

Konrad-Adenauer-Stiftung e.V.

LÄNDERPROGRAMM

JORDANIEN

7. Juli 2011

DR. AYMAN KHALIL

www.kas.de/amman

Energy Security in the Middle East and the Gulf Region - Geopolitics, security challenges and sustainable supplies

Event: Regional Workshop

Date/Place: July 6th-7th 2011

University of Jordan, Mohammad Alim, Budier Auditorium
Amman, Jordan

Organization: The Arab Institute for Security Studies (ACSIS), KAS
Amman Office

Co-Organization: Energy Research Program (NERC), The National
Center for Research and Development, Government of China
(Taiwan)

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Overview:

The International Meeting on Energy Security was held in Amman during the period July 6 to 7, 2011 under the title "Energy Security in the Middle East and the Gulf Region - Geo-politics, Security Challenges and Sustainable Supplies".

The meeting was organized by the Arab Institute for Security Studies (ACSIS) (www.acsis.org), the Konrad Adenauer Foundation (www.kas.de) and the Energy Research Program (NERC) - The National Center for Research and Development. The meeting was cosponsored by the Government of the Republic of China (Taiwan) (www.qio.gov.tw).

The meeting ran under the auspices of the Prime Minister of Jordan and witnessed the participation of a rich international audience. The speakers' diverse backgrounds contributed to a comprehensive approach to the energy challenges facing the Middle East and allowed for many different aspects of these issues to be addressed. Conference participants represented civil society, academia, government offices and international agencies. The dialogue was covered by local media, which intends to raise public awareness about Jordan's energy options and their environmental and political implications.

The opening session included speeches by **Mr. Patrice Dreiski** (representative of the Energy Charter Secretariat), **Dr. Ayman Khalil** (representing ACSIS), **Dr. Martin Beck** (resident representative of the Konrad Adenauer Stiftung to Jordan), **Dr. Khalid Shrideh** (Secretary General of the Higher Council for Science and Technology) and **H.E. Prof. Khalid Touqan** (Jordanian Minister of Mineral Resources and Energy).

Speakers of the opening session indicated that the security of energy supply remains

the most important objective of any energy policy and highlighted the importance of reducing Jordan's dependence on energy imports, a concept that would be touched on by multiple speakers throughout the duration of the conference.



Mr. Patrice Dreiski inaugurates the meeting.

The Energy Security Conference coincided with an important challenge facing Jordanian energy system, namely the disruption of Egyptian gas supplies to Jordan, a challenge which has grave economic, political and security implications.

Event Summary:

Panel 1: Oil Supplies and the Global Economy

Mamdouh G. Salameh, an international economist and World Bank consultant, was the acting chair and moderator of the first panel of the conference. Dr. Salameh discussed critical issues regarding the peaking of international oil production, heavy reliance on crude oil, and the potential of renewable energy for the future global economy. He raised concerns about the current use of oil by leading economies and the opportunities to use unconventional oil supplies and renewable energy to lessen dependence on diminishing crude oil production. He also discussed the threat of the future "oil crunch" which would demand new oil discovery and further development

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of current resources. Salameh concluded with an optimistic outlook on the future energy consumption stating, "Every cloud has a silver lining. The impending oil crunch might provide the incentive needed to accelerate the movement away from oil and the development of alternatives to oil."

Robin Mills, from the Institute for Near East & Gulf Military Analysis, presented on the economic and political aspects of energy security in the Middle East and North Africa. He discussed global oil supplies, the MENA oil market, the effects of political unrest on oil production, and the future of energy production in MENA countries. Robin Mills pointed out many of the present threats to MENA oil production, future opportunities for regional energy production, and the need for alternative sources of energy production to avoid detriment to global consumption and the natural environment.

Ahmad Al Azzam, from the International Technical Assistance Consultants, who works with renewable energy sources in Jordan, presented on "The Jordanian Energy Position." He discussed the energy dilemma in Jordan and the challenges the country faces with the current debt, the high cost of imports, and the growth in energy demand. Limited local energy resources require Jordan to secure its economic future by turning to alternative renewable energy sources. With comparison and analysis of alternative energy sources, Azzam suggested that Jordan should pursue energy production from solar and wind power to end dependency on oil imports and production, in order to ensure future sustainability.

Panel 2 Security Challenges – Impact on Energy and Oil Supplies

Jennifer Giroux, a senior researcher at the crisis and Risk Network (CRN) for the Eidgenoessische Technische Hochschule,

Zurich, Center for Security Studies (CSS), opened the panel speaking about energy infrastructure attacks. Giroux highlighted the importance of understanding different factors and trends in attacks, and overviewed the Energy Infrastructure Attack Database (EIAD) as well as highlighting other regional models in the case of Columbia, Nigeria, and Iraq.

Gal Luft, the executive director of the Institute for the Analysis of Global Security (IAGS), quoted the relatively low dependence of the United States' on Middle East oil. He then continued his presentation by outlining resource exploration on the Israeli side. He highlighting the Mediterranean Project, a venture in which sub-sea natural gas has been discovered in promising quantities. Luft predicts that this project has the potential to "strengthen regional energy security cooperation."

Ahmad Shikara, researcher at the Emirates Center for Strategic Studies and Research, emphasized that the Middle East must have a multilateral strategy on energy security, taking the United States' strategic pattern as an example. Shikara concluded his presentation by emphasizing the economic dependence of most Middle East states, and suggested that economic interdependence may contribute to a solid multilateral approach to energy security in the region. The meeting sparked discussions within the forum as participants juxtaposed Shikara's presentation with that of Luft.

May M. Chen, a researcher fellow at the Institute of Chinese Communist Studies in Taipei, concluded the panel discussions by comparing the security threats in China with those in the Middle East. Chen quoted that China imports 50% of its oil from the Middle East, and noted that China's rapid economic growth relies heavily on energy

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consumption. Chen concluded that security of supply from the Middle East is a "core issue" for Chinese diplomacy. The instability in the Middle East due to tensions with the West, terrorism, and regional conflicts, has led China to closely engage with Middle Eastern states and foster relationships that will secure continuity of supply.

Panel 3: Renewable, Non-Conventional Energy Resources and Inter-relation with water

The panel discussion was moderated by **Salah Azzam**, head of the Energy Research Program, who focused on alternative energy, oil and natural gas imports. He emphasized that Jordan's dependence on imported natural gas and oil can not sustain the rapid increase of energy demands and commended Jordan's planned shift toward the employment of wind and solar energy by the year 2020. He also discussed plans to generate 30-50 MW of biomass energy.

Rula AlAsir, the founder of Alsir Architects-Sustainable Solutions, talked about the importance of taking into consideration the improvement of architectural design and building structures. To demonstrate, she addressed the wind catcher model to cool office buildings in Amman, and concluded that the implementation of these architectural designs have the potential of significantly reducing energy consumption during the summer months.

Panelist **Dia El Quosy**, advisor to the Minister of Water Resources and Irrigation in Egypt, discussed political obstacles of obstructing the generation of hydropower in Nile countries. However, he explained how fears of water resources and energy being concentrated in a single Nile country, could be alleviated through energy sharing agreements. Prof. El Quosy referred to ongoing tensions in water sharing agreements between some countries within

the Nile basin, noting that the disruption of water sharing agreements will have considerable impact on the water security and energy security systems in Egypt as well as North Africa.

Finally, **Benyoucef Boumediène**, chair of the department of Physics at Abou Bekr Belkaid University in Tlemcen, Algeria, discussed the potential energy production through solar energy. He presented the great opportunities in Algeria for solar production, noting the German Space Agency concluded that Algeria has, "The most important solar potential of the Mediterranean basin." He also talked about how the of creation of solar energy production benefits domestic needs, eliminates greenhouse gas emissions, and lessens dependency on unpredictable oil prices. The Algerian speaker described the necessary steps needed reach the goal of creating sustainable solar energy in the region.



Rula Al Asir explains the wind catcher model.

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Panel 4: A Jordanian Perspective – Energy Security, Supplies and Statistics

Panel four convened on the second day of the meeting and was moderated by **Eng. Marwan Baka'in**, director of the Department of Natural Gas. Mr. Baka'in focused specifically on the challenges Jordan is facing with regards to energy security and the strategies that are being employed to tackle them. He explained that diversifying the sources of the natural gas imports, on which Jordan relies so heavily, is central to the Government of Jordan's energy plan. Particularly in light of the recent insecurity of consistent natural gas supplies from Egypt, he pointed attention to a project proposal to install a liquid natural gas (LNG) terminal at the Aqaba seaport.



From left: **Eng. Marwan Baka'in**, **Kholoud Mahasneh** and **Mazen Khalifa**

Hazem M. Al-Ramini, of the Jordanian Petroleum and Oil Shale Directorate, described the Government of Jordan's strategy to develop the country's oil shale resources. The strategy focuses on licensing land to developers interested in exploring the oil shale options. Though developing the technology for shale oil production is costly, Hazem Al Ramini pointed out that the money will remain within Jordan, while continuous oil imports weigh heavily on the national economy. Engineer Ramini touched upon the rehabilitation of oil shale mines following a typical exploration process.

Mazen Khalifa, National Energy Coordinator at the Department of General Statistics, made a point that good policy depends on good information and the accuracy of working statistics. He underscored the weight of Jordan's economic burden due to energy imports by quoting that oil makes up 19.2 % of Jordanian imports, and that renewable energy constitutes only 1 % of local productions. With energy demand on the rise, he says that a sustainable energy strategy is vital.

Kholoud Mahasneh, director of the Industrial Energy Department in the Ministry of Energy and Mineral Resources in Jordan, spoke about the "Energy Master Plan" designed to improve Jordan's infrastructure for the cost efficient transportation of imported crude oil. The analysis suggests that transportation by road is relatively expensive as well as environmentally damaging. Pipelines from Saudi Arabia and Iraq, though relatively cheap, incur high security risks. Mahasneh concluded that a railway line from Aqaba to Zarqa would be the most desirable option for the domestic transportation of crude oil imports.

Panel 5: Legal and Legislative Aspects

The panel was chaired by **Patrice Dreiski**, senior expert at the Energy Charter Secretariat in Brussels. He gave an overview of the legal framework of the Energy Charter and the four pillars of the treaty: Trade (the promotion of international energy trade through World Trade Organization guidelines), Transit (facilitating cross-border energy transfers), Investment (protecting existing investments and generating an environment favorable to further international investments in energy infrastructure and trade), and Energy Security (reducing the risks associated with energy investments and trade). Dreiski emphasized that international cooperation in

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energy security and encouraged Middle Eastern states to ratify the treaty in order to benefit from it.

Aiman Salama, an international law expert from Egypt, addressed the threat of piracy and armed robbery to transportation vessels off the coast of Somalia and in the Gulf of Aden. The security of maritime and its defined routes have a direct impact on maintaining energy security (both regionally and globally). Salama addressed the growing piracy managed by Somali operatives and indicated that the problem lies in the legal definitions and approaches. Salama emphasized the importance of dealing with the problem as an international crime.

Alexis-Peter Von Cramm concluded panel discussions with a presentation on DESERTEC, an industrial initiative which seeks to foster international collaboration in sustainable energy production and energy transportation to consumer centers. It focuses on collecting solar, wind, and biomass energy in places of high availability and relaying it to places of high demand. By 2050 DESERTEC hopes to significantly reduce global carbon dioxide emissions. Von Cramm addressed the obstacles that this initiative faces, which include intricate diplomacy issues as international cooperation is central to the project.

Panel 6: Regional and International Models

The final panel was chaired by **Fayez Al Batayneh** from the Jordan Ministry of Water and Irrigation. He spoke about the importance of the Dead Sea, threats to its extinction, and a proposed course of action to sustain and rebuild its ecosystem. He highlighted the historical significance of the Dead Sea region and the unique tourist economy as well as outlining important research being conducted there. The speaker concluded that the development of

a Dead Sea-Red Sea water channel would be the ultimate solution to save and sustain the Dead Sea.

Arzu Celalifer Ekinci, a researcher at the International Strategic Research Organization based in Ankara, explained the importance of pipeline protection, particularly in transit countries such as Turkey, that make up what Ekinci called an "energy corridor." The total length of natural gas and oil pipelines in Turkey adds up to 22,000 km, which leaves the Turkish energy infrastructure vulnerable to terrorist attacks and illegal tapping. In Turkey, Ekinci reported, the Gendarmerie is charged with protecting the pipelines and mans stations along the length of the pipelines to alleviate the threats. Ekinci talk on pipeline protection coincided with a reported attempt to sabotage a petroleum pipeline crossing via Turkish and Iranian borders.



Arzu Celalifer Ekinci introduces her working paper.

Khalid Al Walidi, an electrical linking expert, presented a model that links Iraq, Libya, Egypt, Turkey, Syria, and the Palestinian Authority among others through electrical grids. He proposed that this would alleviate the energy production load for individual countries, but points out that the project depends on international and political cooperation between the countries of the Middle East.

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Closing remarks:

Martin Beck and **Ayman Khalil** closed by thanking the speakers and participants, and by again reiterating the importance of the diverse perspectives on Energy Security discussed at this conference.

They highlighted important ideas developed throughout the discussion, including (but not restricted to) the following:

- Energy security is an important factor in a comprehensive security system (regionally and locally)

- Proposals of developing inter-state cooperation to provide sustainable petroleum and gas supplies are highly welcomed. The organizing committee will be studying possible means to promote such concepts, taking into consideration logistical arrangements as well other measures

- The organizing committee will study the prospects of establishing an Iraq-Jordan

pipeline as well as developing a security impact assessment of such a facility

- Conference committee examined proposals of utilizing ongoing explorations and newly reported gas fields within the Mediterranean basin. The committee encourages the settlement of regional and boundary disputes, in accordance to regional understandings and in consortium with international law, prior to utilizing these gas fields

All participants commented positively on the quality of the training, the efficiency of the trainer, as well as the organization of the workshop.

The workshop was covered by one of the leading newspapers in Jordan, Al Rai Newspaper, under the link:

http://www.alrai.com/pages.php?news_id=414796