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Aral, Water and Hydro-Energy Issues in Central Asia – view from Uzbekistan

by

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Cambridge, 10 August 2008

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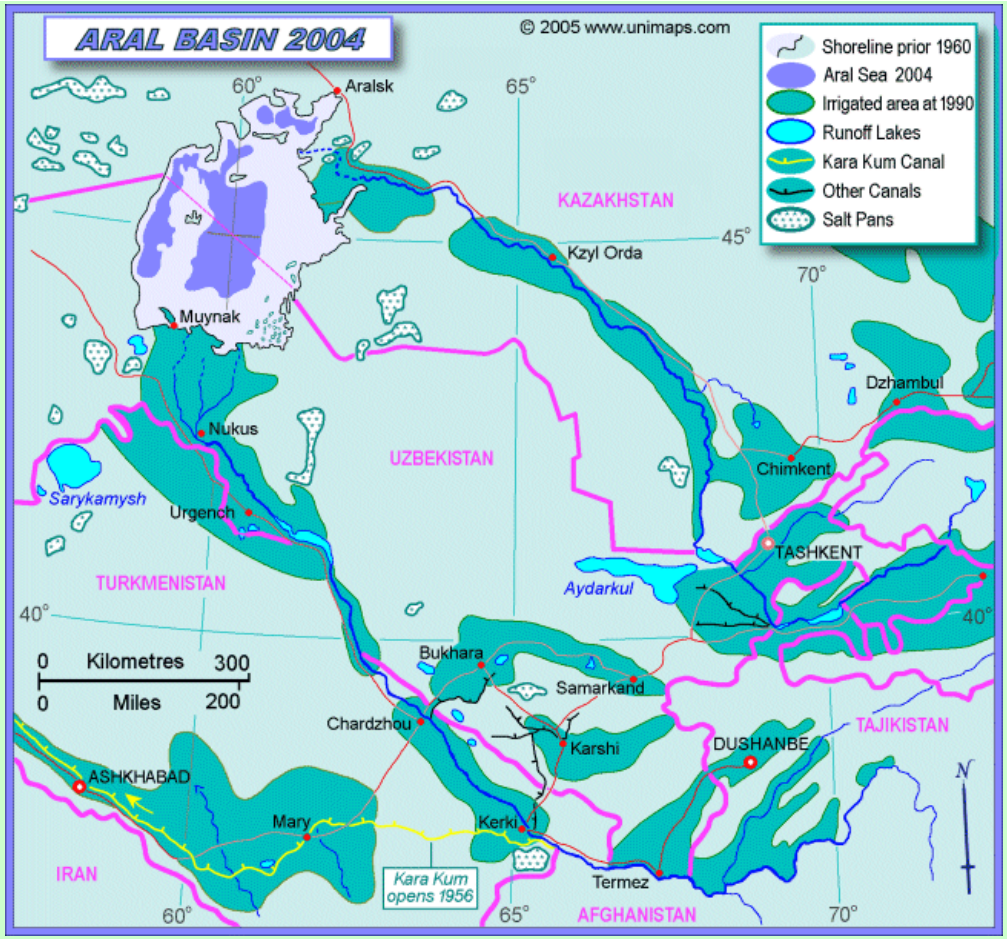

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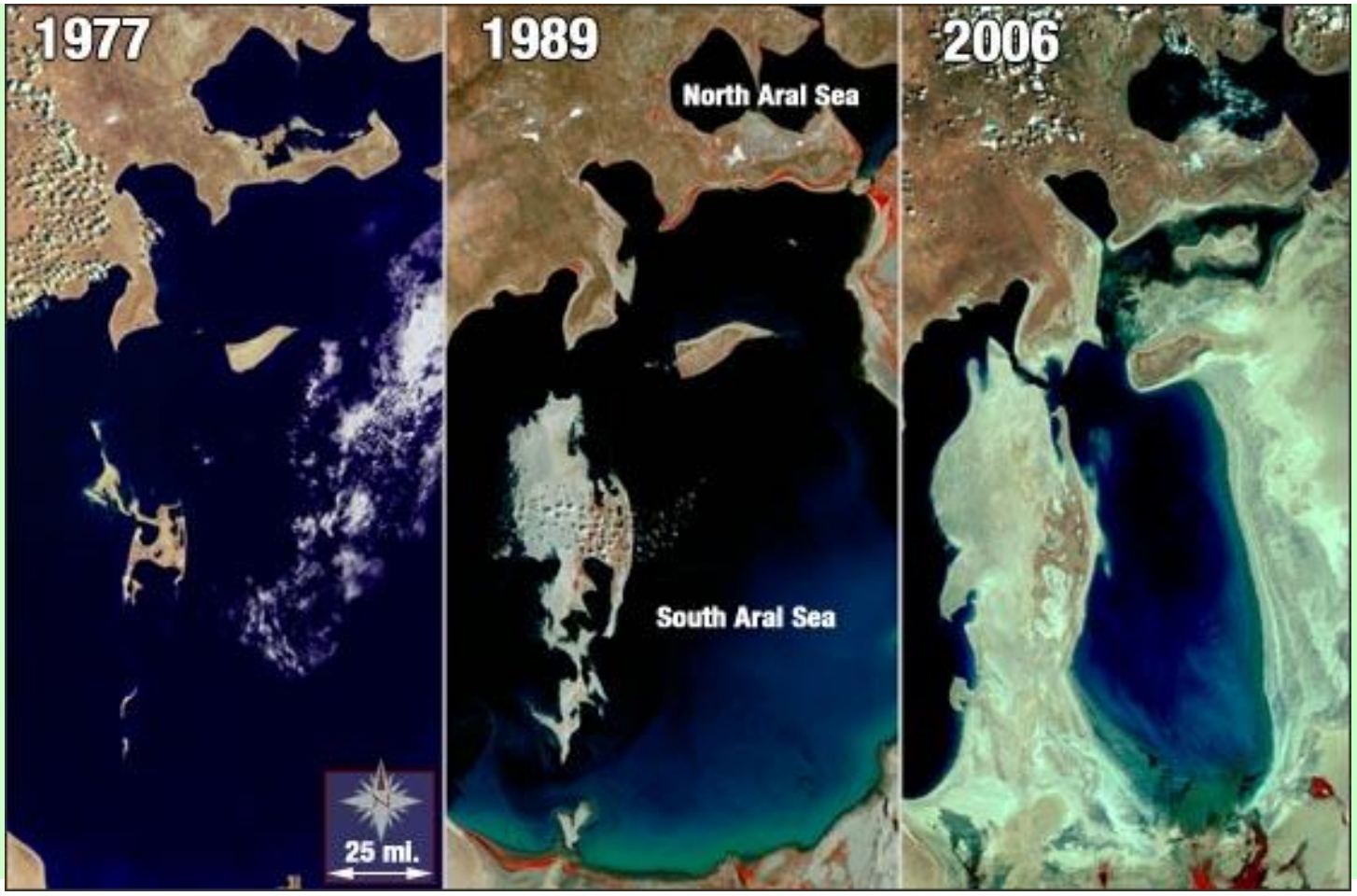

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- 32 international organizations and financial institutions;
- officials and researchers from 18 states;
- range of related issues were discussed;
- Tashkent Declaration;
- Comprehensive Plan of Actions - 101 projects in 9 directions with total amount of $1,4 bln.

INTERNATIONAL CONFERENCE
PROBLEMS OF ARAL:
IMPACT ON THE GENE POOL OF POPULATION, FLORA, FAUNA AND INTERNATIONAL COOPERATION FOR MITIGATING CONSEQUENCES

March 11-12, 2008
Tashkent, Uzbekistan

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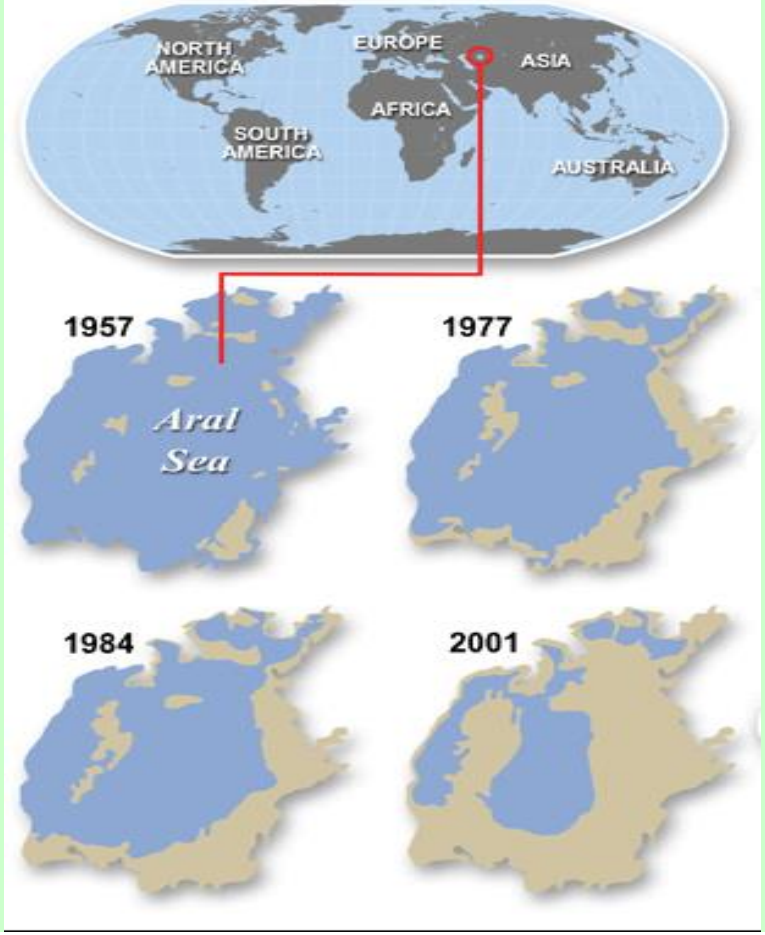
Aral Sea crisis:

- *1960s – 4th biggest inland water-body with 67.000 km² surface, near 1.000 km³ volume and 53,4 m. depth;*
- *sea surface decreased 4 times, water volume dropped by 10 times and depth by 24m;*
- *annual inflow from Amu-Darya and Syr-Darya declined from 60 km³ to 5.2 km³ in 2005;*
- *dried-up sea bed exceeds 4,5 mln ha.;*
- *mineralization of water rose by 10 times;*



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Aral Sea crisis:

- *expansion of desert to 5 mln ha. with appearance of Aralkum;*
- *10 times decrease of biological productivity;*
- *deterioration of life conditions in Kizil-Orda province of Kazakhstan, Dashhovuz province of Turkmenistan, 4 regions of Uzbekistan – Karakalpakstan Republic, Khorezm, Navoi and Bukhara provinces;*
- *winds carry some 70 mln. tonnes of salt per year up to 400 km for 90 days;*

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Biodiversity decrease:

– half of the plant and animal gene-fond is lost forever;

- Almost 90% of tugai bushes and 0,8 mln ha. of reeds disappeared with their inhabitants;

- unique animals, as koulan, arkhar, cheetah and saiga population on the brink of extinction;

- same as 11 types of fish, 12 mammals, 26 birds, 11 plants and 2 reptiles.

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Aral Sea crisis:

- *social-economic impact, including "latent hunger" – lack of variety of nutrient substances;*
- *health – rise of chronic diseases and mortality;*
- *annual socio-economic and environmental damages in Uzbekistan – 150 mln US dollars, regionally – over 210 mln US dollars.*

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Aral Sea crisis:

- *soil degradation, biodiversity problems, climate changes caused by atmosphere pollution (possibly influences diminishing of glaciers in Pamir and Tuan-Shan);*
- *glaciers and snow reserves are decreasing by 0,2-1% annually;*
- *from 1950 to now, number of days with +40 C is doubled in Aral zone, and 1,5 more in other areas of Uzbekistan.*

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***Policy and some achievements*:**

policy on rational use of water resources, introduction of water-saving technologies, maintenance of Aral ecosystem, enforcement of social protection of population in the region, attraction of international assistance and many other measures;

efficiency of irrigation is gradually improving in CA. If in 1990 a water scoop was 14 m^3/ha., in 2007 - 11,5 m^3/ha. level;

soil fortification, forestation, drought and salinity resistant crops cultivation, local reservoirs in Amu-Darya – 150.000 ha.;

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***Policy and some achievements*:**

example of partnership of 3 states and Swiss DA - Canal Managements and Water Boards together with computerised system implemented in 3 canals in Fergana valley, where 25-30% efficiency was achieved without huge funding.

GEF-Nukus /IFAS - developed 22 projects and majority already implemented.

At the same time, solving the problem of Aral demands greater collaboration of efforts of the regional countries and attraction of large-scale assistance of the international community.

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Water management:

- CA – is a largest artificial irrigation zone with 8.9 mln ha;
- 6.000 years history of irrigation, but during 1960-1990 water withdrawal doubled;
- began from construction of Karakum Canal in 1954 and further increase of irrigational land;
- in 1970-1980s, Basin Water Management Organizations were created (BVO "Amu-Darya" and BVO "Syr-Darya");

-CA States Joint Tashkent Declaration in October 1991 - preservation of principles of water allocations;
- February 1992 – Almaty Agreement of joint management and protection, created Interstate Commission for Water Coordination
- March 1993 – Kizil Orda Summit agreement, created International Fund for Saving the Aral Sea;
- January 1994 – CA Summit adopts ASBP-1. In Paris meeting donors (UNDP, WB and UNEP) commited $31 mln of $41 mln;
- 1995 – Nukus Declaration;
- February 1997 – Almaty Summit, reformed IFAS;
- October 2002, Dushanbe Summit – ASBP-2 (2003-2010). Total ASBP contribution till 2005 - $68,5 mln, including from IFAS, GEF, EU, WB and Netherlands;

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Current problems:

- water deficit period, when water-supply on Amu-Darya and Syr-Darya does not exceed 70% of many-years average volumes. There is no "free water" independent of annual water-content;

- drinking water deficit in such condition is expected by 2030, when population growth will lead to 1700 m3 of water p.p. by UN limits (now it is on 2500 m3/p.p. level);

-situation undermines capabilities to provide necessary volumes of water for drinking and irrigation, when 65% of the population of region live in rural areas and depend on agriculture;

- artificial deficit of water caused by change of an operating mode of water reservoirs in the upstream countries contributes to aggravation of the problem;

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Largest hydropower facilities in the region – Toktogul in Kyrgyzstan (Naryn stations), Nurek HPS and Kayrakum HPS in Tajikistan, initially were erected for the irrigational-energy purposes. Now they unilaterally are shifted to energy mode. In result:

- enlarged volumes of water discharged during the winter leads to flooding of useful territories, destructions of houses and other emergency situations downstream;

- work of the same water reservoirs during summer in the mode of water accumulation creates a shortage of water for agriculture, reduction of the area for crops and output;

- due to changes in natural water regime, natural flora and fauna ecosystems of river basins suffer too.

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Construction of new hydropower facilities on transboundary rivers, without taking into account environmental and social impacts, shall negatively affect the water system, situation in agriculture and ecological balance in the region.

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Position and approaches of Uzbekistan:

-Issues of use of transboundary rivers' water resources in Central Asia must be resolved taking into account the interests of more than 50 million people living in all countries of the region.

-Any actions taken in transboundary rivers, must not have a negative impact on existing environmental and water balance of the region;

-Existing international legal documents in the sphere of water management and environment must be the basis for development of an effective system of joint use of the resources of transboundary rivers in Central Asia;

-Right of either party for implementation of projects using the resources of trans-boundary rivers, including hydro-engineering construction, is not denied, but on the assumption of its thorough independent techno-economic and environmental impact assessment on the principles of transparency and full awareness of interested parties;

-Implementation of projects are to be carried out through constructive approach and compromise, that does not harm interests of other states concerned and guarantee two most important conditions:

***first** - reduction of watercourse for downstream located countries must not be allowed;*
***second** - environmental security of the region must not be violated.*

All issues related to the water and energy balance in Central Asia, should be resolved on the basis of mutual understanding, bilateral dialogue and consensus among the regional countries. Any disregard for these principles could lead to unpredictable environmental, economic, social and political consequences in the region.

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Thank you!

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