KEYNOTE ADDRESS

by

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(17th Meeting of COMSATS Coordinating Council, Tehran, 19-20 May, 2014)

Honorable Acting Minister for International Cooperation, Govt. of Islamic Republic of Iran, H.E. Dr. Hussain Salar Amoli,
Prof. Dr. Ahmad Akbari, President of Iranian Research Organization for Science and Technology,
Dr. Imtinan Elahi Qureshi, Executive Director COMSATS

In my capacity as the Chairperson of COMSATS Coordinating Council, I would first of all like to express my sincere gratitude to IROST, and the Government of Iran for their support in the organization of the 17th Meeting of COMSATS Coordinating Council and for providing wonderful hospitality in this beautiful country.

I also wish to thank Ghana's Ministry of Environment, Science, Technology and Innovation for its support in organizing the 16th Meeting of COMSATS Coordinating Council, held in Accra in May 2013, together with the second meeting of the Consultative Committee. The hospitality and the great organization of the meeting by the Council for Scientific and Industrial Research (CSIR) were the key factors for its success.

Twenty years ago, I had the honour of being part of a group of ten people from different disciplines that the then President of Colombia, H.E. Cesar Gaviria, invited to construct a proposal for the development of the country in the forthcoming years. This group that included representatives from natural and social sciences was called the "Mission for Science Education, and Development" and was led by our Nobel Prize winner Gabriel Garcia Marquez, who unfortunately passed away a few weeks ago. In addition to ten detailed documents in different fields, the group summarized its ideas in a book called "Colombia at the Edge of Opportunity". That document, the dream of Garcia Marquez, included concrete proposals for the development of science and technology, among which political, financial, industrial and educational aspects were discussed. On the other hand, it proposed a deep reform of education with emphasis on the improvement of sciences and mathematics teaching and a very ambitious programme for the formation of scientists at a PhD level. Finally, the concepts of learning organizations as well as the notion of social appropriation of science and technology were introduced, along with several ideas for the construction of an industrial policy based on science and innovation.

Even if the next Colombian Government had the initial purpose of implementing these recommendations, unfortunate political events occurred in the following years, which made the realization of these ambitious goals impossible. Today, 20 years later, we realize that, even if some progress has been made, only roughly 50 % of the proposed goals in investment, number of scientists, research groups and industrial financing has been reached.

A situation like this is very frequent in developing nations, where a government gives importance to a certain field, and the next one decides that it is a low priority subject. During the recent years, only a few countries like Iran or Brazil have understood the role of science and technology as a key factor for economic growth and most of us are still far below the investment of 1% of GNP in S&T that UNESCO considers a minimum for development. Despite the fact that quite often the subject has been raised to a ministerial level, there are no clear long term policies in this field and only in a few cases these policies have been integrated with industrial and educational ones.

A similar situation occurs in the case of scientific cooperation where specific initiatives of the Organization of American States or the Andean Pact to financially support research projects of interest for the region were stopped in the past, considering that they had a low priority.

Since last few years, the idea that innovation is enough to create a dynamic industrial sector has become very popular, forgetting that the real innovation has always its roots in long term scientific research processes. It is obvious to us, but in general not to politicians, that without scientific research, neither the electrical industry nor the modern agriculture or the cellular phones would exist.

It is therefore essential that we understand that any development programmes for our countries must be based on two pillars:

- Improvement of the quality and coverage of education at all levels with emphasis on science and mathematics teaching;
- Development of science and technology including basic science at the highest level, and applied science oriented to the solution of our problems and to the creation of a strong and innovative industrial sector.

In the last decades, the countries that have applied these ideas, have very quickly reached the high levels of development.

An essential factor for the success of any initiative of this kind is international cooperation with emphasis on South-South cooperation. This is the point where COMSATS can play a fundamental role.

COMSATS Network of Centers of Excellence includes members from four continents. Our purpose for the near future must be to increase the number of affiliated centers, in particular from other Latin-American countries, and to strengthen the links with institutions that share similar purposes. In particular, I suggest that we promote a joint meeting with countries belonging to the Forum for East Asia-Latin America Cooperation (FEALAC), which can be supported by the Colombian Government.

South-South cooperation can offer innovative solutions that can be transferred to the productive sector. Our institutions are producing science and technology of a very high level that, only in very few cases, generate solutions or products of social or economic impact. Traditionally, our governments and our industry buy most of the soft and hard foreign technology, ignoring locally generated solutions which are often much better adapted to our particular needs.

The importance of science in the modern world is increasing, not only as a key factor for industrial development but in connection with preservation of the environment and the survival of mankind. In this respect, close linking between natural and social sciences is a powerful tool for understanding the evolution of society and establishing the appropriate strategies for development.

The construction of sustainable solutions involves interdisciplinary work, using local resources and international experiences, especially from countries of similar levels of development. As an example, the climate change that affects all our countries in ways that vary from an accelerated desertification to floods and landslides need particular solutions that we must build jointly.

We all have an enormous capital of talented people that can greatly change our future if they are given the opportunity. We should be able to innovate in the creation of models of sustainable development and generate products that meet international market requirements in the framework of environmental consciousness and responsibility.

Thanks to its unique composition, COMSATS has an enormous potential for generating change in the developing world. Our role is to set up the mechanisms for making the dream of Garcia Marquez a concrete reality.

Finally, I would like to congratulate our Executive Director COMSATS, Dr. I. E. Qureshi, and his co-workers for the excellent preparations made for the 17th Coordinating Council

meeting, and for their contribution to the consolidation of COMSATS which is playing an increasingly important role in the countries where the Member States and Centres come from.

My deepest thanks also to the local team for the wonderful work that they have done in the organization of a meeting which, I am sure in advance, will be a great success.