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Central Asia Nexus Dialogue Project: Fostering Water, Energy and Food Security Nexus Dialogue and Multi-Sector Investment in Central Asia

From a series of papers on the Nexus approach to achieving water, energy, food and environmental security in the Central Asia

First Paper: **introduction to Nexus**

THE NEXUS APPROACH: BACKGROUND

Modern global trends, related to the economic growth, population growth, urbanization and changes in the structure of consumption shall objectively result in the increased consumption of water, energy and food. An increasing demand in the ecosystem services, related to water and land, accompanied by an increasing pressure upon the environment, and complicated by the climate change factor, has long been of concern for the researchers and managers. The need for the individuals, making decisions in optimal methodologies and tools, which make it possible to assess not only compromises, but also benefits of the synergies in the management of natural resources, has always been high. At the same time, scientific and practical research has not always been able to meet this demand, especially in the developing countries.

In particular, theoretically and methodologically, the issue of a transition to the systemic or, so-called, integrated management of water resources was reflected in the Dublin Declaration adopted at the International Conference on Water and the Environment back in the year 1992. Thus, one of the principles of the Declaration proclaimed the importance of a mass participation approach in the development and management of water resources, and laid

the foundation for understanding the interconnections between all types of water use in the context of socio-economic development and environmental sustainability. The next significant step in promoting the issue of the management of natural resources in its interconnection with the economic growth and provision of basic services to the people of the developing countries was the adoption of the eight Millennium Development Goals (MDGs), elaborated in the UN Millennium Declaration in the year 2000. Although this framework decision was not fully implemented, it allowed the new partnerships to be created and the enormous importance of setting large-scale goals, based on the intersectoral cooperation, to be demonstrated.

The global financial crisis of the first decade of the 21st century, which triggered the food and energy crises in the developing countries, gave the world community pause for thinking of the need to adopt the interrelated solutions, beneficial for the main sectors of economy toward achieving of water, energy, food and environmental security.

In several years, various scientific research papers, thematic discussions and events led to an understanding of the need to consider the issue of interconnection on the both research and political levels. As a result of this process, the International Conference “The Water, Energy and Food Security Nexus: Decisions for the Green Economy”, held in Bonn on November 16-18, 2011, designated the water, energy and food sectors as the sectors with the greatest potential for mutually beneficial cooperation. At the same



time, water was considered as the central element of the WEF Nexus (Fig. 1), being under the effect of global trends and requiring support measures.

Thus, the so-called WEF Triangle formed the basis for all subsequent studies of the existing Nexus interactions at the global, regional, sub-regional, national and local (basin) levels. Such international organizations as the European Union (EU), the United Nations Economic Commission for Europe (UNECE), the United Nations Environment Program (UNEP), the United Nations Food and Agriculture Organization (UN FAO) analyzed the Nexus in the context of their mandate and, accordingly, analyzed therein additional elements. For example, the UNECE and, subsequently, UNEP considered ecosystems as an essential element of the Nexus. In this case, the ecosystems and the services provided

thereby were considered as a basis for ensuring water, energy and food security. At the same time, the World Business Council for Sustainable Development (WBCSD) analyzed the WEF security in conjunction with such components of business production as biomaterials, fibers and seeds.

In the year 2015, the UN Sustainable Development Goals, which have replaced the Millennium Development Goals and embraced the whole world, have designated the intersectoral cooperation, coordination and partnership within the countries and regions, as one of the main factors for their achieving. Thus, the concept of sustainable development, which stipulates the synergy of economic, social and environmental factors, has found its practical reflection through the interdisciplinary approach and tools.

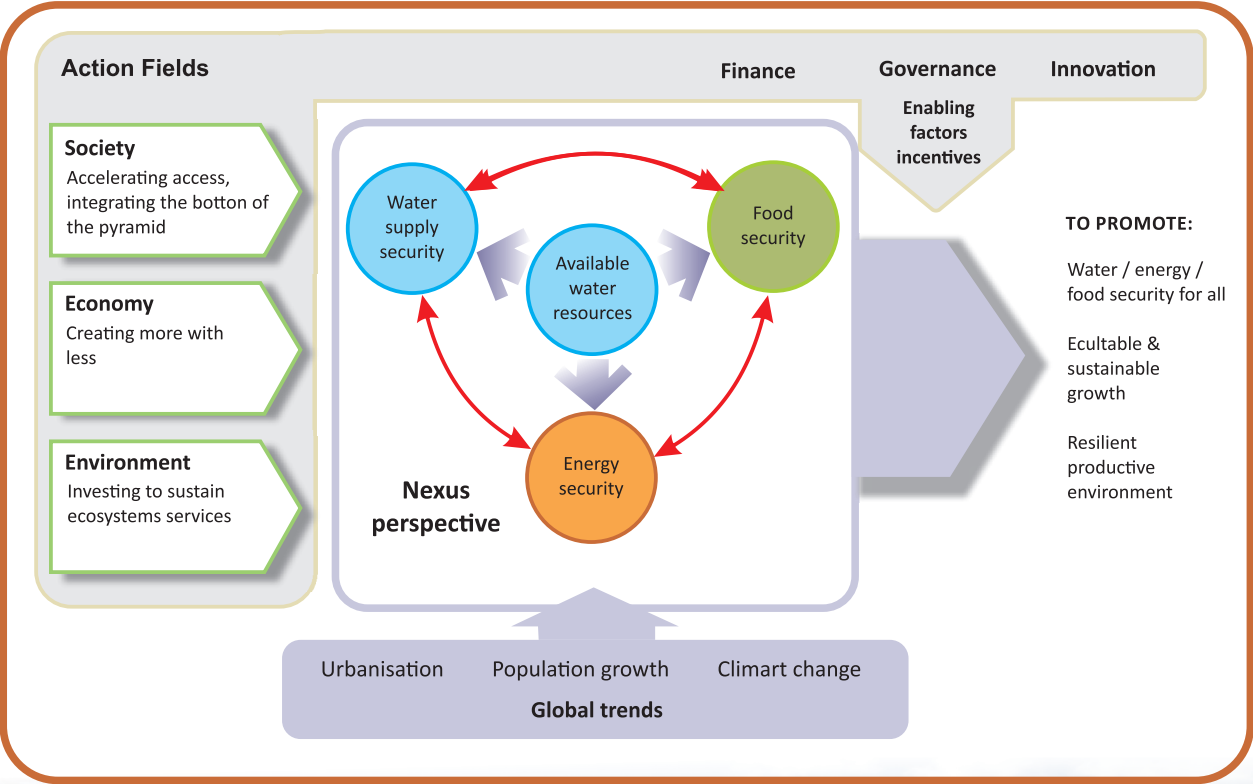


Fig. 1. Prospects of the Water, Energy and Food Security Nexus.

Source:
The Background paper for the Bonn 2011 Nexus Conference:
The Water, Energy and Food Security Nexus, 2011.