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Final Report

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I Overview of Internship

The United Nations Development Programme (UNDP)'s Bureau for Development Policy (BDP) supports its country and inter-country programmes by ensuring that UNDP and its associated funds have ready access to knowledge, policy guidance and operational tools for addressing poverty reduction necessary for achieving sustainable human development. UNDP's development efforts are focused in six thematic priority areas, one of which is energy and environment. The corporate advocacy, analysis, policies and tools development in this practice are lead by staff in the Energy and Environment Group (EEG) of BDP. There are four Sub-Practices (water, energy, lands and biodiversity) and several Cross- Cutting Initiatives (environmental governance, poverty and environment, climate change, community development) which underpin the organization of the practice as a whole.

The Water Governance Sub-Practice promotes sound and effective governance of water resources to support sustainable livelihoods and the achievement of the Millennium Development Goals and accompanying water supply and sanitation targets. UNDP's interventions are aimed at creating and enabling policy and strengthening institutional and human capacity through "hands-on", on-the-ground actions that are essential for an effective multi-sectoral response to sustainable development. The Water Governance Sub-Practice supports national and local level action to operationalize Integrated Water Resources Management (IWRM) as well as riparian efforts to address transboundary management of water resources. The Sub-Practice further integrates the cross-cutting issues such as climate change, capacity development and gender.

Under the overall supervision of the Senior Water Policy Adviser and immediate guidance of the EEG Water Team, I provided support to the Water Governance Programme in the areas of research, writing, and design and preparation of multi-stakeholder dialogues on IWRM. In this respect, my internship included:

1. Activities pertaining to IWRM, such as:
    a. Planning of community stakeholder dialogues to empower and involve historically marginalized groups in decision-making processes via river basin organizations; and
    b. Promotion of national IWRM plans.
2. Activities addressing transboundary waters, such as:
    a. Promotion of transboundary river basin management through an initiative facilitating cooperation between riparian countries; and
    b. Creation of a database of transboundary waters donors.
3. UNDP Water Portfolio review of projects implemented worldwide, not only through Headquarters in New York and the regional bureaus, but also through the network of 134 Country Offices addressing issues 174 countries.

II Project Goals

A. ACTIVITIES PERTAINING TO INTEGRATED WATER RESOURCE MANAGEMENT (IWRM)

During recent decades, a shift has occurred in the popular approach to water resource management.[i] According to the World Water Development report, this change was realized through a gradual process, which included numerous international conferences, events, and resolutions, such as:

- The Dublin Statement on Water and Sustainable Development, a product of the Dublin Conference of 1992, has set the stage for much of the current debate on international water policies. The Dublin Statement declares the following:
    - *Freshwater is a finite and vulnerable resource, essential to sustain life, development and the environment.*
    - *Water development and management should be based on a participatory approach, involving users, planners and policymakers at all levels.*
    - *Women play a central part in the provision, management, and safeguarding of water.*

- *Water has an economic value in all its competing uses and should be recognized as an economic good.*

- The principles asserted in the Dublin Statement, were reiterated and strengthened in Chapter 18 of Agenda 21, which states that:

  The holistic management of freshwater as a finite and vulnerable resources, and the integration of sectoral water plans and programmes within the framework of national economic and social policy, are of paramount importance for action in the 1990s and beyond.

- Although the abovementioned statement was a product of the Rio Earth Summit, water resources were poorly emphasized until the second session of the Commission on Sustainable Development (CSD 2) in 1994. The CSD 2 meeting was pivotal in highlighting existing trends in water scarcity and linking these trends with other problems such as water quality, water-related disasters, water-related health, food security and environmental deterioration.

- For the first time since after Rio+5, water for sustainable development was discussed at the intergovernmental level in the sixth session of the Commission for Sustainable Development (CSD 6) in 1998, and a broad consensus was reached on key water issues. This session resulted in the general acknowledgement of necessary shifts in water resource management, including a move from technical and sectoral approaches to a more integrated approach that places greater emphasis on the social aspects of water management.

- Recent international water meetings, such as the 2nd World Water Forum at the Hague in 2000, the 2001 International Conference on Freshwater in Bonn, and the 3rd World Water Forum in Japan in 2003, served as an important fora for multi-stakeholder dialogue on water related issues. The events at The Hague in 2000 were particularly significant because it marked both the launch of the World Water Vision and the approval of the Ministerial Declaration on Water Security in the 21st Century. The 2001 International Conference on Freshwater in Bonn boasts a Ministerial Declaration that emphasized the role of water management in meeting the Millennium Development Goals.

- The United Nations Millennium Declaration in 2000, the World Summit on Sustainable Development (WSSD) in 2002, and the 13th session of the Commission on Sustainable Development in 2005 all further affirmed the role of water in sustainable development. Water is clearly a critical factor in influencing the global community's responses to, and action on several Millennium Development Goals, including those aimed at reducing poverty, integrating the principles of sustainable development into national policies and programmes, improving access to water and improving the lives of the poor by 2015. Building upon the momentum of the MDGs, the WSSD reiterated the MDG on water provision and set a new goal for sanitation improvements.

With an aim to assist UNDP in the promotion of the newly evolved integrated approach to water resources management, my duties included activities necessary to: (1) plan IWRM stakeholder dialogues in Central Asia; and (2) promote national IWRM and water efficiency plans in different regions, and Central Asia specifically.

1. IWRM Stakeholder Dialogues in Central Asia

My efforts in regards to the IWRM stakeholder dialogues included contributions to the design and agenda of a multi-stakeholder dialogue in the Eastern Europe and CIS (RBEC) region on water resources management issues and operationalization of IWRM at community, river basin, and national levels. The design of the stakeholder dialogue would be informed by the UNDP RBEC water resources strategy and ongoing IWRM activities in the region, including UNDP's project in Kazakhstan and the Global Environment Fund's (GEF) expertise in International Waters. The dialogue aims to identify opportunities and constraints to IWRM at both national and transboundary levels and identify entry-points for potential follow-up support through the Shared Water Basin Management Initiative, Water Governance Facility, and others.

Broadly speaking, the dialogues aim to analyze IWRM issues, identify policy options, and formulate strategies through dialogues with a variety of stakeholders. The overarching purpose of these dialogues would be to involve and empower the various stakeholder categories from the

local level to the national level for the management of their water resources. The aim is to focus these dialogues on the advancement of IWRM implementation. One potential outcome of the dialogues is to identify the external and/or domestic process support needed to operationalize IWRM plans and reach tangible results.

The dialogues could focus on IWRM at the national level (the program in Kazakhstan could be used as an example), while keeping in mind that in Central Asia most water issues are transboundary in nature. The dialogues could bring together a diverse group stakeholders, in particular those historically marginalized, to discuss these issues as a way of working on the methodology and supporting good stakeholder representation, as well as institutional mechanisms for participation.

Assisting the promotion of these dialogues, I provided support through the following activities:

a. Background research on the status of IWRM in the region and development of a briefing note to update UNDP colleagues on regional activities, issues, and concerns;
b. Assessing the current activities of potential partners in the region, such as UNDP, United Nations Environment Programme (UNEP), Global Water Partnership (GWP), and United Nations Economic Commission for Europe (UNECE), whom had all discussed opportunities for future work in Central Asia;
c. Communication with relevant counterparts in Europe, the UNDP regional center in Bratislava, Country Offices in Central Asia, in addition to other partners on the design of the dialogues; and
d. Preparations for dialogue workshop logistics.

Of foremost concern was the process of determining the best possible entry-point, through which these stakeholder dialogues could occur. A needs assessment was performed during a regional conference of Country Office representatives, to gather the environmental focal points' input on the proposed dialogues. In addition, an analysis of ongoing water-related activities in the region provided a shortlist of potential projects in the Syr Darya River Basin, the Amu Darya River Basin, and the Ferghana Valley, to which the proposed stakeholder dialogues might be able to link.

According to a 2003 report funded by the ADB titled, "Small-scale Technical Assistance for Assessment of Sub-Regional Water Resources Management Issues in Central Asia," the trends in development assistance projects in Central Asia have shifted in recent years.

The report states, "In the early years of the assistance the projects were mainly scientific studies to gain an understanding of the scope of the problem and its nature. They included water balance studies, environmental and health surveys, crop and water use studies and the like. These studies were well received by the countries as they increased the knowledge base and the technical skills of the counterpart agencies. However, often the results from the studies were often not widely shared among other concerned agencies, nor were the outcomes of the studies made known publicly in the region. The technical skills were generally retained in the counterpart agencies being used mostly to attract new donor funded projects. More recent work has been designed to build capacity to implement integrated water resources management (IWRM) at each level in the Aral Sea basin. It is important to note in assessing the outcomes of the more recent work that in most projects there has been a continuing tendency to give an emphasis to the technical aspects of the work, in particular to knowledge generation, rather than to assessing and influencing the social, political and institutional climate."

One method, through which donors are successfully increasing public involvement and awareness in the basin, is through the establishment of water users' associations (WUAs). There is increasing donor support to the establishment of and support for WUAs in Central Asia, because not only do they invite public involvement, but they also provide a mechanism for replacing the collective farms in the management and restoration of the irrigation infrastructure that is so relied upon, yet has fallen into disrepair since the end of the Soviet Union.

In terms of national IWRM and water efficiency planning, Kazakhstan is the most advanced of any of the countries in the region. Many experts in the region agree that Kyrgyzstan and Tajikistan could be the next to begin work on IWRM Plan, as their governments have shown interest in working with development partners and advancing the IWRM principles.

2. National IWRM and Water Efficiency Plans

In an effort to assist countries in the Central Asia region in meeting their commitments to develop national IWRM and water efficiency plans by 2005, UNDP is in the process of assessing prior and ongoing work implemented by various bilateral and multilateral donor agencies to determine opportunities for collaboration, in addition to gaps in support requiring assistance. Coordination of different donor activities has historically been poor and therefore obtaining a thorough and accurate account of involvement by various organizations can be difficult.

To most accurately assess the gaps in development assistance, information is required on the current level of project implementation in the region. According an analysis of regional donor support performed by the Asian Development Bank (ADB), the recent donor funded projects focused on the following areas:[ii]

- **On-ground activities aimed at increasing the skills and institutional organization of farmers – establishing water user associations (WUA) and implementing participatory irrigation management.**
  Donors: IWMI, World Bank, CIDA, Denmark, EU, France, GEF, Italy, Kuwait Fund for Arab Economic Development (KFAED), Netherlands, Population/Human Resources Development Fund (PHRD) [Japan], SIDA, Switzerland, United Kingdom, USAID
- **Rural water supply and sanitation, aiming to improve the living standard and health of rural communities**
  Donors: ADB, Netherlands, World Bank, Sweden, Switzerland, KfW, KFAED, Denmark
- **Aiming to improve the optimization of reservoir operations to balance needs of hydropower and irrigation**
  Donor: USAID
- **Strategies for managing water and salinity**
  Donors: Netherlands, GEF, EU
- **Dam safety**
  Donor: Sweden, Switzerland, USAID
- **Environmental studies and wetland restoration**

Donors: Netherlands, NATO, IFAS, Italy, World Bank, NTF

- **Data collection and data management, and**

  Donors: Sweden, Switzerland, UK, EU, and Norway

  Instrumentation and automation

  Donors: CIDA, France, US, IFAS
- **Water quality management and drainage construction**

  Donors: Netherlands and PHRD
- **Integrated land/water management in the upper watersheds**

  Donors: Netherlands, Finland, Turkey
- **Institutional and capacity building at the top international level of EC IFAS**

  Donors: EU TACIS, UNDP, CIDA

Part of my work focused on collating and assessing the status of relevant laws and institutions in each of the countries, as well as project information provided by a variety of donor agencies in an attempt to piece together a more comprehensive picture of the status of IWRM planning for each of the five countries: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. This review resulted in the following country summaries, which include summary descriptions of the countries, their water resources, and general donor involvement.

COUNTRY SUMMARIES

1. KAZAKHSTAN

- **GENERAL COUNTRY INFORMATION**

Kazakhstan, the largest of the countries in Central Asia, has a total area of 2,717,300 sq km, of which 47,500 sq km are water.[iii] Landlocked, the country shares borders with China, Russia, Kyrgyzstan, Uzbekistan, and Turkmenistan. Kazakhstan has been an independent nation since December 1991, at which time Nursultan Nazarbaev became president, a position he still holds today, although upcoming elections on December 4th 2005 could (although it is unlikely) change this. The country is divided into 14 provinces, called oblasts. Kazakhstan possesses large

amounts of fossil fuels and maintains a strong agricultural sector as well.[iv] Kazakhstan has experienced strong economic performance since 1999, which has led to an improved standard of living.[v]

Current issues include: developing a cohesive national identity; expanding the development of the country's vast energy resources and exporting them to world markets; achieving a sustainable economic growth outside the oil, gas, and mining sectors; and strengthening relations with neighboring states and other foreign powers.[vi]

- **WATER RESOURCES**

Environmental concerns:

Aral Sea: The northern part of the Aral Sea, which has been decreasing in size since the 1960s due to diversions for irrigation of agriculture, is located in Kazakhstan. The shrinking has left a layer of chemical pesticides and natural salts, which are lifted by winds and blown into noxious dust storms through the region. Also due to agriculture, soils are heavily polluted from the overuse of chemicals and salination from poor infrastructure and wasteful irrigation practices.[vii]

Caspian Sea: Kazakhstan is one of four countries bordering the Caspian Sea, which is oil rich in several places. As a result of the activity in sea, the Caspian is heavily polluted.

Lake Balkash: Feared to be the next Aral Sea, some studies have shown that this lake is shrinking. Fed by transboundary waters coming from China, the future of Balkash is tied to the Chinese plans to increase water infrastructure for the development of their western region.

Water Laws: A new Water Code, which was implemented in July 2003, and its associated Regulations and By-Laws, which will be approved in 2004, laid the foundation for IWRM. The Law on Environmental Protection (1997) includes several components that are related to water and govern the protection of the environment, include the water environment. The Strategic Plan of the Republic of Kazakhstan Up To 2010 has several elements on the improvement of water resources, their management and the environment, all of which have an impact or influence the National and River Basin IWRM and Efficiency Plans.[viii]

Status of IWRM Preparations: In 2002, the Government of Kazakhstan committed to have a National IWRM Plan by 2005. As a function of the partnership between the Government of Kazakhstan, UNDP, GWP, and the Government of Norway, the project entitled "National Integrated Water Resources and Water Efficiency Plan for Kazakhstan" is currently underway. By the end of 2005, the National IWRM and Water Efficiency Plan is expected to be completed, and subsequently plans for eight river basins by 2007.[ix]

A Water Resources Committee (WRC), which is under the Ministry of Agriculture, will assume the final responsibility for the IWRM plan and ensure that appropriate institutional reforms and management instruments are in place. The River Basin Organizations (RBOs) will be the administrative unit for water management, although further work is required to strengthen the RBOs to make them the authority on water issues in the basin.[x]

The project includes: capacity building for the WRC and RBOs; National IWRM and Water Efficiency Plan and IWRM plans for RBOs and completion of a Strategy for Achievement of MDGs for Water to support its implementation; and establishment of River Basin Councils by 2007.[xi]

Constraints to IWRM planning and implementation in the country include: lack of information transparency, lack of public participation in decision-making and effective communication systems among water related actors at the inter-sectoral level within basins, between water specialists and water users at the local level and water organizations and NGOs.[xii]

- **GENERAL DONOR INVOLVEMENT**

On-going or Past Activities: According to the ADB, its country program is focusing on education, agriculture and rural development, and transport and communications. Its loan program is small; in the year 2002, only a rural water supply and sanitation sector project fully processed. Development partners have been holding regular informal meetings and coordinating with each other even though, the Government has not agreed to any formal consultation meeting

with development partners since 1996. All programs are coordinated and several projects have been cofinanced. The World Bank is assisting with creating institutional processed for participatory irrigation management (WUAs) and the rehabilitation of irrigation infrastructure. EBRD and the World Bank are establishing conditions for privatization of farming and energy developments. UNDP is supporting development of the local government's role in poverty reduction and environmental management.[xiii]

2. KYRGYZSTAN

▪ GENERAL COUNTRY INFORMATION

Kyrgyzstan, a small, poor, and mountainous country, has a total area of 198,500 sq km, of which 7,200 sq km is water. The country borders China, Kazakhstan, Tajikistan, and Uzbekistan. The country is divided into seven provinces, or oblasts. With a predominantly agricultural economy, the main products are cotton tobacco, wool, and meat. While the country is short on energy resources, it has an abundance of water (with the Syr Darya and its tributaries originating in the country's mountains) and therefore plenty of potential for hydropower. The country's natural beauty provides it with great potential for tourism, although its location has limited the growth of the industry to date. Kyrgyzstan holds the one American military base in the region, a central location for its operations in Afghanistan. Of all the Central Asian countries, Kyrgyzstan is distinguished by its liberal economic policies and greater acceptance of freedom of speech. This freedom of speech is probably the reason why this country is the first of the Central Asian countries to have a popular uprising; in spring of 2005 demonstrations led to the outer of President Askar AKAYEV, who had run the country since 1990. Elections held in July 2005, led to former Prime Minister Kurmanbek BAKIYEV taking office.[xiv]

Current concerns include: privatization of state-owned enterprises, expansion of democracy and political freedoms, interethnic relations, and combating terrorism.[xv]

- **WATER RESOURCES**

Environmental Concerns: Many people rely on contaminated streams and wells as their water sources, which makes water pollution and water-borne disease serious concerns in Kyrgyzstan. Also, agricultural activity is mostly concentrated in the Ferghana Valley, where there are transboundary tensions between the three countries sharing the valley (Kyrgyzstan, Uzbekistan, and Tajikistan) and there is an increasing problem of high soil salinity from faulty irrigation practices.[xvi]

Water Laws: According to the 2003 ADB Report, the Kyrgyz Republic is the only country in the region that has actually enacted national legislation to formalize international water agreements. In addition, Kyrgyzstan has set itself apart by developing laws for the establishment of water users' associations. Kyrgyzstan has also established a national body (secretariat) to coordinate the country's activities in relation to the Executive Committee (EC-IFAS), and to monitor the implementation of policies and plans developed and agreed by the council.

- **GENERAL DONOR INVOLVEMENT**

On-going or Past Activities: Since 2000, ADB focused on poverty reduction and four of the seven programs/projects in the 2003-2005 program are either poverty or core poverty interventions. ADB has assisted the Government in agriculture sector reform. The work has included land reform, natural resources management, improving and restructuring the supply system for agricultural inputs, cost recovery in irrigation, and capacity building. ADB has also supported irrigation rehabilitation and credit unions in rural areas. The World Bank is assisting with creating institutional processes for participatory irrigation management (WUAs), the rehabilitation of irrigation infrastructure, agrarian reform and farm restructuring. USAID is working to optimize the operation of the Syr Darya cascade for both energy and irrigation water supply. Various donors are assisting with small hydropower development. Switzerland is assisting in irrigation management in the Ferghana Valley, in water resource data collection and

in local community management of watersheds and forestry. UK, World Bank and UNDP are assisting in poverty reduction and rural water supply.[xvii]

3. TAJIKISTAN

- **GENERAL COUNTRY INFORMATION**

After becoming independent in 1991, Tajikistan was plagued with civil war from 1992 until 1997. Although the country has been peaceful in recent years, the years of war serious harmed its infrastructure and Tajikistan remains the poorest in Central Asia and has one of the lowest per capita GDPs among the 15 former Soviet republics. It is estimated that 60% of the population lives in abject poverty. However, Tajikistan has received increasing aid from the international development community in recent years and has experienced slow yet steady economic growth since 1997. Tajikistan's economic situation remains fragile due to several reasons: uneven implementation of structural reforms, weak governance, widespread unemployment, and the external debt burden. This high external debt hinders the country's borrowing capacity.[xviii]

With an area of 143,100 sq km, 400 sq km of which is water, Tajikistan is the smallest country is Central Asia, sharing borders with Afghanistan, China, Kyrgyzstan, and Uzbekistan. The country is divided into two provinces and one autonomous province. The country is led by Emomali RAHMONOV, who became president 6 November 1994.[xix]

Natural resources within the country's borders include: hydropower, some petroleum, uranium, mercury, brown coal, lead, zinc, antimony, tungsten, silver, and gold.[xx]

- **WATER RESOURCES**

General: With a significant portion of the water feeding the Amu Darya River originating in its mountains, Tajikistan is in a unique position of power within the region. However, similar to

Kyrgyzstan, it faces tremendous energy shortages and must consider the potential hydroelectric power available and the hydropower-irrigation tradeoffs.

Environmental Concerns: With the worst water and sanitation facilities in the region, the safety of drinking water is a major concern. Also, increasing levels of soil salinity and excessive pesticides are the result of agricultural activity in the country.[xxi]

Water Laws: The fundamental documents of the country's water policy: (1) Water Code (2000); and (2) "Concept of Rational Use and Protection of Water (2001). However, these need to be updated to include new thinking on integrated water resources management.[xxii]

Institutional Capacity: Generally, the capacity of the state institutions is considered limited, requiring strengthening through water legislation, policy and strategies. Also, there is need for improved coordination amongst the administrative and technical bodies, as well as civil society and IFI's.

With the end of the Soviet Union, so too ended the collective farms, which provided a critical technical link between the central government and the local water users. For this reason, there is a push to establish Water Users' Associations to fill this void.

There is no regulation or coordination structure to deal with conflicting requirements from different water users and use sectors, such as agriculture and energy.[xxiii]

Status of IWRM Preparations: As a participant country to the Johannesburg World Summit on Sustainable Development (WSSD), Tajikistan committed to establishing national IWRM and Water Efficiency plans by the end of 2005.

UNDP Country Office has been working with the Government on a Water Sector Strategy Paper, which discusses recent studies' recommendations and commitments, which contribute to the strategic recommendations for: (1) the legal, regulatory, and institutional framework; (2) rehabilitation of existing infrastructure; (3) regional water-energy cooperation; (4) possible roles

for different actors; and (5) recommendations. The water sector strategy also includes TOR for a Working Group and three individual consultants (one legal and institutional consultant, one construction and rehabilitation consultant, and one hydropower development consultant), who will address the issues laid out in strategic recommendations.

A series of discussions occurred regarding the water sector strategy, which revealed that many innovations to the water code and the institutional framework are made at the local level within individual programs and projects (by ADB, WB, UNDP, USAID, SDC) to address issues of national importance, such as ownership, management of both water and infrastructures, water saving techniques and regulations, that should all be utilized in a bottom up process and incorporated in the new strategy.[xxiv]

- **GENERAL DONOR INVOLVEMENT**

On-going or Past Activities: ADB performed a Agriculture Sector Strategy, as part of a project aimed to increase agricultural productivity, rehabilitate and improve irrigation and water supply systems in the project areas, and strengthen rural services activities. The ADB has also provided technical assistance for improved flood management and a loan for water resources development and rehabilitation.[xxv]

Proposed Activities: UNDP CO and GTZ have prepared a proposal on *Sustainable Water Use and Management in Tajikistan*, which identifies four components "niche areas" where UNDP and GTZ can contribute to improved water resources management and access to water in Tajikistan. These components are:

(1) Improved access to drinking water and sanitation for rural poor (rehabilitate/construct rural water supplies; improve solid and liquid waste management; establish WUAs; public awareness campaigns and training for health and sanitation)
(2) Enhancing governmental organizations' water management capacities

(improve coordination between Ministries and Agencies; promote long and medium term planning; analyze institutional capacity; develop training curriculum for personnel and publish materials)

(3) Promoting sustainable irrigation practices and efficient resource management (socio-economic baseline survey; id communities for demo sites; train farmers on modern water management techniques; improve sustainable use of transboundary rivers; undertake a cost-benefit study of waters uses and use sectors)

(4) Small grants supported interventions (prepare micro-grant operational manual; community pilot demonstrations; public information campaign; local enabling activities and land use planning)[xxvi]

4. TURKMENISTAN

- **GENERAL COUNTRY INFORMATION**

As the country's leader since the end of the USSR, Saparmurat NIYAZOV remains in power as president for life and opposition is tolerated. With an area of 488,100 sq km, Turkmenistan is comprised mostly of desert and a negligible amount of water resources besides its border on the Caspian Sea. The country is divided into 5 provinces and shares borders with Afghanistan, Iran, Kazakhstan, and Uzbekistan.

Lacking substantial water supplies, agricultural activity only occurs in the few irrigated oases in the country. Turkmenistan has extensive hydrocarbon/natural gas reserves; however, the extraction and delivery mechanisms remain underdeveloped, leaving the government is pursuit of alternative petroleum transportation routes in order to break Russia's pipeline monopoly.[xxvii]

- **WATER RESOURCES**

Environmental Concerns

Although most of the country is completely unsuitable for agriculture, development for cotton production has led to serious environmental damage, such as the soil and groundwater contamination from agricultural chemicals, pesticides, salination, and water logging due to poor irrigation methods. The country continues to divert substantial flow from the Amu Darya for irrigation, thereby contributing to the problem of the shrinking Aral Sea.[xxviii]

Like Kazakhstan, Turkmenistan also borders the Caspian Sea and therefore the significant pollution of the sea is a concern.

- **GENERAL DONOR INVOLVEMENT**

On-going or Past Activities: There has been less donor involvement in Turkmenistan than the other countries in the region, possibly due to the restrictive policies of the current government.

5. UZBEKISTAN

- **GENERAL COUNTRY INFORMATION**

Independent since 1991, Uzbekistan is led by President Islom KARIMOV, who took office in March 1990. With an area of 447,400 sq km, 22,000 of which are water, Uzbekistan is the third largest of the countries in Central Asia. Comprised of twelve provinces and one autonomous republic, the country shares borders with Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan. The leadership is increasingly oppressive, leading to concerns regarding human rights. The government of Uzbekistan has received criticism for its alleged role in killings in the city of Andijan this past May.

Although the country is mostly sandy desert with dunes, there are intensely irrigated river valleys along the regions two major rivers, the Amu Darya and Syr Darya. This extensive irrigation has allowed this dry country to seriously develop its agricultural sector, making it the world's second-largest cotton exporter. However, the current irrigation methods are unsustainable and the country is attempting to lessen its dependence on agriculture by developing its mineral (gold, uranium, silver, copper, lead, zinc, and tungsten) and petroleum reserves.

Current concerns include terrorism by Islamic militants, economic stagnation, and the curtailment of human rights and democratization.[xxix]

- **WATER RESOURCES**

Environmental Concerns: The shrinking Aral Sea has led to growing concentrations of chemical pesticides and natural salts, which are blown into the air, causing human health problems, water pollution and desertification. Agriculture also caused soil salination and contamination.[xxx]

Water Laws: According to an ADB report, Uzbekistan does not recognize IFAS as the primary forum for cooperation and conflict resolution in water resources management in the Aral Sea Basin.[xxxi]

- **GENERAL DONOR INVOLVEMENT**

On-going or Past Activities: ADB is providing support to the Western Uzbekistan Rural Water Supply Project, which aids the welfare and development of Karakalpakstan, a region with one of the highest poverty rates in Uzbekistan and most devastated by the Aral Sea disaster. In addition to this project, a grant from the Japan Fund for Poverty Reduction (JFPR) provides a combination of micro-credit, livelihood training, leasing, and water components in partnership with the local government, non-government organizations, the private sector, local communities,

and UNDP. The World Bank is financing the rehabilitation of the Karshi Pumping Cascade (irriation and rural water supply), in addition to assisting privatization of state farms and improving irrigation management. US Trade Development Agency is financing the rehabilitation of the Amu Bukhara Canal system. EU TACIS has two pilot irrigation management projects.[xxxii]

5. TRANSBOUNDARY WATER ORGANIZATIONS IN THE REGION:

- **Interstate Commission for Water Coordination (ICWC):** Created in 1992 by the countries in the region to be responsible for water management and development of transboundary water agreements in the Aral Sea Basin. Administrative support provided by a Secretariat created at that time.
- **Scientific Information Centre (SIC-ICWC):** Created at the same time as the ICWC to give it technical support.
- **International Fund to Save the Aral Sea (IFAS):** Created in 1993 as a financial body to raise and administer funds for Aral Sea related activities. In 1997, was merged with the International Commission for the Aral Sea (ICAS), which was also formed in 1993 to develop and implement programs to use the funds for improved basin management. Functions through an Executive Committee (EC-IFAS).

6. SELECTED MAJOR PRIOR TRANSBOUNDARY EFFORTS IN THE REGION:

A few large, transboundary projects were implemented in recent years, with varying degrees of success. These include:

Aral Sea Basin Program (ASBP) Water and Environmental Management Project

- Funded by GEF and managed by the World Bank
- Summary: The objective of the project was to address the root causes of the overuse and degradation of the international waters of the Aral Sea Basin by assisting the Central Asian States in implementing a Strategic Action Plan. The project components were:

(1) A water and salt management component to prepare for the ASBP the common policy, strategy, and action programs.
(2) A public awareness component to educate the general public to conserve water and to accept burdensome political decisions.
(3) A dam and reservoir management component to complete the independent dam safety assessment, improve dam safety, address sedimentation, and prepare investment plans.
(4) A transboundary water monitoring component to create the basin physical capacity to monitor transboundary water flows and quality.
(5) A wetlands restoration component to create the basin physical capacity to monitor transboundary water flows and quality.
(6) Project management support component to enable the Executive Committee of the International Fund to Save the Aral Sea (EC-IFAS) to implement the project.

EU TACIS

- Funded by the EU and implemented through EC-IFAS
- Summary: The objectives of this project were to:
  (1) Preparation of legal and interstate agreements
  (2) Creation of a regional information system designed for the solution of priority tasks of land and water resources management at the regional level (WARMIS)
  (3) Analysis of water use and farm management (WUFMAS) in irrigated agriculture
  (4) Development of regional communications network and supply of equipment
  (5) Training of local experts
  (6) Pilot projects for improving farm management techniques

Transboundary Water and Energy Management Project

- Funded by USAID
- Summary: This ongoing project primarily supports an improved implementation of the 1998 agreement on the Syr Darya. There is a strong link between the project and the need to move towards principles for good management of transboundary water resources because the project is being implemented at the tranbsoundary river level. A reservoir simulation model is being completed that will help decision makers assess the effects of adopting alternative

operating rules for Toktogul Reservoir, the main hydropower reservoir in the upper Syr Darya system. The project is also facilitating the development and adoption of operating the reservoir to maximize the benefits to all stakeholders. A decision support system is also being developed that will help to reduce winter spills from the upper system, predict the irrigation season's total water resources and manage the middle Syr Darya throughout the summer season.

B. ACTIVITIES PERTAINING TO TRANSBOUNDARY WATERS

1. Transboundary River Basin Initiative (TRIB)

In early 2005, the daily project management of the Transboundary River Basin Initiative (TRIB) shifted from the World Bank in Washington D.C. to UNDP in New York. This change came during the end of the initiative's first phase. In preparation for the second phase of these transboundary waters efforts, I researched and assessed the outcomes and achievements resulting from the implemented project components through discussions with project contacts. This information was then utilized in the following report to the donors.

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In early 2000, the United Nations Development Programme (UNDP) established a global trust fund with seed funding from the US State Department for the implementation of the Transboundary River Basin Initiative (TRIB) Project.

The TRIB project was established with several goals. The main goal was to support riparian countries in nationally owned efforts to improve their dialogues on shared rivers and build intra-riparian trust. In addition, the project aimed to facilitate an exchange of experiences and lessons learned, build internal capacity within riparian countries, leverage additional funds, and link political processes with the development and management of shared waters.

As the United Nation's principal provider of development advice, with a mandate to enhance capacities and facilitate stakeholder dialogue, UNDP approaches international waters through a number of methods, including environmental management, integrated water resource management (IWRM), and support to political processes. As one of the implementing agencies for the Global Environment Facility, UNDP has the largest global GEF International Waters portfolio.

UNDP seeks to realize synergies between TRIB, GEF and other UNDP support relevant to transboundary water resource management to maximize the impact of TRIB. For the same reason partnerships are an essential feature of TRIB, with both bilateral and multilateral donors, as well as development organizations that provide co-funding and collaboration on activities. This collaboration enables linkages between the political processes, development challenges, and environmental management in transboundary river basins.

This report with its appendices outlines the achievements, activities, and forward-looking developments of the Transboundary River Basin Initiative (TRIB) during 2005.

Achievements

With nine of the twelve implemented components now complete, TRIB succeeded with a variety of achievements and lessons learned:

1. **TRIB provided assistance to 36 countries through twelve project components.** Projects varied in the range of countries involved, with some having a global scope and others focusing on three or four riparian nations.

2. **TRIB leveraged US $76 for every US $1 invested.** TRIB funding equaling US$ 297,795.00 was utilized in three components (Kura-Aras, Senegal, and Niger II). These funds leveraged US$ 22.625 million in funding from GEF.

3. **TRIB strengthened relationships between UNDP, basin organizations and multilateral and bilateral donors.** In the course of the TRIB implementation, UNDP partnered with numerous actors, among others: World Bank, UNESCO, CIDA, GEF, and the Carnegie Foundation. UNDP also partnered with non-donor regional and national organizations, varying from large basin organizations, such as the Mekong River Commission and the Nile Basin Authority, to the smaller local NGOs such as Proudesa and Asdeverde in the Rio Frio Basin.

4. **TRIB improved communication between various levels of government and increased stakeholder participation.** TRIB components strengthened the links between local, regional and national levels of government by facilitating communication and empowering stakeholders to participate in discussions. For example, in the Senegal River Basin, the project increased stakeholder participation, while facilitating dialogue between *Organisation pour la Mise en Valeur le fleuve Sénégal (OMVS)* and the Federal Government in Guinea.

5. **TRIB built the capacities of communities to participate in transboundary waters management.** By building capacity, TRIB enabled reforestation by communities in the Rio Frio Basin, created a curriculum to increase the number of professionals educated in transboundary waters management through the Universities Partnership, and strengthened communities' capacity to participate in cross-border dialogues in the Mekong River Basin.

6. **TRIB initiated policy, institutional and legal reforms necessary for effective transboundary waters management.** Examples of institutional and legal support that resulted from TRIB funding includes the Framework for Cooperation in the Nile Basin, the initiation of regional and national institutional support mechanisms and legal reform in the Kura-Aras Basin, and the implementation of a conflict resolution mechanism in the Mekong Basin.

7. **TRIB increased understanding of the methodology involved in transboundary waters projects.** Numerous components have strengthened policy-makers and the international community's understanding of issues in transboundary water management. The Infrastructure Seminar heightened the understanding of obstacles in implementing water infrastructure projects, the Zambezi Small Dams Study increased knowledge of the role of small dams in poverty reduction, and the Mekong II component provided lessons learned on mechanisms for successful stakeholder participation in community-to-community dialogues.

8. **TRIB increased other donors' awareness of the program through numerous outreach and partnership building activities.** In 2005, TRIB pursued an active outreach to potential donors at international fora and meetings with individual potential donors.

TRIB Components:

The majority of this year's activities occurred within components planned in previous years, many of which reached completion in 2005:

1. **Nile River Basin** (Ongoing) *Burundi, Democratic Republic of the Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda.* TRIB funding is supporting Nile Basin countries' participation in the the Negotiating Committee which is working to reach consensus on the text of the Cooperative Framework Agreement, for finalization by the Nile-COM. The NC is aiming to conclude the CFA text in a final meeting in December 2005.

2. **Niger River Basin** (Niger I, II & III Completed) *Benin, Burkina Faso, Cameroon, Chad, Cote d'Ivoire, Guinea, Mali, Niger, and Nigeria.* TRIB provided support for three separate components in the Niger Basin, which each assisted in moving the Niger Basin Authority and basin management forward: the Niger Basin Authority's Council of Ministers dialogue meeting, which resulted in strong national ownership of proposed institutional changes, translating into regional action; assistance to riparian countries in their decision to proceed with GEF project "Reversing Land and Water Degradation Trends in the Niger River Basin" supporting the basin's Shared Vision process; a study on the status the basin's water resources and opportunities for transboundary cooperation; and national and regional workshops validating multi-sector strategies that outline regional development opportunities across the basin. These activities laid the groundwork for the basin wide Strategic Vision, which is now being supported by other donors.

3. **Kura-Aras River Basin** (Ongoing) *Armenia, Azerbaijan, and Georgia*. TRIB facilitated agreement between riparian countries in the development of the GEF project "Reducing Trans-boundary Degradation of the Kura-Aras River Basin." (PDF B) which supports regional cooperation and capacity for conflict prevention and better management of the Kura-Aras systems (Transboundary Diagnostic Assessment /Strategic Action Plan are main outputs of the PDF B) . TRIB provides ongoing support to regional stakeholder participation and dialogue for project design and implementation.

4. **Zambezi Small Dams Study** (Completed) *Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia, and Zimbabwe.* Acting in partnership with the World Bank, TRIB informed decision-making processes through this study of the advantages and disadvantages of small dams on the Zambezi River and possible cumulative impacts of numerous small dam projects.

5. **Mekong River Basin** (Mekong I Completed, Mekong II Ongoing) *Cambodia, Laos, Thailand and Vietnam.* TRIB sponsored two components in the Mekong Basin, helping to enhance communications between the Mekong River Commission and its member countries: Mekong I increased the Mekong River Commission's internal capacity for information development and dissemination, public participation and partnership activities to level the knowledge base of riparian nations; Mekong II is bringing community perspectives to the decision-making process and facilitating intra-riparian trust though community dialogues.

6. **Rio Frio River Basin** (Completed) *Costa Rica and Nicaragua*. TRIB aided in the restoration of the Rio Frio watershed through riparian community involvement and the facilitation of cross-border dialogue between Costa Rica and Nicaragua for watershed management, via two local NGOs, in an integrated land and water resource management approach.

7. **Senegal River Basin** (Completed) *Guinea, Mali, Mauritania, and Senegal.* TRIB facilitated riparian agreement during preparation for the GEF project, entitled "Senegal

River Basin Water and Environmental Management Program," which is lending support to the four riparian countries to build an inclusive institution for basin management

8. **Infrastructure Financing Seminar** (Completed) *Global.* TRIB aimed at strengthening country capacity by supporting the participation of five pivotal water experts from developing countries in a seminar that elaborated the necessary conditions for successful infrastructure investments.

9. **Universities Partnership** (Completed) *Global.* TRIB supported this north-south partnership, which led to the development of a graduate program in Water Conflict Prevention and Resolution (currently under review at Oregon State University); a series of international workshops to develop the capacity of the Partnership; and research on preventing and resolving water conflict (the resulting publication Hydro Diplomacy will be web-accessible end 2005).

2. Database of transboundary waters donors

In preparation for additional future work in the realm of transboundary waters and increased collaboration with other donors, I assisted UNDP's development of a transboudary donors directory to be utilized for the upcoming meeting at the fourth World Water Forum in Mexico and beyond. The directory was built upon a list of individuals involved in past informal donor consultations on transboundary waters in Stockholm during August 2005. Collating the contact information for the representatives of the major donors in transboundary waters enables UNDP to more readily facilitate coordinate transboundary water activities in each of the regions, especially in some of the larger river basins mentioned above such as the Nile, Niger, and Mekong.

C. ACTIVITIES PERTAINING TO UNDP PORTFOLIO REVIEW

The Water Governance Programme of the Energy and Environment Group, Bureau for Development Policy, UNDP Headquarters, is currently compiling the UNDP Water Portfolio, i.e. a review of all UNDP projects that focus on water issues. At this point we are not including GEF international waters projects.

For this purpose, we have reviewed projects implemented under Energy and Environment and have learned of more than 150 projects in 78 countries, and a total budget portfolio in water of around US$150 million. These preliminary results show that the largest percentage of UNDP's Water Portfolio, in terms of project numbers, is in Africa, with a total of fifty-two projects. With projects at the international, regional, national and community levels, almost forty percent of these occur at the community level. In addition, the initial portfolio results show the broad array of issues addressed by UNDP projects, including: water supply; agriculture and irrigation; sanitation and wastewater; ecological sanitation; integrated water resource management; capacity building and awareness raising; institutional strengthening; knowledge management; climate change and drought; and energy.

These figures, however, are preliminary as they currently do not include projects implemented under UNDP's other practices. We hope to now add projects implemented within some of the other sub-practices within UNDP, such as Democratic Governance, Poverty Reduction, and Capacity Development. Preliminary results are highly encouraging and emphasize the extensive capacity and experience UNDP has in the realm of water.

This exercise of collecting data for theUNDP Water Portfolio has uncovered the wealth of expertise and capacity within the Country Offices and the Regional Centers, while highlighting the strength of UNDP's commitment to water-related activities throughout the world.

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