Under the auspices of Her Highness Sheikha Mozah Bint Nasser Al-Missned,
The First Lady of the State of Qatar

The United Nations, Educational, Scientific and Cultural Organization,

The Islamic Educational, Scientific and Cultural Organization,

The Ministry of Science and Technology of Iraq,

The Ministries of Higher Education and Scientific Research of the Central Government and the Kurdistan Regional Government of Iraq,

are pleased to announce:

The International Conference on Science, Technology and Research for Sustainable Development:

Supporting Scientific Research and Technology in Iraq

Ritz Carlton Hotel, Doha, State of Qatar
6 - 8 June 2010
Introduction

In 2008, an international conference was organized by Her Highness Sheikha Mozah, First Lady of Qatar and UNESCO Special Envoy for Basic and Higher Education, and the United Nations Educational, Scientific and Cultural Organization (UNESCO) in order to promote the right of education in countries affected by crisis. Held under the title, "Stop Jeopardizing the future of Iraq", the Paris conference helped to shed light on the critical issues facing the educational and research system in Iraq, and offered concrete solutions and alternatives for safeguarding education in the country. The joint initiative was considered an important step in advancing education as the main driver of sustainable human development in Iraq.

Yet, the country's institutions responsible for conducting research and development are still challenged by limited capacities and an environment that does not enable innovation and research to their full potential. Studies show that approximately 80% of research institutions in Iraq are not operating at full capacity, constrained by limited resources, "brain drain" and isolation from the international scientific community. In order to consolidate a stronger, more stable economy, it is imperative to revitalize the capacity of Iraq's researchers, scientists and institutions and develop the conditions that will enable scientific ingenuity and technological development to flourish.

Now, as the country transitions to a more stable economy, it is confronted with the dual challenge of addressing the growing population's need for security, water, energy, health, food and education while developing new markets and opportunities. New human and institutional capacities will be required, particularly those which foster sustainable development and knowledge-based, homegrown innovation. Meanwhile, policies that enable capacity development must be formulated, while aligning innovation with national development priorities. The imperative to rebuild Iraq's scientific and innovative capacities is, therefore, vital if the country is to rejoin the ranks of competitive modern economies and make the transition to a knowledge-based society.

It is with this imperative that UNESCO and Her Highness Sheikha Mozah bint Nasser Al-Missned, UNESCO's Special Envoy for Basic and Higher Education, in collaboration with the Minister of Science and Technology and the Minister of Higher Education of Iraq, ISESCO and the Iraqi Higher Education Organization (IHEO) are organizing the International Conference on Science, Technology and Research for Sustainable Development: "Supporting Scientific Research and Technology in Iraq".
In an effort to raise international awareness on the critical challenges faced by conflict-affected societies such as Iraq, and to mobilize the essential endorsement and support for such communities, the organizers of this conference are capitalizing upon their strengths to bring together Iraqi associations involved in the science and technology sectors, policy-makers, heads of universities, academics, private sector representatives, non-governmental organizations, civil society, as well as international donors and United Nations agencies.

As a result of this collaborative effort, it is expected that an objective framework to build consensus on shaping the national vision for science and research system in Iraq will be built.

**Conference Objectives**

The overall objective of the conference is to reinforce and enhance the role of science, technology and research in national development by:

- Providing a forum for Iraqi stakeholders and international experts to take stock of the current challenges in the science and technology (S&T) and research sectors and to articulate priority actions to address them;

- Raising national and international awareness on the current state of science, technology and research in Iraq and the challenges faced by the Iraqi scientific community both in-country and in exile;

- Developing recommendations to respond to specific needs and priorities identified by the stakeholders in rebuilding science, technology and research in Iraq, with a special focus on building human and institutional capacities and fostering the broader enabling environment; and

- Determining the appropriate national and international mechanisms—including human and financial capital—that will support the implementation of the action plan.

**Expected Results**

- Background papers on thematic challenge areas

- A plan for achieving short, medium and long term priorities including guidance on implementation.

- A conference declaration addressed primarily to the Government of Iraq and the international community that recalls the main challenges facing science, technology and research in Iraq and establishes the main principles agreed upon by conference participants.
**Audiences**

The conference will convene up to 200 representatives of government, universities, international governmental organizations and NGOs (see tentative list of participants in Appendix 1), with over 50% of participants coming from Iraq. Government participation, particularly of the Ministries of Science and Technology (MoST) and Higher Education and Scientific Research (MoHESR), is essential for the conference to achieve its outcomes, given the focus and cross-cutting nature of the topic. The participation of other ministries, such as the Ministry of Planning and Development Cooperation (MoPDC), Ministry of Water Resources (MoWR), Ministry of Communications (MoC), Ministry of Agriculture (MoA) and Ministry of Environment (MoEnv) will add to the scope of Iraqi ownership of the conference outcomes and ensure a link to central planning. Members of the Iraqi and international scientific communities will lend their expertise on specific research topics.

The following categories of participants are envisaged:

- Government (e.g. MoST, MoHESR, KRG MoHESR, MoWR, MoA, MoEnv, MoIndustry, MoCommunication, MoHealth, Members of Parliament)
- Iraqi institutes (e.g. university professors and administrators)
- Iraqi researchers and experts (in-country and expatriate)
- Iraqi civil society (NGOs, business community, media)
- International organizations (e.g. experts from ISESCO, UNESCO, Qatari Institutions, UNDP, UNCTAD, WHO, FAO, ASTF, etc.)
- Bilateral/Multilateral donors (EU, WB, IDB);
- International institutions (e.g. experts and representatives)

**Dates and Venue**

The conference will be held from 6 to 8 June 2010 in Doha (Qatar).

**Approach**

The organizers will call for studies and statements from knowledgeable Iraqi and international experts to be presented during the conference. In order to increase international solidarity and to achieve the objective of sensitization, representatives will be invited to present the current situation of the Iraqi science, technology and research sectors by giving concrete and striking examples. A short movie highlighting the current state of science, technology and research prepared by UNESCO will also be broadcasted. Moreover, the inclusion of international media services shall be sought in order to increase outreach. Plenary sessions and Working Groups will explore the details of the challenges facing science, technology and research in Iraq and potential responses and solutions to the needs identified.

Five challenge areas have been identified as priorities to be tackled during the conference:

1. **Human resources, institutional capacities and the enabling environment**
The development of the scientific research and technology sectors will require improvements in human and institutional capacities. The nation’s innovators (both in Iraq and abroad) and skilled workers need to be supported. With limited resources and management capacities, scientific and research institutions’ ability to perform and function properly is hampered. A focus on developing S&T and research policies, institutional performance, civil society involvement and legal and economic reform shall promote a truly enabling environment for innovation and the use of technology to occur. Discussion in this challenge area shall center on questions related to strengthening higher education institutions and enabling Iraq’s innovators, academics, business, students to achieve their full innovative potential. What skills and resources are lacking? How can institutional performance be promoted? What measures should be taken to encourage civil society’s involvement in the sector? How can fellowships and other mechanisms be established to promote such development? What role can the international community play?

2. **Science, technology and research in the management of agriculture and ecosystems**
As Iraq grapples with a changing climate, scarce water supplies, and the need to expand food production, the nation is in need of methods and technologies to make crops and livestock more water-efficient and resistant to pests, disease and weather extremes. The impact of poor water management and pollution on Iraq’s natural environment has been substantial, particularly in the Marshlands of Mesopotamia which has seen a 90% decrease in size since the 1970s. The discussion in this challenge area will focus on how science, technology and research can be mobilized to promote sustainable development in the agricultural sector and protect ecosystems from further degrading? Also, what benefits can science and technology bring to society through advances in biotechnology and gains in agricultural efficiency?

3. **Science, technology and research in managing water and waste**
Within the context of a changing climate, scarce water resources, and a poor infrastructure, delivering enough clean water and sanitation for all end-users is a great challenge. Managing domestic, agricultural and industry waste is also a major concern as pollution and management costs rise. This challenge area will focus its debate on the challenges in the water and waste sectors, and determine the priorities for research and technology in improving the way water and waste are managed. How can integrated water resources management (IWRM) be promoted with new technologies and research areas? What tools and methods can be mobilized to decrease the burden of waste on the economy and the environment?

4. **Information communication technologies (ICT) for development**
The use of ICTs in empowering people through the free flow of ideas and providing access to information and knowledge are widely recognized. Discussion during the conference will focus on the current challenges to deploying ICTs in Iraq and how to encourage their use in achieving national development goals. Priorities in education, research, communications, industry shall be discussed with a view to mobilizing ICTs to build the knowledge and information base. The the technological, logistical and regulatory obstacles to ICT use and proliferation shall also be examined.
5. **Renewable energy technologies and research**

The production and application of clean, renewable energy technologies can significantly help address Iraq’s energy challenges, i.e. gaps in electricity coverage, carbon-based production, need for economic diversification and growth. Yet, innovation (R&D), market barriers, infrastructure and human capacity currently limit expansion of renewable energy technologies. Discussion in this area will focus on how to foster research and development (R&D) and use of technology in the energy sector. Linkages with national policy and other sectors (e.g. water, industry, agriculture) shall also be examined.

**Language**

The Conference will be in both Arabic and English languages. Simultaneous interpretation will be provided.

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