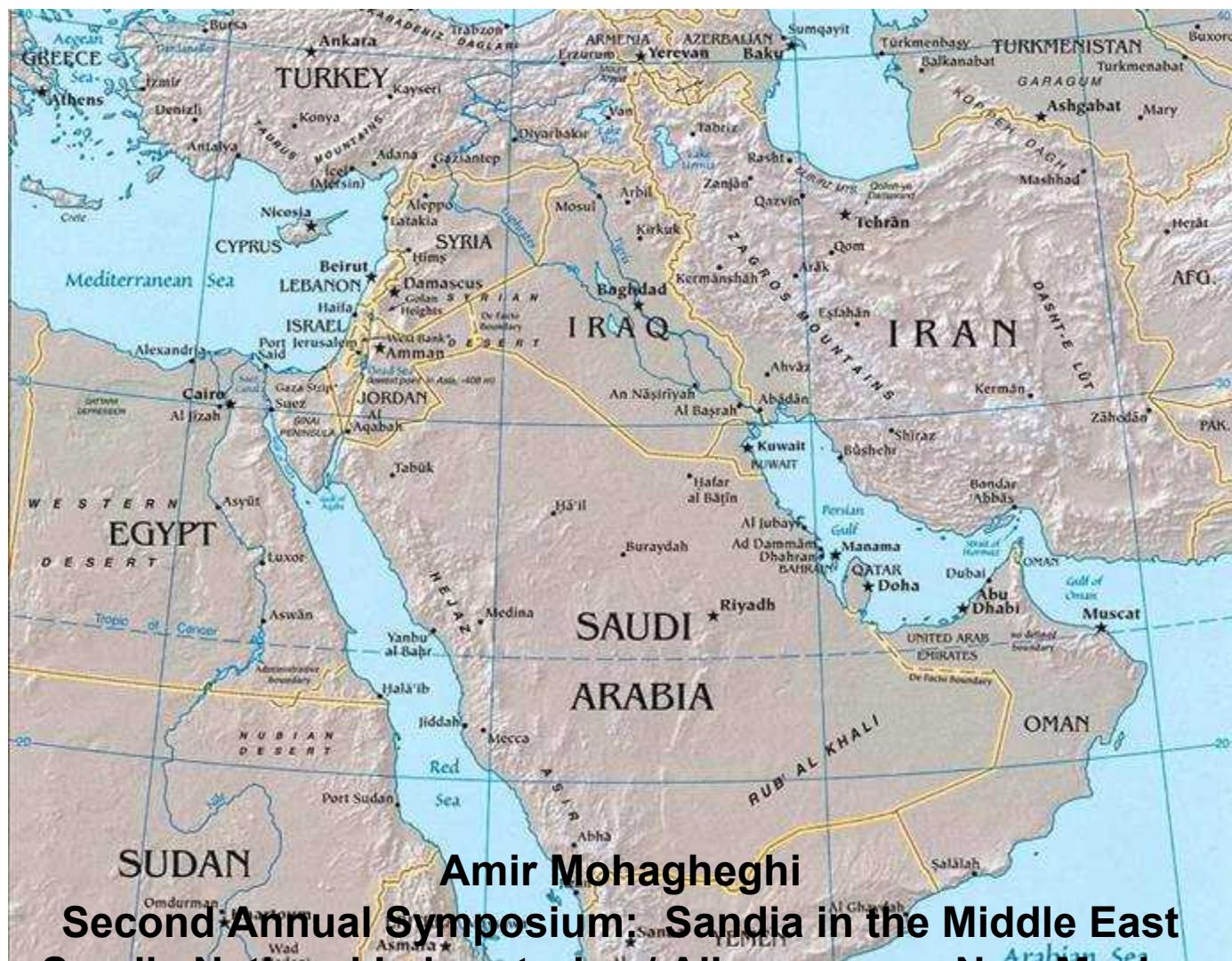




CMC Middle East Regional Security Program Overview



Amir Mohagheghi

Second Annual Symposium: Sandia in the Middle East
Sandia National Laboratories / Albuquerque, New Mexico
05 January 2006



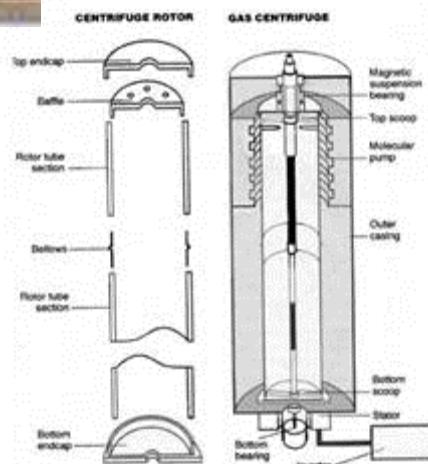


National Security Issues in the Middle East

“The United States is engaged in the Muslim world and will be for many years to come.” – 9/11 Report

- Issues:

- Stabilization of Iraq
- Israeli Arab Conflict
- Nuclear Proliferation – Iran
- Consolidating Libyan Gains
- Terrorist Movements
- Energy Supplies



Source: Albright, D. and Hibbs, M., 'Iraq's shop-till-you-drop nuclear program', *Bulletin of the Atomic Scientists*, vol. 48, no. 3 (Apr. 1992), pp. 32 and 33.



Middle East Regional Projects

- Regional Center for Arms Control and Security – CMC@Amman
- Confidence Building and Engagement in the Persian Gulf
- Government Initiatives
- Middle East Engagements
- Iraq S&T Engagement



Gen. Shiyyab, CMC-Amman Director, giving a tour of the Center's technology display area, Official Inauguration, October 2003



Sharjah University, UAE



Kent Biringer, Royal Scientific Society



Regional Center for Arms Control and Security



● CMC@Amman

- Scholars from Jordan and Egypt recommended the establishment of a Middle East cooperative monitoring center (2001)
- US and Jordanian governments approved the establishment of a CMC at the Royal Scientific Society (2002)
- Center officially inaugurated in October 2003
- The Center's objectives are:
 - ◆ Promote a culture of peace in the Middle East through confidence building measures and technical collaborations
 - ◆ Promote the role of science and monitoring technologies to help resolve nonproliferation, arms control, and other issues
 - ◆ Facilitate cooperation and coordination among NGOs and governmental officials nationally and regionally
 - ◆ Implement projects that allow multiple countries in the region to experiment with cooperative technologies
 - ◆ Work towards establishing a Middle East Weapons of Mass Destruction Free Zone
- *Create effective partners in the region that will champion our causes (regional solutions to regional problems)*

● Four focus areas:

- Border Security & Counter Terrorism
- Proliferation of Weapons of Mass Destruction
- Public Health
- Resource Management and Environmental Security



CMC-Amman Building (3rd Floor)



Gen. Shiyyab, CMC-Amman Director, giving a tour of the Center's technology display area, Official Inauguration, Oct 2003



Regional Center for Arms Control and Security

CMC-Amman

● Workshops

- Regional Workshop on Export Control, DOS/EC, DOE/EC (Mar 06)
- Regional Workshop on Biosecurity (Feb 06)
- Radiological Sources, Security Assessments, RTR (Jan 06)
- Iraq Border Security Workshop, with NDU, DTRA, IAEA, and UKDA (Sep 05)
- Training Iraqis on Orphaned Radiological Sources, DOS/NDF (Sep 05)
- Cooperative Monitoring Workshop, Jordanian Officials (Feb 05)
- Training on Seismological Data Analysis for Iraq, LLNL (Jan 05)

● Projects

- The Middle East Meteorological System (MEMS) project
- Cooperative border project between Israel and Jordan
- Support the USDA project on Arid Land Management
- Continue to support the regional disease monitoring initiative project
- Translate relevant materials into Arabic and upgrade the center's library



Regional Workshop in Iraq Border Security, Jordan, September 2005



Explosives Portal at Border Crossing between Jordan and Israel



Government Initiatives



- DOE and IAEC sign Letter of Intent (Feb 2000)
- Sandia and Soreq NRC select to work on explosives detection
- Secured an export license for the portal
- Upgraded the Explosives Portal to meet the specifications of the Israeli Security Agency
- Conducted additional performance evaluation tests on the second generation explosives-detection portal
- Shipped the unit to Soreq (Apr 2004)
- Soreq and ISA conducted extensive laboratory tests
- ISA tested the portal for several months at the Allenby border crossing site
- The portal was certified for operational use (June 2005)
- Next: Israel to deploy additional portals and cooperate with Jordan.

Soreq
Nuclear
Research
Center



Israeli official briefing visitors on the operational use of the explosives detection portal



Confidence Building and Engagement in the Middle East

- **Radiation Measurements Cross Calibration (RMCC) Project**

- Develop a network of scientists and labs that can devise indigenous solutions to issues such as proliferation monitoring, environmental assessments, emergency response, and radioactive materials smuggling
- Partnered with the IAEA, CTBTO, DOE/MAPEP
- Worked with Kuwait Institute for Scientific Research (KISR) to conduct the first RMCC workshop
- Worked with the Supreme Council for the Environment and Natural Reserves (SCENR) to conduct the second workshop

- **Maritime CBMs**

- Gulf Maritime CSBM Studies
- Caspian Maritime CBM Workshop

- **WMD Detection and Response** (in collaboration with LLNL)

- Provide training on radiological consequence management
 - ◆ Two week training workshop at LLNL and SNL, Dec. 5-17
 - ◆ Follow-up regional workshop



First RMCC Workshop, Kuwait, October 2004



Second RMCC Workshop, Doha, Qatar,
November 2005



Middle East Engagements

● Libya Nuclear Transparency

- Workshops on medical isotope production – Draw on SNL's experience with reactor based production and cooperative monitoring
- Enroll the TNRC in the RMCC project to establish laboratory standards – First step towards a regional reference lab

● Iraq Border Security

- Work with CMC@Amman and partners at DTRA and NDU to determine the Iraq's border security needs
- Study the option of establishing a border control training center in Amman
- Engage Iraqi officials responsible for border security
- Develop a road map for training the Iraqi officials

● Jordan Counter Terrorism

- Develop proposal to model Jordan critical infrastructure and deploy sensors

● Middle East Track II Policy Dialogue

- Work with the UCLA Burkle Center, IGCC, and NDU to study policy issues and establish a dialogue with Middle East countries

● SESAME Project

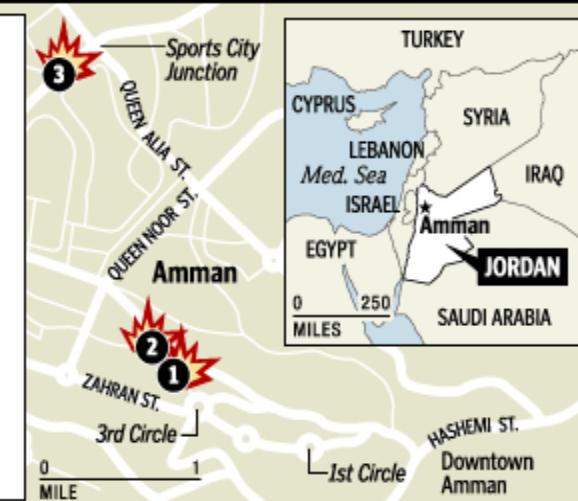
- Studied options for synergistic activities between NA241 and the Synchrotron Light for Experimental Science Applications in the Middle East (SESAME) project



المفاعل النووي الليبي في تاجوراء (الشرق الأوسط)

Tajoura Research Reactor

- 1 About 9 p.m. Grand Hyatt Explosives detonate on the ground floor, killing more than 20.
- 2 Minutes later at the Radisson SAS Hotel Bomb detonates among a wedding party in the banquet hall, killing at least 20.
- 3 A few minutes later at the Days Inn A car packed with explosives blows up outside hotel.



Laris Karklis, The Washington Post