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**Eurasian Programme “Green Bridge”:
Opportunities for Regional Security and Development**

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1. The issues of energy security in Central Asia (CA) are intertwined with the issues of water resources. Up to 90% of all water in the region is spent on irrigation. Obsolete technologies, low (sometimes as low as zero) tariffs, very poor water control and the failure to take into account environmental needs have led to the ecological tragedy of the Aral Sea. Consequences of the social and economic crisis related to the death of the Aral Sea are felt across a broad spectrum. Nowadays only a few shallow lakes remain in the place where a sea once was (foto).



2. Environmental consequences of the catastrophe are having an ever greater impact on the economic development and energy security by way of worsening productivity, reduced cost-effectiveness of economies, and growth of poverty, migration and political conflicts between up-stream and down-stream countries.

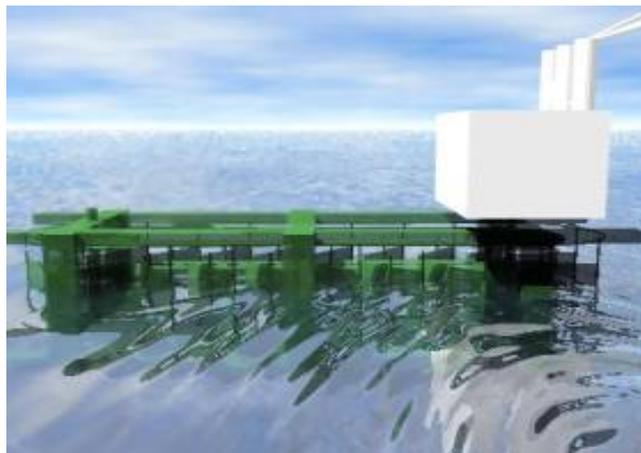
3. One of growing regional problem is the energy crisis in the countries. Back in the Soviet Era there were interrelated water and energy infrastructure and a developed communication network. The single management system had a scheme of regional water division and energy exchange. Geopolitical changes have broken the previous scheme, energy infrastructure was left without investments and the legislative and regulatory framework was not updated. The countries faced a real threat of food and energy crisis.

4. Kyrgyzstan and Tajikistan are the two countries suffering from the most pronounced problems related to the energy crisis. As a response to these problems Tajikistan adopted the Plan of actions to alleviate the emergency in the energy sector. Kyrgyzstan also adopted a Plan of actions to overcome the energy crisis and a Response plan for the winter period.

5. Having said that, all CA countries are blessed with significant energy reserves. CA region could potentially satisfy up to 71% of its energy needs by using hydro power only. Economically viable hydropower potential is estimated at 524 MW¹.

Countries	Hydro Electric Potential	Installed Capacity
Kazakhstan	27000	8861
Kyrgyzstan	163000	10778
Tajikistan	317000	15086
Uzbekistan	15000	7278
Turkmenistan	2000	No data
Total	524400	42598

6. According to a report by the World glacier monitoring service, glacier area in the Tian-Shan mountains shrank by 35% by the end of the 20th century. Beginning in 1970s glacier melting accelerated significantly thus increasing water run-off to the Aral Sea basin but at the expense of significant and lengthy water deficits in the nearest future. This scenario is a threat to the development prospects of the “big” hydropower industry and water supply as such. In these circumstances developing small and sustainable hydropower plants, wind, solar and other renewable sources of energy appears to be a more perspective line of work in the CA countries in the long term. Renewable energy potential in the CA region significantly exceeds its current needs. Ever greater opportunities open up in relation to new technologies, for example, dam-free HPPs (http://www.youtube.com/watch?v=1A10wi7n_SQ).



7. But now up to 90% of energy used in Uzbekistan, Kazakhstan and Turkmenistan is produced using coal, oil and natural gas whereas the GHG/USD of output is one of the highest in the World (water and energy productivity). This means that there are great opportunities for the use of carbon credits and private investments for sustainable use of water and energy.

8. The Aral Sea crisis is a governance crisis that affects countries beyond CA. Water resources are no longer sufficient to satisfy the needs of the economy and the population. In the meantime the population of CA continues to grow and the potential for conflicts will certainly grow in the circumstances of climate change given the current policies persist. Finding a way out of this crisis would only be possible through joint efforts and principally new approaches (governance).

9. However regional cooperation in CA in its current format is facing ever more challenges. The states have intensified their national survival strategies at the expense of concerted cooperation. Upstream countries such as Kyrgyzstan and Tajikistan are beefing up their hydropower capacity whereas downstream countries (Turkmenistan, Uzbekistan and Kazakhstan) are building additional reservoirs. Quite naturally, disconnected (energy and water) strategies cost far more than common and mutually beneficial actions and in the long term do not address the issues of joint use of transboundary water and energy.

¹ Regional Water Intelligence Report Central Asia, UNDP, SIWI, 2010

10. The Aral Sea catastrophe is a tragic and unique phenomenon in the contemporary history of human kind in that humans gradually destroyed one of the largest internal lakes on the face of the Planet. However no any lessons were learnt from this catastrophe: current water policy remains the same despite some modern terminology in it (partnership, public participation, IWRM). The pursuit of environmental objectives and accounting for the interests of water users in real conditions are not supported by the existing legal, institutional, economic and other mechanisms. This is why similar processes of economic degradation are taking place in other basins: Caspian basin – one of the main sources of oil and sturgeon, Ili-Balkhash basin including China – the largest lake ecosystem on the Planet (its area is larger than the UK, Denmark, Switzerland, Holland and Belgium all together).



11. To change the current situation the Central Asian countries are taking some measures. For example, Kazakhstan proceeds to develop a national comprehensive plan for energy efficiency, which will require changes in legislation, management systems, economic and administrative instruments. However, the problems require immediate solutions. In these circumstances one pins some hope on the assistance of the progressive international community whose role and influence on the national policies are increasing with every passing year. One of the conclusions of the Dushanbe international conference on fresh water (2003) is the following: to support transboundary cooperation a special role must be played by international organizations that ensure trust, international expertise and technical support. Currently not a single country may pursue an isolated policy if it does not serve the interests of the society at large. This is why progressive changes in the water and energy relations in CA are closely related to strengthening international cooperation. Kazakhstan proposed to sign the Energy Charter with the EU for stable energy supplies and the adoption of the Stability Pact in the Caspian Sea, as well as initiated the Global Agreement on Nuclear Safety. It is obvious that the practical solutions of these growing problems require joint and concerted efforts of the entire region.

12. Countries which are not part of the basin but are nevertheless political or trading partners and importers of such products as energy commodities, rice, cotton, metals and other water-intensive products from CA are also interested in strengthening regional cooperation. According to the expert opinion of A.K. Chapagain (UNESCO, The water footprint of cotton consumption) the EU countries as importers have contributed at least 20% to the ecological catastrophe of the Aral Sea. According to www.waterfootprint.org the water footprint of Japan is 1150 m³ per person of which 65% include water resources consumed outside of the country. More than half (53%) of the water footprint of Germany is also in other countries. Similar indicators exist for other EU countries: France – 37%, Italy – 51%, Spain – 36%. Using the methodology of calculating “virtual water” (contained not only in the final product but also consumed in the process of its production, including water for diluting waste waters) and the “water (and energy) footprint” methodologies make it possible to take a new look at the issues and prospects of regional cooperation and energy productivity. This approach makes it possible to develop mutually beneficial mechanisms of regional cooperation and international trade for a more efficient use of resources, such as water and energy, transfer of clean technologies and investments with minimal corruption element².

² Prof. Renat Perelet, Dr. Bulat Yessekin «Virtual water for water-saving and Protection of water-related ecosystems

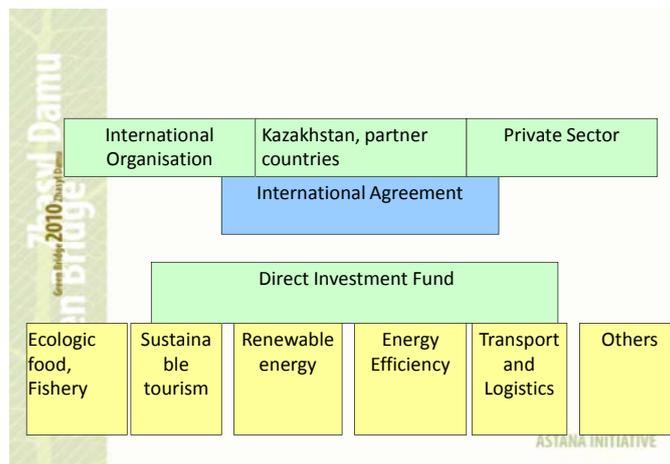
13. At the same time one needs to take into account that a weakness of the existing international programs is their short-term (project-based) nature of financing and risks of fragmentation dependent on the limited authority and narrow (political) interests of organizations. Establishment of multilateral and long-term partnership with the involvement of countries, international organizations and the private sector would help overcome all of the above problems. Furthermore practical experience of water and energy cooperation in CA shows that problems must be addressed within broader frameworks – in the format of Pan-European and Eurasian programmes where the interests of one party would not dominate or block cooperation. Furthermore the capacity and the participation of the EU, Russia, China, US and other countries could make a contribution in the form of the currently missing platform for cooperation and trust. This approach satisfies the contemporary realities and it would be beneficial for the entire global community and common goals of regional security and development.

14. This is why at the OSCE Summit President of the Kazakhstan Nursultan Nazarbayev made a proposal to create a Euro-Asian partnership (the Green Bridge Programme) to develop new mechanisms of cooperation and form a new economy for the future – a green economy. This proposal has already been politically supported by Asian and the Pacific countries (http://www.unescap.org/esd/mced6/documents/final_documents.asp), and included in the agenda of the upcoming 7-th Pan-European Ministerial Conference “Environment for Europe” (September 21-23 2011, Astana) <http://www.unece.org/env/efe/Astana/welcome.html> focusing on the issues of water and the green economy. A concept of the future programme has already been developed and proposals in relation to its content and mechanisms of coordination are being sought. Adoption of the Green Bridge partnership programme will create opportunities for all stakeholders in the issues of European and Asian security to create a new and more solid and more effective political and institutional platform for long-term and mutually beneficial regional cooperation.

15. Asian and the Pacific Initiative should result in a long-term program with a package of investment projects related to the development of the Green Economy. We assume that at the next Pan-European conference in Astana the countries participating in the Programme will also adopt a special agreement to create favorable conditions for public and private investments and new technologies necessary to develop renewable energy, sustainable production and consumption and other areas of sustainable business in line with the future Green Economy.

16. Projects to support the Green Economy should include not only the transfer of new technologies and development of energy efficiency, but also the creation of a regional cooperation and Eurasian renewable energy market. According to many international organizations, in Kazakhstan, as in other CA countries, there is great potential for the production of renewable energy sources exceeding the needs of these countries. It makes no sense to burn oil and coal, where they can be replaced by renewable sources. Developed at the present time, the Eurasian Programme "Green Bridge" could for create such a new market all the necessary legal and institutional conditions.

17. To support the investment projects of the Partnership Programme Kazakhstan suggests to all stakeholders in the implementation of the Programme "Green Bridge" - countries and organizations to adopt the Multilateral Agreement on Partnership and to establish by this Agreement special institutional arrangements, including the International Direct Investment Fund, managed by professional authoritative international organization, or perhaps, a private company with corporate and transparent management based on best international standards.



17. It is noteworthy that the Partnership Programme “The Green Bridge” does not exclude but rather complements other existing programs, both regional and subregional, state and private, and may generate momentum for them and fill current gaps in relation to fragmentation, trust, short-term or narrow sectoral approaches. In other words, one needs to create an umbrella environment where these Programmes would be performing at their best.

18. The results of the Pan-European Conference can also make a significant contribution to the Rio+20 Summit where green economy issues will also be put to the forefront. Taking advantage of this opportunity we would like to invite all interested partners to participate in the mutually beneficial cooperation in the interests of sustainable development and security in the region!

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Dr. Bulat Yessekin is a leading person in Environmental, Water and Sustainable development policy in Kazakhstan, Central Asia and the EECCA region. Since independence of Kazakhstan he was a member of parliamentarian working groups on preparation the first national Water Code and Environmental Law. In 1995-1998 he was a National Coordinator of the National Environmental Action Plan and Agenda-21 (http://www.un.org/jsummit/html/prep_process/focal_points.html).

From 2000 till 2007 he worked for establishment and development of the REC for Central Asia.

He is a member of

- Committee on Environmental Policy of the UNECE – Bureau Member (1998-2000, 2006-2011),
- UNFCCC National Focal Point of the Republic of Kazakhstan (1997-2000),
<http://www.iisd.ca/climate/cop5/negotiations/index.html#defer>
- Asia Pacific Forum on Environment and Development - Board Member (since 2000)
<http://www.apfed.net/apfed1/index.html#member>
- Global Water Partnership - Member of the Regional Bureau of Central Asia and Caucasus (since 2003),
- National Council on Sustainable Development in Kazakhstan - Board Member (since 2006)
- National Water Council of Kazakhstan (since 2009),
- Balkhash-Nursaya Trust Fund, Chairman (since 2010).

His education includes polytechnic institute, Kazakhstan, hydrometeorology institute, Sankt-Petersburg, Russia and national academy of sciences (PhD), Kazakhstan