The Arab world and the Backwardness of Science and Technology And Global University System/Palestine/Gaza Strip and West Bank

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Science and technology have profoundly influenced the course of human civilization.

Science has provided us remarkable insights into the world we live in. The scientific revolutions of the 21st century have led to many technologies, which promise to herald wholly new eras in many fields. As we stand today at the beginning of a new century, we have to ensure fullest use of these developments for the well being of our people in spite of political pain.

Science and technology have been an integral part of the Arab dream within civilization and culture over the past several millennia. The Arabs became an important scientific resource to the world. They did that through learning from and collaborating with the regional civilizations at the time the Greek, the Roman, the Egyptian, the Persian, the Indian and even the Chinese and then improving that is why we have chosen our slogan to be **"To Learn, To Collaborate, To Improve and Seek Knowledge".**

Today, the only way for us to gain knowledge and improve on the quality of our lives is through seeking to learn from and cooperate with, our friends. Our future depends on how much science we can learn and apply and how much appropriate technology we can transfer and adapt for the benefit of our people.

In the past the Arabs was the fountainhead of important foundational scientific developments and approaches. These cover many great scientific discoveries and technological achievements in mathematics, astronomy, architecture, chemistry, metallurgy, medicine, natural philosophy and other areas. The Palestinian colleague's traditions have been founded on the principles of universal harmony respect for all creation and an integrated holistic approach.

This background is likely to provide valuable insights for future scientific advances.

There was an awakening of modern science in the Arab world through the efforts of a number of outstanding scientists. They were responsible for great scientific advances of the highest international caliber.

However, we described in often-painful details some of the factors that have contributed the decline of science and technology. Among them are:

- Increases in average income have been lower in the Arab world than anywhere else for 20 years, except for the poorest African countries. "If such trends continue...it will take the average Arab citizen 140 years to double his or her income, whole other regions are set to

achieve that level in a matter of less than 10 years," the report noted. One in 5 Arabs lives on less than $2 a day.

- Arab unemployment is the highest in the developing world.
- Surveys show more than half of young Arabs want to leave their countries and live in the United States or other industrialized countries where opportunities are better.
- The Arab brain drain is the world's worst, with about 25 percent of new graduates in science, medicine and engineering emigrating each year.
- About 1 in 4 Arab adults can neither read nor write and latest news (~60 Millions). This is a particular problem among Arab women, 50 per cent of whom are illiterate. Many children do not attend school.
- The quality of education has declined, with many schools teaching mainly interpretations of the Koran, rather than other knowledge or skills.
- Authorities on Islamic science cite various reasons for this state of affairs, but the Koran is not among them.
- "The Koran actually forms one of the cornerstones of science in Islam in a way unlike any other scripture of any other religion," said Glen M. Cooper, a professor of the history of science and Islam at Brigham Young University
- Less than 0.6 per cent of Arabs use the Internet and barely 1.2 percent have access to a personal computer. There are 18 computers per 1,000 Arabs, compared to the local average of 78.3.
- During the entire 20th century, fewer than 10,000 books were translated into Arabic equivalent to the number translated into Spanish in a single year. Religious books account for 17 per cent of new publications in Arab countries, compared to a world average of 5 per cent.
- Censorship stifles ideas, information and innovation. Numerous censors review book manuscripts, each with the power to edit text or demand revisions.
- The Arab nations spend only 0.15 per cent of their gross domestic product on research and development, well below the world average of 1.4 per cent."
- Muslims account for 20 percent of the world's population, but less than one percent of its scientists. Scientists in Islamic countries now make barely 0.1 percent of the world's original research discoveries each year.
- “The efforts to measure the quality of Arab education are still limited—in itself an indication of a crises in education in the Arab countries.” Nevertheless, available data shows that Arab states trail their Asian Tigers counterparts in many areas, including the level of investment in education, the number of students pursuing scientific disciplines, and the number of computers in classrooms. Kuwait, with its wealth and small population, was the only Arab country that participated the "Third International Mathematics and Science Study (TIMSS) in 1995." It placed in the bottom of the rankings, compared to Singapore, which was ranked first. Jordan, Tunisia, and Morocco participated in the second TIMSS survey in 1999, and received mathematics rankings of 32nd, 29th, and 37th, respectively. Singapore again ranked first. In science, the three countries were ranked 30th, 34th, and 37th, respectively, while Taiwan ranked first. Arab countries also score dismally in science education and the methods of teaching science is often said to be "outdated and archaic (Castillo, 2004)."

Therefore, **National Research Center (NRC)** colleagues have been committed to the task of promoting the spread of science through genuine peace in the region.

Our policies have emphasized self-reliance, as also sustainable and equitable development. They embody a vision and strategy that are applicable today, and would continue to inspire us in our endeavors.

We are looking for encouragement and support for **National Research Center and Global University System/Palestine/ Gaza Strip & West Bank,** by creating our infrastructure base on science, technology and development. These include research laboratories, higher educational institutions and highly skilled human resource. Palestinian colleagues' capabilities in science and technology cover an impressive range of diverse disciplines, areas of competence and of applications.

NRC and GUS/Palestine/GS&WB are looking for basic research for agriculture, healthcare, chemicals and pharmaceuticals, energy, astronomy and astrophysics, and applications, biotechnology, electronics, information technology and oceanography are widely acknowledged.

While these developments have been highly satisfying, one is also aware of the dramatic changes that have taken place, and continue to do so, in the practice of science, in technology development, and their relationships with, and impact on, society.

Particularly striking is the rapidity with which science and technology is moving ahead. Science is becoming increasingly inter- and multi-disciplinary, and calls for multi-institutional and, in several cases, multi-country participation. Major experimental facilities, even in several areas of basic research, require very large material, human and intellectual resources. Science and technology have become so closely intertwined, and so reinforce each other that, to be effective, any policy needs to view them together. The continuing revolutions in the field of information and communication technology have had profound impact on the manner and speed with which scientific information becomes available, and scientific interactions take place.

The Science and technology have had unprecedented impact on economic growth and social development. Knowledge has become a source of economic might and power. This has led to increased restrictions on sharing of knowledge, to new norms of intellectual property rights, and to global trade and technology control regimes. Scientific and technological developments today also have deep ethical, legal and social implications. There are deep concerns in society about these.

The Palestinian nation continues to be firm in its resolve to support science and technology in all its facets. It recognizes its central role in raising the quality of life of all Palestinian people.

Thank you

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