



Seminar on

SUSTAINABLE DEVELOPMENT

GOALS:

The Role of Universities

9th July 2018, Islamabad, Pakistan

Event Report



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

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(COMSATS)

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Foreword

It is a matter of satisfaction for me to present the report on the international seminar on “SDGs: The role of Universities” held by the Commission on Science and Technology for Sustainable Development in the South (COMSATS) in collaboration with the Higher Education Commission (HEC) of Pakistan on 9 July 2018.

In the recent past, COMSATS has focused its attention on the 2030 Global Development Agenda in particular the Sustainable Development Goals (SDGs). The integration of SDGs within the activities, programmes and plans of COMSATS by its member countries and Centres of Excellence is very much in keeping with an inherent component and stated mission, aims and objectives of the Commission conceived some 24 years ago. Therefore, we are conscious that the meaningful realization of the SDGs not only needs a holistic approach, but advocacy and a purposeful discourse at different levels is also crucial. Since the universities and other higher education institutions provide an environment of research and development, they are the linchpin in helping the national governments in meeting the targets outlined under various SDGs.

For COMSATS, drawing attention and spurring debate and discussion on the role of the universities in the implementation of SDGs has added significance. The seminar afforded an opportunity to reemphasize how scientific, technological and innovative research and knowledge carried out as a normal function by the universities can result in sustainable development and solutions to the problems in the context of SDGs. While the seminar brought together Vice Chancellors, Rectors, social activists, and representatives from the public and private sectors as well as NGOs and think tanks, participation of the COMSATS member countries and its Centres of Excellence was ensured through live streaming. It gives us confidence that this activity would generate more interests at their ends leading to more active involvement of the academic institutions.

The remarks at the opening of the seminar by Chairman HEC and the Resident Coordinator of UNDP set the tone for discussion in the subsequent technical sessions. The three sessions: Promotion and Advocacy for SDGs; SDGs Implementation: Perspectives on Education, Research and Development; and Frontier Technologies:



Scientific Institutions Driving Innovation, provided valuable and diverse insights, perspectives and outlooks on the theme. The gaps were pointed out which related to resources, procedures, lack of data and lack of coordination among researchers, university faculties and other stakeholders. It is hoped that the messages that emerged from the discussions would provide food for thought for the policy makers in the public and private sectors, most importantly the academic institutions.

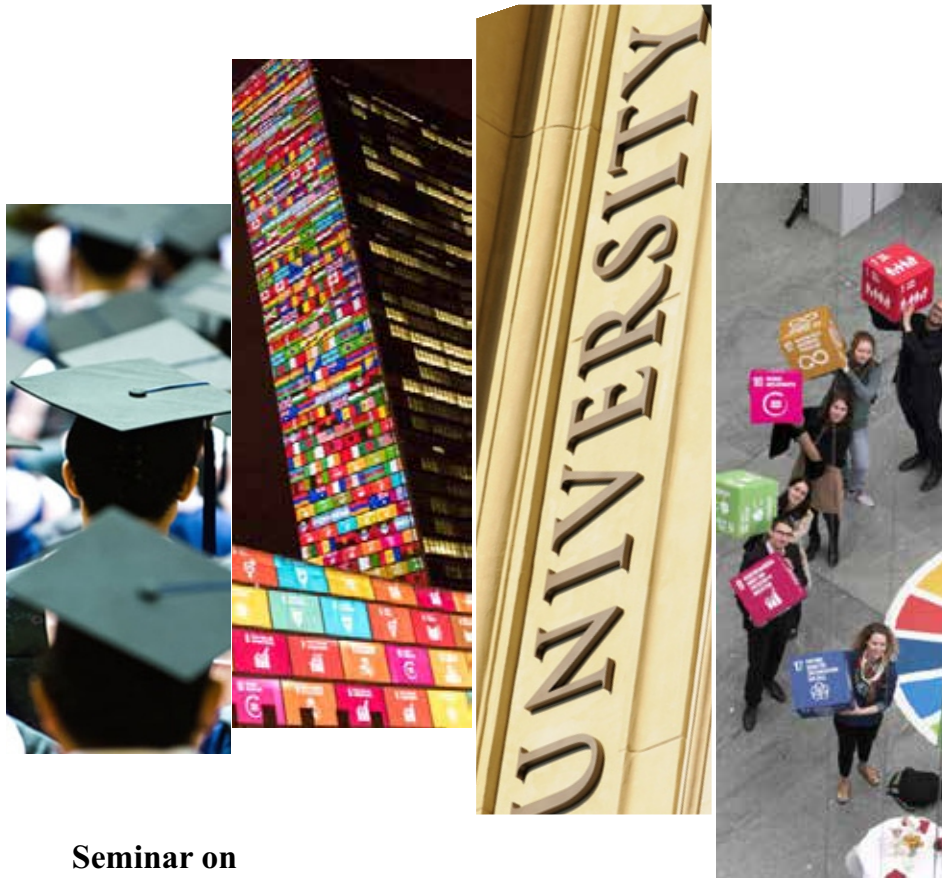
Participation of international speakers: Prof. Dr. Thwaites, Chairperson, Climateworks Australia and Monash Sustainability Institute; Dr. Max Paoli, Programme Coordinator, The World Academy of Sciences; Dr. Adil Najam, Dean Frederick S. Pardee Aschool of Global Studies, Boston University; and Dr. Orkan Hasekioglu, Vice President, Scientific and Technological Research Council of Turkey was indeed a matter of honour for us. Their perspectives gave an international dimension to the discussions on various topics. The inputs provided by other panelists that included Dr. Sania Nishtar, Mr. Shoaib Sultan Khan and Dr. Abid Suleri, were extremely valuable given the diverse sectors they represented. The case study of Ms. Sadia Bashir of Pixel Academy was useful in demonstrating how university education can help in innovation and commercialization. I am thankful to all the chairs and panelists for their contribution and to the participants for their encouraging interest.

The recommendations have been included based on the presentations made by the speakers which form a very substantive part of the report. These are given under the headings of: human resource and the role of

universities; disconnect between researchers and policy makers; data collection; research and development; policy reforms; localizing SDGs; frontier technologies and innovation; and way forward for COMSATS. In the end, I thank all those in COMSATS who were involved in making the event successful. I extend my special thanks to Dr. Tariq Banuri and the HEC team for their support.

(Dr. S. M. Junaid Zaidi)
Executive Director, COMSATS

First Announcement



Seminar on

SUSTAINABLE DEVELOPMENT GOALS

THE ROLE OF UNIVERSITIES

9th July
2018

Serena Hotel
Islamabad



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

A momentous Sustainable Development Agenda, which integrates the three dimensions of sustainable development – economic, social and environmental, was adopted by the 193 Member States of the United Nations on 25th September 2015. The Sustainable Development Goals are the first Member State-led global development guide in history, laying out 17 aspirational objectives with 169 targets for countries to meet by 2030 with achievements monitored periodically to measure progress.

There is already a strong interest in, and response to, the ambitious 2030 Agenda for Sustainable Development by governments, international agencies, businesses, civil society and other institutions in UN member countries. The SDGs are being fully owned by these stakeholders as a major influencer on their strategies and actions of these stakeholders – based on their needs, capacities, resources and alliances. The SDGs also have strong relevance to universities and Higher Education institutions as education and research are explicitly recognised in a number of the SDGs. Engaging with SDGs as a convener and facilitator of support processes and partnerships will also greatly benefit universities by helping them demonstrate university impact in our society.

Universities – both individually and collectively – can help lead, guide, and support the local, national, and international response to the SDGs. We need to create processes that generate Universities engagement with the SDGs through their extensive educational, research and operational activities, only then we will have a realistic change in accomplishing the audacious task set by Agenda 2030. To motivate such a commitment we need to bring key people from academic community and universities on board with the SDGs, identifying strengths, gaps, priorities, and opportunities for university engagement with the SDGs, for policy formulation and developing an action plan.

With the purpose of sharing the academic community's perspective on SDGs, the Commission on Science and Technology for Sustainable Development in the South (COMSATS) is organizing a National Seminar entitled "Sustainable Development Goals: Role of Universities" on Monday 9th July 2018 at Serena Hotel, Islamabad. The objective is to facilitate the universities understanding, preparing and responding to the opportunities and challenges presented, in particular the localization of transformative 2030 agenda. Themes: Promotion and Advocacy for SDGs; SDGs Implementation: Perspective on Research & Development; and Frontier Technologies: Scientific Institutions driving Innovation

This event is expected to encourage a cross-sectoral dialogue on the theme of the seminar. The programme will feature expert talks from the representatives of international organizations who will elaborate the general concepts, steps, and examples of operating SDGs framework across the University. This seminar is expected to generate insightful discussions culminating a set of recommendations for policy formulation and action plan to align R&D with SDGs.

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Report on the Seminar “SDGs: The Role of Universities”

Introduction

As an organization committed to: i) sustainable development; ii) south-south cooperation; iii) advancement of science and technology; and iv) peace and well being of humanity, the Commission on Science and Technology for Sustainable Development in the South (COMSATS) has adopted multiple ways of achieving its objectives. In the wake of the 2030 Global Development Agenda unveiled in the form of Sustainable Development Goals (SDGs), attempts are being made to tailor COMSATS’ plans and activities for the accomplishment of goals and targets relevant to its mandate. Resting on SDGs’ advocacy and their integration, as far as possible, in the ongoing activities, COMSATS has remained cognizant of its catalyst role in the realm of sustainable development objectives. With this in view and as part of its ongoing endeavours, an international seminar on “SDGs: The Role of Universities” was organized by COMSATS in collaboration with the Higher Education Commission of

Pakistan (HEC) on 9th July 2018.

While Vice Chancellors and Rectors of higher education institutions and universities from all over Pakistan were invited, the full day deliberations were also live streamed for the benefit of COMSATS’ member countries and the Network of Centres of Excellence. Material from open sources related to the theme and the sub-themes was also made available to the participants, for them to benefit from the ideas expressed by various experts. The speakers were invited to dilate on various dimensions of SDGs and their incorporation in research, innovation and commercialization efforts by the educational institutions. The subthemes ranged from discussion on Promotion and Advocacy of SDGs; Implementation of SDGs: Perspectives on Education, Research and Development; and Frontier Technologies: Scientific Institutions Driving Innovation. A case study demonstrating the purposeful



utilization of scientific education leading to innovative entrepreneurship i.e. commercialization was presented by a young female graduate of COMSATS' Centre of Excellence: COMSATS University Islamabad (CUI). Leading specialists in diverse areas representing educational institutions, international organizations, representatives from private and public sectors, think tanks as well as social activists shared their experiences and thoughts on crucial development issues in the context of Pakistan. They proffered suggestions citing practical experiences that highlighted the role of scientific and technological approaches in devising innovative solutions to the socio-economic challenges, as well as how simple, home-grown and indigenous methods were transforming the lives of communities and enabling them in overcoming the challenges of energy, water usage, recycling of waste and in building

resilient communities.

Dr. Max Paoli from The World Academy of Sciences (TWAS) alluded to three distinct examples in this context from Kenya, Morocco and Tanzania. While Prof. Dr. John Thwaites, Chair, Climate works Australia, Monash University, underlined the intrinsic value and structure of universities suited for research and innovation that have impact on the society at large. The UN Resident Representative, Mr. Neil Buhne mentioned about the youth bulge in Pakistan and the need to channel this resource for social service, and inculcating the spirit of volunteering among the youth.

The brief report on the proceedings of the seminar is presented in the following sections for wider dissemination and possible use.



Inaugural Session

The inaugural session was devoted to setting the stage for more focused discussion on the theme of the role of universities in the implementation of the SDGs. In his welcome remarks, **Dr. S.M. Junaid Zaidi, Executive Director of COMSATS**, gave a brief history of the organization highlighting its mission, aims and objectives. He referred to COMSATS' plans and activities and its accomplishments in the last 24 years since its inception. Given his extensive experience in building educational institutions, he outlined the broad



contours by which universities can play a meaningful role in furthering the sustainable development agenda and in creating an enabling environment as well as human resource in connection with the advocacy and implementation of the SDGs. The development needs of the countries of the South make it imperative to create awareness about the social challenges. COMSATS has filled the void in so far as inter-linkage between sustainable development and science and technology (Science for SDGs) by establishing networks and Centres of Excellence such as CUI and some others in its member countries. He hoped that today's deliberations would provide a beneficial platform for generating new ideas on the subjects under discussion.

The newly appointed **Dr. Tariq Banuri, Chairman of the HEC**, shared his thought on the SDGs and the evolution of the development paradigm during the last few years. He appreciated the initiative taken by COMSATS in organizing the seminar on a very important and topical subject that has vital relevance to the socio-economic development of Pakistan. He traced the evolution of SDGs from the MDGs of 2010 to 2015



and explained the philosophy behind the sustainable development agenda. In the context of development challenges, he noted that the UN was cognizant that social vulnerabilities could easily transcend into security threats. Health, growing levels of poverty and climate change impacts induced the necessity to devise a comprehensive approach to development in the shape of MDGs. These were designed to reap the true benefits of globalization for the betterment of the poorest of the poor. On the SDGs, he explained that these reflected a tripartite agenda that includes eradication of poverty, creating conditions for sustainable growth and addressing the threats to poverty eradication. He concluded by imploring upon the Vice Chancellors to align the degree programmes being offered at the universities with SDGs. The operations of the universities need to be sensitive to towards energy and water conservation, waste recycling and management, and reduced carbon emissions. His thrust was on



collaboration between the universities of Pakistan and other partner countries in achieving SDGs.

Mr. Neil Buhne, Resident Coordinator of UNDP, after thanking COMSATS for inviting him, stated that it was a privilege for him to be sharing his views on the subject with the professionals and referred to the role students play in such countries as his own. While developing correlation between MDGs and SDGs he remarked that the major difference related to Goal 16 on “Peace, Justice and Strong Institutions”. In the context of new parameters for gauging development, he recollected the contribution of Dr. Mahbub ul Haq who in the 1980s introduced the Human Development Index. (Human resource development is central to development). He was of the opinion that Pakistan has a unique challenge of managing its huge young population which accounts for 64 % of the total population. In this context, it was also important to connect policy makers (politicians) and researchers. He mentioned the issue of unemployment among young people and pointed out how measures were necessary for unleashing this huge potential. His advice was that universities may look at modeling students in marketing, research and development and how strategies could be applied in public policies. The universities could ensure mainstreaming of their ideas and research and use them for the benefit of the society. He concluded by saying that SDGs should be a tool for the universities.



Technical Session 1: Promotion and Advocacy for SDGs



In his keynote address, **Prof. Dr. Thwaites** mentioned that SDGs were built keeping in view the problems associated with MDGs, those related to poverty eradication and inequality. These were succinctly addressed in SDGs. Although there was cynicism about SDGs still there was enough support from countries and universities.



He elaborated on the achievements of SDGs and outlined how universities were uniquely equipped to address the issues identified and prioritized in the SDGs. In his view, it was good to have goals and the universities were best placed to provide experts - an essential role in the realization of SDGs. SDGs mattered most to universities because they are constituted to fulfill certain targets and produce social impact. Hence without the help of the universities the SDGs are not achievable.

While reiterating the role of universities centred on human resource development for implementing SDGs, he raised the question that in return how SDGs can benefit the universities. This can be seen

in terms of recognition earned by the universities in developing solutions and the social impact generated as a consequence. For achieving SDGs, universities role is important in engaging in: training and support in operations, active interdisciplinary, research in understanding the key challenges, mobilization of youth in bringing entrepreneurship, linkage with private sector and government, capacity building public guidance, assisting in data collection and assessment. Dilating upon his own work, an outcome of collaboration between the Australian and New Zealand universities, a guide has been developed on how universities can achieve SDGs. An important area mentioned by Prof. Thwaites on the role of these universities is data collection within the region as a part of network of universities promoting UN framework of North-South collaboration.

Dr. Sania Nishtar, former Minister and Chairperson of Heart file organization, presented a monologue on SDGs and underlined the salient factors leading to the need for SDGs. She highlighted the relevance of SDGs for



national development of countries by using comparative advantage. In her opinion the Global Agenda 2030 is more focused on interdisciplinary approach. She was of the view that sustainable development is about harmony and alignment between economic, social and environmental objectives. The agenda of SDGs was well timed as there was appetite for systemic change. With regard to the question of changed global thinking with regard to availability of development resources, she drew attention to the dwindling of donor funding. She then cited the example of health sector and how this would hinder work especially keeping in mind lack of communication and outreach to isolated communities.

In order to meet the development challenges there was a need for tax reforms for requisite allocation to education, health and other social sectors. The fundamental question that needs to be explored is how systems in developing countries could be enabled to translate money to actual impact on ground. She strongly believed that key reforms were needed which should include identification of certain indicators such as audit, transparency, and anti-corruption measures. A need for disruptive policy as a stimulus change was also presented with reference to the medical drugs industry. The bar-coding system according to her cannot be adopted by all vendors to verify the authenticity of the drugs therefore fake medical drug mafia should be culled. Because of reluctance at the policy level, even though private sector showed willingness to adopt these practices is not in place. She also pointed out that Artificial Intelligence had revolutionized the technology industry with effective monitoring and transparency this could benefit the social sector. In conclusion she summed by emphasizing:

- No donor funding without impact;
- To look at the bigger picture; and
- Focus on disruptive policies.

**Mr. Shoiab Sultan Khan,
Chairman, Rural Support
Programmes Network,**

at the outset explained that his presentation is titled "SDGs For Whom" stating that ironically 20% of global population consumes 80 % of resources and



the poorest account for 1.3 % of global consumption. He expressed the belief that the centre piece of poverty alleviation is empowering the poor and the efforts currently in place are not enough. He underscored the importance of the local dimension and bottom-up approaches. Furthermore the outreach of such efforts is also not enough. Mr. Khan said that the missing link in this regard is the socio-economic pillar where the Rural Support Programme (RSP) plays a major role. RSP has an outreach of 46.8 million and its core function is poverty alleviation and creating awareness. Learning from the mother organization, National Rural Support Programme Network (NRSPN) model, India has developed its own similar programme. On the role of public sector in achieving the objective of sensitizing people, he underscored the multidimensional involvement of the Planning Commission of Pakistan. He believed that SDGs can be achieved by following the RSP approach. In the end, Mr. Khan offered his support in terms of utilizing at the field level where universities are located the strength of the network of RSPs.

**Mr. Shoaib Ahmed Siddique, Secretary Planning
Commission, Pakistan,** at the

outset briefed about the launch of the website on data collection that very morning which in his view was a major milestone.

He expressed the resolve of the government in so far as SDGs are concerned which is evident from its adoption in various plans and programmes. This is being treated as national goals of Pakistan through horizontal and vertical administrative measures to ensure that they are achieved as a national commitment unlike the MDGs that were initially adopted with passion and zeal and later the enthusiasm waned. He emphasized that in the case of SDGs, national parliament has given full support and as a result in the last three years Pakistan has received recognition at the international level. His Ministry has expedited coordination meetings involving various stakeholders more importantly the universities. The outreach programmes are being conducted at schools and college levels. Another example is allocation of development and SDGs budgets. While stressing on the need for Planning Commission to serve as a knowledge



hub he apprised that the Planning Commission in collaboration with the UNDP launched Data Reporting Gaps Study and a comprehensive website on SDGs on 9 July 2018.

The next presentation was made by **Prof. Dr. Muhammad Abdul Aziz Irfan Muft, Dean Faculty of Mechanical and Industrial Engineering (UET), Peshawar**. His main thrust was that in order to move towards the achievement of SDGs, there is a need to advocate free and critical thinking within the students. He stated that was being done in UET in so far as energy conservation and effective monitoring is concerned. He explained that a dedicated research centre has also been established which is working on energy generation solutions. He pointed out

that there exist pockets of excellence within university departments which could be relied upon for SDGs.

He suggested that awareness should be created by making SDGs part of curriculum. With regard to energy monitoring and economic scale application in the analysis, he clarified that universal economic scales were being used and engineering students are required to take economic analysis courses as well.



Technical Session 2: SDGs Implementation: Perspectives on Education, Research and Development



As chair of the second session **Dr. Max Paoli, Programme Coordinator at TWAS**, outlined some global challenges, such as growing energy demand, lack of adequate electricity supply, and global environmental impact. While looking at sustainable development in inter-generational perspective, he called attention to the challenges confronted especially by the developing countries. The top most was unchecked population growth and the limited resources available with the developing countries. As a consequence of increase in population there were high energy demands and production issues together with weak regulations and implementation of laws particularly those related to CO₂ emissions and its effect on climate change. The developing countries were also confronted with issues of air and water pollution due to bad hygiene conditions. These countries are also associated with inefficient use of energy, and energy waste and losses combined with less generation of knowledge for giving solutions to the problems. Dr. Paoli also touched upon the great divide between



scientists and politicians as their goals towards society were different. This disconnect creates problems. The scientists propose solutions on the basis of science and knowledge. However, the decision making is done by the politicians. He emphasized that bridging the gap between the two is desperately required. He strongly endorsed the role of COMSATS urging it to take the lead, in collaboration with UNESCO. Through this collaboration education related agenda of 2030 can be fostered by undertaking advocacy to sustain political commitment, facilitating policy dialogue, knowledge sharing and standard setting, convening global, regional and national stakeholders discourse to guide implementation of the agenda, and COMSATS functioning as a focal point for education within the overall SDG coordination architecture in the member countries. He then referred to the initiatives of UNESCO and presented as examples three projects one each in Kenya, Tanzania and Morocco that involved green solutions to the problems of energy, waste etc. He underscored that there was a need to educate people- an education that can promote critical thinking and provide solutions to the problems of the country.

As representative of the think tank, **Dr. Abid Suleri, Executive Director of the Sustainable Development Policy Institute (SDPI)**, mentioned the role of the think tanks in research and policy advice. He explained how think tanks relate SDGs with the role of the universities

in achieving SDGs spelling out the mandate of the universities as: knowledge generation and research and agenda monitoring through data collection.

Unfortunately lack of quality research on SDGs and lapses in the policy landscape are problems that are attributed to the universities. Change in the mindset and outreach within the researcher community for collaborations need to be strictly embraced by the university faculty and researchers as universities have role in the planning and implementation regarding the SDGs. He referred to bureaucracy and complexity in universities procedures that prevented private sector's collaboration. He discussed in detail the 17 SDGs adding that Goals 1 to 5 were dominated by international organizations and Goals 6 to 9 are dominated by research based think tanks while Goals 8 to 10 are dominated by the government research organizations. He strongly urged the think tanks and the universities to work closely for achieving the SDGs thereby fostering the country's development.



Dr. Suleri also discussed the issues and problems faced by the researchers and universities and highlighted the 'big issue' of data availability and its reliability. There are issues related to how the data was collected and in understanding data and inferring references from it. Moreover, the universities have lack of incentive support. The researchers are not compensated based on the contribution of their work to the society. The researchers in the universities are appraised on the basis of the number of their publications with no analysis of how much impact their publications have for the society. In the context of SDGs, their research has no relation to the SDGs as well as in the planning process on development of the country. There is no liaison between the policy and researchers and the lengthy and long university procedures further complicate the researcher's work. On the issues and problems of think tanks, Dr. Suleri mentioned that these were small organizations, have less capacity to hold quality human resource and face problems of financial management. In his opinion, most think tanks are not flexible and are guarded by international development agenda. They also have to deal with the perception that they are influenced by influential individuals as well as organizations that have certain agenda rather than a focus on local issues.

Dr. Asma Hyder, Member Social Sector, Planning Commission, presented SDGs framework and their prioritization by the government in the local context.

This was done through a process that involved comparative model development criteria according to numerical scores (width, depth, low resources requirement less structural change and relevance etc) in many parts of the country that incorporated analysis on availability of data and goal wise availability of data as tool for accountability initiatives. She presented three horizons of SDGs: Short Term Horizon as Category 1 which included food, healthy life, quality education clean drinking water, peace and security, sustainable economic growth, energy resources. This Horizon focused on improving the general life and well being of the country's citizens. The focus is on issues that are badly hitting the public, on their needs. Medium Term Horizon Category 2: focus more on social aspects such as gender discrimination, peace and justice etc. Long Term Horizon Category 3: these are issues that needed to be handled on long term basis.



Speaking next **Mr. Ali Tauqeer Sheikh, Chief Executive of Leadership for Environment and Development**

(LEAD), gave a detailed review and analysis of universities and their working. In addition, he also dilated upon how and why universities are relevant in contributing and their role in SDGs achievement. He also



emphasized that there is huge disconnect between researchers and policy makers and this wide gap and weak link between them need to be addressed for the localization of SDGs within the country. In this connection, he gave few instances in which think tanks' strength could be utilized. He also gave examples to elaborate gaps in the implementation of SDGs such as lack of SDGs ownership by a few government agencies. There was also a need for allocation of adequate resources and integration of SDG stakeholders. In addition SDGs based research

work is not present in the country and the horizontal and vertical linkages of SDGs and projects are not coherent. He lamented that with regard to 6 out of 17 either data was not available or was unreliable. According to him there was a big issue of capacity of Planning Commission, think tanks and universities to perform analysis and research on available data sets.

Dr Javed Ashraf, Vice Chancellor, Quaid e Azam University, also addressed

the subject of sustainable development and education. Emphasizing the need to inculcate tolerance together with education, he expressed the view that these were necessary for sustainable development.

Regrettably, the society does not accept people who are different or have difference of opinion on a particular issue. Mostly, such people are victims of criticism and are not acceptable by the majority in the society. It is important to develop attitude to listen to others.



Dr. Kahlid Riaz, Dean Management Sciences, COMSATS University Islamabad (CUI), spoke in detail about the role of academia in the implementation of SDGs and different initiatives taken by them while adding that there should be more of their involvement in this regard. He firmly believed that there should be localization of SDGs at the university level to address the problems of sustainability. He stressed on the use of data collection to assess the problems of SDGs and advised universities to engage in BIG data array. He also highlighted the need for data integration and collaboration among universities and posed the question why embracing BIG data has not been taken seriously. In his opinion, a big role is to be played by HEC in this regard rather than hammering simply on publications in high impact factor journals. He also noted that many of SDGs are directly relevant to universities. They now have role of hubs of innovation to support host of businesses, such as high-tech companies that provide technologies and services for sustainable development.



Technical Session 3: Frontier Technologies: Scientific Institutions Driving Innovations



This session was chaired by **Dr. Adil Najam, Dean Pardee School of Global Studies Boston University.**

In his keynote address Dr. Najam focused on key global development challenges narrowing down his observations on Pakistan.

He outlined some of the key challenges faced by Pakistan such as: human development, water management, food security, infrastructure development, impact of climate change and natural disasters.

He added that water scarcity and water management issues have caused multiple problems. While describing the 17 SDGs he emphasized the urgency of these goals, he said all of these goals were integrated encompassing all aspects of development. Comprehensive approach combining all these goals can initiate the process of SDGs implementation. The core of this approach would be to realize how innovation can serve to achieve these goals particularly those related to hunger i.e. 1 to 3; quality education i.e. 4; gender equality i.e. 5; and energy i.e. 6 and others.



Dr. Najam strongly held that the universities were aptly structured to meet the challenges of development and therefore in the implementation of SDGs. Since all faculties are working under one roof in the universities, they can be made to work together for coming up with innovative solutions. In this connection he raised three questions: i) how should universities think about SDGs; ii) how should universities help implement SDGs; and iii) how should universities of Pakistan prioritize innovation for SDGs. He suggested that the use of interdisciplinary approach could be the best way of solving problems of a developing nation like Pakistan as this approach would lead to collective effort of specialists from different background. To strengthen his argument, he shared sound examples of the use of technology for development. He recommended: i) tackling the great global challenges through interdisciplinary approach owing to SDGs "global" nature; and ii) establishing interdisciplinary research centres in Pakistan as instruments for finding solutions to the societal problems.

Dr. Umar Saif, Vice Chancellor, Information Technology University (ITU), focused on the use of technology that can help in achieving SDGs. To illustrate, he discussed two cases in which digital systems were developed by the Punjab government in collaboration with ITU: monitoring of polio vaccination by geo-tagging and time stamping of attendance

of vaccinators. It helped increase the geographic coverage of the project. He explained that the progress of vaccinators was updated with the help of satellite imagery enabling monitoring of their performance online. He advocated the use of similar technology in the agriculture sector. The project developed allows provincial government to monitor the status and types of crops which were being cultivated across the province on weekly basis. Thus, technology driven crop detection and yield estimation have now become possible with the use of technology which could help resolve food security problems of Pakistan. He concluded by emphasizing that the use of technology is fundamental for achieving SDGs and this can be successfully done in collaboration between the universities and government.



The next panelist, **Prof. Dr. Fazal Ahmed Khalid Vice Chancellor UET Lahore**, also highlighted the importance of technology, implementation of SDGs and the opportunities created due to recent developments brought about by the technological advancement. He cited the experiences of UET in taking initiatives to solve national development problems, such as water purification, renewable energy, etc, by creating students hybrids that have acquired a level where they are contributing towards best possible solutions to achieve SDGs. He underscored the imperative of three elements that impact development: i) talent; ii) technology; and iii) tolerance. He stressed that without tolerance society cannot develop. The universities, he added, play important role in implementing SDGs through teaching, research, working on climate issues. Before concluding, he presented inspiring examples of how UET is using SDGs framework to advance action on sustainable development.



Dr. Masoom Yusafzai, Vice Chancellor, International Islamic University (IIU), speaking next said that

pivotal role can be played by the universities implementing SDGs. He elaborated this by expressing the view that the universities in Pakistan were doing very well, presently there are 41000 teachers out of which 11000 are PhDs and more than 90% research is being done by the universities. In the emerging scenario with emphasis on SDGs (targets are to be met by 2030), there is a need to further enhance the role of the universities. In this connection, universities need to take some steps and adopt new technologies. This could be done if the universities were to join hands with government organizations, NGOs, R&D institutions and private sector. Furthermore, there is a need to identify priority research areas for teachers and students aligned with SDGs as well as for the researchers to acquire new skills in terms of their work. He shared the relevant examples from IIU's experience of developing centres of excellence to address the national development issues. Dr. Yusafzai in conclusion emphasized that universities should explore frontier technologies; encourage teachers and students to conduct R&D in versatile areas such as biotechnology and life sciences; and concentrate on quality higher education.



Dr. Orkun Hasekioglu, Vice President, Scientific and Technological Research Council of Turkey (TUBITAK), was the next honourable speaker. His explanation dwelt on how universities can participate in achieving SDGs and focused on how the efforts of his Council in using technology, particularly space technology, was helping in achieving the SDGs. He elaborated space technology benefits as one way of achieving SDGs. He presented credible example of how TUBITAK was focusing on mapping Turkey's national development goals through research activities which had 22 research centres under its umbrella and is currently building a space satellite for commercial use. He also talked about the Technology Bank project an initiative in collaboration with the UN. It provided funding for



capacity building in the field of science and technology and is very much in line with the 2030 Development Agenda. In the end he spoke about his government's plans for 2019-2030 and identified priorities in the areas of space technology development, human resource development, international relations, water management and environmental protection.

Presentation of Case Study by Ms. Sadaf Bashir, CEO and Founder, PixelArt Games Academy (PGA)

Ms. Bashir was invited i) to demonstrate the quality education imparted by COMSATS Centre of Excellence, its university (CU), which helped Ms. Bashir in innovation in entrepreneurship and finally in commercializing her product based on digital technology; and ii) to share her success story with the audience in gaming industry whose worth is US \$1.8 billion in Pakistan. She informed that PGA is focusing



on human resource development by providing training to prospective individuals in the field by providing environment for collaborative learning. Individuals from different backgrounds are grouped together to work on a project in laboratories which helps them in developing more competitive solutions. She underscored the responsibility of universities in developing innovative education systems by using frontier technologies and by collaborating with scientific institutions. The daunting question is: are we fostering innovation? Her concluding remarks were "collaboration brings innovation".

Concluding Session:

The seminar was closed by the **Executive Director of HEC, Dr. Arshad Ali**. He appreciated the presence of the academic community, policy makers and relevant quarters at an important forum of global significance. He emphasized that it is important to be aware of the impact of this global agenda and the way it affects our daily lives. He regarded inclusion of universities in this journey very important as "universities are the places where thinking process develops, matures and transforms." He hoped that each participating university would take the process forward by creating its own agenda in line with the relevant SDGs.





Recommendations inferred from the Presentations

1. **Human Resource and the role of universities:**

Pakistan faced youth bulge and the concurrent problem of youth unemployment. Special measures need to be adopted to unleash this huge potential. Students could be modeled in marketing, research and development. Awareness should be created among students on SDGs through various means including curriculum related to SDGs. Moreover, critical thinking and tolerance need to be inculcated among the students which would generate environment for research and innovation.

2. **Disconnect between Researchers and Policy makers:**

In order for the strategies devised towards youth education and skills development to be effective, their reflection in public policies is crucial. For achieving the SDGs this gap should be bridged. There should be multidimensional involvement including universities, government, NGOs, R&D institutions, and private sector. Horizontal and vertical linkages need to be strengthened and Planning Commission may serve as a knowledge hub on SDGs.

3. **Data Collection:**

There was the problem of reliable and adequate data collection and data availability for research and development as well as for devising implementable policies and strategies. Issues related to data collection methods, data interpretation, data reading and analysis need special attention. Ways to overcome this problem should be fostered by all stakeholders. Data collection for addressing SDGs is imperative and BIG data array should be embraced. There should be integration and collaboration among universities in this regard.

4. **Research and Development:**

Appraisals of faculty simply on publications is counter-productive for research and development. HEC may reconsider this approach in favour of R&D that has social impact. Lack of quality research and lapses in policy landscape are big hurdles. Change in the mindset and outreach of researchers' community

and collaboration among the university faculty and researchers on SDGs are needed. Bureaucracy and complexity in university procedures should be simplified to incentivize private sector. Similarly procedures laid out in the form of public policies encouraging research are needed.

5. **Policy Reforms:**

Donor funding is reducing as it is becoming more and more linked with social impact considerations and SDGs. This is having social impact. Therefore, tax reforms have become necessary to provide the requisite allocations for education, health and social sector. Systems should be enabled to translate money to actual impact on ground. Key reforms should be carried out to include such key indicators as: audit, transparency and anti-corruption measures. Focus should be on disruptive policies as stimulus for change.

6. **Localizing SDGs:**

Poverty alleviation's centre piece is empowering the poor. Localizing SDGs incorporating the local dimension is a requisite which should have a bottom-up approach. Rural Support Programme Network (RSPN) and Rural Support Programme (NRS) are unique in their experiences in terms of outreach mobilizing vast communities in various districts of Pakistan. Universities may collaborate with them and seek their partnership in furthering innovative solutions and outreach for the implementation of SDGs.

7. **Frontier Technologies and Innovation:**

The core for implementation of SDGs is evolving a comprehensive policy combining all the goals and by pivoting on innovation. In this connection universities could adopt inter-disciplinary approach. Research should be conducted in versatile areas such as biotechnology and life sciences. Space technology and digital technology's use for development purposes, in particular, climate change and disasters, health, agriculture and food security would bring high dividends in achieving SDGs. It was also pointed out that the use of Artificial Intelligence required effective monitoring and transparency in order to

benefit the social sector. Moreover, universities should consider developing innovative education systems by using frontier technologies and by collaborating with scientific institutions.

8. **Way Forward for COMSATS:** Mr. Paoli suggested that for bridging the gap between scientists and politicians COMSATS, in collaboration with UNESCO, should take the lead especially

in achieving the education related 2030 development agenda in three ways: advocacy to sustain political commitment, facilitating policy dialogue, knowledge sharing and standard setting, convening global, regional and international stakeholders discourse. COMSATS could function as a focal point for education within overall SDG coordination architecture in the member countries.



Programme

09:15 – 10:30	Inaugural Session
09:00 – 09:15	Registration
09:15 – 09:20	Recitation
09:20 – 09:30	Welcome Address by the Executive Director COMSATS Dr. S.M. Junaaid Zaidi
09:30 – 09:45	Address by the Chairperson Higher Education Commission Dr. Tariq Banuri
09:45 – 10:00	Address by UN Resident Coordinator Mr. Neil Buhne
10:00 – 11:00	Tea Break & Group Photo

11:00 – 12:30	Technical Session 1 – Promotion and Advocacy for SDGs
11:00 – 11:20	Chair: Keynote Talk – Prof. Dr. John Thwaites, Chair of ClimateWorks Australia and the Monash Sustainability Institute
	Panel Discussion
11:20 – 11:30	i) Panelist 1: Dr. Sania Nishtar, President, Heartfile, Pakistan
11:30 – 11:40	ii) Panelist 2: Mr. Shoaib Sultan Khan, Chairman, Rural Support Programmes Network, Pakistan
11:40 – 11:50	iii) Panelist 3: Mr. Shoaib Ahmed Siddiqui, Secretary, Ministry of Planning, Development and Reforms, Government of Pakistan (To be confirmed)
11:50 – 12:00	iv) Panelist 4: Prof. Dr. Muhammad AbdulAziz Irfan Mufti, Dean, Faculty of Mechanical and Industrial Engineering, University of Engineering and Technology (UET), Peshawar
12:00 – 12:30	Q & A

12:30 – 14:00	Technical Session 2 – SDGs Implementation: Perspective on Education, Research & Development
12:30 – 12:50	Chair: Keynote Talk - Dr Max Paoli. Programme Coordinator, The World Academy of Sciences (TWAS), Italy
	Panel Discussion
12:50 – 13:00	i) Panelist 1: Dr. Abid Suleri, Executive Director Sustainable Development Policy Institute (SDPI), Pakistan
13:00 – 13:10	ii) Panelist 2: Ms. Asma Hyder, (Member Social Sector, Planning Commission)
13:10 – 13:20	iii) Panelist 3: Mr. Ali Tauqeer Sheikh, CEO, Leadership for Environment And Development (LEAD), Pakistan
13:20 – 13:30	iv) Panelist 4: Dr Javed Ashraf, Vice Chancellor, Quaid e Azam University
13:30 – 13:40	v) Panelist 5: Dr. Khalid Riaz, Dean Management Sciences, COMSATS University Islamabad (CUI)
13:40 – 14:00	Q & A
14:00 – 15:00	Lunch & Prayer Break

15:00 – 16:30	Technical Session 3 – Frontier Technologies: Scientific Institutions driving Innovation
15:00 – 15:20	Chair: Keynote Talk – Dr. Adil Najam, Dean, Frederick S. Pardee School of Global Studies Boston University, USA
	Panel Discussion
15:20 – 15:30	i) Panelist 1: Panelist 1: Dr. Umar Saif, Vice Chancellor, Information Technology University (ITU)
15:30 – 15:40	ii) Panelist 2: Prof. Dr. Fazal Ahmed Khalid . UET Lahore
15:40 – 15:50	iii) Panelist 3: Dr. Masoom Yusafzai, Vice Chancellor, International Islamic University (IIU),
15:50 – 16:00	iv) Panelist 4: Dr. Orkun HASEKİOĞLU, Vice President, Scientific and Technological Research Council of Turkey (TÜBİTAK)
16:00 – 16:20	Q & A
16:20 – 16:30	Case Study – Ms. Sadia Bashir, CEO, Founder, PixelArt Games Academy, Islamabad

16:30 – 17:00	Closing Session
16:30 – 16:45	Recommendations
16:45 – 17:00	Vote of Thanks by Executive Director HEC, Dr. Arshad Ali

Speakers' Profile

Inaugural Session

Dr. S.M. Junaid Zaidi

Dr. S.M. Junaid Zaidi is Executive Director of Commission on Science and Technology for Sustainable Development in the South (COMSATS), Islamabad.

Dr. Zaidi is also the founding member of COMSATS University, Islamabad. He served as Advisor to the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)'s Asian and Pacific Centre for Transfer of Technology (APCTT) for three years. He worked with UN to set-up National Bureau of the UNDP's project "Technology Information Pilot System (TIPS) in Pakistan.

Dr. Zaidi has been awarded with Pakistan's Sitara-i-Imtiaz in 2007 and Hilal-i-Imtiaz in 2014. In 2001, he was awarded "IT Pioneer 1987-1995" by NCR Corporation. He has recently been awarded Al-Farabi gold medal by the Academic Council of Al-Farabi Kazakh National University (KazNU), Kazakhstan in April 2018. He completed his doctorate from the University of Birmingham, UK, with specialization in Optimization of Algorithms on Networking.



Dr. Tariq Banuri

Dr. Tariq Banuri is Chairman of Higher Education Commission (HEC), Pakistan.

Dr. Banuri is also the founding Executive Director of the Sustainable Development Policy Institute (SDPI), Pakistan. Formerly, he had held the office of Executive Director at Global Change Impact Studies Centre (GCISC), Pakistan. Dr. Banuri also worked as a Research Fellow at the United Nations University World Institute for Development Economics Research (UNU-WIDER). He was the Senior Fellow and Director of the Future Sustainability Program at the Stockholm Environment Institute, Sweden.

Dr. Banuri received Sitara-e-Imtiaz in 2003 in recognition of his service to research and education. He has also won the Allyn Young Teaching Prize in Economics from Harvard University in 1983. He holds a PhD degree in Economics from Harvard University, Massachusetts.



Mr. Neil Buhne

Mr. Neil Buhne is UN Resident Coordinator and UNDP Resident Representative in Pakistan.

Formerly, Mr. Buhne had served as the UN Resident and Humanitarian Coordinator and UNDP Resident Representative in Sri Lanka, Bulgaria and Belarus. Moreover, Mr. Buhne had held the UNDP Office in Geneva and UNDP's Bureau for Crisis Prevention and Recovery (BCPR) Geneva Liaison Office as Director. Mr. Buhne has also served as the UNDP Deputy Representative in Malaysia, UNDP Assistant Resident Representative in Pakistan and Programme Officer in UNDP Bhutan.



Technical Session 1 – Promotion and Advocacy for SDGs

Keynote Speaker

Prof. Dr. John Thwaites

Prof. Thwaites is Professor at Monash University, Australia and Chair of its Sustainable Development Institute and ClimateWorks Australia.

He is one of the six co-chairs of the Leadership Council of the Global Sustainable Development Solutions Network (SDSN) which provides expert advice and support for the implementation of SDGs. Additionally, Prof. Thwaites had held the offices of Minister for Health, Minister for Planning, Minister for Environment, Minister for Water, Minister for Victorian Communities and Victoria's first Minister for Climate Change in his capacity as Deputy Premier of Victoria.

Prof. Thwaites graduated in Law (Honours) and Science from Monash University, Australia. In 2012, he was named one of the top 100 Global Sustainability Leaders by ABC Carbon and Sustainability Showcase Asia.



Panelist 1

Dr. Sania Nishtar

Dr. Sania Nishtar is Co-chair of the WHO High Level Global Commission on Non Communicable Diseases (NCDs) and World Economic Forum's Global Council on the Future of Health and Healthcare.

Dr. Nishtar is also the founder and President of Heartfile – an NGO for catalyzing the health reforms in Pakistan. Besides, she also chairs the Advisory Board of the United Nations University International Institute of Global Health. Formerly, Dr. Nishtar chaired the United Nations Secretary General's Independent Accountability Panel for the Global Strategy for Women's, Children's and Adolescents' Health and co-chaired the WHO Commission on Ending Childhood Obesity. She has also served as the Former Federal Minister, Government of Pakistan.

Dr. Nishtar was awarded Rockefeller Foundation's Global Innovation Award in 2011 and Pakistan's Sitara-i-Imtiaz (Presidential award) in 2005. She obtained her PhD degree in Medicine from Kings College, London.



Panelist 2

Dr. Shoaib Sultan Khan

Dr. Shoaib Sultan Khan is Chairman of the Rural Support Programmes Network (RSPN), Islamabad.

He is a pioneer of the Rural Support Programmes in Pakistan and introduced the Aga Khan Rural Support Programme in 1982. Afterwards, he launched various programmes related to rural development in Pakistan, India and South Asia. He has also served in international organizations such as the UNDP and UNICEF. Mr. Shoaib Sultan Khan is also Advisor to the Board of Trustees of the Rajiv Gandhi Mahila Vikas Pariyojana (RGMVP), a flagship programme of the Rajiv Gandhi Charitable Trust of India.



In recognition of his services towards development, he has been awarded with the WWF Conservation Medal in 1994, the Ramon Magsaysay Award in 1992, Sitara-e- Imtiaz in 1990 and Global 500 award in 1989. Dr. Sultan obtained his Master of Arts degree from Lucknow University, India, followed by a Public Administration Course at the University of Cambridge, UK.

Panelist 3

Mr. Shoaib Ahmad Siddiqui

Mr. Shoaib Ahmed Siddiqui is Secretary, Ministry of Planning, Development and Reforms, Government of Pakistan.

Formerly, Mr. Siddiqui has served as an Assistant Commissioner and Registrar Cooperative Societies, Islamabad Metropolitan Corporation and Karachi Development Authority. Besides, he was also the Director of Protocol, Government of Sindh, and Additional Secretary to the Government of Sindh in the Education and Literacy Department. In addition, Mr. Siddiqui has worked as Executive District Officer, Works & Services, City District Government, Karachi; Additional Secretary, Excise & Taxation Department; Special Secretary Home Department; Special Secretary Finance Department; and Project Director, Karachi Mega City Programme. Mr. Siddiqui also served as Secretary Livestock and Fisheries Department and Secretary Sports and Youth Affairs Department, Government of Sindh.



He did Masters in Development Administration from the University of Birmingham in England.

Panelist 4

Prof. Dr. Muhammad Abdul Aziz Irfan Mufti

Prof. Dr. Muhammad Abdul Aziz Irfan Mufti is the Dean Faculty of Mechanical, Chemical, Industrial, Mechatronics and Energy Engineering at University of Engineering and Technology (UET), Peshawar.

Previously, he has worked at Qassim University, Saudi Arabia, where he established a Center for Industrial Energy Audits. Besides, he has also conducted energy audits in various industries in Pakistan and Saudi Arabia. Dr. Irfan received certification for Certified Energy Manager (CEM-USA) in 2016. Dr. Irfan holds a PhD degree in Mechanical Engineering from Case Western Reserve University, Cleveland, OH, USA.



Technical session 2 – SDGs Implementation: Perspective on Research & Development

Keynote Speaker

Dr. Max Paoli

Dr. Max Paoli is Programme Coordinator at The World Academy of Sciences (TWAS), Italy.

Formerly, he has served as a David Phillips" Research Fellow at the University of Cambridge, United Kingdom for 5 years and had worked in the area of protein structure and molecular recognition for almost 20 years. In addition, he held lectureship positions in Australia and the UK.

Dr. Paoli holds a PhD degree in Chemistry with a focus on protein structure.



Panelist 1

Dr. Abid Suleri

Dr. Abid Suleri is Executive Director at Sustainable Development Policy Institute (SDPI) Islamabad.

Dr. Suleri has been heading the Sustainable Development Policy Institute (SDPI) since 2007. He also holds membership of various policy-making forums including National Economic Advisory Council, National Advisory Committee of Planning Commission of Pakistan, Ministry of Planning, Development & Reforms, Ministry of Finance, and Ministry of Climate Change, lead expert for World Economic Forum's "Transformation Mapping" initiative from Pakistan amongst others. He also served on three judicial commissions formed by Supreme Court of Pakistan, Islamabad High Court, and Lahore High Court on diverse environmental issues. He is also editor-in-chief of SDPI peer reviewed journal, "Journal of Development Policy, Research and Practice".

Dr. Suleri obtained PhD in Food Security from University of Greenwich, United Kingdom.



Panelist 2

Dr. Asma Hyder

Dr. Asma Hyder is Member Social Sector at Ministry of Planning, Development and Reform, Government of Pakistan.

Earlier, she has been the Associate Professor of Economics at Institute of Business Administration (IBA), Karachi; visiting Research Scholar and Professor of Economics at Department of Economics, Arthur Kroeger College of Public Affairs, Carleton University, Ottawa; and Associate Professor at National University of Sciences and Technology (NUST), Islamabad.

Dr. Hyder holds a PhD degree in Labor Economy from National University of Sciences and Technology, Pakistan & Sussex University, Brighton, England.



Panelist 3

Mr. Ali Tauqeer Sheikh

Mr. Ali Tauqeer Sheikh is CEO of Leadership for Environment and Development (LEAD) Pakistan.

He also heads Climate Leaders Action Network which consists of over 2,000 renowned experts from across the continents of Asia, Africa and Latin America. Mr. Sheikh has also served as an advisor/consultant to a various national/international organizations including Asian Development Bank, European Commission, IDRC, IFAD, JICA, Packard Foundation, Rockefeller Foundation, The Asia Foundation, UNDP, UNESCO and the USAID. A key area of interest of Mr. Sheikh is climate change, and is currently designing the Climate Change Roadmap for the Government of Pakistan.

Mr. Sheikh is a member of the key Environmental body in Pakistan, the Pakistan Environment Protection Council (PEPC), chaired by the Prime Minister of Pakistan. He has also represented Pakistan on the World Summit on Sustainable Development a number of times. Mr. Sheikh has a Master's degree in International Relations and Strategic Studies from the University of Miami, Florida.



Panelist 4

Dr. Javed Ashraf

Dr. Javed Ashraf is Vice Chancellor of Quaid-i-Azam University (QAU).

Dr. Javed Ashraf is an economist and Pakistani Educationist who is currently serves as the Vice-Chancellor of Quaid-i-Azam University (QAU) since he took office in October 13, 2014. He had previously served as the dean of Cameron School of Business at the University of St. Thomas in Houston and has also taught economics at University of Wisconsin, University of Hartford in Connecticut and served his longest tenure at the University of West Florida for 13 years. Dr. Javed Ashraf returned to Pakistan after thirty years of teaching in the U.S. to assume charge as the Director of the Institute of Business Administration, Karachi (IBA) in 2000, where he served till 2002.

Dr. Ashraf earned his Ph.D in Economics from Northern Illinois University in 1986. He has two master's degrees from Boston University, and one from Government College University, Lahore. Dr. Ashraf has been credited with expanding PhD faculty at Quaid-i-Azam University and increasing emphasis on research, which has led to improvement in QAU's rank in Times Higher Education rankings.



Panelist 5

Dr. Khalid Riaz

Dr. Khalid Riaz is Chairman, Department of Economics at COMSATS University, Islamabad, Pakistan.

Dr. Riaz has also served at the United Nations Office in Yemen as Chief Technical Advisor and Project Economist as well as Natural Resources Economist at the World Bank in Pakistan. His research interests include sustainable development, water resources management, climate change, agricultural economics and international finance.

Dr. Riaz obtained his PhD in Economics from Iowa State University, USA.



Technical session 3 – Frontier Technologies: Scientific Institutions driving Innovation

Keynote Speaker

Dr. Adil Najam

Dr. Najam is the Inaugural Dean of the Frederick S. Pardee School of Global Studies at Boston University.

Dr. Adil Najam is a Professor of International Relations, Earth and Environment at Boston University, USA. He has also served as Vice Chancellor of the Lahore University of Management Sciences (LUMS), Pakistan and as the Director of the Boston University Pardee Center for the Study of the Longer-Range Future.



Dr. Najam was invited by the United Nations Secretary General to serve on the UN Committee on Development (CDP) in which capacity he participated as lead discussant in High-Level Political Forum (HLPF) on Sustainable Development in 2016 and 2017. He has also served as a member of the President of Pakistan's Special Task Force on Human Development and Pakistan's Presidential Commission on Higher Education. Dr. Najam was awarded the Sitara-i-Imtiaz by the President of Pakistan in 2010. He holds a PhD from the Massachusetts Institute of Technology (MIT), followed by a Specialization in Negotiation from Harvard Law School.

Panelist 1

Dr. Umar Saif

Dr. Umar Saif is Chairman of the Punjab Information Technology Board (PITB), Lahore.

Formerly, Dr. Saif consulted for the Asian Development Bank, USAID, World Bank and DFID on e-governance projects with the Government of Pakistan. He has also served on World Economic Forum's Global Agenda Council on Pakistan.

He has also received numerous awards including Sitara-i-Imtiaz in 2014, the highest Civil Award by Government of Pakistan in recognition of his services to the country. He has also been recognized as the first Pakistani to be named as top 35 young innovators in the world (TR35) in 2011, Young Global Leader by World Economic Forum in 2010 and has received the Google Faculty Research Award in 2011.

Dr. Saif completed his PhD from University of Cambridge and Post-Doctorate from MIT. He has received his Executive Education from the Harvard Kennedy School on Global Leadership and Public Policy.



Panelist 2

Prof. Dr. Fazal Ahmed Khalid

Prof. Dr. Fazal Ahmed Khalid is the Vice Chancellor of UET Lahore.

Prof. Fazal Ahmed Khalid has extensive experience of industry, teaching and research. He holds bachelor and advanced degrees of metallurgical Engineering. Earlier, he worked as AXEn and senior Engineer in Pakistan steel, Karachi and PCSIR Lahore respectively.



Panelist 3

Dr. Masoom Yusafzai

Dr. Masoom Yusafzai is the Vice Chancellor, International Islamic University (IIU).

Prof. Dr. Masoom Yusafzai is the rector of Islamic university, Islamabad. He is a professor of Biochemistry and is among one of the leading scientists and educationist in Pakistan. He has previously served as the vice chancellor of Balochistan University, and Quaid-e-Azam University, Islamabad. Based on ranking by the council for science and technology, Ministry of Science and Technology has classified him among few of the productive scientists of Pakistan.



Panelist 4

Dr. Orkun Hasekioğlu

Dr. Orkun Hasekioglu is the Vice President at the Scientific and Technological Research Council of Turkey (TUBITAK).

Dr. Hasekioğlu is responsible for research institutions and international relations. He is also serving as the R&D Projects Manager at Turkish Airlines Technic since 2015. Dr. Hasekioglu has also served in General Electric's R&D Center, Schenectady, NY, as a research engineer, Moren Communications as Chief Technology Officer, CHEMI Inc. as Vice President, and AIT Inc, as Vice President and later on as President and partner.

He holds a PhD from Rensselaer Polytechnic Institute, USA, with a specialization in signal processing, communications systems and networks.



Panelist 5

Ms. Sadia Bashir

Ms. Sadia Bashir is the CEO and Founder, PixelArt Games Academy, Islamabad.

She is a graduate of COMSATS Centre of Excellence in Pakistan, COMSATS University Islamabad. Her academy is Pakistan's first Video Game Development Teaching & Training Academy. A young entrepreneur, she has been working in the Game Industry as an artist/ game designer for the last 8 years. She is among the Forbes 30 under 30 Asia.





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