CENTRAL ASIAN ESTH HUB HIGHLIGHTS

October 2005

Regional Environment Officer (REO) **Evelynn Putnam**

Environmental Specialist (ES) **Bakhtiyor Mukhamadiev**

http://www.usembassy.uz/home/index.aspx?&=&mid=346&lid=1

This issue's "In Focus" article deals with the South Aral Sea and the status of the western and eastern portions of the South Aral Sea as observed by the CA Regional Environmental Officer (REO) and Environmental Specialist (ES) as they participated in a recent international scientific expedition to the Aral Sea, funded by the National Geographic Society and led by an American geography professor from Western Michigan University and the director of the St. Petersburg Brackish Waters Research Laboratory. Websites relevant to the "In Focus" article are also provided.

Table of Contents

IN FOCUS: THE SOUTH ARAL SEA

BACKGROUND

As mentioned in last month's "In Focus" article, which dealt with the North Aral Sea, the drying up of the Aral Sea has divided the Sea virtually in two -- the South Aral Sea, often referred to as the Large Aral Sea and the North Aral Sea, often called the Small Aral Sea. The South Aral Sea in turn consists of two hydrologically and biologically distinct sections -- the eastern South Aral Sea and the western South Aral Sea. For the sake of brevity, these South Aral Sea sections will be referred to in this article as the eastern Aral and the western Aral, respectively. Both are located in the Autonomous Republic of Karakalpakstan in Uzbekistan. The eastern Aral is fed by the Amu Darya while the western Aral, now almost completely cut off from the eastern Aral, no longer receives the bulk of its water from the Amu Darya, but is fed mainly by rain, melted snow, and groundwater.

The environmental and development projects in the South Aral Sea area are not designed to reverse the effects of the drying up of the Sea or to return the Sea to its size and condition of the early 1960's. Both the prerequisites, extensive changes in government agriculture policies and very expensive repairs of current irrigation systems, which would have to be put into place before such projects could be attempted do not currently seem possible. South Aral Sea projects are designed to stabilize the areas that remain and, to some extent, however small, improve conditions for the people most directly affected by the shrinkage of the Sea.

The South Aral Sea's water level on average has dropped 23 meters -- from 53 to 30 meters above sea level, and its volume has decreased 90 percent. However, compared with last year's salinity level (90+ grams of salt per liter), the western Aral Sea's year's salinity, due to higher than normal inflow from the Amu Darya, measured 68-70 grams of salt per liter.

The western Aral -- reaching equilibrium

The depth and volume of water in the Western Aral seem to be reaching equilibrium. Perhaps because the last three years have been high-water years, there has been little measured change in the western Aral's water level. However, because of the continuing high salinity level, the western Aral, it is predicted by experts, will in just a few years resemble the Dead Sea hydrologically and biologically.

Brine shrimp in the western Aral

Very little plant or animal life remains in the either the western or eastern Aral, though the western Aral's less than 100 grams/liter salinity does permit a limited range of plant and animal life. What little animal and plant life remains in the western Aral has great difficulty reproducing. But such conditions are almost perfect for raising brine shrimp (Artemia), commonly used as feed in fish farming. A pilot project conducted by INVE AquaCulture, a multinational company concentrating on improving agricultural production, especially in animal rearing and aquaculture, to raise brine shrimp in the Sea commercially has just been completed. Results of the project do not rule out that raising brine shrimp commercially could be a possibility in the western Aral at some time in the future. Since the project was a private company feasibility study, the results are not likely to be published.

The eastern Aral -- Another Owens Lake?

By contrast with the western Aral and the North Aral Sea, the eastern Aral is in far more desperate shape. Researchers envision two possible scenarios for the eastern Aral. Either it will evaporate very slowly and become a salt lake of even higher salinity than its current 160 grams per liter or it will disappear altogether, as has happened to Owens Lake, California, a much smaller salt lake that dried up completely in the 1920's for similar reasons.

Much depends on what measures may be taken within the next few years and whether the pattern of the past three high-water-flow years continues. If projected contributions from the North Aral Sea and the Mezhdurechinskoye Reservoir (see below), 3 cu. km and 1 cu. km, respectively, do in fact occur, the eastern Aral can be expected to shrink very slowly. But if these inflow rates are far lower, the eastern Aral could shrink rapidly, perhaps drying up altogether. Because the sand in the South Aral Sea is extremely fine, if the eastern Aral were to

disappear, the sand and salt storms already so problematic for both Central Asia and parts of Asia and Europe will certainly continue.

Barsakelmes Nature Preserve

The scale of the shrinkage of the eastern Aral is dramatically demonstrated by the fate of the Barsakelmes Nature Preserve, which the Expedition visited. The preserve used to be on what once was Barsakelmes Island. The island is now a peninsula connected to Kazakhstan. If the eastern Aral continues drying up at its current rate, within a few years the peninsula will be connected not only to the mainland but also to Vozrozhdeniye Island.

In the early twentieth century when Barsakelmes Nature Preserve was established, it was frequently the destination of Soviet scientific expeditions. The preserve's biosphere, typical of that of the South Aral Sea, had been almost unaffected by man because of its isolation. As a result, studies of the preserve's biosphere provide valuable, indeed priceless, data on the local ecosystem. In fact, data obtained by scientific expeditions between the early 1960's through the 1980's would be invaluable input for computer modeling of how such a sea's shrinkage and drying up have affected the surrounding biosphere. However, no computer modeling using the data has been done due to lack of financial resources.

By the late 1980's, after three decades of shrinkage of the Sea, the Sea's situation had become so acute that in 1989 researchers arranged for most of the animals in the Barsakelmes Nature Preserve to be air lifted to preserves in Turkmenistan, among them the Badkhyz nature reserve. By 1992-93, except for one ranger, Valentin Antonovich Skurotskii, who refused to leave, the island was uninhabited. When Skurotskii died in 1998, he had the honor of being the last person to be buried on the peninsula.

The view to the former seabed of Barsakelmes island

September view of the sea bed, which is partially covered during the spring season

Mezhdurechinskoye Reservoir

The International Fund to Save the Aral Sea, a Central Asian government body set up to coordinate Aral Sea projects, and the Uzbek Agency GEF are cooperating in a project to build the Mezhdurechinskoye (literally "between the rivers" or "mesopotamia") Reservoir near the Amu Darya delta. The purpose of the reservoir will be to collect the waters of the Amu Darya

into a system of lakes. Once the lakes are established and providing marshlands for fishing and drinking water for the local population, it is hoped that water can eventually be released into the eastern Aral, perhaps in quantities sufficient to forestall its complete drying up.

The Mezhdurechinskoye project is similar to, but smaller than, the World Bank project (nearly completed) to build a dike in the Syr Darya delta in the North Aral Sea (reported on in last month's "In Focus" article). The project, a component of the "Wetlands Development in the Amu Darya Delta," began in 2003 and is scheduled to be completed in 2007, at a cost of almost nine million USD. The Mezhdurechinskoye Reservoir project's dike has four water release gates, compared with the World Bank project dike's nine gates. Although the Mezhdurechinskoye project is only one-sixth of the size of the World Bank project in water volume, it will add one-third as much water as the World Bank project does, or about one cubic km of water annually to the eastern Aral, compared with hoped-for three cubic km of water that the World Bank project will add to the South Aral Sea as a whole.

The view to the Amu Darya from the dike

The view to Mezhdurechinskoye reservoir from the dike

Sudochiye lakes system

Another successful South Aral Sea project the Expedition visited was the Sudochiye lakes system project, funded by GEF and implemented by the Ekoteks Consortium (Uzbekistan) and IBS Technology (USA). The Sudochiye lake region, formerly connected to the South Aral Sea when the Sea's water level stood at 53 meters, was cut off from the Sea when the water level dropped to 52 meters. The lake is a wide area of reed marshlands in the Amu Darya delta land into which Amu Darya irrigation water is shunted after being used to irrigate farmland in Uzbekistan and Turkmenistan.

The used water shunted into the Sudochiye lake system contains great quantities of salt and fertilizer constituents due to the nature of the agricultural practices and policies of Uzbekistan and Turkmenistan. The reeds of the Sudochiye lakes project purge the water of much of the salt, nitrogen, phosphorus, and heavy metals deposited by irrigation and farming practices. Since the last three years have been high-water-flow years for the Amu Darya, the Sudochiye lakes system is now quite large and its ecosystem is flourishing. According to measurements made by the Expedition, the salt content in the lakes this year is 6 grams of salt per liter, which enables the Sudochiye wetlands to support a wide variety of fauna, including fish, thus helping the local population eke out a livelihood. In addition to providing food for the

local population, the wetlands also serve as a stopping point for flocks of migratory birds and support many local animal species that were once native to the area and are making a modest comeback in the ecosystem.

Views of the Sudochiye lake system from the Ustyurt plateau

Oil and Natural Gas Prospecting in Karakalpakstan

The Expedition's route to the western Aral ran west from Muynak (formerly on the seacoast before the Sea dried up) and north to the Ustyurt Plateau along the western border of the western Aral in the Autonomous Republic of Karakalpakstan -- the most adversely affected and the poorest region in the entire Aral Sea area, and for that matter, the poorest region in Uzbekistan. Eons ago this area was covered by an ancient vast inland sea that has since broken up into the Mediterranean, Black, Caspian and Aral Seas and into other smaller salt lakes and seas. Like many other ancient marine sites, Karakalpakstan is a place where oil and gas can be found.

Along the Expedition's route, which traversed the now dried up Aral seabed, numerous oil and natural gas drilling rigs are visible. Rig owners include Uzbek, Russian, and Chinese firms, while recent agreements have included South Korean and Malaysian oil firms as well (see news item for Uzbekistan below). Enough natural gas has been found to warrant the construction of a natural gas condensate processing plant in Uchsay, outside of Muynak, which also supplies natural gas for auto fuel and for heating. Local cars carry natural gas fuel tanks and there is an extremely small diameter natural gas pipeline that runs along the highway from Muynak to Uchsay. The small settlements along the pipeline are reaping benefits from the newly found natural gas by tapping into the pipeline to obtain fuel for cooking and heating.

View of oil drilling rig near Muynak

The light far away at the end of the tunnel

Although there was no running water in Muynak and the hotel in Nukus had electricity problems, there are signs of change in the right direction, in addition to the benefits from the pipeline noted above. An important factor is the simple passage of time. A new generation has been born and brought up without direct memory of the Aral Sea as it was before the disaster. Many of the ships left marooned on the dried up seabed are gone, having been cut up and sent/sold to China for scrap metal. One of the members of the Expedition, who had not been to Nukus and Muynak for two years, felt he could see some signs of change for the better. The REO and ES noted a number of new cane fences in villages along the route and instances of cane fences being replaced by brick walls.

Karakalpakstan without a doubt remains the Aral Sea region's and Uzbekistan's most impoverished region, but it may, repeat may, be poised to start experiencing some economic gains, if oil and natural gas ventures there should become commercially successful, and if benefits from that success should trickle down to the local populace.

USEFUL LINKS FOR INFORMATION ON PROJECTS/DONORS

Organization/Program Name	**Internet Address**
Aral Sea Basin Donors Community	http://www.cawater-info.net/donors/index.htm
Caspian Environment Program	http://www.caspianenvironment.org
Central Asian Development Gateway	http://www.cagateway.org
Central Asian Interstate Commission for Water Coordination	http://www.icwc-aral.uz

Organization/Program Name	Internet Address
Central Asian Natural Resources Management Project	http://www.nrmp.uz
Central Asian Water Users Association Support Project	http://www.wuasp.uz
Danish Society for a Living Sea and NGO Aral Tenizi "Aral Sea Fishery Project"	http://www.aralsea.net/en/index.htm
Donor Activities in Kyrgyzstan	http://www.donors.kg/
Donor Assistance Database for Kazakhstan	http://www.undp.kz/projects/start.html?type=internet
EU TACIS projects in Kyrgyzstan, Kazakhstan and Tajikistan	http://www.delkaz.cec.eu.int/index.php?link_to=project_lists&lang=en
German Center for Development Research	http://www.zef.de
Global Fund to Fight AIDS, Tuberculosis, and Malaria	http://www.theglobalfund.org/en
International Fund for Saving the Aral Sea	http://www.ec-ifas.org
International Science and Technology Center	http://www.istc.ru
Law Reform in Transition States	http://www.cis-legal-reform.org
Organization for Security and Cooperation in Europe Center in Bishkek	http://www.osce.org/bishkek
Scientific Information Center of the Interstate Commission for Water Coordination	http://www.sic.icwc-aral.uz
Special Program for Economies of Central Asia	http://www.unece.org/speca
Swiss Cooperation in Central Asia	http://www.swisscoop.uz
Times of Central Asia	http://www.timesca.com
UN Coordination Unit in Tajikistan	http://www.untj.org/database/
United Nations Children's Fund	http://www.unicef.org
United Nations Development Program	http://www.undp.org
United Nations Economic Commission for Europe	http://www.unece.org
United Nations Educational, Science, and Cultural Organization	http://www.unesco.org
United Nations Population Fund	http://www.unfpa.org
United Nations Program on HIV/AIDS	http://www.unaids.org

Organization/Program Name	Internet Address
United States Agency for International Development	http://www.usaid.gov
United States Center for Disease Control and Prevention	http://www.cdc.gov
World Bank	http://www.worldbank.org
World Health Organization	http://www.who.org
World Meteorological Organization	http://www.wmo.org

CENTRAL ASIAN ENVIRONMENTAL LINKS

www.carec.kz	Central Asian Regional Environmental Center
www.ec-ifas.org	Executive Committee of the International Fund for Saving the Aral Sea
www.icwc-aral.uz	Interstate Commission for Water Coordination of Central Asia
www.nature.kz	Ministry of Environmental Protection of the Republic of Kazakhstan
www.mecd.gov.kg	Ministry of Ecology and Emergency Situations of the Kyrgyz Republic
www.uznature.uz	State Committee for Nature Protection of the Republic of Uzbekistan
www.nif.kz	National Innovation Fund of Kazakhstan
http://academ.aknet.kg	National Academy of Sciences of Kyrgyzstan
www.academy.uz	Academy of Sciences of Uzbekistan
www.uzsci.net	Uzbekistan Science Network

UPCOMING ESTH-RELATED EVENTS 2005-2007

2005

Date	Event/Activity	Location
October 17-28	UN Convention to Combat Desertification, 7th Conference of the Parties (COP7)	Nairobi
October 18-20	Global Village Energy Partnership Members Assembly	Brazil

October 19-21	7th APEC Energy Ministerial Meeting	So. Korea
October 30-November 6	ESTH hub regional travel to Turkmenistan	TBD
November 5-6	Central Asia Regional Economic Cooperation Ministerial Meeting	Bishkek
November 7-8	Bonn Renewable Energy Follow-up Conference	Beijing
November 8-15	Ramsar Wetlands Convention - COP	Uganda
November 21-22	OECD Energy Efficiency and Water S&T Collaboration Workshop	South Africa
November 28-December 9	UNFCCC COP 11/MOP 1	Montreal
November (TBD)	CSD Regional Implementation Mtg - West Asia (ESCWA), Part 2	
November (TBD)	CAREC Board meeting	TBD
November (TBD)	ESTH hub regional travel to Kyrgyzstan	TBD
December (TBD)	ESTH hub regional travel to Tajikistan	TBD
TBD	Symposium VI: Caspian Sea "The Link Between Great Civilizations"	Caspian Littoral States
(TBD)	CSD Regional Implementation Mtg - Asia & Pacific (ESCAP)	

2006

January	ESTH hub regional travel to Turkmenistan	TBD
Feb 2	World Wetlands Day	Global
February 7-9	UNEP Governing Council/Global Ministerial Environment Forum	Dubai
February	ESTH hub regional travel to Kazakhstan	TBD
March 16-22	Fourth World Water Forum	Mexico City
March 19-24	International Conference on Emerging Infectious Diseases	Atlanta
March (TBD)	World Bank Energy Week	Washington, DC
March	ESTH hub regional travel to Kyrgyzstan	TBD

April 3-6	Sixth International Symposium on Avian Influenza	Cambridge, UK
April	ESTH hub regional travel to Tajikistan	TBD
May 1-12	UN Commission on Sustainable Development 14 - Energy "Review Session"	New York
May 10-12	UNFCCC Carbon Expo	Cologne, Germany
May	ESTH hub regional travel to Turkmenistan	TBD
June 19-21	The Future of Drylands	Tunisia
June	ESTH hub regional travel to Kazakhstan	TBD
July	ESTH hub regional travel to Kyrgyzstan	TBD
August	ESTH hub regional travel to Tajikistan	TBD
September	ESTH hub regional travel to Turkmenistan	TBD
October	ESTH hub regional travel to Kazakhstan	TBD
November	ESTH hub regional travel to Kyrgyzstan	TBD
December	ESTH hub regional travel to Tajikistan	TBD

2007

February 26-March 1	UN CSD Intergovernmental Preparatory Meeting	New York
April 30-May 11	UN Commission on Sustainable Development 15 - Energy "Policy Session"	New York

ESTH-RELATED NEWS STORIES FROM CENTRAL ASIA

The information below, gathered from news sources from across the region, has not been checked for accuracy. The views expressed in these stories do not necessarily reflect those of the Central Asian ESTH Hub or its constituent posts.

Kazakhstan

STATE DRINKING WATER PROGRAM A STRATEGIC PRIORITY

In an interview with Kazinform on September 27, 2005, the Chair of the Kazakh Water Resources Committee, Anatoly Ryabtsev outlined the Committee's strategic priorities for

Kazakhstan's water supply infrastructure. According to Ryabtsev, the country's water supply is improving from year to year thanks in large part to implementation of the 2002-2010 State Drinking Water Program. It is estimated the program will cost a total of KZT 115 billion, of which KZT 33.2 billion was spent during 2002-2004. During the next five-year period the program will focus on the repair and construction of the water supply's centralized infrastructure, allocating KZT 60 Billion for such projects. Ryabtsev also noted that a number of international financial institutions such as the World Bank, the ADB, the Kuwait Fund for Arab Economic Development, the Islamic Development Bank, as well as bilateral donors, are closely involved in water supply projects throughout Kazakhstan.

ENVIRONMENTAL PROTECTION MINISTRY TO OPEN OFFICE IN BAIKONUR

In a statement to the Kazakh Parliament on September 19, 2005, Minister for Environmental Protection Aitkul Samakova confirmed the Environmental Protection Ministry's plans to open an office in Baikonur in the near future. Reporting that the Ministry has notified the Russian Space Agency of its plans to do so with the expectation the Ministry's office will be opened in Baikonur soon, Samakova emphasized that the absence of Kazakhstan environmental protection representation at Baikonur is not in accordance with the provisions of the Agreement Between the Government of Kazakhstan and the Government of Russia on the Environment and Environmental Protection, whereby, as of June 2, 2005, arrangements governing environmental activities of the Ministry of Environmental Protection of Kazakhstan and the Russian Space Agency are to be set forth in a separate protocol requiring the Russian Space Agency to comply with the environmental laws of Kazakhstan.

Kyrgyzstan

MATERNAL AND INFANT MORTALITY RATES REMAIN HIGH

Health officials in Bishkek announced September 22 that maternal and child mortality rates in Kyrgyzstan are still unacceptably high, especially in rural parts of the country. Kyrgyzstan began using WHO criteria for determining maternal and infant mortality figures in 2004. According to Government statistics, in 2004, 52 infants per 1,000 died before, during, or just after birth and 110 per 100,000 women died during childbirth. Deaths of babies and mothers during childbirth remain alarmingly common in rural Kyrgyzstan where access to any kind of health care is very limited.

In addition to such high death rates, six out of 10 births in rural Kyrgyzstan result in complications and illnesses gravely affecting both mothers and infants, often permanently. The poverty of the rural population, the lack of medicine and OB-GYN equipment and poorly trained medical personnel are the main reasons for the very high risks associated with childbirth. The unavailability of contraceptives and lack of knowledge about their use keep birth rates high, putting mothers and infants at high risk with each successive pregnancy.

HOUSING CONSTRUCTION ORDERED HALTED WHERE CATTLE KILLED BY ANTHRAX ARE BURIED IN BISHKEK

A September 27 Vecherniy Bishkek article reports that the Bishkek Public Architecture Oversight Board has ordered that housing construction be stopped in the Ala-Too residential area where cattle that died of anthrax during an anthrax outbreak in 1940 are buried. At the time of the anthrax outbreak, the burial site was located on the Red Dawn collective farm, which was then outside the city limits of Bishkek. A Vecherniy Bishkek reporter who visited Ala-Too said that builders are ignoring the Board's order and housing construction is continuing, in some cases as close as 100 meters from the burial site, even though there is an ordinance banning construction less than 250 meters from the perimeter of the burial site. Only half of the site is covered with concrete, and that is in disrepair. Although regulations require that the site be fenced in and that signs be posted identifying it as an anthrax burial site, the site is not fenced in and no signs are posted identifying it. The Bishkek Mayor's Office, which is responsible for such matters, has not complied with the regulations for lack of funds. The Ala-Too anthrax burial site is just one of over 1200 registered anthrax sites across Kyrgyzstan, most of which are in the southern regions of the country and unfenced and unidentified.

Tajikistan

HAZARDOUS SUBSTANCE POLLUTION FROM ALUMINUM PLANT CONTINUES

According to estimates by UNDP experts, the Tajik Aluminum Plant (TAP) annually discharges more than 21,000 tons of hazardous substances into the atmosphere. This pollution adversely affects the region and is creating tensions between Tajikistan and Uzbekistan. TAP's hazardous substances are responsible for the high rate of respiratory diseases, especially among children, the increase in the infant mortality rate, the increased number of miscarriages, and the high rate of skin cancer, according to the proceedings of a meeting UNDP Dushanbe held September 19.

Senior officials and experts from Uzbekistan's Ministry of Health and its Committee for Environmental Protection met with journalists in Tashkent September 19 to express their concern about the situation. Representatives of Russky Aluminy (Russian Aluminum or RusAl) claimed that the company would take environmental impact into consideration as it pursues its investment projects in Tajikistan and comply with international standards for openness and access to information. RusAl plans to spend US$160 million to build two TAP electrolysis workshops with an annual capacity of 100,000 tons near the town of Tursunzoda. It also plans to build a new aluminum smelter with an annual capacity of 200,000 tons in the south of Tajikistan.

GROUNDBREAKING CEREMONY FOR ROGHUN POWER PLANT POSTPONED

The Roghun hydroelectric power station groundbreaking ceremony scheduled for September 7 was postponed until later in the month, according to the Tajik Ministry of Power Engineering. The decision to postpone the ceremony was made by the Tajik Government so that Russian Federation Prime Minister Mikhail Fradkov would be able to participate in the ceremony. Oleg Deripaska, RusAl's top manager, who met with Russian President Vladimir Putin prior to the postponement, said that during Putin's official visit to Dushanbe last fall, the Russian and Tajik governments agreed to resume construction of the power station after a 12-year construction hiatus. At that point RusAl made the decision to spend around USD 1.2 billion to complete construction of the station, the largest such station in Central Asia. Construction,

which began in March 1981, was suspended in 1993 because of a lack of funds and social and political problems in Tajikistan. The 3,600-megawatt power station will generate 23.3 billion kilowatt/hours of electricity annually, 25 % of which will go to meet Tajikistan's electricity needs, 25% of which will be exported to Kazakhstan through the Uzbek power grid, and the other 50% of which will be exported to Pakistan, Afghanistan and Iran.

Turkmenistan

RECORD NUMBERS OF TURKMEN VISIT UZBEKISTAN FOR HEALTH CARE

The state of Turkmenistan's health care system is a factor in many Turkmen citizens traveling to neighboring Uzbekistan to seek medical treatment. Most Turkmen "health tourists" come from Tashauz and Lebab provinces, situated along the Uzbek border. Uzbekistan is the closest option for the treatment of serious illnesses for Turkmen citizens living outside of Ashgabat following Turkmenistan President Saparmurat Niyazov's dismissal of approximately 15,000 health care workers in 2004 and his closure of hospitals and clinics outside the capital Ashgabat in February of this year.

ASHGABAT INTERNATIONAL HEALTH EXHIBITION AND CONFERENCE RESCHEDULED

September 20 Turkmenistan President Saparmurat Niyazov signed a decree rescheduling an international health exhibition and conference originally scheduled to be held in October in Ashgabat. It will now be held December 12-14. Marking the State Health Program's 10th anniversary, the exhibition and conference, according to the Ministry of Health Care and the pharmaceutical industry of Turkmenistan, will “showcase for the international community Turkmenistan's major successes in health care and in pharmacy and will expand cooperation and share experiences in those fields.”

Uzbekistan

CONSORTIUM TO EXPLORE ARAL SEA NATURAL GAS RESERVES

A consortium of state-owned companies from Uzbekistan, China, Malaysia, Russia, and South Korea will develop natural gas fields in the Aral Sea's dried up seabed. Uzbekneftegaz, China National Petroleum Corporation, Petronas Carigali Overseas of Malaysia, LUKoil Overseas of Russia, and Korea National Oil Corporation will each hold a 20 percent stake in the consortium. Experts told the Russian journal "Vedomosti" on September 9, 2005, that the companies may invest up to USD 2 billion to find recoverable reserves of up to 1 trillion cubic meters of natural gas. Stakeholders will complete a feasibility study within the next two months with a view to signing a production sharing agreement in 2006.

UZBEKISTAN'S FIRST INTERNATIONAL COTTON FAIR HELD IN OCTOBER

Uzbekistan's first international cotton fair was held in Tashkent October 10-11. The Government of Uzbekistan and Cotton Outlook magazine organized the event, which was expected to attract companies from Southeast Asia, the CIS and Europe. The main goal of the event is to develop long-term trade relations and facilitate the conclusion of cotton fiber delivery contracts. Uzbekistan is the world's sixth largest cotton producer and its second largest cotton exporter. While cotton is by far the Uzbek economy's largest producer of hard currency, it also causes some of Central Asia's gravest environmental problems -- water degradation and pollution, soil salinization, desertification, etc.

FYI: INFORMATION OBTAINED FROM OTHER ORGANIZATIONS WORKING IN ENVIRONMENT, SCIENCE, TECHNOLOGY, AND HEALTH

Watershed Academy Web-Based Training

The U.S. Environmental Protection Agency Office of Water in 1994 created the Watershed Academy to provide training courses and educational materials on the basics of a watershed approach for a distance-learning audience. The target audience includes local, state, and national level officials as well as citizens and private practitioners of watershed management. The Watershed Academy includes live watershed training courses, as well as Web-based training.

The distance learning modules on key watershed management topics run half an hour to two hours long each. A Watershed Management Training Certificate can be obtained by those who complete 15 modules and pass self-tests with scores of 70% or higher (re-testing is permitted). Currently, there are over 35 modules, with more under development. Scientists and non-scientists, local, state, and national government agency staff, community leaders, consultants, college students, citizens from the U.S. and abroad have completed the certificate program.

The modules can also be used as the framework for a watershed course, to which teachers can add their own lectures, readings, and discussions. The length and complexity of the modules vary, but most are at first-year university level of instruction. The modules can be used as basic training for beginners or as review or acquaintance with new watershed principles.

The modules are divided into the following categories:

Introductory/Overview Modules

These modules introduce the principles of the watershed approach and the value of working at a watershed level.

Watershed Ecology Modules

These modules show that watersheds are natural systems that provide substantial benefits to people and the environment when they are kept in good condition.

Watershed Change Modules

These modules describe both natural and human-induced changes in watersheds, and compare normal changes with changes of concern.

Analysis and Planning Modules

These modules address how watershed planning, monitoring and assessment are important first steps toward solving problems.

Management Practices Modules
These modules show how watershed management challenges such as urban runoff, cropland management, forestry and other issues are addressed by techniques that reduce environmental impacts.

Community/Social/Water Law Modules
These modules cover social issues, communications, relevant laws and regulations. They concentrate on the human element of watershed management.

From the recently launched Newsletter of the IUCN Regional Office for West/Central Asia and North Africa

Saiga Antelope Developments

Efforts continue to encourage Kazakhstan, Uzbekistan, Turkmenistan, Russia, China, and Mongolia to sign the Convention on Migratory Species MOU on the conservation, restoration and sustainable use of the saiga antelope. The IUCN Director General and the Chair of the IUCN Species Survival Commission have recently sent letters to the Presidents of the above states stressing the urgency of the issue and enclosing the 2004 World Conservation Congress resolution and recommendations on saiga conservation. A new E-bulletin, "**Saiga News"** to be published twice a year and available in English and Russian has now been launched and is coordinated by Elena Bykova of Uzbekistan (see www.iccs.org.uk/saiganews.htm). Other information on Saiga can be found on the following link: www.iucn.org/themes/ssc

Regional Seminar on Renewable Energy Market Development in Central Asia Almaty, Kazakhstan

Four Central Asian governments (Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan), Central Asian and international NGOs, and private businesses participating in the Regional Seminar on Renewable Energy Market Development in Central Asia held in Almaty, Kazakhstan, September 19-20, 2005, endorsed the creation of a sustainable energy organization for Eurasia. According to the proposed schedule, a working group composed of four participants from each country will work on the details for framing and founding the organization within 45 days. A draft proposal for mission and organizational structure incorporating all comments by the working group and governments should be ready by January 1, 2006.

U.S. National Academies of Science Water Information Web Site Launched

The U.S. National Academies (the National Academy of Sciences, the National Academy of Engineering, the Institute of Medicine, and the National Research Council) are pleased to announce the launch of their Water Information Center, a portal of more than 100 peer-reviewed reports from the National Academies on water-related issues. The website (http://water.nationalacademies.org) aims to assist the work of water scientists, engineers, managers, policy-makers, and students throughout the world. These reports represent independent and objective consensus among experts from academia, industry, and other entities.

The website features the following major topics:

- Water Supply and Sanitation
- Water and Soil Remediation
- Hydrologic Hazards
- Water Quality in the Natural Environment
- River Basin Systems Management
- Environmental Assessment, Management, and Restoration
- Water Science and Research

All of the reports can be read for free on-line, and summaries are freely downloadable as PDFs. For residents of the five Central Asian countries, the full reports can be downloaded for FREE.

If you have questions or comments, contact

Ellen de Guzman
Email: water@nas.edu
202-334-3422
Water Science and Technology Board
The National Academies
500 5th Street NW
Washington DC 20001

The Communication Initiative

There are a number of prizes and funding opportunities in support of communication for development. Details about the prizes, including criteria, deadlines and previous winners, can be found on the on the following link: http://www.comminit.com/awards2005.html

U.S. Civilian Research and Development Foundation (CRDF) Workshop Series in Central Asia on Grants and Proposal-Writing and Scientific Business Development

The U.S. Civilian Research and Development Foundation (CRDF) is sponsoring a series of grantsmanship, proposal writing, and scientific business development seminars throughout Central Asia during 2005. The goal of these workshops is to encourage international scientific collaboration involving Central Asian scientists and engineers. Funding for this program is provided by the National Science Foundation and the U.S. Department of State.

Eligibility Requirements

All workshop applicants will be approved on a first-come, first-served basis. No more than five representatives per scientific department in each institution will be allowed to attend the workshop.

Series Locations and Tentative Dates:
Bishkek, Kyrgyzstan – November, 2005

Ashgabat, Turkmenistan – December, 2005
Tashkent, Uzbekistan – January, 2006

Enrollment Inquiries: Interested parties should write to **cgp@crdf.org** to request further programmatic information and enrollment forms or visit the CRDF website at: **http://www.crdf.org/Events/events.html**.

Information on INTAS-Sponsored Activities Open Calls

INTAS, the ***Int***ernational ***As***sociation for the Promotion of Co-operation with Scientists from the New Independent States (NIS) of the Former Soviet Union is an independent international association formed by the European Community, European Union Member States, and like-minded countries to promote East-West scientific co-operation between INTAS members and INTAS-NIS partner countries. INTAS supports both fundamental and applied research in all fields of science, such as physics; chemistry; the life sciences; earth sciences and environment; economics, social and human sciences; mathematics and information technology; space, aeronautics and engineering.

Several types of funds and grants are available through INTAS:

- Research projects and networks through open, collaborative and thematic calls. While open calls are not restricted in scope and thematic calls address specific scientific issues, collaborative calls are jointly defined by INTAS and the co-funding organization.
- PhD and post-doctoral fellowships for young scientists from the New Independent States.
- Innovation support to promote the further development, utilization and marketing of INTAS research results.
- INTAS Conference Grants Program to support the organization of scientific events.
- Summer Schools and Other Training Activities
- Science Policy Workshops

The terms and conditions of each of the calls are provided in an INTAS information package for each of the activities; namely calls for research project proposals, young scientist fellowships, innovation grants, as well as applications for conference or summer school support. Proposals or applications must meet all eligibility criteria specified in the respective information package for this activity in 2005, which can be downloaded from INTAS web site. They must be in English and complete, and submitted to INTAS before the deadline.

Proposals will be chosen by INTAS (for collaborative calls in cooperation with the co-funding organizations) by peer review, conducted with the assistance of independent experts, following the procedure described in and based on the evaluation criteria specified in the respective information packages. There are a number of deadlines for activity calls in the fall of the year (August-December). For more information, check the INTAS website at www.intas.be

REGIONAL ESTH OFFICE WEB SITE REDESIGN CONTINUES

The Central Asian Environment, Science, Technology, and Health (ESTH) Hub continues to update its web site and is currently seeking information on environment, science, technology, and health issues in the entire Central Asian region, which will be posted as it is obtained. The web site currently has posted past issues of the newsletter, useful links, and a calendar of events. Under development are sections on, among others, regional outreach and issue briefs and papers.

Comments and suggestions on the new web page, especially possible additions to the web page, are welcomed.