



Concept paper for the Rome 2009 conference
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ENERGY, ENVIRONMENT AND THE FUTURE OF SECURITY IN CENTRAL ASIA

Understanding the Security Implications of Critical Energy and Environmental Issues

1) Goals and Objectives

This two-day conference will be held in Rome (Italy) on October 15th and 16th 2009. It organized by the Gino Germani Research Center (Rome) and Link Campus University (Rome), and is sponsored by the US Department of Energy and the Italian Ministry of Foreign Affairs¹.

The event will involve 35 participants from different cultural backgrounds and with diverse types of expertise. Experts from Central Asia, Russia, China, Europe and North America will be invited. Participants will be from governments, academia, think-tanks, NGOs, and the business community.

The overarching goal of the conference is to enhance decision-makers' knowledge and understanding of how developments in Central Asia's energy sectors and environmental systems will affect the region's future security and stability².

Deep knowledge of the potential security-related consequences of energy and environmental forces will enable business and government leaders, within and outside the region, to make better policy decisions as well as to understand emergent risks before they become serious threats, and thus to avert possible security disasters.

The specific objectives of the conference are the following:

- To develop a broader, systemic picture of Central Asian security dynamics by exploring the interactions and interdependencies between energy and environmental factors and other issues that will shape the region's future security environment.

¹ The event is part of a broader project that aims at developing a "Eurasia Strategic Foresight Network" (see section 4 of this document).

² We adopt a broad concept of security, which includes both "hard" threats (military, insurgent or terrorist challenges to the state) and "soft" threats (economic, political, environmental, and societal security issues). The need to widen the concept of security has been increasingly accepted in recent years.

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- To analyze possible positive and negative energy and environmental scenarios for security and stability in Central Asia, and to identify indicators of such scenarios.
 - To define potential security consequences for countries beyond Central Asia of a substantial destabilization of the five Central Asian countries.
 - To identify new questions that have not been raised by expert communities and new ideas for interdisciplinary research.
 - To assist in building bridges between different expert communities that deal with Central Asian issues but are not generally well connected to each other.

The conference will adopt a holistic and integrated systems approach that blends specialist knowledge and insights within a customized and facilitated process of strategic inquiry and conversation. This process will emphasize a forward-looking exploration of the significance of critical certainties and areas of uncertainty, including extra-regional developments - such as those in China, Russia, Iran, Africa, and Europe - for the future of the Central Asian region.

Ultimately, this process, which will involve on-line sharing of research and proposed topics for strategic inquiry in advance of the conference, is expected to generate strategic insights that will be useful for government and business-sector policy makers around the world and in Central Asia itself.

The conference itself will emphasize a blend of speaker presentations and interactive group work involving all participants; the ensuing strategic dialogue is expected to inform the outputs of the conference.

2) Background

There is an increasing awareness that developments in energy sectors and environmental systems can have far-reaching implications for the security and stability of nations, regions and the international system. However, decision makers often lack sufficient knowledge and understanding regarding the security consequences of energy and environmental developments. This knowledge gap also applies to Central Asia, a region whose future security will be profoundly affected by energy and environmental issues.

Energy issues will affect the security of countries in the region in a variety of ways. The region has significant reserves of oil, gas, and uranium. Kazakhstan, Turkmenistan and (to a lesser extent) Uzbekistan have large oil and gas reserves, while Kyrgyzstan and Tajikistan have large untapped hydropower resources. The exploitation and export of these energy resources will be crucial for the economic development of Central Asian countries. How these energy resources will be exploited and exported - and how revenues will be used – will have important security implications for Central Asian countries. The development of energy resources could enhance stability and security of these countries or could produce instability and internal or intra-state conflict.

Environmental factors are also set to play an extremely important role in shaping the region's future security. Central Asia suffers from the horrific environmental legacy of the Soviet Union, and all of the countries in the region face an array of formidable environmental security challenges. The major threats to ecological security in the region are: (a) increasingly serious problems of water scarcity; (b) soil erosion and degradation; (c) severe problems of water pollution; (d) high levels of radioactive contamination³; (e) air pollution due to industrial activities.

One of the most telling examples of Central Asia's ecological disasters is the environmental devastation and collapse of the Aral Sea's eco-system which derived from the shrinking of the sea to almost half its original size. The Aral Sea crisis has produced significant economic and societal stresses including multiple threats to human health⁴.

Critical developments in energy sectors or environmental systems could have destabilizing impacts in Central Asian nations and could even trigger massive security crises such as interstate or internal wars, internal political upheavals, mass radicalization, inter-ethnic violence, the collapse of local and national economies, the spread of epidemic diseases, and public health disasters provoked by the loss of control over nuclear materials and nuclear waste.

There is thus a great need for developing a broader, systemic view of how energy and environmental forces interact with other factors (such as state weakness, ethnic tensions, socio-economic distress, corruption) to shape Central Asia's security dynamics.

³ Central Asia was the nuclear weapons testing ground during the Soviet era. The radioactive threat also stems from uranium waste sites set up during in Soviet times, when uranium was mined in the region for use in the Soviet nuclear arsenal.

⁴ The Aral Sea's Vozrozhdeniye Island's role in the Soviet era as a site to produce and test biological weapons increases potential threats to human health.

Expert communities that deal with Central Asian security affairs do not develop such systemic knowledge because they tend to focus on specific issues within their areas of specialization and are not well-connected with other expert communities that focus on different issues. For example:

- Western experts dealing with Eurasian energy security focus mostly on the “new great game” being played over issues of Caspian energy resources: the competition between external actors (Russia, China, USA, Iran, Turkey, Pakistan) over access to and influence over the region’s energy resources. Most analyses conducted by these experts concentrate primarily on the potential contribution of the region to Western and European energy security as well as on the oil and gas export routes supported by the various states competing in the region⁵.
- Experts on Central Asian national security issues usually adopt a traditional concept of security that emphasizes “hard” security threats (military, insurgent or terrorist challenges to the state) and traditional geopolitics. This approach underestimates the importance of the numerous “soft” security challenges that affect the region, such as threats to political, economic, environmental and societal security.
- The expert community that focuses on the economic and social development challenges facing the region do not usually explore the connections and interactions between such challenges and security problems. These specialists do not usually look at developmental issues (such as economic growth and diversification, poverty and socio-economic inequality, problems of health care and educational systems, etc.) through the “lens” of national and international security implications.
- Environmental experts also do not usually adopt a security perspective when they analyze the region’s problems of ecological degradation, resource scarcity and radioactive contamination. Although it is widely recognized that Central Asia’s environmental stresses may potentially destabilize relations between states in the region and may trigger domestic instability and conflict, this expert community focuses mostly on the ecological stresses themselves rather than on their security implications.

The following are some examples of emerging issues regarding security impacts of energy and environmental forces in the region. These issues are still not well understood and will require much more interdisciplinary dialogue and research.

⁵ Much less attention seems to be devoted by the “energy security” expert community to issues regarding the implications of energy exploitation and competition for the security and stability of Central Asian countries themselves.

A) The impact of energy revenues on economic development, political stability and the governing capacity of states.

Energy revenues will bring both opportunities and dangers for the security and stability of Central Asian countries. Some analysts assume that energy exploitation and revenues will stimulate the economic development of the hydrocarbon-rich countries in the region and will enhance their political stability. But this remains an open question.

Critical questions that need to be addressed are: (I) Will the revenues being generated by the energy sector strengthen the stability and security of Central Asian countries or will they create internal conflict and instability or interstate tensions? (II) Will the post-soviet states of the Caspian region manage to escape from the “resource curse”⁶? (III) Will energy revenues enhance the governing capacity of states in the region or will increasing energy sector-related corruption weaken state capacity⁷?

B) The environmental security consequences of oil and gas production and potential implications for social and political stability.

Large-scale exploration, refining and export of oil and gas create additional environmental stresses in a region already facing enormous ecological security problems. At the same time Central Asian countries will necessarily have to exploit their energy resources in order to generate much-needed capital and foreign investment to develop their economies.

The negative environmental and health impacts of oil and gas production, particularly in a sensitive area such as the North Caspian Sea, will affect significant numbers of people. Some key questions related to this issue are: (I) How will these environmental stresses affect ecological and human security? (II) Which areas and population groups would be most affected? (III) Could such stresses have serious negative impacts on local economies and increase the potential for social unrest?

C) Security implications of water scarcity and of the energy-water agriculture nexus.

The tension over water resources – pitting the upstream states (Kyrgyzstan and Tajikistan) against the downstream states (Uzbekistan, Kazakhstan and Turkmenistan) - is a factor that could destabilize interstate relations in the region⁸

⁶ Some observers argue that several countries in the region are showing signs of the “resource curse”: the tendency of many energy-rich countries to develop distorted and unstable economies and to waste energy revenues on corruption, acquisition of advanced weapons, and the expansion of security forces to protect the ruling élites from any challengers.

⁷ State-building and consolidation of sovereignty are a primary priority for the ruling élites in the region. State weakness and weak governing capacity are problems that affect, to varying degrees, all five countries in the region, and overcoming these problems is a key issue in the region’s security agenda. It is well known that high levels of corruption are one of the factors that undermine the efficiency and functioning of these states.

⁸ The glacial water resources in the region are located geographically in the more impoverished states (Kyrgyzstan and Tajikistan), while the other three Central Asian countries (Uzbekistan, Kazakhstan and Turkmenistan, all well-

The three downstream countries are strongly opposed to the upstream countries' hydropower development projects because hydropower stations keep back the waters of Central Asia's two great rivers - the Syr Darya and the Amu Darya – in the summer, when the downstream countries need water for agriculture.

The important security questions that are emerging in relation to this issue include the following: (I) As water scarcity problems in the region will probably worsen because of climate change, could water issues trigger interstate conflict or domestic political upheaval? (II) Could tensions over the energy-water-agriculture nexus between upstream and downstream countries escalate into an armed conflict?

D) Security challenges and risks associated with Central Asia's anticipated expansion of uranium production and export.

Global interest in nuclear power is increasing. Uranium-rich Central Asia may be poised to play a central role in the global energy system's move toward nuclear power by becoming one of the world's leading uranium-producing and exporting regions. Kazakhstan, in particular, is looking to become the world's largest uranium exporter and to rapidly expand its nuclear industry⁹.

The security risks associated with Central Asia's expansion of uranium production raise important questions: (I) What will be the impact of such expansion on environmental and human security (given the significant threats of radioactive contamination that already affect the region)? (II) Would an increase in uranium mining entail greater non-proliferation risks¹⁰? (III) Given widespread public opposition to nuclear activities in some Central Asian countries, could ambitious plans to develop the nuclear industry trigger social unrest and political instability?

E) The impact of energy competition among external actors on security and stability

Competition for the region's energy resources and pathways among external powers (Russia, the United States, China, Turkey, Iran, India, Pakistan, Japan) is intensifying. The "new great game" over access to Caspian energy resources will shape

endowed with fossil fuel energy resources) are downstream. Due to unpaid fuel and electricity debts by the upstream countries, the downstream countries stop supplying fossil fuels to Kyrgyzstan and Tajikistan, leaving the latter without electricity and gas, often during the winter.

⁹ Increasing Chinese involvement in the exploitation of Central Asia's uranium resources is noteworthy. A recent example is the agreement reached by KazAtomProm (Kazakhstan) and Guangdong Nuclear Power Group Holdings (China) for the joint development of uranium resources, production of nuclear fuel, long-term trade of natural uranium, nuclear power generation and the construction of nuclear power plants.

¹⁰ Counterterrorism analysts foresee that in the coming years terrorists could shift their focus to Central Asia, given the significant deposits of uranium ore they contain. Inadequate security for over 100 metric tons of waste at uranium storage facilities, tailing and mining dumps in numerous sites in Kyrgyzstan, Uzbekistan, and Tajikistan is a serious security threat and a potentially massive public health disaster.

the regional strategic environment for years to come and will affect, in both positive and negative ways, the Central Asian's states' quest for stability and development.

A number of questions arise regarding the consequences of energy competition for security and stability in the region. For example: (I) Given that energy competition is often supported by military capabilities (transfers of arms and sensitive technologies by energy consuming to energy-producing states), could such competition heighten tensions between Central Asian states? (II) Could rivalry over access to energy resources among outside powers escalate into large-scale armed struggle?

3) Tentative Conference Agenda

The conference design will emphasize a mix of speaker presentations and interactive discussion focused on strategic questions for the Central Asia regions. The number of panels and their topics below are merely illustrative of the types of topics that may be explored at the event.

➤ **Panel One**

Two speakers will offer an overall view of emerging energy and environmental security trends in Central Asia and how they will affect the region's future strategic environment and security challenges. The security implications for the region of evolving energy competitions between external actors will be addressed by the speakers.

This panel will provide a broad picture of geopolitical and security dynamics in the region that will be useful for the subsequent discussion of specific issues.

➤ **Panel Two**

Two speakers will address new developments regarding the impact of energy exploitation and revenues on the stability and governing capacity of Central Asian states. The challenges of overcoming the "resource curse" and the links between energy and conflict will be discussed.

Breakout groups will discuss possible scenarios and provide insights on trends in different countries of the region.

➤ **Panel Three**

Two speakers will discuss emerging environmental threats that stem from large-scale exploration, refining and export of oil and gas, as well as their potential consequences for economic security and socio-political stability.

Breakout groups will explore the security implications and identify critical developments in each of the Central Asian countries.

➤ **Panel Four**

Two speakers will point out several positive and negative security scenarios associated with the energy-water-agriculture nexus, including possible near-term destabilizing impacts of climate change on regional stability.

Breakout groups will analyze the scenarios, their implications for different countries of the region and the connections between this issue to other security challenges.

➤ **Panel Five**

Two speakers will highlight security impacts of new developments in Central Asia's uranium sector and nuclear industries. Impacts on environmental security, political stability and non-proliferation challenges will be discussed.

Breakout groups will discuss this issue and its implications for the region and each of its countries.

➤ **Conference conclusions**

Participants will summarize the results of discussions, identify possible positive and negative energy and environmental scenarios for security and stability in Central Asia, propose new questions that have not been raised by expert communities and new ideas for interdisciplinary research.

4) Outline of the "Eurasia Strategic Foresight Network" project

The conference described above is part of a broader project that aims at developing a "Eurasia Strategic Foresight Network": a platform for providing foresight on the security implications of energy and environmental factors in Eurasia.

The goal of the project is to contribute to the development of a network of experts committed to enhancing strategic knowledge and warning capabilities regarding critical Eurasian energy and environmental security issues as well as the impact of such issues on other security challenges in the region.

Three workshops are planned for 2009-2010: the first one (outlined in the present document) on energy, environment and future of security in Central Asia.

An online presence of the "Eurasia Strategic Foresight Network" will be set up. The website will contain the following materials: (a) analytical documents produced by think tanks and experts; (b) comments on critical energy developments in the region; (c) basic information on think tanks around the world specialized in energy, environment and other security issues in Eurasia; (d) online discussions among experts.
