



Collaborative project between

MANCHESTER
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The University of Manchester

&

PCSIR Laboratory Complex, Karachi

SEMINAR ON “MINERAL RESOURCES UTILIZATION FOR SUSTAINABLE ECONOMIC DEVELOPMENT”

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HEC-BC Knowledge Economy Partnership Pak-UK “Effective Utilization and Up-Gradation of
Nagar Parker Kaolin - a Natural Resource Mineral for Economic Development of Thar Desert

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SEMINAR

Pakistan has been endowed with a variety of mineral resources and industrial rocks including dimension stones, metallic minerals, gemstones and energy resources such as coal and radioactive minerals.

In this regard, one day seminar is being organized and the aim of which is to provide a platform to intellectuals, who are concerned with different aspects of mineral resources development in Pakistan. This will not only provide an opportunity to the experts, stake holders and investors to exchange the relevant information but also open new avenues to the researchers to explore the possibilities for efficient utilization of mineral resources in Pakistan.



The seminar covers wide range of topics in the area of mineral resources & utilization that includes:

- zeolite synthesis, potential of zeolite synthesis from minerals & waste material,
- contribution of research & development in utilization of minerals in the world and Pakistan,
- mineral resources in Pakistan & the role of PMDC for the economic development of Pakistan,
- potential of coal resources for the economic development of Pakistan,
- opportunities for corporate sector in mineral processing,
- policy and implementation of mineral resources development projects in Pakistan,
- advanced analytical techniques in mineral processing,
- environmental impacts of mining of minerals & mitigation measures,
- gender empowerment in thar desert for mineral resources development

The seminar was held on January 20, 2016 at Mehran University of Engineering & Technology in collaboration with University of Manchester & Pakistan council of Scientific & Industrial Research (PCSIR) Laboratory complex, Karachi, Ministry of science & Technology, Islamabad.

The seminar was presided by the Vice Chancellor (acting), Prof. Dr. Ghous Bux Khaskeli and the guest of honour was Prof. Dr. Shahab Khushnood, Dean, UET Texila. Seminar was started with the recitation the verses from Holy Quran. Later on, Prof. Dr. Suhail A. Soomro had briefed the conference participant about the silent features of project “Effective Utilization and Up-Gradation of Nagar Parker Kaolin, a Natural Resource Mineral for Economic Development of Thar Desert”.



He apprise the participant about research collaborative project between Mehran UET and University of Manchester, UK has been awarded by Higher Education Commission and British Council Pakistan. The two world renowned institute will work together on “Effective Utilization and Up-Gradation of Nagar

Parker Kaolin -A Natural Resource Mineral for Economic Development of Thar Desert”, under Knowledge Economy Partnerships Pakistan-UK funded by Higher Education Commission & British Council, Pakistan. The project team leaders Prof.

Dr.Suhail A. Soomro and Dr Stuart M. Holmes will work along with team members; Dr Arthur Garforth, Prof. Dr. Shaheen Aziz & Dr. A. Rehamn Memon and industrial partner, Engr. Razia from PCSIR laboratory Complex, Karachi to explore the possibilities of indigenous resource & technology development.



The focus of this research project will, therefore, be to convert Kaolin into a value-added market product. In addition, the proposed research will be a sources of training for prospective PhD and Masters Students, which will not only develop human resources potential, but will also enhance the research capacity potential of Mehran University as a whole. The outcome of the research is targeted towards its application in designing prototype pilot plant for Zeolite production. To achieve this, corporate sector participation will be harnessed in order to take the knowledge base gained during this research to the next level. It is anticipated that the joint venturing will also transpire into the establishment of a sustainable industry in Thar Desert, which may offer job opportunities to the local inhabitants. As a result of this economic activity in Thar Desert, the quality of life will also be improved. Moreover, the findings of this research will be disseminated at national as well as international level via seminars, peer reviewed conference and research journals.



Prof. Dr. Shahab Khushnood, guest of honor appreciated the effort taken by Mehran UET to address the very important issue of Pakistan. He also suggested that these types of events may be continued in future where the experts from stake holder, researchers, scientist & corporate sector will share their experiences. These efforts may result the proper utilization of huge precious mineral resources that has not been capitalized in past.

Prof. Dr. Ghous Bux Khaskeli, Vice Chancellor (acting) in his address told the audience that Mehran UET is one of the leading engineering & technological university is playing its role for the economic development of the country. Mehran UET always taking the lead in addressing the core issues of the country & the project reflect it vision for the same. He assures the participant that Mehran UET will continue its efforts for the development of the indigenous resources so that the peoples of Pakistan will have a better life comparable with the developed counties of the world.



Concluding the inauguration ceremony, Dr. A. Rehman Memon, paid a vote of thanks to the invited speakers and the participants who came from different parts of the country to grace the occasion. He also acknowledges the cooperation of higher education commission & the British council Pakistan for their generous funding for the event.



During the seminar prominent researchers & scientist had delivered keynote talk about the various aspects of mineral utilization, exploration, analysis, value added product recovery, environmental aspects and gender participation. Among the key note speakers were Dr. Stuart Holmes, University of Manchester, Prof. Dr. Suhail A. Soomro, Mehran UET, Prof. Dr. A.K.Ansari, Mehran UET, Prof. Dr Viqar Hussain, University of Karachi, Dr.Anwar Ali Zai, Geological Survey of Pakistan, Prof. Dr. Hasan Agheem, University

of Sindh, Prof. Dr. Shaheen Aziz, Mehran UET and Dr. Abdul Rehman Memon, Mehran UET

In the technical session-1, Dr. A.K. Ansari, Mehran UET had delivered a talk on the “ Mineral Resources in Pakistan - Issues of concern”. In his talk he extensively discussed about the huge potential of mineral resources of Pakistan. He also briefed about how developed countries had developed their mineral resources and what is the role of research & development organization & the universities in those countries.



Prof. Dr. Hasan Agheem in his talk had discussed an important

area of research & development where one has to use advance analytical techniques in mineral processing. These techniques are not only used in R&D but also an important tool during exploration stage.



Prof. Dr Suhail Ahmed Soomro had shared his research about the value added products from waste. His topic

was “ Zeolite synthesis from waste – A case study of Lakhra Coal Power Plant Bottom Ash”. He revealed that the scientist and researchers responsibility is to develop various techniques to effectively utilize the mineral resources but also utilize waste for product recovery. He



discussed the case lakhra coal power plant at khanote ash as a raw material for zeolite synthesis; a value added product that may be used for catalytic cracking of petroleum product water / waste water treatment and many other uses.



Dr Anwar Ali Zai, Geological Survey of Pakistan had delivered a presentation on Mineral potential of Pakistan. He shared his experience about the exploration of different minerals on different projects by geological survey of Pakistan. He said that Pakistan has a very huge resources of minerals all over Pakistan. These resources must be explored and utilized for the economic development of Pakistan.

Dr. Stuart M. Holmes, University of Manchester, UK didn't came for the seminar because of some prior engagements. He had delivered presentation via skype. The topic of his talk was "Zeolite synthesis from minerals". He specifically discussed about the challenges that makes a commercially viable process to produce value added products from kaolin. He shared his research about kaolin at university of Manchester where various parameters were studied that may affects the synthesis of kaolin for the production of zeolite. Zeolite were also characterized by advance analytical techniques for identification of zeolite type.



Prof. Dr Viqar Hussain, University of Karachi had shared his research work about the Nagar Parker Kaolin resources. In his research, he & his student did extensive survey and identified the mining sites of Kaolin mineral. They also identified the potential hurdles in mining these resources. They also analyzed the kaolin for physio-chemical properties in their research.



Prof. Dr. Shaheen Aziz topic of her talk was "Gender empowerment in Thar for mineral resources development". She

had discussed the role of gender in the



development of any country at large. In Pakistan women is less empowered in many spheres of life where they can share their expertise and play their role for the development of the nation. She concluded that mineral resources development & utilization is one of the area where they may be empowered to contribute.

After the end of the technical session, the concluding ceremony was held. Prof. Dr. Taha H. Ali, Registrar was the guest. The shield of appreciation were presented to the invited speakers by Prof. Dr. Taha H. Ali that include, Prof. Dr. Vaqar Hussain, Dr Anwar Ali Zai, Prof. Dr. A.K. Ansari, Prof. Dr. Hasan Agheem, Prof. Dr. Suhail A. Soomro, Prof. Dr. Shaheen Aziz, Dr. Stuart Holmes (in absentia) and Dr. A. Rehman Memon. At the end of the seminar, certificate of participation were distributed among participants.

