on Multimedia and Computer Science, Hammamet, Tunisia (www.wcmcs.org)
09 - 11 Sept. 2013	ICPEC-2013 — International Conference on Physical and Environmental Chemistry 2013, Baragali, Pakistan (ncepc.com.pk)
23 - 25 Sept. 2013	The First International Conference "Food and Agriculture: New Approaches", Cairo, Egypt (bio-nrc.jimdo.com/conferences/)

MR. SABIH-UR-RAHMAN, JOINS COMSATS SECRETARIAT AS ADVISOR (HOST COUNTRY AFFAIRS)

COMSATS welcomes Mr. Sabih-ur-Rahman, who has joined the Secretariat as the Advisor (Host Country Affairs) w.e.f. May 2013.

Mr. Sabih-ur-Rahman holds a Master's degree in Geology from Punjab University, Lahore, Pakistan (1975). He has held many technical and administrative positions during his professional career at various government institutions of Pakistan, including the Ministry of Science and Technology; Water and Power Development Authority; and Pakistan Council for Research in Water Resources. Having worked with public sector organizations for over 35 years, Mr. Sabih has expertise in monitoring and evaluation, financial management, human resource development, as well as international liaison.

Before joining COMSATS, he was holding the position of Director (Planning and Development) at Quaid-i-Azam University, Islamabad-Pakistan. As Advisor Host Country Affairs, Mr. Sabih would facilitate COMSATS Secretariat in managing the affairs relating to the organization's activities in Pakistan, especially its coordination with the Ministries and other government departments. He may be contacted through email at: sabih@comsats.net.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, Pakistan.

COMSATS, currently, has 21 countries as its members, spread across three continents, i.e. Africa, Asia and Latin America. A network, of 18 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.

COMSATS NETWORK OF INTERNATIONAL S&T CENTRES OF EXCELLENCE

- Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh
- Centro Internacional de Física (CIF), Colombia
- COMSATS Institute of Information Technology (CIIT), Pakistan
- Council for Scientific and Industrial Research (CSIR), Ghana
- Embrapa Agrobiologia, Brazil
- Higher Institute for Applied Sciences and Technology (HIAST), Syria
- Industrial Research and Consultancy Centre (IRCC), Sudan
- Industrial Technology Institute (ITI), Sri Lanka
- International Center for Chemical and Biological Sciences (ICCBS), Pakistan
- International Center for Climate & Environment Sciences (ICCES), China
- International Centre for Environmental and Nuclear Sciences (ICENS), Jamaica
- 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
- TÜBİTAK Marmara Research Center (MAM), Turkey
- University Cheikh Anta Diop (UCAD), Senegal

CALL FOR PAPERS FOR COMSATS' JOURNAL – SCIENCE VISION: VOL. 19

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 Volume 19 (January to December 2013) 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.