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Acknowledgements

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We express our deepest thanks to The Punjab Board of Investment and Trade for partnering with us for this forum. We look forward to more such future endeavors of mutual benefit. It is our pleasure to pay deepest regards to all the security institutions namely: The Local Police, Security Branch Police, Special Branch, Intelligence Bureau, Commissioner Office, DCO Office and Capital City Police for working with us and providing fool proof security to our international guests.

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Abbreviations

CEO	Chief Executive Officer
CIIT	COMSATS Institute of Information Technology
CPEC	China Pakistan Economic Corridor
ICT	Information and Communication Technologies
IT	Information Technology
MoU	Memorandum of Understanding
PBIT	Punjab Board of Investment and Trade
PCBF	Pak-China Business Forum
RET	Renewable Energy Technologies

Executive Summary



Executive Summary

COMSATS Institute of Information Technology (CIIT) has taken up the charge of enabling the businessmen, entrepreneurs and academia of two brotherly countries Pakistan and China to shake hands at a joint forum. In this regard CIIT organizes Pak-China Business Forum every year to encourage Chinese companies to invest in Pakistan. The idea of Pak-China Business Forum is also aligned with the China Pakistan Economic Corridor (CPEC), which is a milestone project for the development of Pakistan. The forum has not only attracted delegates from China but has also brought many projects worth billions of dollars to Pakistan. To name a few are the Pak China International Science and Technology & Commerce and Logistics Park Project, Water Filtration and Purification Project etc.

After the success of four consecutive Pak-China Business Forums in 2012, 2013 and 2014 and 2015, CIIT took a leap forward and successfully organized the fifth Pak-China Business Forum 2016 from March 19-22, 2016 at Expo Center, Lahore. This year's forum was patronized by the Punjab Government and local administration. The forum drew widespread publicity in national dailies and local media channels. The participation was very high and was attended by a record number of Chinese delegates. The companies from China were eager to invest in Pakistan envisaging the true investment potential in the country.

Looking at the last year figures, 200 Chinese companies represented by 300 Chinese delegates participated in 2015 which increased to 400 companies this year. The representatives from China also increased from 300 to 700 this year. Apart from Chinese companies, around 100 local companies participated in the forum. The success of the forum could be calculated by the fact that it attracted more than 100,000 visitors per day which included both local and international.

5th Pak-China Business Forum 2016 was inaugurated by the Honourable Chief Minister Punjab, Mian Muhammad Shahbaz Shareef. In his opening speech, Chief Minister Punjab acknowledged the efforts of CIIT in drawing the two countries closer. Emphasizing the forum's importance under the Economic Corridor, the Chief Minister said that this initiative would help in overcoming problems of unemployment and poverty in the region. Chinese Consulate General to Lahore also spoke about the leadership's commitment for encouraging Chinese investors to invest in Pakistan. Mr. Huang – Commissar of the Xinjiang No. 13

Division mentioned that CPEC would be an integral component of strengthening Pak China Relations and regional connectivity. This year's forum had immaculate worth as many new ventures and collaborative measures took place.

The 5th Pak-China Business Forum 2016 gave an opportunity to Chinese and local businessmen to display their products. In total 380 stalls were set out of which 280 stalls belonged to Chinese companies and the remaining 100 stalls were of local businesses. Another important activity was the Business to Business meetings arranged by the COMSATS Institute of Information Technology at the venue. Taking full advantage of the opportunity both local and Chinese businessmen/ investors and entrepreneurs showed great interest in meeting their counterparts. Several meetings took place and MOUs were signed. Around 1000 business to business meetings were held and about 100 MOUs were signed not only between Pakistani and Chinese companies but also between local companies. The meetings of Chinese delegates were also arranged with the Government Departments such as PBIT and Lahore Chamber of Commerce to attract mutual collaborations at government level.

In addition, joint workshop sessions were held for enabling businessmen, entrepreneurs and the academia to exchange views. These workshops were specifically, designed to address the most important issues, facing the Pakistani economy and their proposed solutions. The day long workshop sessions were divided into six main thematic areas. The thematic areas included:

- Renewable Energy Technologies
- Water Conservation, Purification and Sanitation
- Biomedical Materials and
- CPEC
- Sino Pak Trade Issues
- Workshop by Museums Association of Pakistan
- Media Forum

Different Chinese and Pakistani professors presented their papers in these workshops focusing on the economy of both the countries. The common theme that came out of nearly all thematic area workshops was strengthening the linkages between both the countries to support China Pakistan Economic Corridor. Nearly all the presenters, Chinese and Pakistani, supported the idea of CPEC and stressed on the need of developing better relations between the people of the both the countries. The workshops highlighted the potential for the CPEC for promoting indigenous growth and adding value to the local products. A need was also felt to form a think tank of experts and academia whose services would be readily available to various government and private sector organizations, for expert advice.

The four day activity ended on 22nd March 2016. The Chief Guest for the occasion was Ms. Amna Cheema – CEO Punjab Board of Investment and Trade (PBIT). Ms. Cheema appreciated the efforts of the organizers and congratulated CIIT on successfully holding the forum. Mr. Ma from Xinjiang No. 13 Division, in his closing remarks, also spoke positively about the forum. On this occasion Pro Rector CIIT, Dr. Muhammad Haroon Rashid announced the date of the next Pak China Business Forum 2017 to be held from 9th-12th March 2017.



Introduction

COMSATS Institute of Information Technology (CIIT) has taken up the challenge of enabling the businessmen, entrepreneurs and academia of two brotherly countries Pakistan and China to join hands for joint investments in the areas of industry, trade, and research and development with a special role for academia. Pak China Business Forum is an academia driven model of business to business cooperation between Pakistani and Chinese businessmen, academia and entrepreneurs. The Chief Organizer of the forum – COMSATS Institute of Information Technology is a public sector higher education institution in Pakistan. The forum was introduced in the year 2012 with an aim to bridge academia-industry linkages between local and Chinese firms. So far, CIIT has organized four Pak China Business Forums with ever increasing participation from Pakistani and Chinese firms. The forum is held under the umbrella of Ministry of Science and Technology.

Pak-China Business Forum is specifically designed to address the most important subject of breaking the barriers of academia based research driven outputs and their translation into products for industrial and corporate sectors. The forum provides the entrepreneurs from China and Pakistan an opportunity to showcase their products in a joint arrangement for industrial representatives and general public. This increases the business opportunities for entrepreneurs and makes their focus towards innovation.

The 5th Pak-China Business Forum, this year, was held in Lahore from 19th to 22nd March 2016. The forum attracted a large number of Chinese and local exhibitors. It was estimated that the number of Chinese participants was more than double this year than the previous forums. Lahore being the second largest hub of economic activities in Pakistan after Karachi also contributed in attracting increased participation. The 2016 forum was held at the Expo Center, Lahore and the move was widely appreciated by the Chinese. Pak-China Business Forum 2016 helped the Pakistani and Chinese counterparts and offered a unique opportunity for a very progressive future and promising joint activity for the benefit of the two brotherly nations.

This report presents an over view of the activities held at the 5th Pak-China Business Forum 2016. The report is divided into three parts. The first part gives a brief about the pre event activities. The second part discusses the main event and the related activities. The third part comprises of the feedback of the Chinese delegates and the outcomes of the forum.

Pre-Event Activities

Publicity Campaign: For the publicity campaign of the Pak China Business Forum 2016 the media committee (details of PCBF Committees is attached as Annexure 1) developed a thorough, objective driven and cost effective Media and publicity plan. The plan comprised of three phases, Pre-launch, launch and Post launch activities to achieve individual objectives set for all the phases respectively. The idea was to utilize the power and diversity of vibrant media and advertising to attract all stakeholders for making Pak China Business Forum 2016 a real success. The main objective was to attract the attention of the masses.



Segmentation of Activities

The activities were divided into following segments:

1. Press Releases: Strategic press releases on well-crafted dimensions of PCBF 16 have been placed from March 06- 2016 to 18th March. Some press releases taken from the prominent papers are attached in Annexure 2.

2. Media Briefings (09-03-16): A media briefing was organized in Pearl Continental in which all leading electronic and print media teams participated. The channels including PTV, ARY, EXPRESS; DAWN, SAMMA, JAAG, TV 1, Channel 92, NEO TV, AAB TAK NEWS and Jang Newspaper, Business Recorder, Nawa e Waqt, Daily Pakistan, The News, Daily Dawn and other local newspapers covered the Media Brief. It created huge pre-launch hype and also served as a curtain raiser. This activity played a significant role in attracting sponsors and audiences to PCBF 16.

3. Dinner arranged for Leading Media Personalities : A dinner was hosted for the leading media personalities to take them on board regarding PCBF 2016. Mr. Amjad Islam Amjad, Mr. Syed Noor, Mr. Sajjad Mir, Salman Abid, Rauf Tahir and other prominent people from the media participated in the dinner and got an opportunity to meet our visionary leader, Prof. Dr. S. M. Junaid Zaidi, The Rector, CIIT. So far four columns have been written in the favor of PCBF in Daly Jang, Daily Express, Daily Pakistan and a special edition has been published in Daily Nai Baat.

4. Package about Pak-China Business Forum on different channels: Strategic TV Packages on well-crafted dimensions of PCBF 16 were aired since the inception of PCBF activities. These TV packages were recorded on different activities starting from logistics, arrival and Chinese arrivals at CIIT.

5. Participation of CIIT Spokesperson in TV Show : A special TV show was organized to create awareness about PCBF 16 and to make people aware of this significant event. Previous events' achievements and overall contribution of COMSATS in fostering Pak China Business were discussed in the show. The program was aired on PTV, titled "Paish Raff". The participants included Prof. Dr. Qaisar Abbas, Director, Ms. Amna Cheema, CEO, PBIT, Mr. Atif Sikka, Director, Brighto Paints, (Sponsor) and Mr. Anees (Chinese Businessman).

6. Social Media: A face book page of event was created to get the attention of social media users. The page was visited by many people and has 16000+ likes till date. The page was also used for live covering of the event by posting the live pictures and videos of the venue. A team was deputed to conduct interview of the visitors and upload them on the page. All the media coverage of PCBF 16 was documented on Face book page for future reference.

7. Newspaper Inserters: 50,000 inserters were distributed at strategic locations of Lahore with an objective to consolidate the other media and publicity activities. CIIT representative was present in the morning while hawkers were distributing leaflets. 12500 inserters per day were distributed for the four day's event starting from 18th March 2016.



Segmentation of Activities



8. Streamers: The Government of Punjab, very graciously helped CIIT, Lahore for putting up the streamers of PCBF. The campaign was done in coordination with the team of vendors who had extensive experience of working with Punjab Government. A total of 3000 streamers were placed at the locations approved by PHA. These locations were as follows:

- Mall road complete
- Canal from mall to thokar (Side poles)
- Main boulevard (side poles)
- UCP to Pak Turk school (Centre poles)
- Azadi chowk
- Empress road
- Egerten road
- Arfa Kareem to FC
- Peco Road
- Raiwind Road

9. Sponsors/ Partners: The sponsors of the event were Zhuhai Port Company, Shenzhen Goldwide Import and Export Company, and Changhong Ruba. From the Pakistani side the sponsors were National Logistics Cell and Brighto Paints. The partners in the forum were Government of Punjab, Ministry of Science and Technology, National Testing Service, Lahore Chamber of Commerce and Industry, Punjab Board of Investment and Trade.

Invites to the Local Industry:

The local industry was targeted from the following sectors as the Chinese companies also belonged to same sectors:

- Food & Agriculture
- ICT & Electronics
- Design & Decoration
- Education & Research
- Energy Resource & Renewable Energy
- Chemicals & Pharmaceutical
- Engineering & Manufacturing
- Services
- Textile

- Automotives
- Associations / Chamber
- Trading & Logistics

The task of contacting the local industry was divided into three phases. In the first phase, invitation letters and email were sent to all the prominent industries, industrial associations and chambers. The purpose was to introduce the industry with the concept of the Pak-China Business Forum. In the second phase, follow up calls were done to get the feedback from the industry. In the last phase, the teams conducted personal visits of the industries to motivate concerned personnel to participate in the 5th Pak-China Business Forum. The response from the local industry was encouraging. About 100 local companies participated in the forum. The sample of invitation letter sent to the industry is attached as Annexure 3.



5th Pak-China Business Forum 2016 – The Main Event

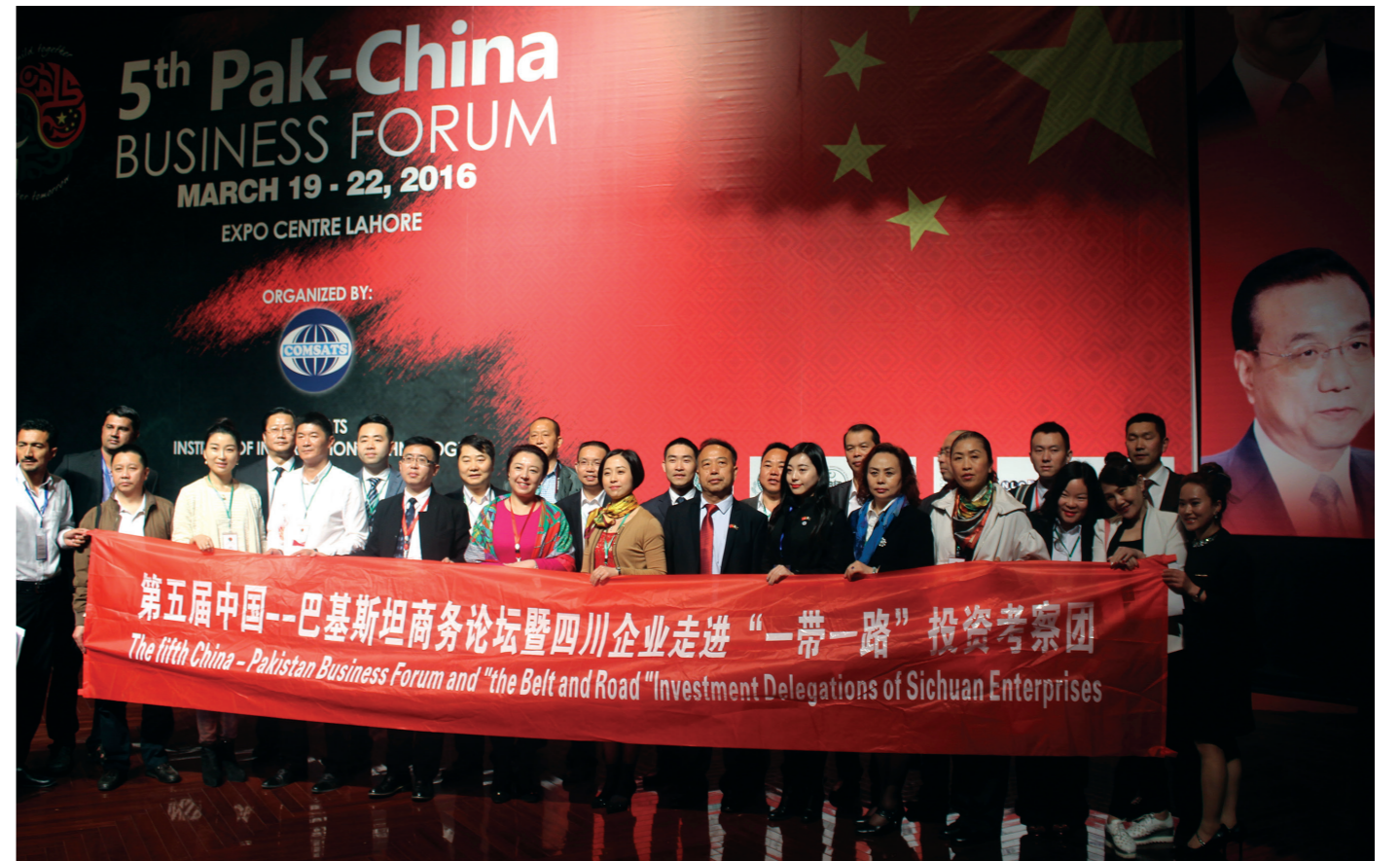
The participation from the Chinese remained at record number in this forum. Looking at the last year figures, 200 Chinese companies represented by 300 Chinese delegates participated in 2015 which increased to 400 companies this year. The representatives from China also increased from 300 to 700 this year. Apart from Chinese companies, around 100 local companies participated in the forum. The success of the forum could be calculated by the fact that it attracted more than 100,000 visitors per day including both local and international. This year's forum drew immaculate worth as many new ventures and collaborative measures were taken.

Opening Ceremony

5th Pak-China Business Forum 2016 was patronized by the Government of Punjab. The forum was inaugurated by the Honourable Chief Minister Punjab, Mian Muhammad Shahbaz Shareef. The Honourable Chief Minister welcomed the Chinese delegation and emphasized on the importance of Pak-China relations. In his opening address, Chief Minister Punjab acknowledged the efforts of CIIT in drawing the two countries closer. Highlighting the forum's importance under the Economic Corridor, the Chief Minister said that this initiative would help in overcoming problems of unemployment and poverty in the region. The Chinese Consulate General to Lahore also spoke about the leadership's commitment for encouraging Chinese investors to invest in Pakistan. He commended the efforts of the Federal and Provincial Governments in bringing the two countries together. Mr. Huang – Commissar of the Xinjiang No. 13 Division mentioned that CPEC would be an integral component of strengthening Pak China Relations and regional connectivity. At the end, souvenirs were presented to Guest of honor and Chinese delegates.

On the second day of the event, twenty groups of Chinese delegations had a meeting with CM Punjab at CM House. Bilateral issues concerning the economic welfare of both the countries were discussed during these meetings. The Chinese delegates showed great interest to invest in Punjab. They had various developmental projects which they wanted to initiate in the Province. Chief Minister Punjab offered free of cost land to the Chinese for developing industrial parks at various locations of the province. Some pictures of these meetings are as follows:



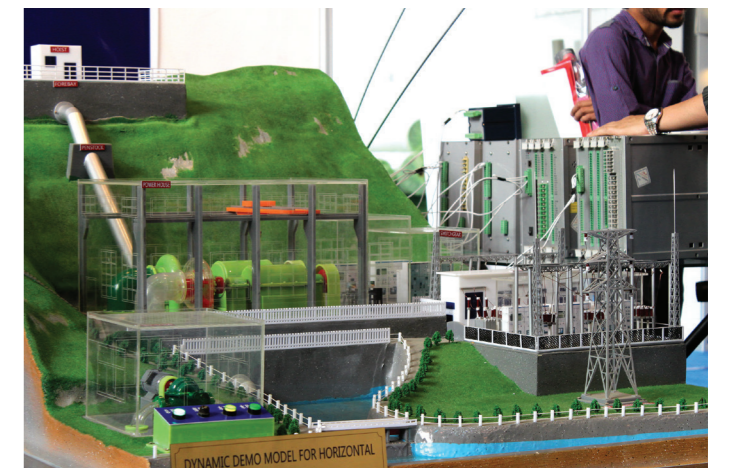
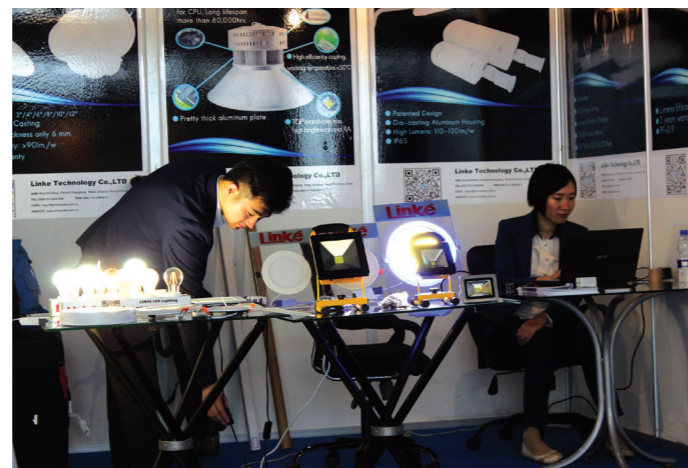


The Exhibition

The participation of Chinese and Pakistani companies was from the sectors of Food & Agriculture, ICT & Electronics, Furniture & Design, Education & Research, Energy Resource & Renewable Energy, Chemicals & Pharmaceutical, Engineering & Manufacturing, Textile, Automotives, Associations / Chambers and Trading & Logistics. Total number of stalls of Chinese and Pakistani companies was around three hundred and eighty out of which Chinese companies had about 280 stalls and the rest were all Pakistani.

Large sector of ICT & Electronics participated from China. There was a beautiful display of products and services by the companies of both the countries. The general public showed great enthusiasm while visiting these stalls. People were also seen buying products from the stalls. Given below are some glimpses of the exhibition:

Participating Stalls





Business to Business Meetings

An important aspect of this forum was the Business to Business meetings. Both Chinese and Pakistani companies were interested in meeting their counterparts in order to increase their businesses. The total number of B2B meetings held at the four day event was about 1000. Many of these meetings reached to signing of MoUs / agreements between the two parties. Within four days of 5th Pak-China Business forum 2016, about 100 MoU's were signed between different Pakistani and Chinese companies. Among these agreements, 6 were signed between CIIT, Lahore and Chinese Companies in ICT & Technology, Economic and Trade, Associations, Research and Education Sector. Moreover, 5 MoU's of worth 35 Million US Dollars were signed between local companies and different Chinese companies. The focus was on Exhibition & Trading, Investment, Trade Fair conferences and construction of hospitals.

A View of B2B Meetings and MoU Signing Ceremonies being held at the Forum



Business to Business Meetings





Thematic Workshops

Another important aspect of this forum was the thematic workshops. There were six main thematic areas on which a day long proceedings of workshops and seminars were arranged. Each thematic area was assigned to a senior faculty member of CIIT who made it possible to create a platform to discuss the ideas of commercializing the research and techniques to transfer newer technologies. The thematic areas include:

- Biomedical Materials
- Renewable Energy Technologies
- Water Conservation, Purification and Sanitation
- China Pakistan Economic Corridor
- Sino Pak Trade Issues
- Media Forum

A brief of these workshops is discussed as under where as the detailed reports of these workshops are attached as Annexure 3:

1. Workshop on Biomedical Materials: Biomedical Materials Thematic Session was held on 22nd March, 2016 at Expo Center Lahore during Pak-China Business Forum 2016. The Inter-disciplinary Research Centre in Biomedical Materials at CIIT Lahore has been organizing the interactive session (a key activity for each of PCBF 2016 thematic areas) since 2012; the key focus of this year's workshop was to understand the possibilities of University-Industry-Clinical linkages and invite strong collaborations in order to commercialize the products. In addition, Regulatory Affairs regarding biomedical products were also discussed in the session. The session included 5 lectures/presentations and around an hour of panel discussion which opened new avenues in biomedical materials research.

2. Workshop on Renewable Energy Technologies: A thematic workshop was held on 20th March 2016 at Pak China Business Forum in Expo Center Lahore. More than seventy (70) people from academia, industry of both countries (Pak & China) participated. The proceedings of renewable energy technologies (RET) workshop were initiated with the recitation of Holy Quran. Prof. Saleem Farooq Shaukat welcomed the honorable guests and gave a thought-provoking talk about the energy situation in Pakistan. He discussed that the collaboration of Pak-China amongst the R&D organizations, academia and industry should be strengthened to develop better solutions in the area of Renewable Energy Technologies. After that Dr. Rizwan Raza (Incharge of the Workshop) shared the details of the Workshop and the speakers. He briefly explained the prevailing issues in the energy sector of Pakistan. Addressing the need of such activities in Pakistan, he said that Pakistan is an energy-deficient country and this workshop emphasizes the importance and challenges of new era technologies. The renewable energy sources like wind energy, solar energy, biomass energy and fuel cell technology can be used to overcome energy shortage in Pakistan. RET have the potential to provide solutions to the long-standing energy problems being faced by the developing countries e.g., Pakistan.



3. Workshop on Water Conservation, Purification and Sanitation: The aim of the workshop mainly was to help policy-makers, planners, operators and communities in making practical decisions based on clear criteria. It also aimed to improve the resilience of their water and sanitation services in Pakistan and China. It was discussed that both countries would be the victim of increased precipitation and flooding in coming future therefore, they should work hand in hand to secure the future of their generations to come. Highlighting the importance of water conservation, sanitation and treatment, the participants explained that the global water demand doubles every 20 years, at more than twice the rate of human population growth. Pollution and over-extraction in many regions of the world has reduced the ability of water supplies to meet demand.

4. Workshop on China Pakistan Economic Corridor (CPEC): Two workshops were held on the theme of China Pakistan Economic Corridor. One highlighted the importance of bridging linkages between the ICT industries of both the countries. The other workshop discussed the future perspectives of China Pakistan Economic Corridor. Both the workshops were held on 19th March 2016.

Discussing the opportunities offered by CPEC, Mian Anjum Nisar, ex-President LCCI, explained how they can be effectively harnessed for the optimal growth of the society. Hailing from the business background, Mr. Nisar also highlighted the potential for the CPEC for promoting indigenous growth and adding value to the local products. Mr. Sajid Saleem Minhas, CEO, Delta Garments Ltd., gave an insightful lecture on the trade imbalances between China and Pakistan. Pakistan, despite being a key political ally of China on matters of regional geostrategic importance, has a much smaller trade relation with China as compared to trade relations between India and China. Mr. Minhas highlighted the need to make an effective and robust public policy to promote exports and forge closer trade ties with China and other economies of the world.

Highlighting the importance of ICT in the growing world of today, Dr. Asad Hussain explained that ICT environment is conducive to innovation in both countries. He further added that Chinese companies and investment is already present in Pakistan. ICT services affordability is improving significantly but still both the countries need to catch up the ICT Development Index as front runners improvising the positive indicators.

5. Workshop on Sino Pakistan Trade Issues: The workshop was held on 21st March 2016. The speakers highlighted the issues pertaining to trade between China and Pakistan. It was concluded that right public policies may be developed especially addressing the equity concerns in sharing the fruits of development.

6. Workshop on Media Perspective on CPEC: The workshop was held on 22nd March 2016. The thematic area panel comprised of an eclectic mix of Academicians, media analysts, Columnists, PR Professionals and Public sector representative from Information department. The panelists emphasized on the need of improving people to people contact by increasing the influx of Chinese to Pakistan and Pakistanis to China. This in their opinion would help in gaining maximum benefits out of CPEC. All the participants stressed on the positive role of media in strengthening the China Pakistan Economic Corridor.

Different Chinese and Pakistani professors presented their papers in these workshops focusing on the economy of both the countries. The common theme that came out of nearly all thematic area workshops was strengthening the linkages between both the countries to



support China Pakistan Economic Corridor. Nearly all the presenter, Chinese and Pakistani supported the idea of CPEC and stressed on the need of developing better relations between the people of the both the countries. The workshops highlighted the potential for the CPEC for promoting indigenous growth and adding value to the local products. A need was also felt to form a think tank of experts and academia whose services would be readily available to various government and private sector organizations, for expert advice.

Special Conference of Museum Directors and Curators

The Museum Conference on 19th and 20th March, 2016 was attended by directors and curators of numerous museums of Pakistan. The two-day conference incorporated a variety of speeches by prestigious speakers such as, among others, Sir Kamran Lashari, Director General at Walled City of Lahore Authority and Dr Sumaira Samad, Director Lahore Museum. The presentation topics and resulting discussions ranged from divers suggestions on making museums more accessible to the public, to debates on equalizing the entrance fee structure for nationals and non-nationals, to a very informative presentation of a new-to-Pakistan 3D laser scanner and point cloud-technology, currently employed in the digital preservation of the country's archaeological heritage.

Some glimpses of these workshops are given below:

Thematic Workshops

Bio-Medical Materials



Renewable Energy Technologies



Water Conservation, Purification and Sanitation



Pak-China Economic Corridor; Opportunities for the ICT Industry in Pak & China



Sino Pakistan Trade Issues



Media Perspective on CPEC



China Pakistan Economic Corridor The Way Forward



Special Conference of Museum Directors and Curators



Cultural Show

An illustrious cultural show was arranged at the evening of forum's third day to give a glimpse of Lahore's culture to the distinguished guests. Renowned artists of the country participated in this program. The host and Chief Guest for the event was the Education Minister for Punjab, Mr. Rana Mashood. The show started with rendering of a poem by Allama Muhammad Iqbal. The mesmerizing performance was given by the students of CIIT, Lahore. The poem depicted the forlorn of Iqbal lamenting about the lack of understanding of the people towards his message. It gave the message of unity and tried to make people aware of the political realities of those times. The poet beautifully emphasized the need for collective action and unified struggle to achieve freedom and progress as a nation.

Second performance of the night was by the renowned Kathak dancer Nighat Chaudhary. Nighat's dance was a blend of traditional and contemporary techniques. She presented a mix of kathak and fusion which started with kathak and ended with fusion. Her performance enchanted the audience and held them captivated for a very long time. The Chinese audience especially, appreciated the performance. The third performance was given by Gonga Sain and Mitthu Sain, the legendary dhol players in Pakistan. They performed by playing dhol and dancing in Sufi tradition. Their performance had a utopian effect on the audience and amazed them. The folk dance, Dharees, which they did on stage, put the audience in a state of awe. On the beat of the 'Dhol' or the local drum, the dancers' moved in a style that was unique in finesse and detail. The Chief Guest greatly appreciated the presenters and the efforts of CIIT in putting up the incredible show. Some highlights of the show are given as under:

Highlights of Cultural Show





Closing Ceremony

The closing ceremony of Pak-China Business Forum was held on 22nd March 2016. The Chief Guest for the occasion was Ms. Amna Cheema – CEO Punjab Board of Investment and Trade (PBIT). In her speech, she congratulated CIIT for putting up a successful business forum and ensured the cooperation of PBIT in the future as well. Mr. Ma from Xinjiang No. 13 Division also spoke positively about the forum in his closing remarks. Among others were Dr. Haroon Rashid – Pro Rector CIIT and Prof. Dr. Qaisar Abbas – Director CIIT Lahore Campus, Mr. Chico Jamshed – Investment Councilor. On this occasion Pro Rector CIIT, Dr. Muhammad Haroon Rashid announced the date of the next Pak China Business Forum 2017 to be held from 9th to 12th March 2017.

Conclusion

In entirety the Pak-China Business Forum 2016 was a productive and fruitful event that provided the platform to open various windows of opportunity on Pakistan. The forum helped in enhancing the academia supported knowledge based economic activity in both Pakistan and China. Pak-China Business Forum 2016 helped the Pakistani and Chinese counterparts and offered a unique opportunity for a very progressive future and promising joint activity for the benefit of the two brotherly nations. The forum helped in enhancing the academia supported knowledge based economic activity in both Pakistan and China. This forum not only opened the gates of investment for industry in Punjab but also helped in leveling the path for China Pakistan Economic Corridor in Pakistan as a whole. It was for the first time, people understood the importance of CPEC through this Chinese business forum. We hope to see more economic investment coming in future and a prosperous Pakistan.

Feedback of the Participants

The general feedback of the participants was very positive. The Chinese guests highly appreciated the efforts of the organizers for facilitating them at every step of the event. Selective feedbacks of some prominent guests are given under:

1. GUANGDONG E-Commerce Association, China

GUANGDONG E-Commerce Association originated other 5 National Associations; a total of 125 enterprises under the guidance of Ms. Roshana attended the Fifth China-Pakistan Business Summit during March 17- 23, 2016. The standard this time was higher than before obviously both in qualifications and quantity of the participating enterprises. 90% participants were the owners of enterprise meanwhile 60% were well-known in China Local Market.

During the forum, we felt the warm hospitality in everything, such as accommodation, food and transportation. Here we want to thank our brother for the excellent work, especially the security system, was very satisfactory. Total 125 enterprises participated this year compared with 45 before. 32 have signed the MoU in the summit with total Amount \$ 2.5million, increased by 215%. A Car New Energy Projects are still under negotiation. Here we thanks again for providing the high-quality resources.

Through this forum, we learnt of the high level education at COMSATS; a lot of entrepreneurs have strong interest on the investment policy in Pakistan. The following is the details which we want to know more about it:



- There are a lot of highly-skilled personnel in various sectors who are cultivated by COMSATS University. Also large requirements from Chinese enterprises of talents, especially bilingual talent of Chinese and Arabic. Now most workers in China company are only English Majors, limit to operate localization Marketing. We are looking forward the co-operation with COMAS University on exchanging of Chinese-Arabic bilingual students to meet the extending demands in China.
- Investment: As a lot entrepreneurs are quite absorbed in investing in Pakistan, so we are looking forward to get more information about Tax Revenue Labor Salary and Free-Trade Zone. We only got to know about the land-use policy in the Summit which is not complete to make decisions. Maybe Investment Projects" Lectures could be developed to let more China's enterprises to participate in and can find the right personnel matching.
- Exhibition: It is great that more audience attended this time but there was less presence of professional buyers. We suggest enhancing the propaganda focus in Wholesale Market and Industry Association. The main purpose for enterprises is to gain orders and we are willing to afford reasonable cost if can get considerable results.
- We quite understand the serious security issues, but I suggest appropriate permits to investigate the local market and visiting our customers who have already worked for a long time, that will much help us to work efficiency.
- The imperfection of the booth arrangement: power supply, Display panel and desk, negotiating table and so on are not unified to each booth. The LED Company failed to display the products due to no power supply. We suggest the basic configuration of standardization next time.
- Associations Communication: It's a regret that there was less time to communicate with Pakistan Local Commerce Associations directly this time.

There's been a noticeable improvement of Summit this time, GUANGDONG E-Commerce Association is willing to continue to lead more and more Chinese enterprises to take part in the next forum, working hard for China-Pakistan economic and trade activities. The forum has deepened our knowledge of education, the investment environment, and the commercial activities in Pakistan. We have established friendship! Best wishes for next time! The China-Pakistan friendship is high as mountains and long as rivers!

Guangdong E-Commerce Association Secretariat

2. E-Commerce Gateway Pakistan

First of all, I would like to congratulate you and your entire team for organizing such a successful event and hats off for all the hard work and tremendous efforts that COMSAT put in. I along with Mrs. Hina Khursheed, Sr. Vice President, Ecommerce Gateway and Mr. Uzair Nizam, Vice President Ecommerce Gateway, visited this esteemed Pak-China Business Forum 2016. Also, I would like to significantly commend the wonderful efforts of COMSAT students, the facilitation from airport to hotel and hotel to Lahore expo Centre, the arrangements for B2B meetings and each and everything was up to the international standards. I must say it has brilliantly performed its role in boosting bilateral trade between China and Pakistan which will ultimately increase direct foreign investments and bring latest technologies in various sectors of Pakistan.



The visit to Pak-China Business Forum 2016 has been very productive for my company. I am going to China for a follow-up visit from 12th April, 2016 to 1st May, 2016 and I'll be visiting Beijing, Guangdong, Chengdu, Nanjing and Shanghai to meet all those people which we met during exhibition to sign MOUs and also to mature MOUs which we signed during the exhibition. These MOUs are expected to bring investment of US \$50 Million in Pakistan.

Looking forward for the dates of next Pak-China Business Forum

Dr. Khursheed Nizam

President

Ecommerce Gateway Pakistan (Pvt) Ltd

Outcomes of the 5th Pak-China Business Forum

The success of 5th Pak-China Business Forum 2016 can be determined by the fact that many future projects have been generated through it. These projects fall under the categories of agriculture, industry, trade, IT, security, infrastructure and university linkages to name a few. The details of some major projects are shared as under:

Agriculture

- Agriculture products sample base
- R&d centre
- Export agriculture machines to Pakistan

IT

- Hospital information management system (HIMS70)
- Police used geography information system (GIS)
- Intelligent transportation system (ITS)

Security

- Police/ anti-riots equipments
- Police used or army used facilities
- Anti-riots facilities
- Vehicles with weapons
- Police/ anti-riots equipments



- Police used or army used facilities
- Anti-riots facilities
- Vehicles with weapons

Infrastructure

- Development of Industrial Parks in Punjab
- Waste collection and waste power station
- Purified polluted water
- Exports public vehicle and first aid vehicles
- Economic Park in Lahore and seek opportunity for technology and industrial transfer

Inter-University Programs

- Bilingual talent exchange of Chinese and Arabic from Pakistan to China

Investment and Trade

- Information about Tax Revenue Labor Salary and Free-Trade Zone





Organizing Committee







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Annexure 1

Organizing Committees

The event was organized by COMSATS Institute of Information Technology, Lahore Campus. The success of the event would not have been possible with the dedication of its organizing teams. The organizers of the event included the management staff, teaching faculty, students and support staff from the campus. The organizers were divided into various committees and sub-committees in order to systematize the event. Each committee had its own set of responsibilities in the event. The committees were convened by the faculty and officers having sufficient experience and expertise. The tasks performed by some major committees are briefly described as under:

1. Guest Facilitation and Registration Committee: The committee members were mainly involved in facilitating the guests at the reception area of the venue. They coordinated with the focal persons of the other committees and ensured the smooth conduction of the vent.

2. Event and Hall Management Committee: Main responsibilities of the committee were to make hall arrangements, send invites to government officials and other prominent personalities. The committee was also involved in the printing and distribution of event cards.

3. Media and Publicity Committee: The function of the media committee was to achieve maximum media awareness, recall and image building of the PCBF 2016. The committee formulated an effective strategy to have a thorough, objective driven and cost effective Media and publicity plan. The plan comprised of three phases, Pre-launch, launch and Post launch activities to achieve individual objectives set for all the phases respectively.

4. IT Support Committee: ITS committee provided variety of services during the 5th Pak-China Business Forum 2016. The main objective was to manage IT related tasks within the venue. Its activities ranged from network/internet services to video/photography and live displays on the screens. For managing all the tasks and ensuring their smooth running following sub-teams were formed:

- Web Team
- Display & Multimedia Support Team
- Lab, WIFI Infrastructure and Live Streaming Team
- Video Infrastructure Team
- Photography & Video Coverage Team
- Stall Facilitation & IT Support Team
- Each team was comprised of competent staff and headed by the officers with sufficient area knowledge and experience.

5. Food and Services Committee: The food and services committee was responsible for providing food services to all the organizers and Chinese participants at the venue.

6. Chinese Guest Facilitation Committee: Lodging, boarding and travelling with in the city of the Chinese guests was all looked after by the Chinese Guest facilitation Committee.

7. Local Industry Liaison and B2B Matchmaking Committee: The committee was working on contacting the local industry to participate in PCBF 2016. During the first phase, the



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committee was assigned the following tasks:

- Sending invitation emails and invitation letters to local companies identified
- Compiling the list of Local industry registered for the event and forwarding it to the relevant committees.
- Arranging scheduled and walk in B2B meetings
- Documenting the meetings being conducted
- Documenting the details of MoUs
- Coordinating with Punjab Board of Investment and Trust officials for arranging their meetings with Chinese or local industry representatives

Coordinating with other governmental bodies' representatives to facilitate Chinese guests

8. Security Committee: The security committee in coordination with the security agencies of Punjab Government devised a comprehensive security plan. The plan was made to facilitate the Chinese guests during their stay in Lahore.



Annexure 2

Press Releases

Strategic press releases on well-crafted dimensions of PCBF 16 have been placed from March 06- 2016 to 18th March.

http://epaper.dawn.com/DetailNews.php?StoryText=07_03_2016_178_009



Annexure 3

Invitation to Pak-China Business Forum 2016 – March 19 to 22, 2016 at Expo Centre, Lahore

With the Compliments from COMSATS Institute of Information Technology (CIIT)!

It is our profound privilege to introduce to you and invite you to 5th Pak-China Business Forum (PCBF), which is scheduled to be held from March 19 to 22, 2016 at Expo Centre, Lahore. PCBF was established by the COMSATS Institute of Information Technology (CIIT), a leading public sector, federally chartered, Degree Awarding Institute, in 2012 as a part of its efforts towards the socio-economic development of the country by strengthening academia-industry linkages as well as focusing on research, innovation and commercialization.

In the above regard, CIIT took up the challenge of enabling businessmen, entrepreneurs and academia of two brotherly countries Pakistan and China to explore opportunities for mutual benefit by establishment of PCBF, a 4-day event, which is organized every year. The event includes an exhibition to display the products, Business to Business meetings as well as thematic workshops for scholarly work. A series of 4 successful PCBF events have already been organized in year 2012, 2013, 2014 and 2015, attracting a large number of Pakistani and Chinese prominent business houses and scholars/expert besides general public. The initiative of Pak-China Business Forum has been complemented by the conferment of 1st FPCCI Achievement Award in 2013.

The 5th PCBF, 2016 is expecting participation from more than 250 Chinese companies including Food Industry, ICT & Electronics, Automotives, Chemical & Bio-Medical, Textile, Tourism, Trade Associations, Trading and Logistic, Education & Research Institutes, Banking & Investment Institutions, Construction Engineering and Manufacturing companies.

We hope the participation of your organization at 5th PCBF 2016 shall provide you ample opportunities to meet your counterpart industry from China besides introducing your products to general visitors through display in the exhibition.

Looking forward to your participation at the 5th PCBF 2016 thus supporting CIIT's motive to promote knowledge based economy in Pakistan. For further details and registration, please see the attached Registration Form or contact:

Ms. Memoona Idrees, pcbf-meeting@ciitlahore.edu.pk
Mr. Jahangir Ahmad, pcbfexpo@ciitlahore.edu.pk
<http://lahore.comsats.edu.pk/pcbf2016/Default.aspx>

With Kind Regards,
(Dr. Usama Ijaz Bajwa)
Convener,
Local Industry Liaison Committee (LILC)
PCBF 2016.



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Thematic Area: Biomedical Materials

History of IRCBM & Pak China

IRCBM - A Brief Overview

Modern implants and biomedical materials are rarely used in Pakistan, mostly imported on initiatives taken by progressive surgeons, affording patients and hospitals, suppliers and/or social helpers. However, the costs are very high and there is a dire need to develop these materials locally and also explore the local potential for material based novelty. Therefore it is of utmost importance to synchronize all efforts on the biomedical materials' research in Pakistan to develop national consensus and an effective sign posting mechanism for research and development. This requires the transition of lab based concepts to patient-friendly solutions – which we are proud to be developing at the Interdisciplinary Research Centre in Biomedical Materials (IRCBM), COMSATS Institute of Information Technology, Lahore, Pakistan.

Pakistan witnessed a catastrophe in the form of an earthquake back in October 2005. Around 80,000 people died and millions were left homeless. Thousands had to undergo emergency surgeries, several of them had amputations and most of the injuries were of skeletal origin. The absence and dire-need of new-age implants and bone-repair materials was therefore truly highlighted. This coupled with an understanding of Pakistan's strengths such as a highly experienced and innovative clinical circle, ample eco-geological resources, a huge consumer market and an increasing pool of PhDs, IRCBM was established in 2008.

Pak-China Business Forum

COMSATS Institute of Information Technology has introduced an academic driven model of business cooperation by conducting Pak-China business forum on annual basis. After the success of four consecutive Pak-China Business Forums in 2012, 2013, 2014 and 2015, COMSATS organized the 5th Pak-China Business Forum from 19th to 22nd March 2016.

Pak-China Business Forum 2016

To promote University-Industry collaborations in business and economic sectors for the mutual benefit of both the countries, 5th Pak-China- Business Forum 2016 was held at Expo Center Lahore.

The objectives set forth for the Pak-China Business Forum are as under:

- To provide a platform for interaction between Chinese and Pakistani entrepreneurs and businessmen.
- To explore possibilities of attracting FDI from China.
- To provide business opportunities for Pakistani entrepreneurs.

It is expected that the Forum would also provide opportunity for commercialization of products and processes developed at CIIT and other participating organizations.

Projects and Products Display

IRCBM displayed a few final products at Pak-China Business Forum 2016. Many clinicians and students visited the stall and engaged themselves in productive discussions regarding



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future prospects of these biomedical materials.

Bone Repair and Regeneration Group: Product Display of Bone repair and regeneration group included bone fillers and porous scaffolds.

Bone Fillers: Bone fillers with different physical properties developed in large quantities at IRCBM. Porous calcium phosphate scaffolds for guided bone regeneration obtained via naturally occurring organic templates and marine life skeletal sources were displayed.

Soft Tissue Research Group: The theme of Soft Tissue Research Group at IRCBM is to design biomaterials to modulate the response of desired tissue leading the regeneration and formation of degraded tissues. Project display of soft tissue Research Group included Artificial Skin for burn patients, Nerve Guidance Conduits (NGC) for peripheral nerve repair and Haemostat Spray.

Nerve Guidance Conduits NGC: The aim is to develop polymer based NGCs which are bio-compatible, biodegradable and fulfill all requirements of an ideal NGCs. Reported artificial NGCs were successfully used for distances up to 30 mm. but not more as thin fascicles regenerate more easily than large caliber nerves and successful regeneration of fiber motors is also difficult that sensory axons fascicles regenerate more easily than large caliber nerves. The usefulness of futures NGS would be determined by their ability to support nerve growth over long distances.

Artificial Skin: A valuable breakthrough in the scientific field was the development of artificial skin, which is being used in major burn patients. Angiogenesis is the growth of new blood vessels by capillary sprouting from pre-existing blood vessels. It is critical to develop hybrid organs and tissue constructs, which require a blood supply to provide nutrients needed for cell viability.

Haemostat spray: The transfer of these phosphoryl groups to amino acid residue is catalyzed by enzymes called protein kinases. These kinases play an important role in signal transductions. Haemostat spray is PKI's based on pyridine-pyrimidine structures which can be displaced by other heterocycles like thiazole, oxazole, imidazole etc at target molecules in order to obtain more specific and biologically active drugs.

Dental Materials and Clinical Applications: Dental material research group undertake fundamental and applied research in dental materials relevant to clinical applications.

Bioactive Dental Fillers: Project display of dental materials and clinical applications group include novel bioactive dental filling material, synthesized by using various preparatory techniques including microwave irradiation and hydrothermal procedures and further subjected to structural, physical, thermal mechanical and biological analysis.

Anti-bacterial Dental Adhesive: Anti-bacterial dental adhesives are developed to enhance the bonding ability with tooth structure and to avoid the secondary carries. Key area of evaluation for anti-bacterial dental adhesive evaluation is anti-bacterial activity assessment with multiple microbial strains which is being performed at IRCBM.

IRCBM Testing Services: IRCBM is a versatile research centre which is well equipped with advanced instruments, not only for indigenous research activities but also available for researchers/industrialists from all over Pakistan. A number of SMEs, industries and import/export businesses from Pakistan and China were interested to involve IRCBM in value addition of their products along with various certifications that we offer. These services are intended



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to create a bond between academia and industry along with high quality research.

Trainings and Workshops: IRCBM holds a functional training cell which conducts several trainings and camps for the students as well as for the professionals at National and International levels. The aim is to provide hands on training to interested individuals and invite collaborations with experts and clinicians in order to move towards commercialization of researched products. Public interaction is always the main focus of IRCBM, to achieve the aim several events have been organized since 2010. Further, to continue the venture 5th international symposium on biomedical materials (ISBM) is scheduled in December 2016 (14th-16th). A number of research oriented clinicians and students shared their contact details in order to get involved in upcoming events

Public Interaction: IRCBM displayed a few final products at Pak-China Business Forum 2016. Many clinicians and students visited the stall and engaged themselves in productive discussions regarding future prospects of these biomedical materials. A number of research oriented students shared their contact details in order to get involved in upcoming symposiums or workshops.

Public interaction is always the main focus of IRCBM, to achieve the aim several events have been organized such as international Symposium on Biomedical Materials: Translation Research and Commercialization, international Symposium on Biomedical Materials: Recent Advances and Challenges, International Symposium on Biomedical Materials: Current Research and Future Signposting and International Symposium on Biomedical Material Sciences in Pakistan. Further, to continue the venture 5th international symposium on biomedical materials (ISBM) is scheduled in December 2016 (14th-16th).

(a) Program of the event: Biomedical Materials Thematic Session was held on 22nd March, 2016 at Expo Center Lahore during Pak-China Business Forum 2016. The Interdisciplinary Research Centre in Biomedical Materials at CIIT Lahore has been organizing the interactive session (a key activity for each of PCBF 2016 thematic areas) since 2012; the key focus of this year's workshop was to understand the possibilities of University-Industry-Clinical linkages and invite strong collaborations in order to commercialize the products. In addition, Regulatory Affairs regarding biomedical products were also discussed in the session. The session included 5 lectures/presentations and around an hour of panel discussion which opened new avenues in biomedical materials research.

(b) The brief introduction of these presentations are;

i. Dr. Aqif Anwar (Head of Department, IRCBM, CIIT Lahore): Dr. Aqif presented a brief introduction of IRCBM and research that is being conducted in the center. The title of his presentation was "Biomaterials and Tissue Engineering at IRCBM". The concept of biomaterials was also discussed, especially for the audience of non-science background.

ii. Shaukat Ali (CEO, Business Management Consultant International): Mr. Shaukat's presentation was mainly focused on the explanation and comparison of regulatory affairs of Pakistan and developed world. During his presentation he managed to explain the challenges and prospects of commercialization of locally produced research-based prototypes or products.

iii. Dr. Faraz Ahmad Saeed (CEO, Ahmad Saeed and Company, Lahore): Dr. Faraz's main theme of discussion was the possibilities on new ways of linking-up academia and industry, especially keeping in view the acute environment of Pakistan.



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iii. Dr Faraz Ahmad Saeed (CEO, Ahmad Saeed and Company, Lahore): Dr. Faraz's main theme of discussion was the possibilities on new ways of linking-up academia and industry, especially keeping in view the acute environment of Pakistan.

iv. Prof Dr Fridoon Jawad Ahmad (Associate Professor, King Edward Medical University, Lahore): Dr. Fridoon's talk was purely science-based in which he discussed specifically the fundamental concepts of tissue engineering. The prime part of his presentation was to demonstrate critical scientific concepts and terminologies in a very easy way, which were understandable for the non-science audience.

v. Prof Dr Syed Muhammad Awais (S.I.) (Former Pro Vice Chancellor, King Edward Medical University, Lahore): The prime focus of his presentation was to discuss the aims and objectives of biomaterials and bioengineering research and tissue engineering with respect to orthopedic and bone repair. Based upon his vast experience, he identified the problems prevailing in orthopedic research in Pakistan and suggested useful scientific and non-scientific interventions to deal with the problems.

(c) Panel Discussion: Panel discussion lasted for about one hour in which participants and panelists got actively involved and certain areas of interest were discussed. Apart from speakers (listed above), Dr. Mustehsan Bashir, Head of the Plastic Surgery Department at Meo Hospital Lahore and Dr. Nadeem Pasha, Assistant Professor Lahore Medical and Dental College were also the part of session's panelist team. Questions and queries from participants were satisfied in detail by the panelists. The main focus was the impact of locally produced implant products on the clinicians and their acceptability along with the impact of latest research being conducted at IRCBM and commercialization of already developed prototypes, like bone fillers, skin and dental implants at IRCBM. A whole new avenue in biomedical research was generated as a result of panel discussion which would surely guide IRCBM's team and the audience of the session to foresee future of the locally produced, research-based implantable materials.

(d) Chinese participation (include pictures)

- Binyi Liu (Chinese academy of sciences)
- LanWeng Jing (University of Istanbul)
- Mak David (TEHAMA, Iraq)

(e) Key Carry Forwards from the Event

(i) Service Contract for a company based on IRCBM characterization: Interest for service contract for characterization of samples using Scanning Electron Microscope (SEM), UV-VIS and UV-VIS (DRS), BET and XRD was shown by Ahmad Saeed & Company will be finalized after further discussions and mutual consent.

(ii) Queries from Sialkot industry for implants testing: Surgicraft, a Sialkot-based company attended the workshop/thematic session and had shown keen interest in using our expertise in cytotoxic and bioburden studies and investigations for their products.

(iii) Potential Implant manufacturing venture and start up company discussion with Prof. Awais: Idea of manufacturing standardized implants at one place (rather than at scattered places due to unavailability of facilities at one venue) was floated by Prof. Dr. Awais, former Pro Vice Chancellor of the King Edward Medical University in Lahore.



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Carrying further his idea, it was agreed by the IRCBM faculty and relevant participants of the workshop that a start-up company can be launched under the banner of IRCBM with all required facilities at one place, from local synthesis to characterization and trials and marketing of implants in local (and international) market.

(iv) Total number of Participants (60) and their back grounds - potential IRCBM training cell and testing services clients: Around 60 professionals from academic, clinical and industrial background attended the session and very actively participated in Q&A sessions after every talk and panel discussion.

Big implant and surgical companies like surgicraft and bonecare implants are already in collaboration with IRCBM for the testing services. Also, Mr. Shaukat Ali, an eminent business management consultant, quite regularly brings in surgical and implants manufacturing companies to avail IRCBM's testing services. Individuals from respective companies and Mr. Shaukat had shown keen interest in further strengthening the collaborations in terms of availing testing services at IRCBM.

Students from diverse academic backgrounds like dentistry, material sciences, chemistry and chemical engineering, who were a part of the thematic session or visited IRCBM's stall were interested in upcoming Summer Camp, 2016. Some of the industry representatives also were interested in getting their workers trained on different machines and equipment when they were told about the training cell.



Annexure 4

Thematic Area: China-Pakistan Economic Corridor Opportunities for the ICT Industry in China and Pakistan

Faculty of Information Sciences and Technology (FIST) organized a Thematic Lectures on "China-Pakistan Economic Corridor: Opportunities for the ICT Industry in China and Pakistan", at Pak-China Business Forum, March 19-22, 2016 at Expo Centre, Johar Town Lahore. About 100 participants including teachers, students and businessmen from Pakistan and China attended the sessions.

Venue: Conference Room # 2 in Exhibition Hall #1: Expo Center Lahore

Time: 9:45 Am to 12:00 Pm

Following were the guest speakers for the sessions:

1. Mr. Liu Sheng Jie, CTO HUAWEI Pakistan
 2. Mr. Frank, Representative ZTE Pakistan.
 3. Mr. Saleem Rafik, Director General NADRA Pakistan.
 4. Mr. Tahir Mahmood Chaudhary, President & CEO Pakistan Institute of Entrepreneurship,
- The session started at 9:45 am with the recitation from Holy Qur'an by Hafiz Rizwan, lecture Computer Science Department COMSATS Institute of Information Technology Lahore.
 - An introduction to the seminar's theme was delivered by Prof. Dr. Syed Asad Hussain, Dean Faculty of Information Sciences and Technology (FIST), COMSATS Institute of Information Technology.
 - Prof. Dr. Asad Hussain explained the importance of the ICT industry with reference to China-Pakistan Economic Corridor (CPEC).

Dr. Asad Hussain further explained that ICT is the need of the world of today and tomorrow. ICT environment is conducive to innovation in both countries. Chinese companies and investment is already present in Pakistan. ICT services affordability is improving significantly but still both the countries need to catch up the ICT Development Index as front runners improvising the positive indicators. He further mentioned that ICT companies have opportunities in the following areas:

Health: epidemics, healthcare delivery.

Climate change: climate monitoring, energy- management systems.

Disaster management: monitoring of extreme weather events.

Agriculture: precision agriculture, management of water resources, crop drones.

Megacities: transportation, electric grids, water and sanitation management.

Pakistan has great potential of software development through software companies. Pakistan can invest through HR and capital in this field and there is a possibility of establishment of joint companies.



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ICT companies have huge opportunities in CPEC as Pakistan and china agree to create e-corridor to supplement CPEC. COMSATS Institute of Information Technology being number one institution in IT in Pakistan can play a significant role in fulfilling the ICT needs for businesses of both Pakistan and China. It has many faculty members who completed their PhDs in computer science and IT from reputed universities of China. Their academic and research links in China can be very beneficial for ICT and educational growth of Pakistan and China, hence there is a need to explore this opportunity. At the end of his talk, he said "I hope today's session will open new avenues and opportunities of progress for both the countries."

- Thereafter, the first guest speaker, Mr. Liu Sheng Jie (Mr. Jay), CTO HUAWEI Pakistan was invited. Mr. Jay threw light on the importance of the ICT industry with HUAWEI's perspective on CPEC and telecommunications and security needs of Pakistan.

Mr. Jay said that China is business partner of Pakistan. He further explained that HUAWEI is striving to enhance the ICT infrastructure in Pakistan and now time has come to work together for the betterment of people of both the countries. He pointed out that HUAWEI has already setup training centres in Pakistan to enhance the skills in IT industry.

- Next, Mr. Frank, representative of ZTE Pakistan was invited to deliver his presentation. Mr. Frank explained the importance of Smart Cities for China-Pakistan Economic Corridor. Mr. Frank said ZTE is working to make cities smart from the perspective that they will be more secure, there will be more comfort of life and ease in the communications. He said that ZTE is currently working for the improvement of the ICT infrastructure of Islamabad, capital city of Pakistan. He said that ZTE intends to invest in the area of smart cities development projects.

- Next speaker was Mr. Saleem Rafik, Director General NADRA Pakistan. Mr. Rafik thoroughly discussed about the importance of ICT and transportation industry in Pakistan. He further explained role of Pakistan in CPEC.

Mr. Rafik said that a new era of relations and friendship between both countries has started due to 46 billion dollars investment under China Pakistan Economic Corridor. He mentioned that Pakistan got support in the area of ICT industry and 36 billion dollars out of 46 billion dollars are dedicated to energy projects in Pakistan under CPEC agreement.

He mentioned that Pakistan is the world's fourth largest producer of cotton. Pakistan is the world's eleventh largest producer of rice. Pakistan is the world's fifth largest producer of sugarcane; Pakistan is the world's ninth largest producer of oranges. It is the world's tenth largest producer of wheat.

Mr. Rafik said agriculture is the major part of national economy of Pakistan in real sense. He mentioned that increase in per acre yield is not possible without transforming modern technology with the help of IT based equipment and sharing its results with the farmers. He said that Pakistan is the fourth milk producing country of the world and, perhaps, tenth big country with regard to livestock but now it is lagging behind. He mentioned that the Pak-China Business Forum would provide numerous investment opportunities for the business community of both the countries. At the end, he emphasized that there is a need to improve the ICT infrastructure in Pakistan to get full benefits through exports of agricultural products.



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- Finally, Mr. Tahir Mahmood Chaudhary, President & CEO Pakistan Institute of Entrepreneurship was invited to explain the importance of Pakistan ICT industry in CPEC. He said that there is a need to pay full attention to agriculture research in universities and agriculture research institutions. He said that agriculture planners, government, agriculture research institutions and universities will have to work jointly. Mr. Tahir mentioned that he is attending 5th Pak-China Business forum and addressing the importance of entrepreneurship culture in Pakistan and ICT industry needs to meet the need of IT for projects of China-Pak Economic Corridor. Mr. Tahir discussed that COMSATS Institute of Information Technology has experience and a great potential for developing softwares for educational institutions/universities and an effort has already initiated by Dr. Madani. He further mentioned that "Now time has come to take concrete steps for the IT revolution in Pakistan and enhance collaboration in ICT with China".
- The session was concluded by Dr. Sajjad Madani with the vote of thanks. Dr. Madani thanked to all guest speakers and the participants of the session.
- Dr. Madani invited Prof. Syed Asad Hussain, for the presentation of the shields to all honorable guests. The session closed after the distribution of the shields.



Annexure 4

Thematic Area: The China-Pak Economic Corridor: The Way Forward

The first thematic workshop "The China-Pak Economic Corridor: The Way Forward" was conducted on March 19, 2016 (from 2:30 pm to 5:00 pm) in Conference Room No. 2, Hall 2, of Expo Centre, Lahore. The event opened with the recitation from the Holy Quran. Dr. Abdus Sattar Abbasi, Head, Department of Management Sciences, CIIT, Lahore, chaired the session.

Dr. Rafi Amir-ud-Din, Assistant Professor, Department of Management Sciences, CIIT, Lahore, was the first speaker of the event. The title of Dr. Rafi's presentation was "CPEC as a game changer? Some reality checks." The speaker discussed some prerequisites for translating the opportunity offered by CPEC into sustainable development outcomes. Analyzing CPEC within the context of larger Chinese "Road and Belt Initiative", the speaker highlighted some of the pitfalls of foreign investment which have to be avoided at any rate, and underscored the importance of balancing the concerns of efficiency and equity. The speaker also warned that in the absence of equitable distribution of the fruits of development, social problems like law and order and extremism might further deteriorate. The speaker also emphasized the need to change the general attitude of the public to the issues of development and underdevelopment.

Prof. Dr. Rasul Baksh Rais, Professor at LUMS and a noted columnist spoke on the theme entitled "China and Pakistan: Working Towards a Futuristic Partnership". Dr. Rais discussed CPEC within the historical context of Sino-Pak relationships. He noted that the current opportunity offered by CPEC has to be sustained and further upgraded in the long run for national and regional development.

Mian Anjum Nisar, ex-President LCCI, discussed the opportunities offered by the CPEC and how they can be effectively harnessed for the optimal growth of the society. Hailing from the business background, Mr. Nisar also highlighted the potential for the CPEC for promoting indigenous growth and adding value to the local products.

Mr. Sajid Saleem Minhas, CEO, Delta Garments Ltd., gave an insightful lecture on the trade imbalances between China and Pakistan. Pakistan, despite being a key political ally of China on matters of regional geostrategic importance, has a much smaller trade relation with China as compared to trade relations between India and China. Mr. Minhas highlighted the need to make an effective and robust public policy to promote exports and forge closer trade ties with China and other economies of the world.

Dr. Abdus Sattar Abbasi thanked the audience and the event was concluded. The guests informally discussed many issues over the tea.



Annexure 4

Thematic Area: Media's Role in Pak-China Business Growth

Day 4: Tuesday, 22 March 2016

Room No: Conference Room, Exhibition Hall 1

Workshop Session I: Pak China Business Forum 2016 planning team first time ever included Media's perspective upon Pak China Business Growth, which turned out to be a very productive and intellectual session. The thematic area panel comprised of an eclectic mix of Academicians, media analysts, Columnists, PR Professionals and Public sector representative from Information department. The details of participants with relevant topics are given for kind reference:

Print Media Perspective on Pak China Economic Growth'	Syed Naseem Ahmad (CEO, Advision)
Media role in Pak China Economic Cooperation	Dr. Aslam Dogar (Additional DGPR, Punjab)
Global Media's perspective on Pak China Economic Cooperation	Rizwan Razi (Executive Editor, Daily Nai Baat)
Pak China Business & Media	Salman Ghani (Columist and Chief Editor, Daily Dunya)
Electronic Media & Pak China Relations	Salman Abid (Columist/Analyst, Express Group)
Impact of Political Economy on Pak China Relations	Khalid Rasheed (Assistant Professor, PU)
Pak China Economic Corridor to Punjab Corridor controversy of Media	Dr. Ejaz Butt (Anchor, PTV & Principle, Township College, Lahore)
Q & A session	All Speakers

Recommendations of the session

- Syed Naseem Ahmad gave an idea of establishing Chinese language café's in different cities of Pakistan to pave the way for better understanding between Pakistani and Chinese people. He also emphasized upon improving people to people contact by more extensive influx of Chinese to Pakistan and Pakistanis to china. This is the way forward to get maximum benefit from CPEC.

- Dr. Aslam Dogar said that China has always proved to be a friend in need. China has always backed up our resolve may it be Osama bin Ladin Issue, Richard Nixon "The real War in 80s" and on all the issues. He said, this century belongs to media. Media can play vital role in achieving desired results from CPEC. Media can sensitize the people about learning Chinese language, knowing about Chinese culture and vice versa Chinese media be advised to do the same.

- Salman Ghani, started with a Poetic verse to highlight his point of view:

"Zamane Bhar ki Nazar mai Moetabar honge"

"Who Faisle jo Mohabat ki Maiz Par honge"



Annexure 4

Thematic Area: Renewable Energy Technologies: Prospects and Challenges

20th March 2016

ORGANIZED BY DEPARTMENT OF PHYSICS

COMSATS INSTITUTE OF INFORMATION TECHNOLOGY LAHORE

www.ciitlahore.edu.pk

"A Workshop on Renewable Energy Technologies: Prospectus and Challenges" in Pak-China Business Forum-2016

COMSATS Institute of Information Technology organized the Pak-China Business forum program to promote University – Industry collaborations in business and economic sectors for the mutual benefits of both countries. As the primary focus of the Pak-China Business Forum is on contemporary issues; there are certain areas which needed to be focused. So, in consultation with the Chinese counterparts the themes of the Forum have been limited. Therefore, one of the very important themes is based on current global energy issues and solutions based on the renewable energy technologies.

A thematic workshop has been managed by Department of Physics, CIIT Lahore on 20th March 2016 in Expo Center Lahore with Pak China Business Forum. More than seventy (70) people from academia, industry of both countries (Pak & China) participated. The proceedings of renewable energy technologies (RET) workshop were initiated with the recitation of Holy Quran. The opening remarks were delivered by **Prof. Saleem Farooq Shaukat**, Head of Academics & Research. He welcomed the honorable guests and gave a thought-provoking talk about the energy situation in Pakistan. He discussed that the collaboration of Pak-China amongst the R&D organizations, academia and industry should be strengthened to develop better solutions in the area of Renewable Energy Technologies. After that **Dr. Rizwan Raza** (Incharge of the Workshop) shared the details of the Workshop and the speakers. He briefly explained the prevailing issues in the energy sector of Pakistan. Why should such type of workshops be held in Pakistan? Because the Pakistan is an energy-deficient country and this workshop emphasizes the importance and challenges of new era technologies. The renewable energy sources like wind energy, solar energy, biomass energy and fuel cell technology can be used to overcome energy shortage in Pakistan. RET have the potential to provide solutions to the long-standing energy problems being faced by the developing countries e.g., PAKISTAN.

The present situation in Pakistan: There is very small activities of renewable energy resources to overcome this deficiency as well to develop suitable environment, marvelous efforts are needed.

Five national/international speakers have talked in this workshop in different areas of renewable technologies. The first speaker was **Professor Dr. Waqar Mahmood**, currently he is the Director of center for Energy, research and development (**CERAD**), UET, Lahore. He has focused on the Pakistan Energy Crisis, Challenges and Opportunities. In his details presentation, he discussed that, Pakistan like other developing countries of the region, is facing a serious challenge of energy deficit. Renewable energy sources can play an important role in meeting this challenge.



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Thematic Area: Renewable Energy Technologies: Prospects and Challenges

The 2nd Speaker was **Dr. Suhail Zaki Farooqui**, Currently he is working as a Director General of Pakistan Council of Renewable Energy and Technology (PCRET). He briefly discussed about the Role of his institute in the Promotion of Renewable Energy Technologies in Pakistan. He discussed the vision of the PCRET; this organization is committed to research, develop, promote, disseminate, impart training provide energy services to the people living in remote areas, and create renewable energy culture in the country. Also PCRET is strengthening the linkages with the Private/Public sector and end users to promote renewable energy in the country. Revamping of bilateral collaboration with countries like China etc. for technology transfer, need based research, development and deployment of RETs viz; Biogas, Micro-hydel, Solar Thermal, Solar PV, Wind. To provide energy services at the doorstep of people living in remote and far-flung areas, collaboration with provincial and local governments for the promotion, dissemination and deployment of RE systems is needed.

The third speaker was from Chinese company **Mr David**. He discussed how Pakistan Chinese companies can work together in the area of renewable energy technologies.

Dr Iffikhar Ahmed, currently a research scientist at Masdar Institute, UAE working on solar nanotechnologies for energy/water recovery applications and previously hold the position of Assistant professor in solar nanotechnology at University of Paris, France. He discussed about the "Smart Solar Nanotechnologies for Energy and Water applications". Also he focused, how new technologies can play a vital/dynamic/key role for the sustainable development of Pakistan and to overcome the energy crisis.

Dr. Muhammad Ghaffar Doggar highlighted the potential of biogas in Pakistan. Currently, he is working as Principal Scientific Officer, at Energy Research Center, COMSATS Institute of Information Technology Lahore. He has also worked in many governments projects as Project Manager, Project Directors etc. He described that available biomass potential in Pakistan for the most part of Punjab and versatility in its use are highly favorable for energy production as a clean and cost-effective fuel option. It is necessary to know about the existing technologies and how they are used in a feasible way in Pakistan to produce energy. Biogas plants are an economical and superior option to the energy demands of Pakistan. Because of the fact, more than 60% of its population lives in rural areas and they are mostly related to agriculture and livestock. Pakistan, being rich in biomass resources, must generate some percentage of its total energy demand, create job opportunities by building biogas plants, cope with environmental issues and decrease the burden on its economy by the reduction of oil imports. Therefore, it is great opportunity for China to invest in the area of Biogas. At the end of his talk, one of the Chinese company has shown his interest in this area and hold a detailed meeting with Dr Doggar to find out the solutions and ways how to collaborate and work together.

At the end of the workshop, the **Vice President of Biogas Company from China Mr Tang** is discussed about the biogas potential in Pakistan as well as in China. He introduced some of their company product which can be used in Pakistan.

Energy Panel Discussion:

At the end of workshop, a panel discussion has been arranged by the organizers, in which following members have pointed out their views in the light of renewable energy technologies.



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Thematic Area: Renewable Energy Technologies: Prospects and Challenges

1. Prof. Dr. Khalid Saeed, Head of Energy Research Center CIIT, Lahore
2. Dr. Sohail Zaki, Director General PECRT
3. Dr. Waqar Mahmood, Director Energy Research UET Lahore
4. Dr. Muhammad Ghaffar Dogar, COMSATS IIT, Lahore
5. Chinese Delegate Mr Tang, Vice President of Biogas Company

The panel discussion was chaired by Mr Khalid Saeed (Head, ERC, CIIT). He appreciated the efforts of Pak-China business forum organizer to provide such platform, where both country friends can discuss and collaborate the needs of the nations and society.

1. Prof. Dr. Khalid Saeed

- He told that there is an excellent program to express Pak-China Friendship particularly in the form of business forum.
- In this forum, we may get an opportunity to highlight the importance of the products based on renewable energy technologies.
- He also discussed the policy issues by Energy Board (1994, 1998, 2002).
- We have been facing crises since last 8 years.
- In 2013-14, a policy was devised to use the sources like 1/3 from furnace oil and 2/3 from gases. There is nothing in terms of solar, wind, and even coal, nuclear etc.
- He informed that now Energy Development Board EDB has targeted till 2030 at least 50% usage of renewable energy. In this regard, 500MW wind power will be added in grids in next year.
- By Product of Sugar Industry BPSI may play a vital role to support renewable energy programs.
- To remove the load shedding in Pakistan, we need much and massive program on behalf of solar energy technologies.
- Income from power generation not only should be tax free but also confirm to pay incentive.
- To invite others foreigner's experts, either in conferences or symposium/workshops is beneficial to take initiative steps in renewable energy technologies.

After the details discussion on current energy scenario of Pakistan, Dr Sohail Zaki (DG, PCRET) have started discussion on the theme of the workshop and how can we work together in this area?



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Thematic Area: Renewable Energy Technologies: Prospects and Challenges

2. Dr. Sohail Zaki (DG PECRT)

- Pakistan is paying 40-50 Billion Dollars in climate issue
- 500MW @ 6 cent/KWh in America 5 cent/KWh from solar and 2.5 cent/KWh from wind sources cost is being estimated.
- Due to rise in usage of renewable energy technologies, the oil prices reduce dramatically from last two months.
- The 45% power from Biogas will be transferred in grid.
- In order to implement renewable technologies, policy makers ensure that no new plant based on fossil fuels will be installed after 2030.
- In future, new plants will be installed on renewable energy technologies.
- Two-third part of energy is used in the form of non electricity.
- 2/3rd number of population belong to rural areas.
- Mother cause of evil is the raise of population, and population growth issue should be discussed at every forum and it also should be limited like China.

3. Prof. Dr. Waqar Mehmood (Director, CERAD, UET Lahore)

- We should host more and more B2B forum to energy companies for investment. We have a lot of opportunities in renewable energy technologies.
- India has a capacity indigenous manufacturing.
- However, there are five Research centres based upon RET in Pakistan.
- They are being run by the funding of Government and students also contribute widely to work in these energy research centers
- In last comment, he admitted the hard work and progressive success of China and wished to work with Chinese companies.

4. Chinese Delegate

- He needs collaboration on the projects of Biomass and Biogas as well as Waste to Power Generation Project.
- He has a team here and can talk; how it is possible to contact and cooperative details can be shared to Pakistani team

Questions

1. How can we involve the stakeholder, either Government or Private Sector (Industries)? Because energy is multidisciplinary subject.
2. Can PECRT take a charge to get funds to enhance the solar technologies in Pakistan even in abroad? PECRT, AEDB are the incharge of policy makers.



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Thematic Area: Renewable Energy Technologies: Prospects and Challenges

Answer by Dr. Zaki

- We are in the process of incubation not only for solar but for all other RET technologies and YES it is possible but we have little funds and even no fund.

The interest of the participants was evident from the number of questions they asked relevant to current energy crisis and the role of industry and academia.

The workshop, undoubtedly, was an international event. The feedback from the participant was very encouraging which enhanced motivation to work more diligently and solution based on the RET through meeting many experts from different areas. It was an excellent opportunity of exchange of expertise between specialists from Pakistan and China. This Thematic Workshop was successful to achieve its main objectives, one to increase awareness in the ongoing research programs and second to review the latest developments in the area of RET.

We are feeling very privileged in thanking our Worthy Rector CIIT and the honorable director CIIT Lahore for their encouragement to organize such great event.

At the end, vote of thanks with shield was presented to the speakers by honorable Head of the Physics Department Prof. Dr Saleem Farooq Shaukat. He also thanks to the all organizing team, especially Dr Ayesha Anjum who hosted the complete event, and other members, Dr Ghazanfar Abbas, Dr Muhammad Saleem, Dr Saif Ur Rehman, Dr Muhammad Ajmal Khan, and PhD, MS, BS Students for their commitment to make this event successful.

“Let's save the energy, save the world”



Annexure 4

Thematic Area: Water Conservation, Purification and Sanitation

Department of Chemical Engineering organized Thematic Lectures on "Water Conservation, Purification & Sanitation", at Pak-China Business Forum, March 20, 2016 at Expo Centre, Johar Town Lahore. About 80 participants including teachers, students and businessmen from Pakistan and China attended the sessions.

Venue: Conference Room # 2 in Exhibition Hall #1: Expo Center Lahore

Time: 2:30 PM to 5:00 Pm

Following were the guest speakers for the sessions:

- Prof. Dr Zaki Ahmad, Department of Chemical Engineering, CIIT, Lahore
- Prof. Dr. Muhammad Abid, PhD Director, Interdisciplinary Research Center, Chairman, Mechanical Engineering, CIIT, Wah
- Dr Zahiruddin Khan, Chief Technical Officer, Punjab Saaf Pani Company, Lahore

Following are the participants for panel discussion;

- Dr. Bahadar Nawab Khattak, HOD, Development Studies, CIIT, Abbottabad
- Prof. Dr Jamil Anwar, University of Punjab, Lahore
- Prof. Dr. Qaisar Mahmood, Department of Environmental Sciences, CIIT, Abbottabad
- Prof. Dr Zaki Ahmad, Department of Chemical Engineering, CIIT, Lahore
- Prof. Dr. Muhammad Abid, PhD Director, Interdisciplinary Research Center,
- Chairman, Mechanical Engineering, CIIT, Wah
- Dr Zahiruddin Khan, Chief Technical Officer, Punjab Saaf Pani Company, Lahore
- The session started at 02:30 PM with the recitation from Holy Qur'an by Hafiz Qasim, student Department of Chemical Engineering, COMSATS Institute of Information Technology Lahore.
- An introduction to the seminar's theme was delivered by Prof. Dr. Asad U Khan, Chairman Chemical Engineering, COMSATS Institute of Information Technology. Prof. Dr. Asad U Khan explained the importance of the thematic area with reference to China-Pakistan Economic Corridor (CPEC).

The first guest speaker, Prof Dr Zaki Ahmad was invited. The presentation entitled "A Novel Design of Fog-Water Conversion System by Mimicking Desert Beetle" showed about the technology of harvesting drinking water from fog and thin air. There are several hilly regions in Pakistan with acute water shortage. This paper describes both the traditional techniques used in different countries of the world and new technology based on nanotechnology. This technology has emerged from the desert beetle of Namabia, whose skin possesses nanostructured features of bumps valleys and nano hairs which allow the condensation of



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Thematic Area: Water Conservation, Purification and Sanitation

fog on the surface of desert beetle. This technology has been mimicked by the author on 316 Stainless Steel coated with homogeneous solution consisting of 20% PTFE, 10% PVA, 1% Sodiumdodecylbenzene sulfide spread over mesh panels. The yield can be as high as 4 liters per square meter. The work is in progress and it can be of great value to minimize the impending drinking water shortage in Pakistan.

Prof Dr M Abid said that Tarbela dam is one of the largest earth filled dam in the world used for power generation and irrigation purposes. Indus basin is also regarded as backbone of Pakistan as it is the biggest source of electricity generation and is called as a food factory for Pakistan. Like all reservoirs the sediments inflow in the Tarbela reservoir has also resulted in reduction in water storage capacity and is also causing damage to the tunnels, the power generating units and ultimately to the plant equipment. The main source of the River Indus is the glacial melt water from the Himalayas with an annual flow rate of 94 MAF which carries along huge amount of sediments and the gross capacity of the reservoir has reduced. The annual suspended sediment load is about 430 million tons meaning that, over time, the reservoir will fill. The life of the dam and reservoir was estimated to be somewhere around fifty years in 1976 when the dam was constructed, meaning that the reservoir will be full of sediments by 2030 and will not be functional anymore unless maintained. This study presents life prediction of Tarbela reservoir in terms of its storage capacity, erosion rate and strength of the tunnels. As such kind of work has not been done so far in any of the hydel power plants in Pakistan; the numerical methods developed will provide a base for the study of the behaviour of water and sediment flows in Tarbela Dam reservoir, spillways and tunnels and strength analysis of the tunnels using FSI. The developed methodology can also be implemented to study the water and sediment flow behaviour of water in other reservoirs, dams, rivers, barrages and canals present throughout in Pakistan in specific; provided the required data for those are available.

Dr Zahiruddin Khan, Chief Technical Officer, Punjab Saaf Pani Company, Lahore introduced his company and situations of water treatment at Pakistan. He has completed many projects with Punjab Government. He also offered working collaboration with CIIT.

The panel disssion was hosted by Dr Bahadar Nawab. Participants actively involed in this discussion and large number of problems were discussed.

Workshop has highlighted the importance of water conservation, sanitation and treatment. While freshwater supply is finite, global water demand doubles every 20 years, at more than twice the rate of human population growth. Pollution and over-extraction in many regions of the world has reduced the ability of water supplies to meet demand. In the next decades, water shortages will become a large worldwide problem affecting every nation. Water supply and sanitation (WSS) are interrelated. Inadequate access to sanitation facilities can lead to the leaching of waste into freshwater sources and a decrease in the quality and level of access to freshwater for a community. Also, public health and the quality and quantity of WSS are directly linked. Currently 18 percent of the world's population, live without access to adequate water supply and 42 percent of the world's population, live without access to sanitation facilities. The impacts of scarce access to water supply and sanitation are not distributed equally among populations. Globally, the lack of access to WSS disproportionately affects women and children.

It was discussed that CIIT Lahore has developed simple water filtration systems for people having no access to safe drinking water. Nanotechnology is also incorporated for



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photocatalytic reduction of hazardous substances in water. Similarly we have developed water testing kits for identification of pathogens in drinking water. Department has high tech equipment which are being utilized for regular analysis of all drinking resources across the campus. Similarly under Pak US project, research is going to develop technology for auto-oxidation and bio reduction of hazardous pesticides laden well water into healthy drinking water for villagers.

Prof Dr Robina Farooq has highlighted that water is arguably Earth's most precious resource, and one of its most scarce. Without major conservation and treatment tactics, water scarcity will only continue to worsen around the world. We must remain vigilant to emerging trends and risks that could derail our efforts and undermine our impact on poor communities. Climate change is now recognized as one of the defining challenges for the 21st century. More frequent and intense extreme weather events have resulted in a higher incidence of floods and droughts around the planet. The emerging adverse impacts on water and sanitation services constitute a clear and present danger for development and health. New evidence, translated into new advocacy, is needed to raise the awareness in governments, international agencies, nongovernmental organizations and communities about the links between climate change and water and sanitation services, and the consequences for health and development. In a context of relative uncertainty associated with climate change projections, policy responses will have to be formulated based on our current knowledge to address these impacts and consequences. The aim of the workshop mainly was to help policy-makers, planners, operators and communities in making practical decisions based on clear criteria, to improve the resilience of their water and sanitation services in both countries of Pakistan and China. Both of us are going to be the victim of increased precipitation and flooding.

Prof Robina Farooq identified two key areas where climate changes may represent the most significant drying environments: which include some regions of Africa, America and eastern Mediterranean while others including Pakistan is experiencing more flooding: There is a need to initiate research to reduce global warming by different techniques including either reduction of green house gas emission and to harvest them for chemicals. A research group at COMSATS Lahore is also involved in bio-harvesting of greenhouse gases using MFC technology and is successfully synthesized some fuel precursors and polymers. These kind of projects are the need of the day to indirectly reduce pressure of climate change on water resources.

Dr Bahadar Nawab said that Increasing average precipitation and more intense wet weather events are forecast for this region, making flooding more likely. High mountain regions are warming faster than the global average. This affects drinking-water supplies that depend on rivers and lakes where glacial melt water forms a significant part of the low-season flow. This suggests that increased water storage should be able to offset some of the problems resulting from a loss of glacial melt water.

It was unanimously agreed that research and development (R&D) is needed which are likely to slow the pace of adaptation and reduce the capacity to strengthen resilience to climate change. R & D at Pakistani Universities along with industrial expertise of China can be merged to find solution like diverting increased water to old underground acquirers, and develop dams. It is also necessary to handle huge volume of wastewater if created due to flooding. It was told to participants by Prof Dr Robina Farooq that COMSATS is working on large number of funded research projects related to water treatment, energy and



materials recovery from wastewater, water conservation technologies with China, Sweden, USA, UK and Pakistan. Pak China business forum 2016 has provided us an opportunity to collaborate with our Chinese counterparts for making better Pakistan.

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large number of funded research projects related to water treatment, energy and materials recovery from wastewater, water conservation technologies with China, Sweden, USA, UK and Pakistan. Pak China business forum 2016 has provided us an opportunity to collaborate with our Chinese counterparts for making better Pakistan.

At the end, Prof Dr Robina Farooq, convener of the workshop has concluded the session and paid vote of thanks to speakers, representatives from Pakistani and Chinese industries, Students and faculty from difference Universities across Pakistan for their participation in this workshop. She appreciated faculty and student organizers, team members especially Dr Bahadar Nawab HOD Development studies Abbottabad campus and Dr Muhammad Shaid HOD Env Sc Vehair campus for their valuable suggestions

Prof. Asad U Khan was invited for the presentation of the shields to all honorable guests. The session closed after the distribution of the shields.

build together



better tomorrow