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**The Kura-Araks Basin: Obstacles and
Common Objectives for an Integrated Water
Resources Management Model among Armenia,
Azerbaijan, and Georgia**

by

Berrin Basak Vener

A Professional Project Report Submitted in Partial Fulfillment of the
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Abstract

After the dissolution of the Soviet Union, the Kura-Araks Basin became an international river basin with respect to the South Caucasus states: Armenia, Azerbaijan, and Georgia. The main problems in the Basin include not only the *quantity* and *quality* of the water, but the lack of internal and joint management and monitoring of the river system. The river system has no uniform allocation and/or management system and no water quality monitoring. These countries also share problems of poverty; political instability; bureaucratic and structural issues; involvement by international and intergovernmental organizations (IGOs), individuals, interest groups, and other countries; the historical biases of the people who live in the region; and more importantly, ongoing ethnic, religious, and cultural conflicts.

Despite these obstacles, the countries recognize that they depend greatly on this river system, whose waters they have to share. The goal of this project is to define common goals and objectives to create the basis for an integrated water resources management (IWRM) model for the Basin in the South Caucasus using interviews and research.

The Kura-Araks Basin is the focus of many organizations and donor groups like the European Union (EU), United Nations (UN), World Bank (WB), U.S. Agency for International Development (USAID), Swedish International Development Cooperation Agency (SIDA), and the North Atlantic Treaty Organization (NATO). There are also many ongoing projects and programs in the Basin that support the creation of an IWRM model. These organizations can play a leadership role in the

creation and implementation of the IWRM model by building on existing projects and programs.

Interviews were conducted with 30 key water resource managers and officials in July 2005 to gain an understanding of each party's current situation and future needs in the South Caucasus. The interview results show that the main obstacle in creating a place of common ground for an IWRM model and/or initiation for the Basin is the lack of trust among the three countries due to the current political situation. Most of the interviewees (93.3%) were very positive about cooperating on transboundary water management regardless of their country of origin. That is why IWRM is one key to stability in the South Caucasus. An IWRM model can be the foundation for mediation and peace in the future.

Only when the parties are ready to discuss and negotiate, however, can the peace process begin.

I. INTRODUCTION

The Caucasus region is home to transboundary river basins such as the Kura, Araks, Sulaks, Terek, Choroki, Enguri, Kuban, and Rioni. The Kura and Araks Rivers have the largest drainage area and are mostly situated in the South Caucasus (SC) (Figure 1) (Appendix I). In the Kura-Araks Basin (Basin) over 40 river segments and tributaries cross international borders and are therefore transboundary rivers (TACIS 2003).



Figure 1: Map of the South Caucasus

The Basin includes two main branches, the Kura River and Araks River. The Kura River contributes 55% of the flow and the Araks River contributes 45%. The river system has 10,000 tributaries and covers five countries: Turkey, Iran, Armenia, Azerbaijan, and Georgia (TACIS 2003). This research focuses on the basin in the South Caucasus: Armenia, Azerbaijan, and Georgia. The total basin area of the Kura-

Araks is about 290,000 km², and approximately 16 million people live in the basin (UNEP/UNDP/OSCE 2004).

Armenia, Azerbaijan, and Georgia gained their independence from the Union of Soviet Socialist Republics (USSR) in 1991. During the Soviet era, all three countries of the South Caucasus Region (SCR) were within the USSR and water resources management of the Basin was contingent upon the policy that the USSR was implementing at the time.

When they became independent states, the three countries did not have any water resources management regulations or water code. However, each country has adopted water codes within the last 15 years: Armenia in 1992 and revised in 2002 by the European Union Water Framework Directives (EU-WFD), and Georgia and Azerbaijan in 1997. Nevertheless, there is no uniform control and/or management system for the rivers and, until 2002 no water quality monitoring by the riparian countries.¹

Georgia has an oversupply of water, Armenia has some shortages based on poor management, and Azerbaijan has a lack of water (TACIS 2003). The main water use in Georgia is agriculture, and in Armenia, it is agriculture and industry. In Azerbaijan, the Kura-Araks Rivers are the primary sources of fresh water.

The water users in all these countries are faced with water quality and quantity problems. In the South Caucasus almost 80% of the wastewater load is discharged into the Kura River and its tributaries (UNECE 2003). The Basin is excessively polluted due to a lack of treated urban and agricultural return flows, poorly treated

urban and agricultural return flows, pesticides such as DDT² that are used in Azerbaijan, and the recent resurgence of chemical and metallurgical industries in Georgia and Armenia (TACIS 2002).

It is important to note that there are constructive involvements in the area from different countries such as the USA and Switzerland and international/intergovernmental organizations (IGOs) such as the European Union (EU), World Bank (WB), the North Atlantic Treaty Organization (NATO), United Nations (UN), United Nations Development Program (UNDP), and the United States Agency for International Development (USAID). These organizations have an investment portfolio and international funding and credits available specifically for projects related to the environment, energy, communication, and education.

The Basin is a coveted prize for these organizations; they have several projects related to the management of the Basin. Major projects done by IGOs include: the European Union Technical Assistance Commonwealth of Independent States-Joint River Management Project (EU-TACIS-JRMP) in cooperation with UNDP, the NATO/OSCE South Caucasus River Monitoring Project and USAID's South Caucasus Water Management Project. While these are supposed to be parallel projects, there is no formal cooperation or communication between the projects. However, Armenia, Azerbaijan, and Georgia have cautiously welcomed the projects and, thus far, are willing to work together (see Appendix II).

¹South Caucasus River Monitoring Project, 2002-2007 by NATO/OSCE. See Appendix II.

² Dichlorodiphenyltrichloroethane.

While the three countries are willing to cooperate on water-related issues, they have not solved their political, economic, and social issues. The work in the Basin will be the first step towards cooperation and it is possible that they will be able to carry this positive spirit into resolving other areas of conflict.

The goal of this project is to define common objectives and obstacles to create the basis for an Integrated Water Resources Management (IWRM) model for Armenia, Azerbaijan, and Georgia (see Appendix VI). This goal will be achieved through interviews and/or surveys (“the interviews”) among the key water resources managers (“the interviewees”) in the South Caucasus Region (SCR).

IWRM is a participatory planning and implementation process, based on sound science, which brings together stakeholders to determine how to meet society’s long-term needs for water and coastal resources while maintaining essential ecological services and economic benefits (USAID 2006). Briefly IWRM seeks to balance human, industrial, agricultural and environmental needs (GWP 2006). IWRM helps to protect the world’s environment, foster economic growth and sustainable agricultural development, promote democratic participation in governance, and improve human health (USAID 2006). IWRM will advocate, build capacity, and implement in-country policy and mechanisms for:

1. Fair and equitable sharing of lands and resources and their benefits.
2. Understanding humankind’s vital dependency on ecosystems and the critical environmental and societal functions they provide.
3. Building awareness of the range of applicable dispute resolution and mediation methods and applying this capacity internally and in transboundary

settings particularly at the local stakeholders (civil society) and user association levels.

4. Creating and maintaining enhanced local capacity and knowledge.
5. Taking full advantage of the synergy from donor contributions and in-country capacity to carry out effective integrated management of financial, social and technical conditions to optimize a nation's or shared-basins' resources and their benefits (GWP 2006).

During the interviews Alternative Dispute Resolution (ADR) techniques were used to understand the issues and perspectives of the parties and encourage them to settle these issues on their own. ADR skills were used such as emphasizing the common objectives, remaining nonbiased and rational in the face of strong feelings between the parties, speaking clearly in ways that promote listening, inquiring and listening effectively and letting the parties express their feelings effectively. Based on the results of the interviews, ADR techniques such as mediation could be used successfully in the South Caucasus to create an IWRM model.

It is also necessary to gain an understanding of the geographical, historical, and political situation, problems and conflicts of the region in order to understand what is required to resolve the regional issues involved in transboundary water management. This project will examine not only water-related but also historical and political issues in Armenia, Azerbaijan, and Georgia. The project will also discuss the obstacles and objectives identified in the interviews, and make recommendations to the parties on how to achieve IWRM.

II. BACKGROUND: REGIONAL, SOCIO-ECONOMIC, HISTORICAL, AND POLITICAL EVENTS

A. Background Information

During the Soviet era, the Caucasus was an important agricultural region that supported the entire USSR. Soviet agriculture was highly inefficient and suffered from a poorly equipped infrastructure (CEO 2002). At present, agriculture remains the main sector in the region, employing a significant amount of the population.

In the Soviet period, from the 1970s to 1980s, industry in the Caucasus was well developed. The major industrial sectors were oil and gas, chemicals and machinery, ferrous and non-ferrous metals, cement, fertilizer, light manufacturing, and food processing (CEO 2002). This rapid industrial development resulted in increased environmental pressures.

After the USSR was dismantled, industrial production sharply declined in the Caucasus region because of the energy crisis and the dissolution of economic ties among the former Soviet Republics. Recently, some signs of industrial revival have appeared. However, the growth rate is still insignificant. A majority of the region's population still lives below the poverty line. Gross Domestic Product (GDP) has decreased roughly by 50% since 1991, poverty levels have reached 60-80%, and unemployment has skyrocketed (SIDA 2002). Even though all three countries have shown signs of macroeconomic recovery and progress in the implementation of structural reforms, there has been emigration from the region to Russia, Turkey, the

Persian Gulf, and the West (SIDA 2002). As an example, almost half of Armenia's population has left the country since independence in 1991 (SIDA 2002).³

After the Soviet Union's dissolution, the countries in the South Caucasus were primarily faced with environmental degradation stemming from agriculture and industry. The political situation in the region was not much different from the environmental situation. A series of ethnic conflicts broke out in Nagorno-Karabakh, Abkhazia, Javakheti, and other regions of the Caucasus. Because of these internal and international ethnic conflicts, today in the South Caucasus there are 1,500,000 refugees and/or Internally Displaced People (IDP)⁴ (SIDA 2002). The South Caucasus region remains in deep crisis because of ethnic conflicts, economic collapse, environmental degradation, and political instability.

In a positive vein, the South Caucasus lies on an ancient trade route known as the "Silk Road". The region acts as a natural bridge between Europe and Asia and is surrounded by three regional powers: Russia, Iran, and Turkey. This is one of the reasons the international community began to realize the geopolitical and geo-economic importance of the Caucasus in the world (SIDA 2002).

The South Caucasian states are neither democracies nor fully authoritarian states. All three countries attempted to introduce democratic systems, and held relatively free elections in 1990-1992 (SIDA 2002). However, the region reverted to increased authoritarian rule because of the pressures from war, threats of economic collapse, and the countries' inexperience with participatory politics.

³ Net immigration rate (2003 est.) for Armenia it is -3.15 migrant(s)/1,000 population; for Georgia it is -2.3 migrant(s)/1,000 population; and for Azerbaijan it is -5.16 migrant(s)/1,000 population

Of the three countries, Georgia has made the greatest progress towards building a democratic polity. Azerbaijan and Armenia are still in a transition period from an authoritarian regime to a full democracy. Political violence has been a constant threat in the three countries since independence as all have experienced *coup d'états*,⁵ insurrections, or attempts to assassinate political leaders (SIDA 2002).

As a result, political and socio-economic reform processes in all three countries have been slow and continually suffer setbacks. Widespread corruption, bureaucratic difficulties, and political instability have continued the South Caucasus' reputation as a relatively high-risk area for business (USDS 2003; SIDA 2002).

These obstacles frustrated early hopes for a democratic and prosperous future after the fall of Communism. Increasing international interest in investing in the region's energy resources resulted in instability in the mid to late 1990s (SIDA 2002). This interest in the region's energy resources was not new. As far back as 1877 Charles Marvin wrote that there was "irrefutable proof that 2500 years ago oil was exported from this region to Iran, Iraq, India and other countries through the "Silk Route"" (Bagirov 1996). The South Caucasus has a favorable geographic location at the crossroads of Asia, Europe, and the Middle East. Thus, today the three states have been eager to develop east-west and north-south transport corridors through their territory. In other words, restoration of the ancient Silk Route may help return the socio-economic and political stability to the region (SIDA 2002).

(CIA 2004).

⁴ Internally Displaced People or Internally Displaced Persons (IDP)

⁵ Stroke of state, a sudden, decisive exercise of force in politics.

Forces leading towards democratization were strengthened by membership in the Council of Europe. The three countries were accepted into the Council of Europe after their independence: Georgia in 1999 and Azerbaijan and Armenia in 2001. Being a member of the Council of Europe is the first step in a country's candidacy for European Union membership, which requires meeting European Union standards and harmonization with the European Union legislation. Ultimately, the European Union membership is the goal of these three countries and would provide the necessary political and legal infrastructure for IWRM.

B. Ethnic Conflicts and Other Issues

With over 50 ethnic groups, the Caucasus region is one of the most ethnically diverse areas in the world (SIDA 2002). The three largest ethnic groups are the Armenians, the Azeris, and the Georgians.

1. The Armenians speak an Indo-European language and are predominantly Apostolic Christians (94%).
2. The Azeris speak a Turkic language and are Muslims (93.4%) and Orthodox Christians (4.7%).
3. The Georgians speak a unique, South Caucasian language, and are Orthodox Christians (75%), Armenian Apostolic (8%), and Muslim (11%) (CIA 2004).

Of the three countries Armenia is the most homogeneously populated, especially after the forced exodus of Azerbaijanis in the late 1980s; at present only a small number of Yezidi Kurds remain (SIDA 2002).

Georgia and Azerbaijan are multi-ethnic countries. In Azerbaijan, ethnic groups include: Azeris (90%), Dagestanis 3.2%, Russians 2.5%, Armenians 2%, and

Lezgins, Kurds, and Talyshees 2.3%. In Georgia, ethnic groups include: Armenians 7% (according to the CIA 2004) or 9% (according to SIDA 2002), Azeris 6%, Abkhazians 1.7% (according to SIDA 2002), Russians 9%, and Ossetians.

C. Major Ongoing Conflicts

Nagorno-Karabakh

The Nagorno-Karabakh region is predominantly an Armenian-populated area in the western Azerbaijan. Armenia supports ethnic Armenian secessionist in Nagorno-Karabakh and militarily occupies 16% of Azerbaijan. After the occupation, more than 800,000 Azerbaijanis were forced to leave the occupied lands; another estimated 230,000 ethnic Armenians were forced to leave their homes in Azerbaijan and flee into Armenia (USDS 2003, CIA 2004). A cease-fire between Armenia and Azerbaijan was signed in May 1994 and has held without major violations ever since. The “Minsk Group,” part of the Organization for Security and Cooperation in Europe (OSCE), continues to mediate disputes.

Abkhazia

The Abkhazia region is located in the northwestern corner of Georgia on the south coast of the Black Sea. The Abkhazians declared independence from Georgia in 1992, acquired control over almost all of Abkhazia by late 1993 and conducted ethnic cleansing of about 240,000 Georgians living in the area. There are no guarantees for the 40,000 Internally Displaced Persons (IDPs) who returned to the area in 1998. The Basic Principle document for a peace agreement prepared by the UN Secretary General with the support of the United Nations (UN), the OSCE, the USA, United Kingdom (U.K.), Germany, France, and Russia was not satisfactory for Georgia and Abkhazia. While Georgia reluctantly agreed to sign it (SIDA 2002; CIA

2004), Abkhazia has refused to discuss the final outcome, making further discussions conditional on its independence from Georgia. Furthermore, Abkhazia demands that the return of IDPs be linked to the economic rehabilitation of the conflict zone and a final peace agreement. The peace process is presently stagnant (SIDA 2002).

South Ossetia

The armed conflict between the Georgians and Ossetians led to hundreds of casualties and thousands of refugees and IDPs on both sides (UNHCR 2003). The settlement talks launched in 1995 under OSCE auspices and with Russian mediation helped to bring the sides closer on many issues. However, the main issue, the political status of South Ossetia, remains unresolved. South Ossetia is one of the most heavily armed regions of Georgia. Robbery and violence are common features of the area (Nan 2002). An extensive market has developed between Georgia and South Ossetia; the market is not officially controlled by either country (SIDA 2002).

Javakheti

This area is part of Georgia bordering Turkey, and has a total population of 100,000 people. Almost 90% of the population is Armenian. Thus, Javakheti is often cited as a secessionist region (NIC 2000). The region is more integrated with Armenia than Georgia. Armenia supports demand for local autonomy of the region.

Refugees and Internally Displaced Persons (IDP)

Across the world, millions of people have fled wars without crossing an international border and now live precarious lives as IDPs (UNHCR 2003).

Azerbaijan has the largest population of the IDPs with over half a million,⁶ mostly as a result of the Nagorno-Karabakh conflict (UNHCR 2003, CIA 2005). This is followed by 270,000 in Georgia and approximately 250 in Armenia (UNEP/UNDP/OSCE 2004). According to the study (UNEP/UNDP/OSCE 2004) entitled 'The Case of the Southern Caucasus', refugees and IDPs pose a considerable challenge to the rest of the country, adding to existing environmental pressures. In Azerbaijan, schools, hospitals, abandoned factories and railway coaches have all been used to accommodate the IDPs (UNHCR 2003). In addition to other organizations and countries, UNDP is helping the South Caucasus countries with the IDP issue.

Transnational Threats

The transnational threats that are present in the South Caucasus today are both criminal and ideological in nature (SIDA/CCC 2002).⁷ Socio-economic crises, political instability, and ethnic conflicts since the dissolution of the Soviet Union have resulted in narcotics trafficking and radical Islamic movements (CIA 2004; SIDA/CCC 2002). According to the Conflict and Security Assessment study (SIDA/CCC 2002), conducted by the Cornell Caspian Consulting (CCC) and the Swedish International Development Cooperation Agency (SIDA) the location of the South Caucasus on the major trafficking routes from Afghanistan to western Europe implies that drug trafficking may become a serious threat to statehood and breed instability in the South Caucasus. The same study also indicates that radical Islamic movements are another transnational threat even though these groups not present on a significant scale. Being the only overwhelmingly Muslim country in the region,

⁶ According to the United Nations the number was 585,170 in 2003 (UNHCR 2003).

Azerbaijan is more affected by this problem than its neighbors, though Georgia also experienced its fair share of the problem.

D. Roles and Interest of Regional and Global Powers

Regional and global powers such as Russia, Iran, Turkey, the EU, and the United States have sought to maximize their influence in the region serving, to exacerbate an already politically sensitive situation. The Environment and Security study (UNEP/UNDP/OSCE 2004) states:

“The South Caucasus is also strongly influenced by the diverging geopolitical alliances including an expanding European Union and NATO, and by the growing global significance of Caspian oil and gas resources and transportation pipelines. This has dramatically increased the importance of these countries to the Russian Federation, to Europe and the United States.”⁸

Russia seeks to monopolize the transportation of Caspian energy resources to world markets, and has sheltered coup-makers and secessionist leaders from Azerbaijan and Georgia (TACIS 1998). According to SIDA (2002), “Russia effectively used separatist wars in Georgia, Armenia, and Azerbaijan as levers to rein in independent-minded Georgia and Azerbaijan.” Russia also developed strong military ties with Armenia (NIC 2000).

Despite being an Islamic Republic, **Iran** continuously supported Armenia instead of Azerbaijan during the ethnic conflicts. There were two reasons for this policy: the fear of separatism among Azerbaijani populations (20 million) in Iran, and

⁷ Swedish International Development Cooperation Agency (SIDA), Cornell Caspian Consulting (CCC).

Turkish and American influence in the area. Thus, Iran has improved its relationship with Russia and Armenia (Skopec 2002).

Turkey strongly signaled that it had taken on a role as guarantor of Azerbaijan's security. Turkey has also improved its strategic partnership with Georgia. Turkey reacted strongly to Armenia's occupation of Azerbaijani territories in 1992-93 and continues to refuse to open diplomatic relations until Armenia withdraws from the occupied territories in Azerbaijan. For the same reason, Turkey also imposed an economic embargo on Armenia that began with the war in Nagorno-Karabakh. Because of the embargo, Armenia's major transportation routes to and from Turkey have been closed.

The United States' interest in the region has been spearheaded by two camps: the Department of Defense and the oil industry. After September 11, 2001, the US became increasingly involved in the region (SIDA 2002). Armenia has been the biggest beneficiary of American aid every year since its independence. But in January 2002, even though there was strong Armenian lobbying in the US Congress against Azerbaijan, Congress waived the limitations to Azerbaijan and established military bases in Azerbaijan and Georgia (White House 2002).⁹ According to SIDA (2002), uncertainty regarding American intentions in the region may create instability rather than stability.

⁸ UNEP/UNDP/OSCE 2004 on p.12.

⁹ The U.S. Congress adopted Section 907 of the Freedom Support Act in 1992 during the Nagorno-Karabakh conflict, banning U.S. government aid to Azerbaijan until it relieved pressure on Armenia and the people of Nagorno-Karabakh. President Bush waived this section on 01/25/2002, after Congress passed legislation as part of the Foreign Operations Appropriations Bill granting him the authority to do so (White House Press Release, January 30, 2002. Available at <http://usinfo.state.gov/>).

E. Major Conflict Resolution and Mediation Efforts

The South Caucasus is a strategic crossroads in the transit point from Europe. It is at the heart of America's evolving "Greater Middle East" vision that considers weak or failing states as serious security risks as they can easily become terrorist breeding grounds. The status quo, especially in Nagorno-Karabakh, Abkhazia, and South Ossetia, is leading to human suffering, an enormous loss of human potential, and limited economic development. Because of the scale of the Nagorno-Karabakh conflict, it is the primary example of mediation but there are other examples of mediation related to other conflicts.

The 1999 Luxembourg declaration of the European Union (EU) and the South Caucasus states reflect the EU view that the threat to European security posed by the instability in the Caucasus has been increasing, and that the root cause of many of the problems facing the three republics is a stalemate over ethnic conflicts (The WEU-CM 1999).¹⁰ The EU officials argue that the present stalemate has aggravated humanitarian problems and has tended to impede the development of democratic institutions and a market economy. This is especially true with the conflict between Armenia and Azerbaijan over Nagorno-Karabakh, which adversely affects the economic and political development of both countries. Basic concerns were a lack of democracy, conflicts and economic struggle in the region. An attempt was made first by the Organization for Security and Cooperation in Europe (OSCE) to solve the Nagorno-Karabakh conflict.

¹⁰ Luxembourg Declaration, Document 1675 by the Western European Union Council of Ministers (WEU-CM), 24 November 1999. Page 428-432.

The EU and USA showed their interest in peace for the region. Several countries from the regional powers including Russia, Iran, and Turkey offered to mediate but the mediation process did not begin until the South Caucasus countries joined the OSCE in 1992 (Hakala 1998). Almost a decade later, the World Bank (WB) developed trade facilitation programs and studies of the short-term impacts of the regional conflicts, as well as the consequences of lifting the associated economic blockade on international trade in the South Caucasus (WB 2003).

The OSCE Minsk Group. The Conference on Security and Cooperation in Europe (CSCE, before 1995) and its successor, the Organization for Security and Cooperation in Europe (OSCE, after 1995) is an international organization whose stakeholders are the participating states. In 1992, the EU held the Helsinki Additional Meeting of the CSCE Council requesting a conference as soon as possible on Nagorno-Karabakh under the auspices of the CSCE to provide an ongoing forum for negotiations towards peaceful settlement of the crisis (Kwaasteniet 1998). The Conference took place in Minsk in 1994 (OSCE 2004). Since 1994 the OSCE Minsk Process has been working to achieve its task.¹¹

World Bank's Trade Facilitation Programs and Related Studies. The Caucasus region has been a major trade and transport corridor since ancient times (part of the ancient 'Silk Road'), but during the last decade, it has lost this role because of the conflicts in the region. The WB started facilitation programs that helped the conflict resolution process and illustrated the economic benefits of peace. In order to achieve this goal, the WB commissioned a series of studies of transport,

trade and telecommunications infrastructure in the three South Caucasus states. The six studies looked at current issues and future prospects in the region for trade flows, trade facilitation, roads, railroads, telecommunications, and tourism (WB 2006). The premise of the studies is that for the region as a whole, the major economic benefit from a peace settlement will come from the benefits of trade. The purpose of the studies is to consider the steps needed to achieve this “virtuous cycle” of border openings leading to increased trade and prosperity (WB 2006). The papers are entitled: *Changing Trade Patterns after Conflict Resolution in South Caucasus; Trade Facilitation in the Caucasus; Armenia and Azerbaijan: Post-Conflict Study Road Transport; Post-Conflict Study of Railways in Armenia, Azerbaijan, Georgia and Turkey; Regional Study on Telecommunications in the Caucasus and Regional Study on Community-Based Tourism in the Caucasus*. In June 2001, the Georgian Ministry of Transport and Telecommunications, the World Bank and PPIAF (Public-Private Infrastructure Advisory Facility) cosponsored a workshop, which considered the institutional and physical obstacles to trade, transport and telecommunications in the region and developed strategies to overcome the obstacles (WB 2006). In particular, the Workshop introduced the ongoing work of the World Bank’s Trade and Transport Facilitation Project in Southeastern Europe and considered ways in which this methodology and experience could be applied in the South Caucasus (WB 2006).

The WB also funded a study related to the conflict resolution efforts and its effects in the South Caucasus. The title of the study is *Changing Patterns of Trade After Conflict Resolution in the South Caucasus* (Polyakov 2001), and the study

¹¹ The Minsk Group took its name from the capital of Belarus, which was chosen by the

examines short-term impacts of the resolution of the Nagorno-Karabakh and other regional conflicts, and the consequences of lifting the associated economic blockades on the international trade and domestic economies in the Caucasus region. The study suggested the following would occur:

1. more rational trade flows;
2. likely changes in import/export unit values and prices; and
3. resumption of regional trade in some major commodities such as energy.

According to the study, trade flows in the region are seriously distorted. Disrupted traditional transportation routes stifle the export and import capabilities of Armenia and Azerbaijan. At the same time, Georgia enjoys some benefits of higher-than-normal transit through its territory. For instance, there are no exports of gas from Azerbaijan to Armenia or of electricity from Armenia to Turkey. In addition, the study points out that potential peace benefits are especially high for the countries of the region. The potential benefits for the South Caucasus states (Polyakov 2001) are listed below:

1. Armenia could save over 50 million dollars a year, which could lead to a 30% GDP increase.
2. Azerbaijan could increase its exports by 100 million dollars, or 11 percent of the 1999 level, reducing its trade deficit by a quarter. Thus the country's GDP could increase by up to 5%.

3. Georgia might face a reduction of transit through its territory. At the same time, the country would benefit from the effects of regional cooperation.

The WB's studies show that the benefits from peace favor Armenia rather than Azerbaijan and Georgia. Thus the projects backed by the WB are not equally attractive to the three countries. However, there is still an opportunity to create regional cooperation and peace in the region.

F. Programs and Projects in the South Caucasus

There are many constructive projects organized and funded by International entities and organizations such as the European Union (EU), the United Nations Development Program (UNDP), the North Atlantic Treaty Organization (NATO), the United States Agency for International Development (USAID), the Organization for Security and Cooperation in Europe (OSCE), the Global Environmental Facility (GEF), and many other entities with different projects, programs, funds, and grants (see Appendix II). These organizations have an investment portfolio and international funding and credits specifically for projects related to the environment, energy sources, peace, and other economic and social issues. The Kura-Araks Basin is the one of the most highly-desired areas for all these organizations, and there are several projects related to the management of the Basin. Major regional projects related to transboundary water resource management are: the EU TACIS Joint River Management Project (TACIS JRMP) in cooperation with UNDP, the NATO-OSCE South Caucasus River Monitoring Project and USAID's South Caucasus Water Management Project (see Appendix II). Even though most of the projects are related to each other there is little or no cooperation among the organizations and agencies. Nearly all the projects have common goals and activities or overlapping actions (see Appendix II).

However, they do not share or exchange information due to the lack of legally binding data exchange requirements. The sector-based approach to water resources management is still widely used and integrated river basin-based water management principles are not used region-wide. However, there are some efforts to introduce these approaches and to establish specific water authorities for coordinated water resources management and improved performance in some of the countries of the South Caucasus.

However a lack of communication is not only a problem on the national and international level, but also among the international agencies and organizations. That is why the ongoing projects (OSCE, USAID/DAI, TACIS, and NATO etc.) aim at strengthening the cooperation among related agencies all local, national, regional and inter-organizational levels and demonstrate the effectiveness of integrated water resources management. However, communication and data exchange are still problems.

Thus, these projects and the lead actors must come together and clearly define their objectives, goals, and activities for more efficient results. It is crucial to establish a coordinating group that includes each of these projects' leading actors and countries for efficient and more sustainable results. According to Dr. Michael Campana (2006),¹² creation of a regional coordination group was suggested at the "Transboundary Water Issues in South Caucasus" seminar¹³ in Tbilisi in November 2002. However, no actions to date have occurred.

¹² Director of the NATO-OSCE South Caucasus River Monitoring Project (see Appendix II).

¹³ The Seminar was organized by the OSCE regional offices in the South Caucasus with the assistance of the Development Alternatives, Inc. (DAI) project offices in Armenia, Azerbaijan, and

G. Relations with the European Union

The focus of concern for the EU in the region has been the South Caucasus, which is perceived to impinge upon European interests far more than developments in Central Asia. The South Caucasus can even be viewed as the European part of the CIS.¹⁴ The EU is extending its efforts towards political dialogue and support for international measures and is focused on conflict resolution and regional cooperation in the South Caucasus. The EU has a considerable agenda for the region and could go further to adopt a common position within its Common Foreign and Security Policy (CFSP) for at least the South Caucasus.

The relationship between the EU and the South Caucasus are legally conducted within the framework of the *Partnership and Cooperation Agreements (PCAs)*(EU 2004).¹⁵ These Agreements between the South Caucasus states and the EU were signed on April 22, 1996, in Luxembourg and entered into force on July 1, 1999 (EU 2001a).¹⁶

Even though a form of cooperation existed between the EU and the three republics prior to 1999, it was mostly based on financial and technical assistance.

Georgia. The funding was provided by OSCE and USAID with additional support from the Carnegie Corporation of New York.

¹⁴ The Soviet Union changed from a centralized state into a much larger number of autonomous states, based upon the former internal states of the Soviet Union. These new states remained within a loose confederation of 12 known as the Commonwealth of Independent States (the CIS), comprising Armenia, Moldova, Belarus, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Kazakhstan, Ukraine, Russia, Azerbaijan, and Georgia, but excluding the Baltic States (Estonia, Latvia and Lithuania); more recently the CIS members have become known to the European Commission as the Newly Independent States (NIS), and Mongolia has become part of the group (TACIS 2002).

¹⁵ PCAs are legal frameworks, based on the respect of democratic principles and human rights that set out the political, economic and trade relationship between the EU and its partner countries. Each PCA is a ten-year bilateral treaty signed and ratified by the EU and the individual state (EU 2004).

Indeed, after the South Caucasus countries achieved independence in 1991, the EU devoted over 1 billion Euros of European Commission (EC)¹⁷ assistance to the region (EU-SC 2004).¹⁸ The EU strategy was based on bilateral PCAs that encouraged regional cooperation through the *TACIS* and Transport Corridor Europe Caucasus Asia (*TRACECA*) projects. *TACIS* is the most comprehensive project related to the South Caucasus (see Appendix II).

In 1999, the EU developed the Luxembourg Declaration (LD) to encourage a more intense and opportunistic policy toward the South Caucasus. In truth, the PCAs had not worked as planned and the EU felt disturbed over Russia's 'divide and rule' policy towards the South Caucasus (WEU-CM 1999). Russia's policy contributed to the stalemate over ethnic conflicts in the region. As a result, the EU declared in the LD that the increasing instability in the South and North Caucasus States threatened the EU's security (EU-SC 2004). The EU also stated in the LD that it would not provide assistance to support the status quo unless there was evidence of positive change (WEU-CM 1999).¹⁹ The EU also declared that they were ready to enhance their contribution to conflict prevention and post-conflict rehabilitation through the OSCE and UN and promote regional cooperation through the *TACIS* Program and the Regional Environmental Center for the Caucasus (*TACIS* 2002; EU 2001b).

¹⁶ EU Parliament: Information Note on Delegation for Relations with the South Caucasian Republics: Armenia, Azerbaijan and Georgia 2001.

¹⁷ The EC's main job is to initiate new policy measures and also act as the guardian of the EU treaties to ensure that EU legislation is applied correctly by the member states.

¹⁸ European Union Security Council (EU-SC), The Gahrton Report, 2004.

¹⁹ Western European Union Council of Ministers (WEU-CM), 24 November 1999, Luxembourg Declaration, Document 1675.

In addition to the EU's security concerns, as reflected in the Luxembourg Declaration, there are many reasons for the EU's policy changes in the region. First of all, the EU is welcoming new members which would expand its boundaries close to the South Caucasus. Second, the energy resources are important to the gas-hungry European states. Third, the potential energy market in the region is important for the European companies. Fourth, the Caucasus states are transit routes for drugs and illegal goods, which indirectly affect the EU (EU 2002).

From the viewpoint of the South Caucasus countries, the EU is important for three reasons: 1) they all want to join the EU and be part of the balance of power in the region instead of being isolated; 2) the assistance from the EU is both financially and technically important, and they do not want to lose it; 3) the EU is an important market for the South Caucasus countries.

Ultimately, the EU is the path that will lead the South Caucasus States to a prosperous future from almost every perspective. For this reason, Armenia, Azerbaijan, and Georgia have become members of the Council of Europe.

As current members of the Council of Europe, the three states' long-term plan is to be considered as candidates for EU membership. However, it is not a simple or quick process. The three countries, especially Armenia, have already begun to harmonize their legal structure with the EU standards. And, the EU is strongly supporting this process with such projects as TACIS, which assists countries in the preparation of the harmonization process to meet "*acquis communautaire*" of the

EU.²⁰ Indeed, the TACIS program's Introduction Report points out that "... membership of the EU must, in current conditions, remain a dream for most of the "Newly Independent States (NIS)" (TACIS 2002).

As for the Kura-Araks Basin, the South Caucasus countries have already begun adopting the environmental structure of the EU. The TACIS program is assisting different projects related to transboundary river management for the Kura-Araks Basin mostly based on the EU structure.

The EU has been developing environmental legislation and actions for over 20 years. The EU's main policy towards transboundary river management is mainly based on the United Nations Economic Commission for Europe (UNECE)²¹ *Convention on the Protection and Use of Transboundary Watercourses and International Lakes* (adopted 17 March 1992, Helsinki) and its *Protocol on Water and Health* (adopted 17 June 1999, London). The EU also has been in the process of attaining compliance²² with the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses,²³ which does not provide for compliance review and does not require the monitoring of compliance.

²⁰ The entire body of European Union laws is known as the *acquis communautaire*. This includes all the treaties, regulations and directives passed by the European Union institutions as well as judgments laid down by the Court of Justice. The term is most often used in connection with preparations by the candidate countries to join the union. They must adopt, implement and enforce all the *acquis* to be allowed to join the EU.

²¹ UNECE region: Europe and North America.

²² Geneva Strategy and Framework for Monitoring Compliance with Agreements on Transboundary Waters.

²³ Not yet entered into force; Armenia and Georgia did not sign it but Azerbaijan signed and ratified it.

III. WATER RESOURCES OF THE KURA-ARAKS BASIN

The Kura-Araks Basin is situated south of the Caucasus Mountains. Its borders are northeastern Turkey, central and eastern Georgia, almost all of Azerbaijan and Armenia, and northwestern Iran (see Appendix I: Area Maps).

The Kura River originates in northern Turkey (185 km), passes through Georgia (390 km), and Azerbaijan (789 km) and then directly discharges into the Caspian Sea. There are 6,500 small and medium sized rivers in the Basin (TACIS 2003). The total length of the Kura River is about 1,364 kilometers (km) and it has an average discharge of 575 million cubic meters per year or MCM/yr (CEO 2002).

The Araks originates in Turkey and after 300 km forms part of the international borders between Armenia and Turkey, for a very short distance between Azerbaijan and Turkey, between Armenia and Iran, and between Azerbaijan and Iran. The Araks River joins the Kura River (80 km) after crossing the Azerbaijan border (TACIS 2003). The Araks River is about 1,072 km long and it has an average discharge of 210 MCM/yr.

Table 1: Total Watershed Area of the Kura-Araks Rivers

Country	Population (millions) (July 2003 est.)	Kura River		Araks River	
		% of total basin area	Area (km ²)	% of total basin area	Area (km ²)
Armenia	3.3	15.79	29,741	22	22,090
Azerbaijan	7.8	30.70	57,800	18	18,000
Georgia	4.9	18.43	34,700	-	-
Turkey & Iran	-	35.06	66,000	60	61,000
Total	16	100.00	188,241	100.00	101,090

Sources: TACIS 2003, USAID 2002, CIA 2004.

Table 1 shows that water resources are not distributed equally in the South Caucasus. While Georgia has more water than it needs, Azerbaijan is left with a water deficit; furthermore its groundwater is of poor quality. It obtains 70% of its drinking water from the Kura-Araks rivers. Armenia has a surface water shortage but has a large fresh groundwater stock that it uses for drinking water (TACIS 2003).

Table 2: Indicative Water Balance in the Kura Basin (in km³)²⁴

	AR	AZ	GE
Precipitation	18	31	26
Evaporation	(11)	(29)	(13)
River Inflow	1	15	1
River Outflow	(8)	(18)	(12)
Underground inflow	1	3	1
Underground outflow	(1)	(2)	(3)

Source: TACIS 2003

Parentheses indicate depletion.

Table 2 shows that the most precipitation and evaporation occurs in Azerbaijan followed by Georgia and Armenia in that order.

Table 3: Land use in the Kura Basin (in km²)

State	Land Area	Disputed Area	Forested Area	Agriculture			
				Arable land		Meadow, pasture	Other
				JRMP	CIA		
AR	29,800	1,500	4,250	5,600	5,215	8,300	10,091
AZ	86,600	2,000	7,590	15,290	16,714	20,936	12,000
GE	67,700	600	10,900	7,700	7,813	NA	NA

Sources: TACIS 2003, CIA 2004

Water is used for municipal, industrial, agricultural, irrigation, fishery, recreation, and transportation purposes. The main water use is agriculture, followed

²⁴ There are different numbers from the different sources regarding the water balance in the South Caucasus.

by industry and households uses (see Tables 3 and 4). Table 3 shows that Azerbaijan has the most arable land followed by Georgia and Armenia. Table 3 shows that even though Azerbaijan has the most arable land it is the one that is faces a water deficit (See Table 4).

Table 4 shows that Azerbaijan withdraws 57.9% of its actual renewable water resources, Armenia withdraws 28.2% of its actual renewable water, whereas Georgia withdraws only 5.2% of its actual renewable water. However, as a water resources-rich country Georgia's withdrawal per capita (cubic m) is 635 m³ while Azerbaijan's is 2,151 m³, and Armenia's is 784 m³ (See Table 4). It is evident that per capita water withdrawal is disproportionate to water availability among the three countries.

The main rivers have only two reservoirs; but, the tributaries have more than 130 major reservoirs. The total capacity of the reservoirs and ponds is almost 13,100 MCM (TACIS 2003).

Table 4: Water Resources and Freshwater Ecosystems in the South Caucasus

Internal Renewable Water Resources (IRWR), 1977-2001	AR	AZ	GE
Surface water produced internally	6.2	6	57
Groundwater recharge (cubic km)	4.2	7	17
Overlap (shared by groundwater and surface water) (cubic km)	(1.4)	(4)	(16)
Total internal renewable water resources (surface water + groundwater – overlap) (cubic km)	9	8	58
Per capita IRWR, 2001 (cubic meters per person)	2,393	995	11,151
Natural Renewable Water Resources (includes flows from other countries)			
Total, 1977-2001 (cubic km)	11	30	63
Per capita, 2002 (cubic meters per person)	2,778	3,716	12,149
Annual river flows:			
From other countries (cubic km)	1	21	8
To other countries (cubic km)	3	-	11.9
Water Withdrawals			
Year of withdrawal data	1994	1995	1990
Total withdrawals (cubic km)	2.9	16.5	3.5
Withdrawals per capita (cubic m)	784	2,151	635
Withdrawals as a percentage of actual renewable water resources	28.2%	57.9%	5.2%
Withdrawals by sector (as a percent of total) {a}			
Agriculture	66%	70%	59%
Industry	4%	25%	20%
Domestic	30%	5%	21%
Desalination (various years)			
Desalinated water production (cubic m)	0	0	0
Freshwater Fish Species, 1990s			
Total number of species	41	61	84
Number of threatened species	0	5	3
Freshwater Seafood Production			
Freshwater fish catch {b}			
1990 (metric tons)	2,698	40,389	117
2000 (metric tons)	1,105	18,795	194
Freshwater aquaculture production			
1987 (metric tons)	-	-	-
1997 (metric tons)	1400	488	1

Notes:

a. Totals may exceed 100 percent due to groundwater withdrawals, withdrawals from river inflows, and the operation of desalinization plants.

b. Freshwater fish production data refer to freshwater fish caught or cultivated for commercial, industrial, and subsistence use.

c. Parentheses indicate depletion.

d. See Glossary of Terms

Sources: Modified from EarthTrends 2003a, 2003b, 2003c and FAO/AQUASTAT 2006a, 2006b, 2006c, 2006d

IV. WATER-RELATED ADMINISTRATIVE, LEGAL, AND INSTITUTIONAL ISSUES

After gaining their independence from the USSR in 1991, Armenia, Azerbaijan, and Georgia began to revise their administrative and legal frameworks as well as their water codes. Because of new legislation and governmental reorganization in these three countries, the responsibilities and the content of the water code are still changing.

The administrative organization of each country is very complex. Institutional structure of the water resources management sector is very complicated in all three countries. Each of the countries has a wide range of ministry committees and agencies that have responsibilities and an interest in water management. Thus, the communication and coordination problems within all these entities are the main obstacles in managing the South Caucasus' water resources.

In addition, communication is a major problem in the region. This can be seen between the countries, within the individual countries, and between international entities and governments. Data exchange is an ongoing and incomplete job resulting in continued miscommunication between the entities.

Each of the countries adopted a new water code after they became independent. Armenia was the first to adopt its water code in 1992 and harmonize it with the EU Water Framework Directive in 2002. Both Georgia and Azerbaijan adopted their own water codes in 1997.

A. Armenia

Armenia adopted its first Water Code in 1992 just after it seceded from the USSR. Environmental reforms and changes are a part of the State Reform Program in

Armenia and serve to harmonize the environmental legislation with the established European norms and standards. As a member of the Council of Europe,²⁵ Armenia signed the EU Water Policy under the Water Framework Directive in January 2001 and began harmonization studies on the structure of its legislation using the Government Decision on Water Economy Management Systems Reforms.

In June 2002 Armenia adopted the water code of the Republic of Armenia. The new Code replaced the 1992 Water Code and provides for the adoption of new legal acts for the purpose of detailing regulation and coordination of water policies. The government is planning to adopt 54 legal acts. The improvements in the water policy field should promote the integration of Armenian water legislation with the European legal system (TACIS 2003).

In the Republic of Armenia, the National Water Council is the primary policy-making body and the Ministry of Nature Protection is the executive water resource management agency. However, neither entity has sufficient expertise or financial resources to implement its tasks. Various ministries, including the Ministries of Agriculture and Health Protection and other regional and local authorities are involved in water resource management; however there is no coordination between these entities (UNDP/SIDA 2005).

Water users need registered water permits and water-use rights transfer contracts in order to use water. There are exemptions that do not need a permit to use the water when the water will be used for no purpose of profit-gaining, recreation,

²⁵ Armenia acceded to the Council of Europe in January 2001.

water sports, etc (Water Code of Armenia 2002).²⁶ Water-use permit fee changes depend on the purpose of use. In addition, other fees are applicable such as the possible cost of the impact on the quality and quantity of the water, the cost of monitoring, etc. (Water Code of Armenia 2002).

There is a regulation regarding the use of transboundary surface water and groundwater resources that defines transboundary water and related issues. This regulation (Water Code of Armenia 2002)²⁷ points out that “transboundary resources shall be implemented by permanent inter-state committees.”

B. Azerbaijan

The Water Code of the Republic of Azerbaijan (approved in 1997; in effect since March 1998) regulates water use and management in Azerbaijan. The Law on Environmental Protection was accepted and has been in force since 1999. This law exists to integrate Azerbaijan’s country reforms with international conventions (TACIS 2002).

In Azerbaijan, the management of water resources is in the hands of two major public entities, the Ministry of Ecology and Natural Resources and State Committee for Amelioration and Water Economy (the former Ministry of Water Management) (UNDP/SIDA 2005). Many water organizations are charged with the management of water resource use and water quality control because the owner of the water can be the State, a municipality, or the private sector. The Water Code of Azerbaijan

²⁶ Water Code of Armenia 2002: Article 22: Free Water Use.

²⁷ Water Code of Armenia 2002, Chapter 7.

regulates the legislative relationship connected to the use and protection of the country's water. Water use is chargeable, excluding cases predetermined by law.

Because of the water shortage in the country, Azerbaijan has one of the lowest rankings in terms of per capita water availabilities in the world - below 1000 cubic meters of water per person per year (USAID 2002). The improvement of environmental protection, management of wastewater, and determination of rules for the use of water for energy-producing purposes are very important to Azerbaijan.

C. Georgia

Georgia's laws, "About Soil" (1996) and "About Water" (1997), regulate water in Georgia. They envision balancing the water economy accounts of certain water basins and the elaboration of the general basin and territory complex schemes of water use and protection (TACIS 2003). In Georgia the responsibility for management of the water resources rests with the Ministry of Environment and Natural Resources. The Ministry of Fuel and Energy and the Department of Amelioration within the Ministry of Agriculture play secondary roles (UNDP/SIDA 2005). In Georgia water resources are under state ownership. That is why, special water use, including every kind of water use with a possible negative impact on water and water basin conditions, must be licensed.

V. POLICY TOWARDS INTERNATIONAL WATER CONVENTIONS

There are currently no water treaties among the three countries. This is directly related to the political situation in the region. However, there is recognition of the importance of water and river basin management, which provides them with a good foundation for a transboundary water management agreement.

The lack of coordination in river basin management makes it difficult to overcome the issues the region faces in relation to the function of the rivers in Armenia, Azerbaijan, and Georgia (TACIS 2003).

There are also other political issues which make signing an agreement difficult among the countries. Nagorno-Karabakh is one of the main obstacles, which makes it difficult for Azerbaijan and Armenia to sign a treaty even though it may relate only to water resources management. Another obstacle is the Javakheti region of Georgia. Ethnic Armenian groups in Javakheti that are seeking greater autonomy and closer ties with Armenia have led to a confrontation between Armenia and Georgia and a resumption of hostilities in the region (SIDA 2002).

Armenia has not yet signed transboundary water-related conventions, but the new Water Code takes into account the transboundary aspects of water. The Water Code also sets the principles and first steps for river basin management, which is a very important step for transboundary water management.

As a downstream country suffering from a water shortage, **Azerbaijan** is open to signing international water-related conventions (TACIS 2003). Azerbaijan signed and ratified the Helsinki Convention and wants Armenia and Georgia to ratify it. However, in the area of international conventions, Azerbaijan is far behind Georgia and Armenia.

Also complicating the situation in Azerbaijan is the ownership of the water which can be the State, municipalities, or the private sector.

Georgia has decided to harmonize its legislation with international development. Georgia has signed more international conventions than Azerbaijan and Armenia and is currently discussing ratifying the Helsinki Convention.

VI. METHODOLOGY AND RESULTS OF THE INTERVIEWS/SURVEYS

The initial goal of this project is to define common objectives in order to create the basis for an integrated water resources management (IWRM) model for the three countries of Armenia, Azerbaijan, and Georgia. These three countries make up the region known as the South Caucasus Region (SCR). The common objectives are identified using interviews and/or surveys (“the interviews”) among the key water resources managers (“the interviewees”) in the SCR. The results of the interviews can be used to create the source document from which the IWRM model could be derived.

The interviews were conducted from July 14 through 21, 2005, in the SCR. During that time, 30 key water resource managers and/or officials were interviewed to obtain information about their current situation, future needs and the political will in the SCR.

The survey questions included multiple choice and narrative questions (see Appendix III). Interviews were conducted face-to-face and in a mostly informal environment. Even though the interview and survey questions were the same, the interviews were, for the most part, more detailed and included commentaries. During the interviews, facilitation and mediation techniques that are part of Alternative Dispute Resolution (ADR) were used to elicit detailed responses from the interviewees. The purpose of using these techniques was to prompt the interviewees to think more deeply about the issues and their solutions.

The survey included 43 questions. The answers were grouped and analyzed by country. The results of the interviews were quantified in the following manner:

1. The results were compiled for each individual country in alphabetical order Armenia (AR), Azerbaijan (AZ), and Georgia (GE).

2. The results were then aggregated for the SCR as a whole. The 30 interviewees in the SCR provided the total percentage for the SCR as an overall picture of the region.

3. The results of the interviews were interpreted as descriptive statistics. *Significance value* and *total percentage* were used as statistical values in order to interpret the results. A significance value (less than 0.05) means that the null hypothesis is rejected, that there is **no** relation between the rows and columns of the table. In this case, the columns are the three countries and the rows are the responses to a question. If there **is** a statistically significant relationship, it means that there **is** a difference in the way the people in the three countries answered the question. If there is no relationship (p greater than 0.05), the researcher concluded that the groups (countries) do not differ in the way they answer the question. When the chi-square is significant, (p less than 0.05), there will be differences in the proportions.

If there is no relationship, (p greater than 0.05), one can say that the groups (countries) do not differ in the way they answered the question (see Appendix IV).

A. Interview/Survey Caveats and Limitations

The results presented here are based on interviews, which took place in Armenia, Azerbaijan, and Georgia, in July 2005. Before the interview process began, lists of the key water resources experts from the three countries were obtained. These lists defined the universe from which the sample was obtained. The lists consisted of 20 experts in Armenia, 20 in Azerbaijan, and 16 in Georgia. The selection of interviewees was based on availability and cannot be considered a random sample. In Armenia, 11 out of the 20 water experts were interviewed, in Azerbaijan 11 out of the

20 experts were interviewed and in Georgia 8 out of 16 water experts were interviewed (see Table 5).

The samples in each country represented 55% of the water experts from Armenia, 55% from Azerbaijan and 50% from Georgia. All of the interviewees were actively involved in at least some of the current ongoing projects regarding water and/or environmental resources management in the SCR. The interviewees work for governmental organizations (GOs); national and international non-governmental organizations (NGOs); international/inter-governmental-organizations (IGOs); research institutes and the private sector.²⁸ There were some interviewees from NGOs and IGOs because of their active decision-making and participation role in the IWRM in the SCR (see Table 6).

Most of these organizations are also donor organizations that fund the majority of the current IWRM projects in the SCR. However, the results from this survey cannot be generalized to a particular group, organization and/or community; instead, these results are representative of the state of affairs in the SCR.

²⁸ An international organization is an organization of international scope or character. There are two main types of international organizations: International inter-governmental organizations (IGOs), whose members are sovereign states or other inter-governmental organizations (like the EU and the WB) and non-governmental organizations (NGOs), which are private organizations.

Table 5: Statistics of the Interviewees

	AR	AZ	GE	SCR
Initial List of the Experts	20	20	16	56
Actual Participation	11	11	8	30
Participation %	55%	55%	50%	54%

Table 6: Background of the Interviewees

	AR	AZ	GE	SCR
Non-governmental Organizations (NGOs)	1	2	1	4
Government Agency	2	5	2	9
International Org. (IGOs)	5	2	4	11
Research Institutes (RIs)	2	2	1	5
Private Sector	1	0	0	1

Given that the survey questionnaire was originally in English and translated to the Armenian, Azerbaijani, and Georgian languages, there may or may not be slight differences in the translated documents. Also, in Armenia and Georgia, translators were used as needed during the interviews. Some of the translators were not familiar with water resource terminology.

Another obstacle was the translation of the survey answers from the Armenian, Azerbaijani and Georgian languages to English. Some of the answers were written in “broken” English which was sometimes difficult to understand. In such cases, in order to avoid potential translation falsification of survey data, *observational* and *recontact* methods were used.²⁹ Also, during the interviews

²⁹ Usually in the observational method a third party sees or hears interactions between interviewers and respondents. In this study, the interviewer also acted as the observer between the translator and the respondent. Monitoring alone is generally sufficient for detection and deterrence of falsification. Common modes of contacting the interviewees included mail, telephone, and face-to face meetings. In this study, electronic mail was used to clarify the responses

questions and answers were often clarified, restated and final statements repeated for better understanding.

B. Study Population

Out of the 30 interviewees, the majority of the participants were male (78%) and 22% of them were female.³⁰ Even though there were non-South Caucasian interviewees (9%) who work at international organizations, the overwhelming majority of the participants (91%) were from the SCR.

Table 7: Gender of Interviewees

Country	Total Participants	Sex	
		Male	Female
AR	11	8	3
AZ	11	9	2
GE	8	6	2
SCR	30	23	7

C. Survey Questions and Results

This study is not meant to generalize the results to a large population of experts; it sought the opinions of 30 experts and attempted to determine if there were any strong, consistent opinions between the three countries. For the graphical results of the responses, see Appendix VI.

Question 1) In your country, what is the main problem(s) associated with your transboundary water resources. (You can choose more than one)

a) Organizational management related issues

(AMSTAT 2005).

³⁰ In Armenia 73% were male and 27% female; in Azerbaijan 85% were male and 15% female; in

- b) Legal and regulatory problems
- c) Technical problems
- d) Water resources management policies
- e) Lack of information, data, knowledge, expertise
- f) Water contamination
- g) Ecological problems
- h) There are no problems
- i) Other. Please specify

In this particular question, a significance value (0.041) shows that there is a statistically significant relationship between the countries and the responses. This means that there is a difference in the way the people in the three countries answered the question. Regarding the issues, the Armenian interviewees responded differently from the interviewees from the other two countries. However, when we look at the percentages we can also interpret these results to mean that each country has different priorities and that is how they ranked the issues. Table 8 shows average rankings for each SCR issue; the lower the average rank, the more important it is to the respondent.

Table 8: Average Ranking for Each Issue in the South Caucasus Region

	Issues	Respondents	Avg. Rank
1	Ecological problems	9	3.3333
2	Legal and regulatory problems	26	3.4231
3	Water resources management policies	20	3.9000

Georgia 75% were male and 25% female.

4	Organizational management related issues	29	4.0690
5	Water contamination	14	4.1429
6	Technical problems	23	4.8261
7	Lack of information, data, knowledge, expertise	18	5.3889

When we look at the SCR, “ecological problems” followed by the “legal and regulatory problems” and “water resources management policies” were chosen by a large proportion of respondents.³¹ The second most important issues were “organizational management related issues” and “water contamination and technical problems.” A “lack of information, data, knowledge, and expertise” was the least frequently checked option by the interviewees.

For the Armenians, “technical and water contamination problems” were the most important problems followed by a “lack of information, data, knowledge and expertise” and “ecological problems.” It is interesting to note that during the interviews, Armenians did not emphasize the water contamination problem; however, results showed that while it may not be their top priority, it certainly is an important issue for them. Next, “organizational/management related issues” and “legal and regulatory problems” were tied for third place. Armenians chose the water resources management problems as the least important problem.

Azerbaijanis chose “water contamination and ecological problems,” a “lack of information, data, knowledge, and expertise,” and “organizational management related issues” as the most important problems of the country. While the “legal and regulatory and technical problems” were in the second importance row for the

³¹ ($p=0.515$ and p greater than 0.05)

Azerbaijanis, the least important problem was that of “water resources management policies.”

For the Georgians, “legal and regulatory problems”, “water resources management policies,” a “lack of information or expertise”³² and “ecological problems” were equally important issues. “Organizational management related issues,” “water contamination” and the “technical problems” were secondary issues.

Question 2) If you chose more than one option please rank them on their importance.

Interviewees did not agree on the ranking, either. Thus, there was no distinct ranking among the issues. For example, while 45.5% of the experts from Armenia ranked “organizational and management related issues” in first place, 36.4% of them ranked it in second place. Of the Armenians, 9.1% chose “legal and regulatory problems” in the first rank, another 9.1% ranked it in second place, and 54.5% ranked it third.

In the case of the Azerbaijanis, for 27.3% of the people interviewed, “water contamination” and the “legal and regulatory problems” were chosen as equally important. On the other hand, 54.5% of Azerbaijanis ranked the “legal & regulatory problems” in third place. “Organizational and management related issues” were ranked as the least important issue by 9.1% of the Azerbaijani experts.

Georgians did not differ in the way they ranked the question compared with Armenians and Azerbaijanis. Fifty percent of the Georgians ranked “water resources

³² Most of the Georgians also added a lack of funding under this issue.

management policies” as the most important issue. Of the Georgians, 87.5% ranked the “legal and regulatory problems” in second place and 50% ranked the “ecological problems” in third place. The least important problems seemed to be technical problems for 50% of the Georgians.

In the SCR, 23.3% chose “organizational and management related issues” and 20% placed “water resources management policies” in the first rank. Thirty percent ranked “legal and regulatory problems” in second place and 26.7% in third place. Overall, 23.3% ranked “technical problems” as the least important problem of all.

Question 3) Has your country and/or other non-governmental organization(s) made efforts to fix the above mentioned problem(s)?

a) Yes b) No c) Other countries/organization(s) are handling these issues.

Both in Armenia and Azerbaijan, the majority of the interviewees agreed that organizations like the WB, UNDP, SIDA, OSCE, EU, et al., are making efforts to solve environmental and IWRM issues along with their governments. On the other hand, 50% of the Georgians said that international organizations are more involved in these efforts than the Georgian government, and the other half of them stated that both their government and the international organizations have been making efforts.

Question 4) Do you think, other riparian countries in the Kura-Araks Basin (KAB) have similar water resource and/or management related problems?

a) Yes b) No c) I have no opinion

This is one of the answers that all the interviewees agreed upon in the three countries. The interviewees all pointed out that even though they have different priorities, they have similar water resources and /or management related problems.

Question 5) What do you think are the main transboundary resource problem(s) in the other riparian countries?

Please indicate the country.....	Please indicate the country
a) Organizational management related issues	a) Organizational management related issues
b) Legal and regulatory problems	b) Legal and regulatory problems
c) Technical problems	c) Technical problems
d) Water resources management policies	d) Water resources management policies
e) Lack of information, data, knowledge, and expertise	e) Lack of information, data, knowledge, and expertise
f) Water contamination	f) Water contamination
g) Ecological problems	g) Ecological problems
h) There is no problem	h) There is no problem
i) Other.....	i) Other.....

Interviewees from Armenia agreed that Azerbaijan and Georgia have all the IWRM problems which were stated as options in the previous questions. However, they have different priorities. Interviewees (90.9%) indicated that “technical” and “water resources management policy” problems are the most important problems for Azerbaijan followed by “organizational issues”. Secondary problems are “water contamination,” “legal and regulatory issues,” “ecological problems,” and a “lack of data and expertise.” They think Georgia suffers equally from “water resources management policies” and “technical problems” followed by “organizational issues” and “legal and regulatory issues.”

The results also showed that most of the interviewees from Armenia chose the “water contamination problem” (significance value of 0.677) and “legal and regulatory issues” (significance value of 0.622) as the most important problems as compared to the other countries. Experts especially noted that Azerbaijan and Georgia need better management and organizational arrangements regarding their water resources.

Interviewees from Georgia were mostly consistent regarding the issues, and they thought that the other countries have the same issues as they do. Interviewees felt as though all the issues named are equally important for Azerbaijan.

On the other hand, the interviewees from Georgia felt like “technical” and “organizational issues” are less important than the other issues for Armenia. Georgians also noted that Armenia has a better water resources organizational structure as compared to Azerbaijan and Georgia.

Interviewees from Azerbaijan agreed that Armenia and Georgia have all the stated issues however they did not rank them all. On the other hand, they felt that, for Armenia, “water contamination”, “water resources management” and “technical problems” are not as important as they are for Azerbaijan and Georgia. Respondents from Azerbaijan also noted that Armenia has a better water resources organizational structure compared to Azerbaijan and Georgia. It was interesting that the Georgians emphasized the same points in their interviews.

Question 6) Do you think basin problems in other riparian countries (that you specified in question 4) are going to affect the KAB in your country?

a) Yes b) No c) I am not sure d) Other

There was no agreement on this question because 63.6% of the Armenians believed that since Armenia is the upstream country, basin problems in Azerbaijan and Georgia will not affect the KAB in their country.

On the other hand, all the Azerbaijanis and Georgians pointed out that any problem in the other riparian basins will affect their portion of the KAB. These results were similar to those of the SCR: 86.2 percent indicated that the basin

problems in other riparian countries would effect their country, while 13.8% (all from Armenia) thought that there would be no affect to their country.

Question 7) What do you think this effect would be?

a) Negative b) Positive c) No effect at all d) I am not sure e) Other

The countries did not agree on the answer. The opinions of the Armenians were split evenly in thirds and those of the Georgians were split almost in half. However, in the region as a whole 76.2% thought that the effect would be “negative,” while 19% thought that there “would be no effect at all” and 4.8% thought that the effect would be “positive.”

Question 8) In your country, what do you think is the most important issue that has to be addressed immediately?

Most of the interviewees from Armenia indicated the need for an “Integrated Water Resources Management (IWRM)” and/or a “Transboundary Water Resources Management” mechanism. They also emphasized public awareness and participation and the rehabilitation of existing and construction of new wastewater treatment plants.

For the Azerbaijanis, the most important issue was “water contamination problems” followed by “ecological issues” and the need for an “IWRM mechanism” in their country. Georgians underscored the need for “legal and regulatory measures” and an “IWRM mechanism”. The second issue for the Georgians was funding sources for the water related projects.

All the countries appeared to agree upon the need for an IWRM mechanism and also on the importance of rehabilitating existing and constructing new water related infrastructure. They also agreed that they all need country action plans for IWRM and an implementation plan. Armenia already has a country plan.

Question 9) What do you think about the involvement of the international and inter-governmental organizations in the South Caucasus, such as the European Union (EU), the Organization for Security and Cooperation in Europe (OSCE), United Nations (UN), United Nations Development Program (UNDP), World Bank (WB), North Atlantic Treaty Organization (NATO), the United States Agency for International Development (USAID), and others.? You can choose more than one option but please explain.

- a) Constructive b) Distractive c) Helpful d) Not helpful at all e) Leading
f) Confusing

Surprisingly, the countries agreed on the answers. In the SCR 40% of the interviewees found the involvement of the IGOs “helpful but confusing”; 30% “helpful and constructive”; 10% chose just “helpful” and another 10% found them “constructive.” Finally, 6.7% respondents indicated that these involvements were only “confusing”.

Question 10) Do you think your country has enough information/data about the Kura-Araks Basin in other riparian countries?

- a) Yes b) No c) Other

Results showed that 70% of the interviewees in the SCR did not think that they had enough information from the neighboring countries. However, 27.3% of the Armenians were more positive than the other countries and said that they had enough information. Of the Azerbaijanis, 9.1% also stated that they had enough information about Georgia but not about Armenia.

Interestingly, most of the interviewees noted that the real problem was not one of having data, but that of obtaining *accurate and reliable* data in the SCR. At the

same time, none of the countries has enough accurate data even in their own countries.

Question 11) If you answered ‘yes’ to question 10, please indicate whether the information/data are satisfactory?

a) Yes b) No c) I am not sure d) Other

Among the professionals who answered “yes” to question 10, 34% indicated that they were not satisfied with the information/data. Apparently, there are two main reasons. First of all, it is not only difficult to get information from other countries, but it is also difficult to obtain information in their own country because of bureaucratic and/or political issues. Second, it is important to obtain accurate and reliable information and due to technical difficulties in the SCR, most data are obtained by outdated methods, and therefore, not reliable.

Question 12) Do you think it is important to obtain information about the KAB in other countries?

a) Yes b) No c) I am not sure d) Other

The majority (96.7%) of the interviewees agreed that they thought it was important to obtain information about the KAB in other countries. However, the information should be accurate and reliable.

Question 13) If you answered ‘yes’ to Question 12, please indicate why it is important?

Question 14) Do you think other countries have enough information/data about the KAB in your country?

a) Yes b) No c) I am not sure d) Other

The countries agreed (56.7%) that they did *not* have enough information/data about each other. However, another 10% (Armenians and Azerbaijanis) said that they had the information they needed. Also, 45.5% of the Azerbaijanis indicated that Georgia has been getting enough information from Azerbaijan.

Most of the interviewees who answered “no” also noted that the information/data that they had was mostly *outdated* and *inaccurate*. The overall results indicated that the main problem with regard to data/information was not the *quantity* but the *quality*.

Question 15) Do you think it is important for other countries to obtain information about the KAB in your country?

- a) Yes b) No c) Other

The countries had a high level of agreement (in the SCR 96.7%, Azerbaijan and Georgia 100% and Armenia 90.9%) that it was important for other countries to obtain data from their country since they share the KAB. Most of the interviewees also noted that it was important to obtain information from the other riparian basins especially for IWRM-related issues.

Question 16) How do you think that the KAB should be managed geographically?

- a) As one basin in three countries.
b) Separately; as subbasins in each country (Armenia, Azerbaijan, Georgia).
c) Subbasins in each country with cooperation.

It was very interesting to see that the countries agreed on the management of the Basin. Seventy percent of the interviewees indicated that the best management for

the KAB is going to be as “subbasins in each country with regional cooperation with other riparian countries.” Among this 70%, most of them also noted that it would be better if Turkey and Iran were also involved in this regional cooperation rather than just Azerbaijan, Armenia, and Georgia.

On the other hand, 10% indicated that the KAB should be managed as “one basin in three countries” and that Turkey and Iran should be more involved. The remaining 6.7% thought that the KAB should continue to be managed separately in Azerbaijan, Armenia, and Georgia without any cooperation.

Question 17) How do you think that the KAB should be managed geopolitically?

- a) An international agreement signed by Armenia, Azerbaijan, and Georgia.
- b) Managed separately in Armenia, Azerbaijan, and Georgia but within the same European Union Standards.
- c) Managed separately in Armenia, Azerbaijan, and Georgia but within the United Nations Convention on Transboundary Water Resources (1997) Convention.
- d) Managed separately in Armenia, Azerbaijan, and Georgia but with the same water resources management criteria in Armenia, Azerbaijan, and Georgia.
- e) Shared vision and an initiation agreement among Armenia, Azerbaijan, and Georgia.
- f) Other

The significance value in this answer was 0.069 (slightly greater than 0.05) which means that there is agreement among the countries as to how to manage the KAB.

Fifty-seven percent of those interviewed indicated that the KAB should be administered separately in Armenia, Azerbaijan, and Georgia within the European Union Water Framework Directive (the EU-WFD). Most of the interviewees also indicated that their country wanted to be part of the European Union in the future; thus, it is important to manage the KAB using the same criteria as the EU-WFD. Another 13.3% (all from Azerbaijan) indicated that the Basin should be managed separately in Armenia, Azerbaijan, and Georgia but with the same integrated water resources management (IWRM) criteria in the riparian countries, including Turkey and Iran. In the interviews, most of the Azerbaijanis also indicated that the IWRM criteria and/or bi-lateral agreements (Armenia-Georgia; Georgia-Azerbaijan; Armenia-Iran; Iran-Azerbaijan; etc.) could be drawn from the 1992 Helsinki Rules and the EU-WFD along with the requirements of the World Trade Organization (WTO).

On the other hand, 20% indicated that an international agreement signed by Armenia, Azerbaijan, and Georgia should set the management criteria for the KAB. Finally, 6.7% replied that the Basin should be managed separately in each country but in an integrated manner with bi-lateral agreements between Armenia-Georgia and Georgia-Azerbaijan. Another important result derived from this question was that these countries favor the participation of Turkey and/or Iran in the KAB's management plans in some form or another.

Question 18) Do you think Armenia, Azerbaijan, and Georgia are ready to cooperate regarding transboundary water management?

a) Yes b) No c) I am not sure d) Other

Forty percent of the interviewees agreed that the countries are ***not*** ready to cooperate under the current conditions. Another 23.3% of the interviewees thought that the three countries are ready to cooperate regarding the KAB management; 13.3% answered that they were not sure whether or not the countries want to cooperate.

Finally, 23.3% noted different points including the fact that the three countries have been cooperating on the technical level but not on a governmental level. That is why technical level cooperation should be the initial starting point for future cooperation and/or agreement. Governmental level cooperation and/or agreement will not happen unless the countries solve their political problems (i.e., the Nagorno-Karabakh issue).

Question 19) What is your country's point of view regarding cooperative management of transboundary waters? Please explain.

In each country, there were lots of original ideas. However, the core ideas were very similar to each other. Armenians think they have gone further in water resources management than Azerbaijan and Georgia. For example, Armenia has a water resources management committee but the other countries do not. Armenia has also adapted their Water Directives to the EU-WFD. Therefore, they think that Azerbaijan and Georgia should work towards catching up with Armenia. The suggestions for cooperation regarding transboundary water were almost the same. The main points were:

1. An “inter-governmental river basin council (IGRBC)”³³ is needed to coordinate and discuss IWRM related projects in the KAB.
2. Instead of cooperation among the three countries, it can be managed as a special project by a donor organization(s) such as the WB, EU, UN, etc.
3. The three countries are not ready to sign an agreement under the current circumstances. However, they might sign a project agreement under an international/inter-governmental donor organization(s).
4. The same IWRM standards should be used in the SCR such as the EU-WFD.

Question 20) Do you think that it is important to manage the KAB in Armenia, Azerbaijan, and Georgia using the same water resources management criteria in all three countries?

- a) Yes b) No c) I am not sure d) Other

The countries agreed (86.7%) that it is important to manage the KAB in the three countries with the same IWRM criteria. Only 6.7% remarked that they were not sure if it is necessary to use the same management criteria. However, none of the interviewees indicated they had a negative opinion about it.

Question 21) Do you think the other two countries are ready to cooperate with your country regarding transboundary water management?

- a) Yes b) No c) I am not sure d) Other

³³ It can have a different name; this name was suggested by an interviewee.

The interviewees did not agree on any of the options. Furthermore, 36.7% of the interviewees felt that the other countries were not ready to cooperate with their country. On the other hand, 30% were more positive and indicated that the other countries were ready to cooperate with their country. There were 16.7% who that they were not sure. The rest (16.7%), indicated that because of the current political situation (Nagorno-Karabakh issue), Azerbaijan and Armenia cannot cooperate on a governmental level.

Taken country by country, Georgians were more positive: 62.5% of them thought that Armenians and Azerbaijanis were willing to work with Georgia. In contrast, Armenians were more negative: while 45.5% said that they had no opinion, 27.3% were negative about cooperation. In the case of the Azerbaijanis, they were also negative (45.5%) and skeptical. Moreover, 36.4% of the Azerbaijanis pointed out that Azerbaijan cannot negotiate an IWRM agreement until the Nagorno-Karabakh issue is resolved.

Question 22) Assume that there is a cooperation agreement among Armenia, Azerbaijan, and Georgia. Which one of the following options is more suitable for management of the KAB in Armenia, Azerbaijan, and Georgia?

a) A single headquarters for coordination of all the related projects with experts from each of the countries and the non-governmental organizations. There would be divisions in each country.

b) There will be divisions in each country and coordination meetings among the stakeholders.

c) I cannot assume that experts from Azerbaijan, Armenia and Georgia can work together under the same roof.

d) Other

Results showed that 63.3% of the interviewees chose option “a”. This option includes a headquarters for coordination of all the related projects with experts participating from each country and the non-governmental organizations. There would be IWRM division offices in each country.

Twenty percent indicated that “b” is a better choice, which includes IWRM division offices in each country and, instead of a headquarters, coordination meetings among the stakeholders.

Different options were suggested by 13.5% of the respondents, including the following:

Consideration should be given to the technical level cooperation agreement among Armenia, Azerbaijan, and Georgia. This agreement should be a working document. The document should contain real river water flow data, quantity and quality parameters. A special international team should be established to collect the necessary data for the full-scale modeling of the Kura-Araks watershed. The current NATO-OSCE project’s international team is engaging in this type of activity.

Only 3.3% choose option “c”; which probably means that they do not believe that experts from Azerbaijan, Armenia and Georgia can work together. When we look at the results by country, 54.5% from Armenia and Azerbaijan and 87.5% from Georgia chose option “a” as the most agreeable option.

Question 23) Do you think that other problems between the countries (which are not related to water resources management) will create a problem/obstacle for a possible water resources management agreement?

a) Yes, it can be a problem. That is why cooperative management with an agreement will not happen in the South Caucasus.

b) Not a problem. Water issues are separated from the other problems between the countries.

c) Yes, it is a problem however it can be worked out.

d) Other

The results showed that 86.7% of the interviewees thought that other problems in the region, such as the political situation between the countries, might be an obstacle for a possible IWRM agreement; nevertheless, they also believed that these problems could be resolved.

Question 24) If there is a water resources cooperation agreement among Armenia, Azerbaijan, and Georgia, do you think there should be a headquarters in charge of coordination?

a) Coordinate, operate, and monitor related projects in Azerbaijan, Armenia and Georgia.

a) It is not necessary to have a headquarters.

b) It is necessary to have a headquarters.

c) Other

There was no agreement about the answer. However, 83.3% of the interviewees thought it was important to have a headquarters which would be responsible for “coordinating, operating and monitoring related projects in Azerbaijan, Armenia, and Georgia”.

Thirteen percent of the interviewees felt “it is not necessary to have a headquarters.” Finally, 3% said that coordination meetings among the countries would serve the same purpose as the headquarters.

Question 25) If you thought there should be a headquarters, where do you think this headquarters should be located?

Of those interviewed, 64.3% replied that headquarters should be in Georgia; while 10.7% of the interviewees (mostly Armenians) answered that they preferred other options such as another neutral country instead of Georgia or that the headquarters should rotate among Armenia, Azerbaijan, and Georgia every other year or so. Still another 14.3% of the interviewees suggested that headquarters could be located in Turkey and/or Georgia.

Question 26) As a water resources manager, are you familiar with the water resources management and development related projects funded/organized by international and non-governmental organizations such as the European Union’s TACIS, NATO/OSCE’s South Caucasus River Monitoring Project, and others?

a) Yes b) No c) Some of them d) I have no opinion e) Other

Half of the interviewees indicated that they are familiar with *most* of the water resources management and development related projects funded/organized by international and non-governmental organizations.

The other half indicated they are familiar with some but not all of the projects such as the European Union’s TACIS project, NATO/OSCE’s South Caucasus River Monitoring Project, etc.

Question 27) Do you think these projects are helpful?

a) Yes b) No c) Some of them d) I have no opinion e) Other

There was absolute agreement among the interviewees regarding ongoing water resources management projects in the Region (significance value 1.00). While 43% of the interviewees found most of these projects helpful, 56% responded that only some of them are helpful.

Question 28) Do you think that some of these projects overlap and/or conflict with each other?

a) Yes b) No c) Some of them d) I have no opinion e) Other

Of the total number of interviewees, 54% agreed that most of the projects overlap and/or conflict with each other. Forty percent thought that only some of them did and 3% of them felt that there were no overlapping projects in the region.

Question 29) Do you think there is coordination among the aforementioned (in Q.26) projects?

a) Yes b) No c) Some of them d) I have no opinion e) Other

Sixty-three percent indicated that there is *no* coordination among the water related projects. Twenty-seven percent stated that there is cooperation and coordination among some of the projects, especially if it is a cooperative effort among different organizations.

Three percent thought that there is coordination among the projects. However, they also noted that the cooperation exists only if a project has a partner organization(s) and even then, coordination is weak.

Question 30) If you answered ‘no’ please explain.

Question 31) Do you think these projects should be combined and managed in an integrated and sustainable manner by the countries of Armenia, Azerbaijan, and Georgia?

a) Yes b) No c) Some of them d) I have no opinion e) Other

The majority of the interviewees agreed (66.7%) that the water related projects should be combined and/or managed in an integrated and sustainable manner by Armenia, Azerbaijan, and Georgia and possibly Turkey and Iran. Another 23.3% thought that some of the projects could be combined and managed together. The remaining 10% saw no need to do anything differently. In their opinion, the current status was fine.

Question 32) As a water resources manager, are you familiar with the international non-governmental *organizations* such as the EU, OSCE, NATO, UN, UNDP, WB, etc., and their *efforts* regarding the South Caucasus?

a) Yes b) No c) Some of them d) I have no opinion e) Other

Half of the interviewees felt that in general, they are familiar with the IGOs and NGOs, such as the EU, OSCE, NATO, UN, UNDP, WB, etc., and their efforts in the region. The other half said that they are familiar with some of the organizations and their efforts. However, they felt that too many different donor countries and organizations were involved with the SCR during the last decade. For this reason, the flow of information has been inadequate and discontinuous even when it relates to their professional work.

Question 33) Do you think that the aforementioned non-governmental organizations (IGOs) have cooperated with your country?

a) Yes b) No c) Some of them d) I have no opinion e) Other

The countries did not differ in the way they answered the question. While 26.7% thought that IGOs had worked cooperatively with their country, another 26.7% thought that they were not cooperative. Forty percent of the interviewees said that some of them are cooperative and some of them are just willing to work on their own agenda rather than for whom they are working.

Most of the interviewees specifically noted that some of the organizations are not cooperative with the local experts. Apparently, this situation is causing a communication problem and lack of trust between them.

Question 34) Do you think there is coordination among the aforementioned *organizations*?

a) Yes b) No c) Some of them d) I have no opinion e) Other

The countries did not differ in the way they answered the question. Of those interviewed, 36.7% felt that there is *no* coordination among the organizations. Another 56.7% said that some of the organizations have coordination and cooperation efforts but not all of them.

Some interviewees noted that some partnering organizations have coordination regarding the related project; however, this does not mean that other related governmental and non-governmental organizations are involved in this coordination process.

Question 35) Do you think there is *coordination* among the ongoing *projects*?

a) Yes b) No c) Some of them d) I have no opinion e) Other

While the majority of the interviewees (75.9%) believe that there is “no coordination” among the ongoing projects in the SCR, 17.2% noted that some of the

projects have coordination but not enough. Finally, 6.9% of the interviewees had no opinion.

Question 36) Were you and/or your organization involved with these projects at any stage?

a) Yes b) No c) Some of them d) I have no opinion e) Other

In answer to this question, 76.7% of the interviewees said that they were involved with and/or aware of most of the projects. The rest (23.3%), were involved with and/or aware of only some of the projects.

Question 37) If you answered 'yes', please indicate if this involvement was satisfactory to you.

a) Yes b) No c) Other

The countries did not differ in the way they answered the question. While 31% of the interviewees thought their involvement was satisfactory, 67% did not think they had a satisfactory experience. Some of the interviewees also noted that in some ways they were disappointed with the projects.

Question 38) Compared to your country, do you think that the other countries were more involved with these efforts and projects?

a) Yes b) No c) Other

Most of the interviewees (63.3%) felt that the other countries were not more involved in these efforts and projects than their country. Only 10% believed that the other countries were more involved than their own country.

Question 39) Are there any topics or initiatives that Armenia, Azerbaijan, and Georgia can work together on other than water issues?

a) Yes b) No c) Maybe d) Other

The countries strongly agreed (86.7%) that “there are other prospective areas in which the South Caucasus countries possibly could work together.” Nevertheless, 10% were negative about this answer. Some (3.3%) also noted that there may be other common areas of interest for their countries but it is not realistic to think of implementing them under the current political condition.

Question 40) Do you think cooperation among Armenia, Azerbaijan, and Georgia could bring these countries together and foster effective and fruitful communication among them?

a) Yes b) No c) Maybe d) Other

The results were very promising because the interviewees agreed on the answer. Most of the interviewees (93.3%) were very *positive* about cooperation regardless of their country of origin. Only 3.3% felt negatively about the subject. However, the rest (3.3%) noted their concerns about each country’s political perspective regarding cooperation given the current political situation in the SCR.

Question 41) Are you aware of the Organization for Security and Cooperation in Europe (OSCE) and its mission in the SCR?

a) Yes b) No c) Other

Ninety percent of the interviewees answered that they were familiar with the OSCE, while 10% said that they were not.

Question 42) Do you think that conflict settlement negotiations among Armenia, Azerbaijan, and Georgia have been helpful?

a) Yes b) No c) I have no opinion d) Other

The interviewees agreed that the conflict settlement negotiations had not been helpful so far. In other words, 63% of the interviewees had negative perspectives about the ongoing conflict resolution process in the SCR. However, 26.7% believed that negotiations had been helpful. It was also interesting that when they were asked if they could describe the ongoing conflict resolution process, none of them had any concrete idea or information about it.

They also noted that during the IWRM related meetings, one of the local experts is often engaged as a mediator/facilitator. It is not the preferred practice to have an untrained and subjective mediator/facilitator. It is more professional to use a neutral (disinterested) mediator in terms of effectiveness.

Question 43) Do you think that mediation between Armenia, Azerbaijan, and Georgia would be helpful toward reaching some sort of water resources management related agreement?

a) Yes b) No c) I have no opinion d) Other

Most of the interviewees were not familiar with Alternative Dispute Resolution (ADR) techniques such as mediation. Thus, after a brief explanation about ADR techniques, 76.7% believed that mediation and/or facilitation would be helpful tools for reaching some sort of agreement. However, 6.7% were skeptical, and they did not believe that it would be helpful.

VII. LESSONS LEARNED

Interview results showed that 40% of the respondents agreed that the governments of Armenia, Azerbaijan, and Georgia are not ready to cooperate on matters concerning the Kura-Araks Basin given the current political situation. On the other hand, 23.3% think they are ready to cooperate and another 23.3% think they are already cooperating at the technical level. It was clear that they are aware (86.7%) of the importance of managing the KAB in a sustainable manner within the same IWRM criteria, not only in their countries, but also in Turkey and Iran (see Appendix V). The results also showed that 57% of the respondents agreed on drawing from the criteria in the European Union Water Framework Directives (EU-WFD) since the three countries are willing to be a part of the EU in the future. Most importantly, the three countries are already working on adapting their Water Codes to those of the EU-WFD.

Seventy percent of the respondents indicated that the best management for the KAB is going to be as “sub-basins in each country with regional cooperation with the other riparian countries.”

All the respondents agreed that their countries have the same water resource management problems but different priorities and needs. Indeed, 86.2% of the respondents agreed that basin problems in their country will affect other riparian countries. Moreover, 76.2% think that this effect would be “negative”.

The overwhelming majority (96.7%) of the experts indicated that it is important to obtain information/data from the other countries and 56.7% said that they do not have enough information about each other. Experts also felt that it is difficult to obtain reliable data, not only from the other countries, but also within their own

country. Most of them also emphasized that, regarding obtaining data the main problem is the “quality”, not the “quantity”, in order to manage the Kura-Araks Basin in their countries. They also pointed out that all the countries needed more technical equipment, expertise, and special projects to collect more reliable data in their countries. Another challenge for these countries was the lack of technical-level expertise and the lack of newer equipment and facilities.

On the other hand, the main obstacle seems to be the Nagorno-Karabakh problem between Armenia and Azerbaijan. For this reason, the interviewees believe that it is difficult to think about any international agreement, especially at the governmental level, before this issue is resolved. Nonetheless, when they were asked if other problems between the countries will create an obstacle for a possible IWRM agreement, the results showed that the interviewees (86.7%) think positively about the situation, i.e. there may be obstacles but they could be resolved. Almost the same suggestions were made about how to solve the obstacles. For example, instead of a governmental level IWRM, they suggested creating technical level umbrella projects led by donor organization(s) and/or IGO(s). In any case, technical level experts from Armenia, Azerbaijan, and Georgia have been working and are willing to work together without any political concerns. Thus, they think that technical level cooperation projects will lead to an international agreement when the time is right.

Most of the interviewees (93.3%) agreed that IWRM cooperation among Armenia, Azerbaijan, and Georgia could lead to peace and improved welfare in the region.

When asked to choose the most suitable IWRM option for the Kura-Araks Basin in the SCR, 63.3% of the interviewees chose the option “manage separately but with the same criteria in each country.” Most of the respondents indicated that the

management criteria should be drawn up by the EU-WFD since the three countries are willing to be a part of the EU in the future. A high percentage (83.3%) of the respondents felt it is important to have a headquarters for the coordination of all the water related projects with experts drawn from each country and from the IGOs and NGOs. Each country would also have their “Country Division”. While 64.3% of the respondents thought that the headquarters could be located in Georgia, another 10.7% of the respondents answered that they would rather choose a neutral country as a location for the headquarters. Yet another 14.3% suggested mobile headquarters that changed location every other year or so.

When it comes to involvement of the IGOs and other countries in the SCR, it was very interesting that even though respondents were very positive about the involvement of the other countries and IGOs, they were partly confused by these chaotic efforts and projects. There are different reasons for this confusion such as those listed below:

1. There are countless, ongoing projects in the Kura-Araks Basin.
2. Some of these projects are very similar to each other but they are getting funded by different IGOs and/or countries. Fifty-four percent of the interviewees stated that these projects overlap each other. Furthermore, 66.7% indicated that these projects could be combined and/or managed in an integrated and sustainable manner.
3. Access and use of the funds is another problem. It is difficult to find funding for a proposed and/or ongoing successful project unless it is part of a proposed donor organization project. Most of the time, donor organizations

want to be in charge of the funding related issues and/or special requirements which make it hard for the project owners.

4. Sixty-three percent of respondents indicated that there is no coordination among these projects.

5. A majority (56.7%) thought that there is no coordination and/or cooperation among the donor IGOs.

6. Many (36.7%) thought that there is *no* coordination and 56.7% thought coordination and communication are weak between the country of implementation and the IGO(s) during the development and the management of the projects.

7. The experts from the countries are not involved in the projects as much as they think they should be and/or they are not informed about the projects at all. Sixty-seven percent of respondents felt that their involvement in these projects was *not* satisfactory.

8. Some of the experts think that suggestions from their countries are not heard when these projects are being planned. Indeed, 40% of the respondents said that some of the IGOs and/or donor organizations are cooperative with the countries with which they are working, but some of the organizations have their own agendas. Another 26.7 % of the interviewees said that the IGOs do not cooperate very well with their country.

9. Most of the time the results of the projects are not quite understood by the countries since they are either recommendation level reports, are not amenable to implementation, or the countries have no idea what to do with these reports (such as the EU's TACIS Project).

10. Some projects were developed and left to the countries to be implemented and the country did not have enough expertise or, in some cases, a coordination unit to continue to implement these projects.

VIII. OBSTACLES AND COMMON OBJECTIVES

This section summarizes, in tabular form, the main obstacles to IWRM (Table 9) and the common areas/objectives of Armenia, Azerbaijan, and Georgia, (Table 10).

Table 9: Main Obstacles to IWRM

Main Obstacles	
Socio-economic	Lack of trust among the countries Socio-economic collapse Historical hostile feelings IDP and refugees Immigration Trafficking of narcotics Poverty Lack of funding
Political	Unstable political situations Lack of democracy (democratic polity) Bureaucratic processes Corruption Ethnic Conflicts: Nagorno-Karabakh, Javakheti, etc. Nationalism, separatism <i>Coup d'etats</i> , insurrections, attempts to assassinate political leaders Regional and global interference Lack of defined law structure in the South Caucasian states
Infrastructure	No transboundary, bi-lateral, or multi-lateral agreements among the countries Lack of cooperation and communication national, international, inter-organizational levels Lack of organization to coordinate water-related projects None and/or poor communication between the countries, donors, organizations, and projects Outdated or lack of facilities and equipment
Country-Based Obstacles	
Armenia	Landlocked and isolated No solution yet on Nagorno-Karabakh and Javakheti Lack of natural resources Water pollution Problems associated with Lake Sevan
Azerbaijan	Water shortage and pollution Cannot export its oil without Georgia, which connects it to Turkey and the West
Georgia	Partially relies on Azerbaijan's oil Lack of funding and sources

Table 10: Common Areas/Objectives among Armenia, Azerbaijan, and

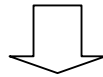
Georgia

Common Areas/Objectives	
Socio-economic	<p>Willingness to cooperate in solving water-related issues</p> <p>Support for transboundary water resource management</p> <p>Establishment of the ancient “Silk Road”</p> <p>Current and potential available funding, aid and investment opportunities</p> <p>Harmonization of the EU directives</p> <p>Formerly part of the Soviet Union</p>
Political	<p>Regional and global interest</p> <p>Creating a bridge between Turkey and the Black Sea, to the Caspian Sea, and Central Asia</p> <p>Being members of the Council of Europe (Georgia since 1999; Azerbaijan and Armenia since 2001)</p> <p>Willingness to join the European Union</p>
Infrastructure	<p>Funding opportunities and promises by the World Bank and Western institutions, contingent upon peace settlement, to help with economic development</p> <p>Ongoing projects creating a socio-economic and political basis for cooperation between the countries</p> <p>Ongoing mediation efforts by Minsk Group to establish cooperation and trust</p>
Country-Based Common Objectives	
Armenia	<p>Joined Georgia in signing the charter for establishing the Regional Environmental Center (REC) in the Caucasus, in Tbilisi, Georgia; was supported by the United States and the EU</p>
Azerbaijan	<p>Azerbaijan and Georgia share a similar outlook on the world and on relations with their neighbors</p> <p>Close relationship with Georgia</p> <p>Member of NATO, and GUUAM (Georgia, Ukraine, Uzbekistan, Azerbaijan, Moldova alliance) and ally of Turkey</p> <p>Has significant reserves of oil and gas</p>
Georgia	<p>Joined Armenia in signing the charter for establishing the Regional Environmental Center (REC) in the Caucasus, in Tbilisi, Georgia; was supported by the United States and the EU</p> <p>Member of NATO, and GUUAM (Georgia, Ukraine, Uzbekistan, Azerbaijan, Moldova alliance) and ally of Turkey</p> <p>Willing to sign an agreement related to Javakheti</p>

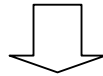
IX. RECOMMENDATIONS

From the interview results, it is clear that it is possible to implement an IWRM model for the Kura-Araks Basin in the South Caucasus (see Appendix V: Fact Finding and Recommendations Chart). The model might be based on the following conditions as seen in Figure 2 below.

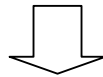
The Kura-Araks Basin is going to be managed in each country separately but within the same IWRM criteria.



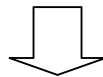
Since Armenia, Azerbaijan and Georgia are willing to be a part of the EU in the future, the criteria can be drawn from the European EU-WFD. However, each river basin is unique and that is why the countries might need to address some specific issues under these criteria.



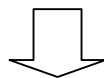
Develop a Kura-Araks Basin River Basin Management Plan (KAB-RBMP). Public participation is essential in the process of creating the KAB-RBMP (see Figure 2).



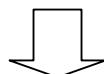
Create a River Basin District (RBD) in each country as an implementation and coordination unit (see Figure 2). This unit will be in charge of the coordination, communication and the management of the related issues and the projects at the country level.



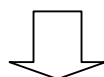
Create a headquarters (which acts like a regional development agency) to implement the KAB-RBMP and coordinate related projects, parties and the countries.



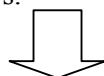
The location of the headquarters should be decided by the partner countries with the help of a mediator. It may be located in any neutral country and/or in Georgia and/or may change location every other year among the countries.



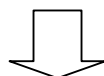
The *Consensus Meeting* should be organized in a neutral country to reach a consensus for the details such as the management criteria, location of the headquarters, by-laws etc., of the IWRM model of the Kura-Araks Basin. ADR techniques such as mediation, facilitation, peer conferencing, and shuttle diplomacy should be used in each phase of decision-making, especially in the *Consensus Meeting*.



In the first phase, *Country Consensus Meetings* must be organized in each country to establish each country's priorities. Short and long-term goals should be established with the help of the mediators.

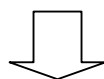


A *Regional Consensus Meeting* must be organized in the second stage to discuss each country's first phase document with the help of the mediators.

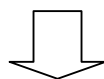


Country Consensus Meetings and the *Regional Consensus Meeting* should be organized by the donor/leader and/or donor agency(ies) such as WB, NATO, UNDP,

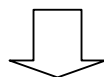
EU, etc. The donor organization(s) that is going to take the initial leadership role in this process will have very critical and important duties. This structure is not a government-level initiative; it is a project that three countries are willing to participate in with the leadership of an IGO(s).



Mediation plays a very important role in order to reach this point. Mediators should be from neutral countries. It will be very important to have shuttle diplomacy in the *Regional Consensus Meeting*.



Location of the meetings: the *Country Consensus Meetings* should be take place in a resort including a weekend for a total of 3- 4 days so that the experts of the countries have a chance to discuss the issues both in formal and informal settings. In the country meetings, each country has to choose their *country team* in order to attend the Regional Consensus Meeting. Participants of the meetings are very important. Governmental officials, NGOs, universities, research centers, other involved organizations, etc. should be represented in these meetings.



The *Regional Consensus Meeting* must take place in a neutral country which all the countries agreed upon as the meeting place in their country consensus meeting. The meeting should last at least a couple of days. Experts from the countries should travel and stay together at the same place in order to get to know each other and spend some time together. Along with the activities, some kind of leadership workshop should be provided to them, with mediators present.

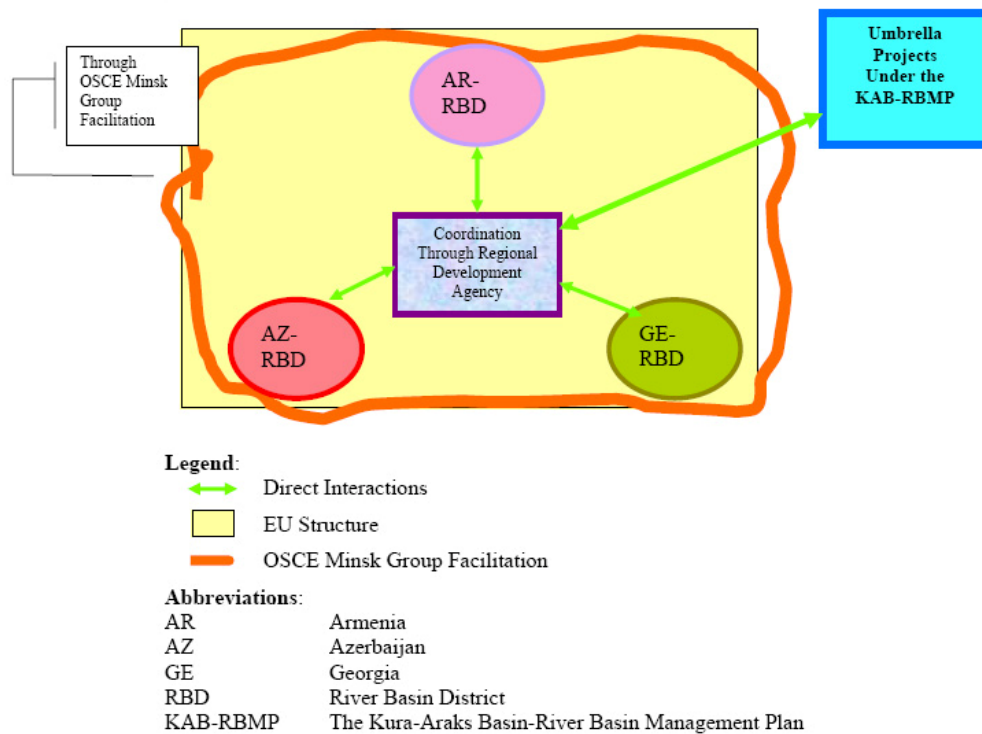


Figure 2: Structural Interactions for the IWRM Model

X. CONCLUSIONS

During the interviews it was important to understand each country's point of view from the experts of that particular country. Results showed that experts from the countries mostly agreed on the main issues and were willing to work together in order to manage the Kura-Araks Basin. It seems that because of the Nagorno-Karabakh issue, the countries are not willing to sign an IWRM agreement. However, they are willing to find a solution. The countries have the same hopes, fears and concerns about a prosperous future in more peaceful settings for their citizens. There are many efforts and aid directed towards this region. IGOs such as the WB, NATO, UN, EU, and different countries are working to make this region more stable and affluent. There are already a tremendous number of valuable efforts and projects by the countries and the IGOs and NGOs. There are also many ongoing projects regarding IWRM by the different organizations. The countries appreciate these efforts, but they wish to be stable and independent (see Appendix VI). Thus, they need capacity-building forums and projects, which are already occurring in the region. With the ongoing projects, technical experts from the different countries are already working together. Despite the fact that there are political obstacles such as the Nagorno-Karabakh issue, the main obstacle seems to be a lack of leadership to mediate and initiative to coordinate all these efforts and make them work in a sustainable manner.

The interview results showed that a neutral party, possibly an international organization such as WB, NATO, EU and/or UN, should be taking the leadership role in this initiative. Leadership and mediation are the key issues to creating this kind of initiative since the countries are willing to participate.

Regional cooperation on the IWRM model may not only set the framework for comprehensive management of water resources in the SC but also may lead to a peaceful environment in the region. The people of the region are ready for peace. That is why 86.7% of the interviewees agreed that there are other prospective areas (along with water resource management) on which the SC countries could work together.

It is only matter of time before somebody takes the leadership role. The European Union, NATO, UN and WB can play this role and take this initiative further along. The WB has already done this in the Nile River Initiative and the OSCE will continue to help in the dispute resolution process.

It is important to understand that even though ongoing disputes exist among these countries, they are accustomed to working together and being part of a similar culture since they were part of the former Soviet Union. During the Soviet Union era only a couple decades ago, these countries were sharing the Kura-Araks Basin along with their other resources. Despite their religious and cultural differences, they still share the same fears and hopes for their future.

Abbreviations

AR	Armenia	NATO	North Atlantic Treaty Organization
ADR	Alternative Dispute Resolution	NEAP	National Environmental Action Program
AZ	Azerbaijan	NGO	Non-Governmental Organization
CEE	Central and Eastern Europe	NIS	Newly Independent States (former Soviet republics)
CEO 2002	Caucasus Environmental Outlook 2002	OSCE	Organization for Security and Cooperation in Europe
CEP	Committee of Environmental Protection	PCAs	Partnership and Cooperation Agreements (the EU)
CENN	Caucasus Environmental NGO Network	REC	Regional Environmental Center
CCC	Cornell Caspian Consulting	SC	South Caucasus
CIA	USA- Central Intelligence Agency	SCR	South Caucasus Region
DAI	Development Alternatives, Inc.	SIDA	Swedish International Development Cooperation Agency
DDT	Dichlorodiphenyltrichloroethane (Pesticide)	TACIS	Technical Assistance: Commonwealth of Independent States (EU)
EU	European Union	TACIS-JRMP	TACIS Joint River Project (EU)
EU-WFD	European Union - Water Framework Directives	UN	United Nations
FAO	Food and Agriculture Organization	UNDP	United Nations Development Program
GDP	Gross Domestic Product	UNECE	United Nations Economic Commission for Europe
GEF	Global Environment Facility	UNEP	United Nations Environment Program
GE	Georgia	UNICEF	United Nations Children's Fund
GIS	Geographic Information System	USAID	United States Agency for International Development
GUAAM	Georgia, Ukraine, Uzbekistan, Azerbaijan, Moldova alliance	USEPA	United States Environmental Protection Agency
IDP	Internally Displacement People or Persons	USDS	United States Department of State
IFAD	International Fund For Agricultural Development	USSR	Union of Soviet Socialist Republics
IGO	International/Intergovernmental Organizations	WB	World Bank
KAB	Kura-Araks Basin	WTO	World Trade Organization

Glossary of Terms³⁴

Average precipitation (mm/year and km³/year): Double average over space and time of rainfall on the country in a year.

Average evapotranspiration (mm/year and km³/year): Represents the actual rate of water uptake by plants and from the surrounding soil, which is determined by the level of available water in the soil and atmospheric conditions.

Coup d'état: Stroke of state; a sudden, decisive exercise of force in politics.

Degradation: Readjustment of the stream profile where the stream channel is lowered by the erosion of the stream bed. Usually associated with high discharges.

Desalination (Desalinization): The process of removing salt from saltwater to produce water suitable for humans to drink.

Internal renewable natural water resources (IRWR) (km³/year): Average annual flow of rivers and recharge of groundwater generated from endogenous precipitation.

Natural flow (km³/year): The amount of water that would flow under natural conditions, i.e. without human influence.

Overlap between surface water and ground water (km³/year): That part of the water resources which is common to both surface water and groundwater.

Renewable water resources (km³/year): Total resources that are offered by the average annual natural inflow and runoff that feed each hydrosystem (catchment

³⁴ Most of the glossary terms were taken from the FAO/AQUASTAT 2006d.

area or aquifer). Natural resources that, after exploitation, can return to their previous stock levels by natural processes of growth or replenishment.

Total actual renewable water resources (km^3/year): The sum of internal renewable water resources and incoming flow originating outside the country, taking into consideration the quantity of flows reserved to upstream and downstream countries through formal or informal agreements or treaties. This gives the maximum theoretical amount of water actually available for the country.

Total natural renewable water resources (km^3/year): The sum of internal renewable water resources and natural incoming flow originating outside the country.

Water withdrawal (km^3/year): The removal of water from some type of stock, like groundwater, for some use by humans. The water is subsequently returned some period of time after its is used. The quality of the returned water may not be the same as when it was originally removed.

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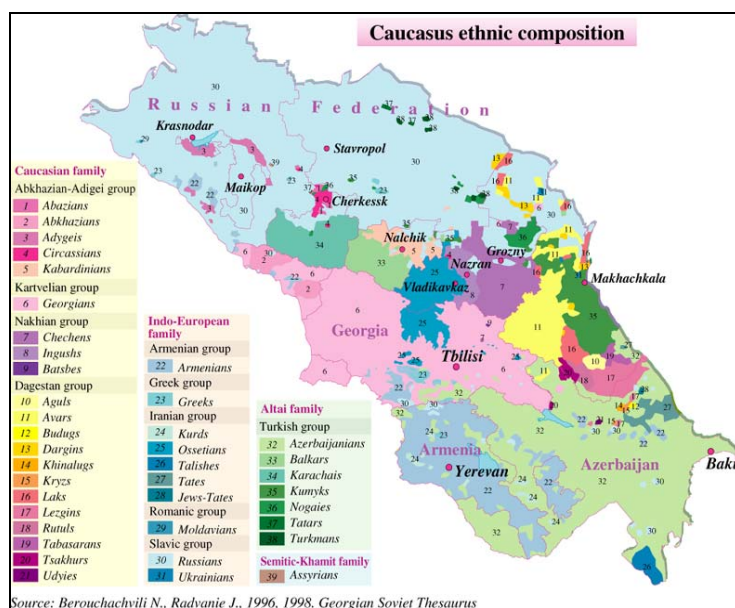
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Appendix I: Area Maps



Appendix II: Some of the Projects in the South Caucasus

Title and Donor	Lead Actor	Time Frame	Funding	Description	Main Objectives	Some Other Related Projects and/or Organizations
The EU TACIS³⁵ Joint River Management Program (JRMP) Funded by the European Union * TACIS has also other regional programs like <i>TRECECA</i> , <i>INOAGAGE</i> ³⁶ , <i>Regional Environmental Centre (REC) for South Caucasus</i> , and <i>NEAP</i> .	The EU	2000-2006	Armenia ~ € 78.9 million Between 1991 to 2001 Azerbaijan € 72.5 million Between 1992 to 2001 Georgia € 84 million Between 1992 to 2002 Total for 3 Countries €235.4 million	To develop a staged approach to the implementation of the EU Framework Directive in the NIS using the Kura Basin as a pilot project. By (a) Strategy papers (b) Multiannual indicative programs (c) Annual and biannual action programs	* Bi-lateral agreement * Cooperation between the countries * Pilot projects on small-scaled solution in water supply and sanitation * Training programs * Water quality and quantity projects and links * Ecological monitoring * Environmental auditing	* UNDP/GEF- Kura Basin Water Management * USAID-Water Management in the South Caucasus * WB Irrigation and Drainage projects * German Project on Pollution prevention and early warning

³⁵ Technical Assistance: Commonwealth of Independent States (TACIS)

³⁶ Cross border energy initiative funded by TACIS.

Source: TACIS 2002, USAID 2002, DAI 2004

Title and Donor	Lead Actor	Time Frame	Funding	Description	Main Objectives	Some Other Related Projects and/or Organizations
South Caucasus Water Management Project Funded by the United States Agency for International Development (USAID)	DAI (USA) (Contractor: Development Alternatives Inc.-DAI)	2000-2002	\$ 4,000,000	To increase the dialogue for sustainable water management in the South Caucasus countries of Armenia, Azerbaijan, and Georgia. By (a) Increased cooperation for the management of water resources, (b) Integrated river basin planning in two bi-lateral settings, and (c) Assessment of legal issues for water management in the region	* Monitor water quantity and quality, *Develop a regional framework for a geographic information system (GIS), *Promote a data exchange program to facilitate water management, *Initiate a process for building capacity for integrated river basin planning, *Develop a legal framework for water resources management, and *Implement an effective project management system.	EU TACIS JRMP, EU TACIS NEAP, EU TACIS Caspian Environmental Program, OSCE Environmental Program, USAID, OSCE, UNDP, IBRD, NATO, ARD, etc

Title and Donor	Lead Actor	Time Frame	Funding	Description	Main Objectives	Some Other Related Projects and/or Organizations
Synergy (USAID)	Eurasia Foundation	1998-	\$ 400,000	Create more liberal and transparent system in the region's telecommunication sector. By * Perfection of existing legislation * Conducting a social survey	* Development of telecommunication sector in the South Caucasus.	* Liberty Institute * SIGMA-Research Center for Development * International Collaboration * Internet Society (ISOC AM)
Regional Environmental Center (REC) (EU-TACIS and USEPA³⁷) Funded by the EU. Key donor is USA. Other financial and technical assistance has been provided by Denmark, Germany, and Switzerland.	REC	Chartered 1999-	³⁸ ✦	Capacity building and development of regional environmental cooperation. By Building the civil society through promotion of public participation in the decision-making process.	* Increasing information exchange between NGOs, governments, the scientific community, and the private sector. * Developing compatible environmental policy and strategies among countries; and, raising awareness about the environment.	* EU TACIS * UNDP/GEF- Kura Basin Water Management * USAID-Water Management in the South Caucasus
South Caucasus Highland and Mountain Development Project (FAD)	Center for Highland Development	✦	\$ 49,000,000	Rural infrastructure rehabilitation, including irrigation.	✦	* UNDP/GEF- Kura Basin Water Management * WB Irrigation and Drainage projects * TRASEKA projects




³⁷ United States Environmental Protection Agency (USEPA)

Source: JRMP2002; REC; IFAD; UNDP Web Portal

³⁸ ✦ Lack of information

Source: JRMP2002; REC; IFAD; UNDP, CENN, OSCE, NATO Science for Peace Web Portal

Title and Donor	Lead Actor	Time Frame	Funding	Description	Main Objectives	Some Other Related Projects and/or Organizations
Support for South Caucasus Highland and Mountain Development Project (Swiss Agency for Development and Cooperation-SDC)	SDC	2000-	Total Cost \$10 million Azerbaijan \$ 9.23 million Georgia	Possible grant support IFAD project	✦	* UNDP/GEF- Kura Basin Water Management * WB Irrigation and Drainage projects * TRASEKA projects * NATO, TACIS, USAID , REC etc.
Regional Partnership for Environmental Security through Prevention of Transboundary Pollution to the Kura-Araks Rivers (UNDP)	UNDP	2002-2004	\$ 4,700,000	Develop intuitional and legal structure for equitable use and shared benefit of common river basin resources. By MOUs, workshop, development of regional communication and information systems.	* Reduce degradation of the Kura-Araks river basin. * Development of better intuitional structure.	The EU TACIS, USAID-DAI, UNDP, REC, WB.
Arid and Semi-Arid Ecosystem Conservation in the Caucasus (CASEC) GEF &UNDP	UNDP/GEF	1999-	\$ 750,000	Protection of biodiversity in the arid and semi-arid zones in the area. By Protection activities and coordination of these activities with neighboring countries sharing sections of the ecosystem	* Local land users' participation in the design of alternative land uses, and their integration in its implementation.	The EU TACIS, GEF, USAID-DAI, UNDP, REC, WB.

Title and Donor	Lead Actor	Time Frame	Funding	Description	Main Objectives	Some Other Related Projects and/or Organizations
Caucasus Environmental NGO Network (CENN) Supported by USAID through the Environmental Information Systems and Networking Project (EISN).	DevTch Systems/Georgian Center for the Conservation of Wildlife	March 2000-		Promotion of regional environmental collaboration in the Caucasus by information exchange By Monthly bulletin Creation of Web Databases on Natural Resources and Environment Related Issues of the Caucasus Region Regional workshops	* Capacity building of environmental NGOs in the region; * Facilitation and promotion of joint activities in the Caucasus; * Improvement of the effectiveness of solutions of environmental problems; * Establishment and maintenance of easily accessible environmental information space, and * Coordination of efforts in the development of compatible environmental strategies and policies in Caucasus countries.	* Environmental Survival Union (ESU), Armenia * Ecological Stability (ECOS), Azerbaijan * Others: TACIS, GEF, REC, USAID
Peace Zone Project (OSCE and Helsinki Citizens' Assembly (hCa))	OSCE	Planned		A project for a Peace Zone in the 'Reb Bridge' area where Armenia, Azerbaijan and Georgia meet entailing several joint projects, including water and agriculture.		TACIS, NATO, USAID, REC, CENN etc.

Title and Donor	Lead Actor	Time Frame	Funding	Description	Main Objectives	Some Other Related Projects and/or Organizations
South Caucasus River Monitoring (SRP-River Monitoring) Funded by NATO Science for Peace Programme and co-funded by OSCE	OSCE Projects Partners & Participants: National Academy of Sciences (AR); Tbilisi State University (GE); National Academy of Sciences (AZ); University of New Mexico (UNM), 2002-2006; and Oregon State University (OSU), 2006-2007, USA; University of Antwerp, Belgium; Norwegian University of Science and Technology, Norway.	2002-2007	Approx. €1,100,000	To establish the social and technical infrastructure for an international, cooperative, transboundary river water quality and quantity monitoring, data sharing and watershed management system among the Republics of Armenia, Azerbaijan and Georgia.	* Increase technical capabilities (monitoring, analytical and communications) among partner countries * Cooperatively establish standard sampling, analysis and data management techniques for all partner countries * Establish data, GIS and model sharing system accessible to all partners via WWW * Establish social framework (i.e., annual international meetings) for whole-watershed management.	The EU TACIS, USAID, REC, CENN etc.

Appendix III: Survey Questions (English Version)

Introduction

The purpose of this survey is to assess the need for an Integrated Water Resources Management (IWRM) model for the Kura-Araks Basin in Azerbaijan, Armenia and Georgia in terms of sustainable and integrated investment development planning. These survey questions will be used to gain a general understanding of the Armenian, Azerbaijanian, and Georgian perspective of water issues and the current situation in the Kura-Araks Basin.

In the Kura-Araks Basin, utilization and conservation of water resources are constrained by limited institutional, social, human and financial capacity. Capacity building represents a priority requirement and prerequisite for cooperation on management and development of the Kura-Araks resources.

The aim of this project is the inclusion of all countries in a joint *dialogue that opens up new opportunities for realizing win-win solutions*. It also holds the promise for greater potential regional integration, both economic and political. The benefits would far exceed those derived from the waters of the Kura-Araks Basin itself.

Please answer all the questions from your country's perspective. You can also write notes and comments after the each question and/or after the survey.

Please keep in your mind that these survey questions are for Kura-Araks Basin in Armenia, Azerbaijan, and Georgia. As an example, if you are from Azerbaijan and are answering question 4, you have to answer for Armenia and Georgia.

Your participation in this survey will assist in determining the extent of conflicts/cooperation in the Kura-Araks Basin in Armenia, Azerbaijan and Georgia.

Please indicate the country you are from:..... (Required)

If you are working for international non-governmental organization, please indicate your organization:.....**(Optional)**

Name, Surname: **(Optional)**

If you have any questions please feel free to contact me bbvener@aol.com

QUESTIONS

1) In your country, what is the main problem(s) associated with your transboundary water resources. (You can choose more than one)

- a) Organizational management related issues
- b) Legal and regulatory problems
- c) Technical problems
- d) Water resources management policies
- e) Lack of information, data, knowledge, expertise
- f) Water contamination
- g) Ecological problems
- h) There are no problems
- i) Other. Please specify

2) If you chose more than one option please rank them on their importance.

3) Has your country and/or other non-governmental organization(s) made efforts to fix the above mentioned problem(s)?

- a) Yes b) No c) Other countrie(s)/organization(s) are handling these issues.

Please indicate the organization(s)

4) Do you think, other riparian countries in the Kura-Araks Basin (KAB) have similar water resource and/or management related problems?

- a) Yes b) No c) I have no opinion

If you answered 'yes' please explain why

5) What do you think are the main transboundary resource problem(s) in the other riparian countries? If you choose more then one please rank them based on their importance.

Please indicate the country	Please indicate the country
a) Organizational management related issues	a) Organizational management related issues
b) Legal and regulatory problems	b) Legal and regulatory problems
c) Technical problems	c) Technical problems
d) Water resources management policies	d) Water resources management policies
e) Lack of information, data, knowledge, and expertise	e) Lack of information, data, knowledge, and expertise
f) Water contamination	f) Water contamination
g) Ecological problems	g) Ecological problems
h) There is no problem	h) There is no problem
i) Other.....	i) Other.....

6) Do you think basin problems in other riparian countries (that you specified in question 4) are going to affect the Kura-Araks Basin in your country?

- a) Yes b) No c) I am not sure d) Other

7) How do you think this effect would be?

- a) Negative b) Positive c) No effect at all d) I am not sure e) Other

8) In your country, what do you think is the most important issue that has to be addressed immediately? Why?

9) What do you think about the involvement of the international and inter-governmental organizations in the South Caucasus such as the European Union (EU), the Organization for Security and Cooperation in Europe (OSCE), United Nations (UN), United Nations Development Program (UNDP), and the World Bank (WB), North Atlantic Treaty Organization (NATO), the United States Agency for International Development (USAID), and others? You can choose more than one option but please explain.

- a) Constructive b) Distractive c) Helpful d) Not helpful at all e) Leading f) Confusing

Notes and Comments for Q.9.....

10) Do you think your country has enough information/data about the Kura-Araks Basin in other riparian countries?

- a) Yes b) No c) Other

11) If you answered ‘yes’ to question 10, please indicate whether the information/data are satisfactory?

- a) Yes b) No c) I am not sure d) Other

12) Do you think it is important to obtain information about the Kura-Araks Basin in other countries?

a) Yes b) No c) I am not sure d) Other

13) If you answered ‘yes’ to Question 12, please indicate why it is important?

14) Do you think other countries have enough information/data about the Kura-Araks Basin in your country?

a) Yes b) No c) I am not sure d) Other

15) Do you think it is important for other countries to obtain information about the Kura-Araks Basin in your country?

a) Yes b) No c) Other

16) How do you think that Kura–Araks Basin should be managed geographically?

- a) As one basin in three countries
- b) Separately; as subbasins in each country (Armenia, Azerbaijan, Georgia)
- c) Subbasins in each country with cooperation
- d) Other

17) How do you think that the Kura–Araks Basin should be managed geopolitically?

- a) An international agreement signed by Armenia, Azerbaijan, and Georgia.
- b) Managed separately in Armenia, Azerbaijan, and Georgia but within the same European Union Standards
- c) Managed separately in Armenia, Azerbaijan, and Georgia but within the United Nations Convention on Transboundary Water Resources (1997) Convention
- d) Managed separately in Armenia, Azerbaijan, and Georgia but with the same water resources management criteria in Armenia, Azerbaijan, and Georgia.
- e) Shared vision and an initiation agreement among Armenia, Azerbaijan, and Georgia.
- f) Other

Please justify your answer.....

18) Do you think Armenia, Azerbaijan, and Georgia are ready to cooperate regarding transboundary water management?

- a) Yes b) No c) I am not sure d) Other

19) What is your country's point of view of cooperation regarding to transboundary waters? Please explain.

20) Do you think that it is important to manage the Kura-Araks Basin in Armenia, Azerbaijan, and Georgia using the same water resources management criteria in all three countries?

- a) Yes b) No c) I am not sure d) Other

21) Do you think the other two countries are ready to cooperate with your country regarding transboundary water management?

- a) Yes b) No c) I am not sure d) Other

22) Assume that there is a cooperation agreement among Armenia, Azerbaijan, and Georgia. Which one of the following options is more suitable for management of the Kura-Araks Basin in Armenia, Azerbaijan, and Georgia?

a) A single headquarters for coordination of all the related projects with experts from each of the countries and the non-governmental organizations. There would be divisions in each country.

b) There will be divisions in each country and coordination meetings among the stakeholders.

c) I cannot assume that experts from, Armenia, Azerbaijan, and Georgia can work together under the same roof.

- d) Other

23) Do you think that other problems between the countries (which are not related to water resources management) will create a problem/obstacle for a possible water resources management agreement?

a) Yes, it can be a problem. That is why cooperative management with an agreement will not happen in the South Caucasus.

b) Not a problem. Water issues are separated from the other problems between the countries.

- c) Yes, it is a problem HOWEVER it can be worked out.

- d) Other

24) If there is a water resources cooperation agreement among Armenia, Azerbaijan, and Georgia, do you think there should be a headquarters in charge of coordination?

- a) Coordinate, operate, and monitor related projects in Armenia, Azerbaijan, and Georgia.
- a) It is not necessary to have a headquarters.
- b) It is necessary to have a headquarters.
- c) Other

25) If you thought there should be a headquarters, where do you think this headquarters should be located?

26) As a water resources manager, are you familiar with the water resources management and development related *projects* funded/organized by international and non-governmental organizations such as European Union's TACIS; NATO/OSCE's South Caucasus River Monitoring Project, WB, and others?

- a) Yes b) No c) Some of them d) I have no opinion e) Other

27) Do you think these projects are helpful?

- a) Yes b) No c) Some of them d) I have no opinion e) Other

28) Do you think that these projects overlap and/or conflict with each other?

- a) Yes b) No c) Some of them d) I have no opinion e) Other

29) Do you think there is coordination among the aforementioned (in Q.26) projects?

a) Yes b) No c) Some of them d) I have no opinion e) Other

30) If you answered 'no' please explain.

31) Do you think these projects should be combined and managed in an integrated and sustainable manner by the countries of Armenia, Azerbaijan, and Georgia?

a) Yes b) No c) Some of them d) I have no opinion e) Other

32) As a water resources manager, are you familiar with the international non-governmental organizations such as the EU, OSCE, NATO, UN, UNDP, WB, etc. and their efforts regarding the South Caucasus Region (SCR)?

a) Yes b) No c) Some of them d) I have no opinion e) Other

33) Do you think that the aforementioned mentioned non-governmental organizations have cooperated with your country?

a) Yes b) No c) Some of them d) I have no opinion e) Other

34) Do you think there is coordination between aforementioned organizations?

a) Yes b) No c) Some of them d) I have no opinion e) Other

35) Do you think there is coordination among the ongoing projects?

a) Yes b) No c) Some of them d) I have no opinion e) Other

36) Were you and/or your organization involved with these projects at any stage?

a) Yes b) No c) Some of them d) I have no opinion e) Other

37) If you answered ‘yes’, please indicate if this involvement was satisfactory to you?

a) Yes b) No c) Other

38) Compared to your country, do you think that the other countries were more involved in these efforts and projects?

a) Yes b) No c) Other

39) Are there any topics or initiatives that Armenia, Azerbaijan, and Georgia can work together on other than water issues?

a) Yes b) No c) Maybe d) Other

40) Do you think cooperation among Armenia, Azerbaijan, and Georgia could bring these countries together and foster an effective and fruitful communication among them?

a) Yes b) No c) Maybe d) Other

41) Are you aware of the Organization for Security and Cooperation in Europe (OSCE) and its mission in the South Caucasus?

a) Yes b) No c) Other

42) Do you think that conflict settlement negotiations among Armenia, Azerbaijan, and Georgia have been helpful?

a) Yes b) No c) I have no opinion d) Other

43) Do you think that mediation between Armenia, Azerbaijan, and Georgia would be helpful toward reaching some sort of water resources management related agreement/initiation?

a) Yes b) No c) I have no opinion d) Other

Appendix IV: Valid Statistics of the Interviews³⁹

A significance value (less than 0.05) means that the null hypothesis is rejected that there is *no* relation between the rows and columns of the table. In this study, the columns are the three countries and the rows are the responses to a question. If there is a statistically significant relationship, it means that there is a difference in the way the people in the three countries answered the question.

If there is no relationship, (p greater than 0.05), the researcher concluded that the groups (countries) do not differ in the way they answered the question. When the chi-square is significant, (p less than 0.05), there will be differences in the proportions.

Crosstab 1

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q1. Legal and regulatory problems	Not chosen	Count % within Country of Origin	5 45.5%	1 9.1%	0 0.0%	6 20.0%
	Chosen	Count % within Country of Origin	6 54.5%	10 90.9%	8 100.0%	24 80.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

³⁹ Calculations in this appendix were performed by Dr. Marcus Lieberman. Former associate professor of Harvard University and currently president of the consulting firm 'Responsive Methodology' located in Albuquerque, NM.

Chi-Square Tests 1

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.369 ^a	2	0.041
Likelihood Ratio	8.441	2	0.015
N of Valid Cases	30		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.87.

Crosstab 2

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q1. Organizational management related issues	Not chosen	Count % within Country of Origin	5 45.5%	0 0.0%	2 25.0%	7 23.3%
	Chosen	Count % within Country of Origin	6 54.5%	11 100.0%	6 75.0%	23 76.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square = 6.369, p = 0.041

Chi-Square Tests 2

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.273 ^a	2	0.026
Likelihood Ratio	8.164	2	0.017
N of Valid Cases	30		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.60.

Crosstab 3

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q1. Technical problems	Not chosen	Count % within Country of Origin	1 9.1%	2 18.2%	3 37.5%	6 20.0%
	Chosen	Count % within Country of Origin	10 90.9%	9 81.8%	5 62.5%	24 80.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 3

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.372 ^a	2	0.305
Likelihood Ratio	2.306	2	0.316
N of Valid Cases	30		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.60.

Crosstab 4

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q1. Water resources management policies	Not chosen	Count % within Country of Origin	8 72.7%	5 45.5%	0 0.0%	13 43.3%
	Chosen	Count % within Country of Origin	3 27.3%	6 54.5%	8 100.0%	17 56.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 4

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.008 ^a	2	0.007
Likelihood Ratio	13.005	2	0.001
N of Valid Cases	30		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 3.47.

Crosstab 5

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q1. Lack of information, data, knowledge and expertise	Not chosen	Count % within Country of Origin	3 27.3%	0 0.0%	0 0.0%	3 10.0%
	Chosen	Count % within Country of Origin	8 72.7%	11 100.0%	8 100.0%	27 90.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 5

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.758 ^a	2	0.056
Likelihood Ratio	6.614	2	0.037
N of Valid Cases	30		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 0.80.

Crosstab 6

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q1. Water contamination	Not chosen	Count % within Country of Origin	1 9.1%	0 0.0%	1 12.5%	2 6.7%
	Chosen	Count % within Country of Origin	10 90.9%	11 100.0%	7 87.5%	28 93.3%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 6

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.327 ^a	2	0.515
Likelihood Ratio	1.965	2	0.374
N of Valid Cases	30		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 0.53.

Crosstab 7

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q1. Ecological problems	Not chosen	Count % within Country of Origin	4 36.4%	0 0.0%	0 0.0%	4 13.3%
	Chosen	Count % within Country of Origin	7 63.6%	11 100.0%	8 100.0%	26 86.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 7

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.972 ^a	2	0.019
Likelihood Ratio	9.140	2	0.010
N of Valid Cases	30		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.07.

Crosstab 8

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q1. There is no problem	Not chosen	Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%
	Chosen	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 8

	Value
Pearson Chi-Square	. ^a
N of Valid Cases	30

a. No statistics are computed because Q1. *There is no problem* is a constant.

Crosstab 9

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q2. Ranked first	None Chosen	Count % within Country of Origin	5 45.5%	2 18.2%	2 25.0%	9 30.0%
	Org mngmnt issues	Count % within Country of Origin	5 45.5%	1 9.1%	1 12.5%	7 23.3%
	Legal and regulatory problems	Count % within Country of Origin	1 9.1%	3 27.3%	0 0.0%	4 13.3%
	Water resources mngmnt policies	Count % within Country of Origin	0 0.0%	2 18.2%	4 50.0%	6 20.0%
	Water contamination	Count % within Country of Origin	0 0.0%	3 27.3%	1 12.5%	4 13.3%
Total		Count %within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 9

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.830 ^a	8	0.032
Likelihood Ratio	19.599	8	0.012
N of Valid Cases	30		

a. 15 cells (100.0%) have expected count less than 5. The minimum expected count is 1.07.

Crosstab 10

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q2. Ranked second	None Chosen	Count % within Country of Origin	5 45.5%	2 18.2%	0 0.0%	7 23.3%
	Org mngmnt issues	Count % within Country of Origin	4 36.4%	1 9.1%	1 12.5%	6 20.0%
	Legal and regulatory problems	Count % within Country of Origin	1 9.1%	1 9.1%	7 87.5%	9 30.0%
	Technical problems	Count % within Country of Origin	1 9.1%	2 18.2%	0 0.0%	3 10.0%
	Lack of info, data, knowledge, expertise	Count % within Country of Origin	0 0.0%	1 9.1%	0 0.0%	1 3.3%
	Water contamination	Count % within Country of Origin	0 0.0%	2 18.2%	0 0.0%	2 6.7%
	Ecological problems	Count % within Country of Origin	0 0.0%	2 18.2%	0 0.0%	2 6.7%
Total		Count %within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 10

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.856 ^a	12	0.004
Likelihood Ratio	30.380	12	0.002
N of Valid Cases	30		

a. 21 cells (100.0%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 11

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q2. Ranked third	None Chosen	Count % within Country of Origin	1 9.1%	3 27.3%	3 37.5%	7 23.3%
	Org mngmnt issues	Count % within Country of Origin	3 27.3%	1 9.1%	1 12.5%	5 16.7%
	Legal and regulatory problems	Count % within Country of Origin	6 54.5%	2 18.2%	0 0.0%	8 26.7%
	Technical problems	Count % within Country of Origin	1 9.1%	2 18.2%	0 0.0%	3 10.0%
	Water resource mngmnt policies	Count % within Country of Origin	0 0.0%	1 9.1%	0 0.0%	1 3.3%
	Water contamination	Count % within Country of Origin	0 0.0%	1 9.1%	0 0.0%	1 3.3%
	Ecological problems	Count % within Country of Origin	0 0.0%	1 9.1%	4 50.0%	5 16.7%
Total		Count %within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 11

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.104 ^a	12	0.049
Likelihood Ratio	23.911	12	0.021
N of Valid Cases	30		

a. 21 cells (100.0%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 12

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q2. Ranked fourth	None Chosen	Count % within Country of Origin	8 72.7%	4 36.4%	0 0.0%	12 40.0%
	Org mngmnt issues	Count % within Country of Origin	1 9.1%	0 0.0%	6 75.0%	7 23.3%
	Legal and regulatory problems	Count % within Country of Origin	1 9.1%	1 9.1%	0 0.0%	2 6.7%
	Technical problems	Count % within Country of Origin	1 9.1%	1 9.1%	2 25.0%	4 13.3%
	Water resource mngmnt policies	Count % within Country of Origin	0 0.0%	1 9.1%	0 0.0%	1 3.3%
	Lack of info, data, knowledge, expertise	Count % within Country of Origin	0 0.0%	3 27.3%	0 0.0%	3 10.0%
	Ecological problems	Count % within Country of Origin	0 0.0%	1 9.1%	0 0.0%	1 3.3%
Total		Count %within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 12

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	29.334 ^a	12	0.004
Likelihood Ratio	33.185	12	0.001
N of Valid Cases	30		

a. 21 cells (100.0%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 13

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q2. Ranked fifth	None Chosen	Count % within Country of Origin	3 27.3%	1 9.1%	0 0.0%	4 13.4%
	Org mngmnt issues	Count % within Country of Origin	2 18.2%	4 36.4%	3 37.5%	9 30.0%
	Legal and regulatory problems	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
	Technical problems	Count % within Country of Origin	2 18.2%	2 18.2%	1 12.5%	5 16.7%
	Water resource mngmnt policies	Count % within Country of Origin	2 18.2%	3 27.3%	3 37.5%	8 26.7%
	Lack of info, data, knowledge, expertise	Count % within Country of Origin	1 9.1%	1 9.1%	1 12.5%	3 10.0%
Total		Count %within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 13

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.188 ^a	10	0.799
Likelihood Ratio	7.243	10	0.702
N of Valid Cases	30		

a. 18 cells (100.0%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 14

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q2. Ranked sixth	None Chosen	Count % within Country of Origin	1 9.1%	1 9.1%	1 12.5%	3 10.0%
	Org mngmnt issues	Count % within Country of Origin	2 18.2%	4 36.4%	1 12.5%	7 23.3%
	Legal and regulatory problems	Count % within Country of Origin	2 18.2%	3 27.3%	0 0.0%	5 16.7%
	Technical problems	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
	Water resource mngmnt policies	Count % within Country of Origin	3 27.3%	0 0.0%	0 0.0%	3 10.0%
	Lack of info, data, knowledge, expertise	Count % within Country of Origin	2 18.2%	3 27.3%	4 50.0%	9 30.0%
	Water contamination	Count % within Country of Origin	0 0.0%	0 0.0%	2 25.0%	2 6.7%
Total		Count %within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 14

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.502 ^a	12	0.132
Likelihood Ratio	19.496	12	0.077
N of Valid Cases	30		

a. 21 cells (100.0%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 15

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q2. Ranked seventh	None Chosen	Count % within Country of Origin	4 36.4%	3 27.3%	0 0.0%	7 23.3%
	Org mngmnt issues	Count % within Country of Origin	2 18.2%	1 9.1%	1 12.5%	4 13.3%
	Legal and regulatory problems	Count % within Country of Origin	1 9.1%	2 18.2%	0 0.0%	3 10.0%
	Technical problems	Count % within Country of Origin	1 9.1%	2 18.2%	4 50.0%	7 23.3%
	Water resource mngmnt policies	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
	Lack of info, data, knowledge, expertise	Count % within Country of Origin	1 9.1%	0 0.0%	1 12.5%	2 6.7%
	Water contamination	Count % within Country of Origin	1 9.1%	2 18.2%	2 25.0%	5 16.7%
	Ecological problems	Count % within Country of Origin	0 0.0%	1 9.1%	0 0.0%	1 3.3%
	Total	Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 15

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.572 ^a	14	0.482
Likelihood Ratio	16.894	14	0.262
N of Valid Cases	30		

a. 24 cells (100.0%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 16

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q2. Ranked eighth	None Chosen	Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 16

	Value
Pearson Chi-Square	. ^a
N of Valid Cases	30

a. No statistics are computed because Q2. Ranked eighth is a constant.

Crosstab 17

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q3. Has your country and-or other non-governmental organization made efforts to fix the problem?	Yes	Count % within Country of Origin	4 36.4%	0 0.0%	1 12.5%	5 16.7%
	No	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	Other countries or orgs are handling these	Count % within Country of Origin	2 18.2%	3 27.3%	4 50.0%	9 30.0%
	Yes and "0"th countries are handling these issues	Count % within Country of Origin	5 45.5%	8 72.7%	3 37.5%	16 53.3%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 17

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.363 ^a	9	0.599
Likelihood Ratio	8.428	9	0.492
N of Valid Cases	30		

a. 14 cells (87.5%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 18

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q4. Do you think other counties in the Kura-Araks basin have similar water resource and-or management related problems	Yes	Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%
	No	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	I have no opinion	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 18

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.000 ^a	6	1.000
Likelihood Ratio	0.000	6	1.000
N of Valid Cases	30		

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 19

			Country of Origin		Total
			Azerbaijan	Georgia	
Q5AR Organizational management related issues	0	Count % within Country of Origin	1 9.1%	5 62.5%	6 31.6%
	1	Count % within Country of Origin	9 81.8%	3 37.5%	12 63.2%
	4	Count % within Country of Origin	1 9.1%	0 0.0%	1 5.3%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 19

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.351 ^a	2	0.042
Likelihood Ratio	6.961	2	0.031
N of Valid Cases	19		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 0.42.

Crosstab 20

			Country of Origin		Total
			Azerbaijan	Georgia	
Q5AR Legal and regulatory problems	0	Count % within Country of Origin	4 36.4%	4 50.0%	8 42.1%
	1	Count % within Country of Origin	6 54.5%	4 50.0%	10 52.6%
	4	Count % within Country of Origin	1 9.1%	0 0.0%	1 5.3%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 20

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.950 ^a	2	0.622
Likelihood Ratio	1.313	2	0.519
N of Valid Cases	19		

a. 5 cells (83.3%) have expected count less than 5. The minimum expected count is 0.42.

Crosstab 21

			Country of Origin		Total
			Azerbaijan	Georgia	
Q5AR Technical problems	0	Count % within Country of Origin	0 0.0%	1 12.5%	1 5.3%
	1	Count % within Country of Origin	10 90.9%	7 87.5%	17 89.5%
	4	Count % within Country of Origin	1 9.1%	0 0.0%	1 5.3%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 21

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.108 ^a	2	0.348
Likelihood Ratio	2.829	2	0.243
N of Valid Cases	19		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 0.42.

Crosstab 22

			Country of Origin		Total
			Azerbaijan	Georgia	
Q5AR Water resources management policies	0	Count % within Country of Origin	0 0.0%	1 12.5%	1 5.3%
	1	Count % within Country of Origin	10 90.9%	7 87.5%	17 89.5%
	4	Count % within Country of Origin	1 9.1%	0 0.0%	1 5.3%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 22

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.108 ^a	2	0.348
Likelihood Ratio	2.829	2	0.243
N of Valid Cases	19		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 0.42.

Crosstab 23

			Country of Origin		Total
			Azerbaijan	Georgia	
Q5AR Lack of information, data, knowledge and expertise	0	Count % within Country of Origin	10 90.9%	8 100.0%	18 94.7%
	4	Count % within Country of Origin	1 9.1%	0 0.0%	1 5.3%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 23

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	0.768 ^a	1	0.381		
Continuity Correction ^a	0.000	1	1.000		
Likelihood Ratio	1.133	1	0.287		
Fisher's Exact Test				1.000	0.579
N of Valid Cases	19				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 0.42.

Crosstab 24

			Country of Origin		Total
			Azerbaijan	Georgia	
Q5AR Water contamination	0	Count % within Country of Origin	4 36.4%	3 37.5%	7 36.8%
	1	Count % within Country of Origin	6 54.5%	5 62.5%	11 57.9%
	4	Count % within Country of Origin	1 9.1%	0 0.0%	1 5.3%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 24

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.780 ^a	2	0.677
Likelihood Ratio	1.145	2	0.564
N of Valid Cases	19		

a. 5 cells (83.3%) have expected count less than 5. The minimum expected count is 0.42.

Crosstab 25

			Country of Origin		Total
			Azerbaijan	Georgia	
Q5AR Ecological problems	1	Count % within Country of Origin	10 90.9%	8 100.0%	18 94.7%
	4	Count % within Country of Origin	1 9.1%	0 0.0%	1 5.3%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 25

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	0.768 ^a	1	0.381		
Continuity Correction ^a	0.000	1	1.000		
Likelihood Ratio	1.133	1	0.287		
Fisher's Exact Test				1.000	0.579
N of Valid Cases	19				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 0.42.

Crosstab 26

			Country of Origin		Total
			Azerbaijan	Georgia	
Q5AR There is no problem	0	Count % within Country of Origin	10 90.9%	8 100.0%	18 94.7%
	4	Count % within Country of Origin	1 9.1%	0 0.0%	1 5.3%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 26

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	0.768 ^a	1	0.381		
Continuity Correction ^a	0.000	1	1.000		
Likelihood Ratio	1.133	1	0.287		
Fisher's Exact Test				1.000	0.579
N of Valid Cases	19				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 0.42.

Crosstab 27

			Country of Origin		Total
			Armenia	Azerbaijan	
Q5AZ Organizational management related issues	0	Count % within Country of Origin	1 9.1%	0 0.0%	1 4.5%
	1	Count % within Country of Origin	10 90.9%	10 90.9%	20 90.9%
	4	Count % within Country of Origin	0 0.0%	1 9.1%	1 4.5%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	22 100.0%

Chi-Square Tests 27

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.000 ^a	2	0.368
Likelihood Ratio	2.773	2	0.250
N of Valid Cases	22		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 0.50.

Crosstab 28

			Country of Origin		Total
			Armenia	Azerbaijan	
Q5AZ Legal and regulatory problems	0	Count % within Country of Origin	11 100.0%	10 90.9%	21 95.5%
	4	Count % within Country of Origin	0 0.0%	1 9.1%	1 4.5%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	22 100.0%

Chi-Square Tests 28

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.048 ^b	1	0.306	1.000	0.500
Continuity Correction ^a	0.000	1	1.000		
Likelihood Ratio	1.434	1	0.231		
Fisher's Exact Test					
N of Valid Cases	22				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 0.50.

Crosstab 29

			Country of Origin		Total
			Armenia	Azerbaijan	
Q5AZ Technical problems	0	Count % within Country of Origin	1 9.1%	0 0.0%	1 4.5%
	1	Count % within Country of Origin	10 90.9%	10 90.9%	20 90.9%
	4	Count % within Country of Origin	0 0.0%	1 9.1%	1 4.5%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	22 100.0%

Chi-Square Tests 29

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.000 ^a	2	0.368
Likelihood Ratio	2.773	2	0.250
N of Valid Cases	22		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 0.50.

Crosstab 30

			Country of Origin		Total
			Armenia	Azerbaijan	
Q5AZ Water resources management policies	1	Count % within Country of Origin	11 100.0%	10 90.9%	21 95.5%
	4	Count % within Country of Origin	0 0.0%	1 9.1%	1 4.5%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	22 100.0%

Chi-Square Tests 30

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.048 ^b	1	0.306		
Continuity Correction ^a	0.000	1	1.000		
Likelihood Ratio	1.434	1	0.231		
Fisher's Exact Test				1.000	0.500
N of Valid Cases	22				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected countless than 5. The minimum expected count is 0.50.

Crosstab 31

			Country of Origin		Total
			Armenia	Azerbaijan	
Q5AZ Lack of information, data, knowledge and expertise	1	Count % within Country of Origin	11 100.0%	10 90.9%	21 95.5%
	4	Count % within Country of Origin	0 0.0%	1 9.1%	1 4.5%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	22 100.0%

Chi-Square Tests 31

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.048 ^b	1	0.306		
Continuity Correction ^a	0.000	1	1.000		
Likelihood Ratio	1.434	1	0.231		
Fisher's Exact Test				1.000	0.500
N of Valid Cases	22				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected countless than 5. The minimum expected count is 0.50.

Crosstab 32

			Country of Origin		Total
			Armenia	Azerbaijan	
Q5AZ Water contamination	1	Count % within Country of Origin	11 100.0%	10 90.9%	21 95.5%
	4	Count % within Country of Origin	0 0.0%	1 9.1%	1 4.5%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	22 100.0%

Chi-Square Tests 32

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.048 ^b	1	0.306	1.000	0.500
Continuity Correction ^a	0.000	1	1.000		
Likelihood Ratio	1.434	1	0.231		
Fisher's Exact Test					
N of Valid Cases	22				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 0.50.

Crosstab 33

			Country of Origin		Total
			Armenia	Azerbaijan	
Q5AZ Ecological problems	1	Count % within Country of Origin	11 100.0%	10 90.9%	21 95.5%
	4	Count % within Country of Origin	0 0.0%	1 9.1%	1 4.5%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	22 100.0%

Chi-Square Tests 33

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.048 ^b	1	0.306	1.000	0.500
Continuity Correction ^a	0.000	1	1.000		
Likelihood Ratio	1.434	1	0.231		
Fisher's Exact Test					
N of Valid Cases	22				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 0.50.

Crosstab 34

			Country of Origin		Total
			Armenia	Azerbaijan	
Q5AZ There is no problem	0	Count % within Country of Origin	11 100.0%	10 90.9%	21 95.5%
	4	Count % within Country of Origin	0 0.0%	1 9.1%	1 4.5%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	22 100.0%

Chi-Square Tests 34

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.048 ^b	1	0.306	1.000	0.500
Continuity Correction ^a	0.000	1	1.000		
Likelihood Ratio	1.434	1	0.231		
Fisher's Exact Test					
N of Valid Cases	22				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 0.50.

Crosstab 35

			Country of Origin		Total
			Armenia	Georgia	
Q5GE	1	Count			
Organizational		% within Country of Origin			
management					
related issues			11	8	19
			100.0%	90.9%	95.5%
Total		Count			
		% within Country of Origin			
			11	8	19
			100.0%	100.0%	100.0%

Chi-Square Tests 35

	Value
Pearson Chi-Square	. ^a
N of Valid Cases	19

a. No statistics are computed because *Q5GE Organizational management related issues* is a constant.

Crosstab 36

			Country of Origin		Total
			Armenia	Georgia	
Q5GE Legal	1	Count			
and regulatory		% within Country of Origin			
problems			11	8	19
			100.0%	90.9%	95.5%
Total		Count			
		% within Country of Origin			
			11	8	19
			100.0%	100.0%	100.0%

Chi-Square Tests 36

	Value
Pearson Chi-Square	. ^a
N of Valid Cases	19

a. No statistics are computed because *Q5GE Legal and regulatory problems* is a constant.

Crosstab 37

			Country of Origin		Total
			Armenia	Azerbaijan	
Q5GE Technical problems	0	Count % within Country of Origin	1 9.1%	0 0.0%	1 5.3%
	1	Count % within Country of Origin	10 90.9%	8 100.0%	18 94.7%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 37

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	0.768 ^a	1	0.381		
Continuity Correction ^a	0.000	1	1.000		
Likelihood Ratio	1.133	1	0.287		
Fisher's Exact Test				1.000	0.579
N of Valid Cases	19				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 0.42.

Crosstab 38

			Country of Origin		Total
			Armenia	Georgia	
Q5GE Water resources management policies	1	Count % within Country of Origin	11 100.0%	8 90.9%	19 95.5%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 38

	Value
Pearson Chi-Square	. ^a
N of Valid Cases	19

a. No statistics are computed *because Q5GE Water recourse management policies* is a constant.

Crosstab 39

			Country of Origin		Total
			Armenia	Georgia	
Q5GE Lack of information, data, knowledge and expertise	1	Count % within Country of Origin	11 100.0%	8 90.9%	19 95.5%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 39

	Value
Pearson Chi-Square	. ^a
N of Valid Cases	19

a. No statistics are computed *because Q5GE Lack of information, data, knowledge and expertise* is a constant.

Crosstab 40

			Country of Origin		Total
			Armenia	Georgia	
Q5GE Water contamination	1	Count % within Country of Origin	11 100.0%	8 90.9%	19 95.5%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 40

	Value
Pearson Chi-Square	. ^a
N of Valid Cases	19

a. No statistics are computed *because Q5GE Water contamination* is a constant.

Crosstab 41

			Country of Origin		Total
			Armenia	Georgia	
Q5GE Ecological problems	1	Count % within Country of Origin	11 100.0%	8 90.9%	19 95.5%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 41

	Value
Pearson Chi-Square	. ^a
N of Valid Cases	19

a. No statistics are computed *because Q5GE Ecological problems* is a constant.

Crosstab 42

			Country of Origin		Total
			Armenia	Georgia	
Q5GE There is no problem	0	Count % within Country of Origin	11 100.0%	8 90.9%	19 95.5%
Total		Count % within Country of Origin	11 100.0%	8 100.0%	19 100.0%

Chi-Square Tests 42

	Value
Pearson Chi-Square	. ^a
N of Valid Cases	19

a. No statistics are computed *because Q5GE There is no problem* is a constant.

Crosstab 43

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q6. Do you think basin problems in other riparian countries are going to affect the Kura-Araks Basin in your country?	Yes	Count % within Country of Origin	7 63.6%	11 100.0%	7 100.0%	25 86.2%
	No	Count % within Country of Origin	4 36.4%	0 0.0%	0 0.0%	4 13.8%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	7 100.0%	29 100.0%

Chi-Square Tests 43

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.593 ^a	2	0.022
Likelihood Ratio	8.848	2	0.012
N of Valid Cases	29		

a. 3 cells (50%) have expected count less than 5. The minimum expected count is 0.97.

Crosstab 44

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q7. How do you think this effect would be?	Negative	Count % within Country of Origin	1 33.3%	11 100.0%	4 57.1%	16 76.2%
	Positive	Count % within Country of Origin	1 33.3%	0 0.0%	0 0.0%	1 4.8%
	No effect at all	Count % within Country of Origin	1 33.3%	0 0.0%	3 42.9%	4 19.0%
	Total	Count % within Country of Origin	3 100.0%	11 100.0%	7 100.0%	21 100.0%

Chi-Square Tests 44

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.375 ^a	4	0.015
Likelihood Ratio	11.904	4	0.018
N of Valid Cases	21		

a. 7 cells (77.8%) have expected count less than 5. The minimum expected count is 0.14.

Crosstab 45

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q9. What do you think about the involvement of the international and inter-governmental organizations in the South Caucasus?	0	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
	Constructive	Count % within Country of Origin	1 9.1%	1 9.1%	1 12.5%	3 10.0%
	Distractive	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	Helpful	Count % within Country of Origin	1 9.1%	1 9.1%	1 12.5%	3 10.0%
	Not helpful at all	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	Leading	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	Confusing	Count % within Country of Origin	0 0.0%	1 9.1%	1 12.5%	2 6.7%
	Constructive and Helpful	Count % within Country of Origin	4 36.4%	2 18.2%	3 37.5%	9 30.0%
	Helpful and Confusing	Count % within Country of Origin	4 36.4%	6 54.5%	2 25.0%	12 40.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 45

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.981 ^a	24	1.000
Likelihood Ratio	5.968	24	1.000
N of Valid Cases	30		

a. 36 cells (100.0%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 46

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q10. Do you think your country has ENOUGH information about the Kura-Araks Basin in other countries?	Yes	Count % within Country of Origin	3 27.3%	1 9.1%	0 0.0%	4 13.3%
	No	Count % within Country of Origin	7 63.6%	7 63.6%	7 87.5%	21 70.0%
	Other	Count % within Country of Origin	1 9.1%	0 0.0%	1 12.5%	2 6.7%
	No and Other	Count % within Country of Origin	0 0.0%	3 27.3%	0 0.0%	3 10.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 46

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.716 ^a	6	0.137
Likelihood Ratio	11.880	6	0.065
N of Valid Cases	30		

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is 0.53.

Crosstab 47

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q12. Do you think it is important to obtain information about the Kura-Araks Basin in other countries?	Yes	Count % within Country of Origin	10 90.9%	11 100.0%	8 10.0%	29 96.7%
	No	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
	I not sure	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 47

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.787 ^a	6	0.938
Likelihood Ratio	2.067	6	0.913
N of Valid Cases	30		

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 48

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q14. Do you think other countries have enough information-data about the Kura-Araks Basin in your country?	Yes	Count % within Country of Origin	2 18.2%	1 9.1%	0 0.0%	3 10.0%
	No	Count % within Country of Origin	5 45.5%	5 45.5%	7 87.5%	17 56.7%
	I am not sure	Count % within Country of Origin	3 27.3%	0 0.0%	1 12.5%	4 13.3%
	Other	Count % within Country of Origin	1 9.1%	5 45.5%	0 0.0%	6 20.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 48

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.268 ^a	6	0.056
Likelihood Ratio	14.671	6	0.023
N of Valid Cases	30		

a. 10 cells (83.3%) have expected count less than 5. The minimum expected count is 0.80.

Crosstab 49

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q15. Do you think it is important for other countries to obtain information about the Kura-Araks Basin in your country?	Yes	Count % within Country of Origin	10 90.9%	11 100.0%	8 100.0%	29 96.7%
	No	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
	Other	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 49

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.787 ^a	6	0.938
Likelihood Ratio	2.067	6	0.913
N of Valid Cases	30		

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 50

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q16. How do you think that Kura-Araks Basin should be managed geographically?	a. As one basin in three countries	Count % within Country of Origin	2 18.2%	0 0.0%	1 12.5%	3 10.0%
	b. Separate basins, subbasins in each country	Count % within Country of Origin	1 9.1%	1 9.1%	0 0.0%	2 6.7%
	c. Subbasins in each country with coop	Count % within Country of Origin	7 63.6%	8 72.7%	6 75.0%	21 70.0%
	Other	Count % within Country of Origin	1 9.1%	1 9.1%	0 0.0%	2 6.7%
	a and c	Count % within Country of Origin	0 0.0%	1 9.1%	1 12.5%	2 6.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 50

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.683 ^a	8	0.791
Likelihood Ratio	7.302	8	0.504
N of Valid Cases	30		

a. 12 cells (80.0%) have expected count less than 5. The minimum expected count is 0.53.

Crosstab 51

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q17. How do you think that the Kura-Araks Basin should be managed geopolitically?	a. An inti agreement signed by Ar, Az, and Ge	Count % within Country of Origin	4 36.4%	0 0.0%	2 25.0%	6 20.0%
	b. Manage separately but within same Eur Union Standards	Count % within Country of Origin	6 54.5%	6 54.5%	3 37.5%	15 50.0%
	c. Manage separately but within UN 1997 Conv	Count % within Country of Origin	0 0.0%	0 0.0%	1 12.5%	1 3.3%
	d. Manage separately but with same water res	Count % within Country of Origin	0 0.0%	4 36.4%	0 0.0%	4 13.3%
	e. Shared vision and an initiation agrmnt among	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	f. Other	Count % within Country of Origin	0 0.0%	0 0.0%	2 25.0%	2 6.7%
	b and d	Count % within Country of Origin	0 0.0%	1 9.1%	0 0.0%	1 3.3%
	a, d and e	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
Total			11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 51

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.727 ^a	21	0.356
Likelihood Ratio	26.008	21	0.206
N of Valid Cases	30		

a. 30 cells (93.8%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 52

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q18. Do you think Armenia, Azerbaijan, and Georgia are ready to cooperate regarding their transboundary water management?	Yes	Count % within Country of Origin	3 27.3%	0 0.0%	4 50.0%	7 23.3%
	No	Count % within Country of Origin	4 36.4%	5 45.5%	3 37.5%	12 40.0%
	I am not sure	Count % within Country of Origin	3 27.3%	1 9.1%	0 0.0%	4 13.3%
	Other	Count % within Country of Origin	1 9.1%	5 45.5%	1 12.5%	7 23.3%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 52

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.692 ^a	6	0.069
Likelihood Ratio	14.224	6	0.027
N of Valid Cases	30		

a. 12 cells (100.0%) have expected count less than 5. The minimum expected count is 1.07.

Crosstab 53

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q20. Do you think that is important to manage the Kura-Araks Basin in Ar, Az and Ge with the same water res mgmt criteria in all 3 countries?	Yes	Count % within Country of Origin	9 81.8%	9 81.8%	8 10.0%	26 86.7%
	No	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	I am not sure	Count % within Country of Origin	2 18.2%	0 0.0%	0 0.0%	2 6.7%
	Other	Count % within Country of Origin	0 0.0%	2 18.2%	0 0.0%	2 6.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 53

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.133 ^a	9	0.623
Likelihood Ratio	8.244	9	0.510
N of Valid Cases	30		

a. 13 cells (81.3%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 54

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q21. Do you think the other two countries are ready to cooperate with your country regarding transboundary water management?	Yes	Count % within Country of Origin	2 18.2%	2 18.2%	5 62.5%	9 30.0%
	No	Count % within Country of Origin	3 27.3%	5 45.5%	3 37.5%	11 36.7%
	I am not sure	Count % within Country of Origin	5 45.5%	0 0.0%	0 0.0%	5 16.7%
	Other	Count % within Country of Origin	1 9.1%	4 36.4%	0 0.0%	5 16.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 54

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.248 ^a	6	0.008
Likelihood Ratio	18.903	6	0.004
N of Valid Cases	30		

a. 12 cells (100.0%) have expected count less than 5. The minimum expected count is 1.33.

Crosstab 55

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q22. Assuming a coop agreement among the three countries which option is most suitable for management?	a. One HQ with divs by ctry with experts from each ctry	Count % within Country of Origin	6 54.5%	6 54.5%	7 87.5%	19 63.3%
	b. Divs in each country and coord mtgs bet stake holders	Count % within Country of Origin	3 27.3%	3 27.3%	0 0.0%	6 20.0%
	c. Experts from the 3 con trs can't work under	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
	Other	Count % within Country of Origin	1 9.1%	2 18.2%	0 0.0%	3 10.0%
	a and d	Count % within Country of Origin	0 0.0%	0 0.0%	1 12.5%	1 3.3%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 55

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.211 ^a	8	0.325
Likelihood Ratio	11.513	8	0.174
N of Valid Cases	30		

a. 12 cells (80.0%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 56

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q23. Do you think that it is important to manage the Kura-Araks Basin in Ar, Az and Ge with the same water res mgmt criteria in all 3 countries?	Yes	Count % within Country of Origin	9 81.8%	9 81.8%	8 100.0%	26 86.7%
	No	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	I am not sure	Count % within Country of Origin	2 18.2%	0 0.0%	0 0.0%	2 6.7%
	Other	Count % within Country of Origin	0 0.0%	2 18.2%	0 0.0%	2 6.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 56

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.732 ^a	6	0.943
Likelihood Ratio	1.716	6	0.944
N of Valid Cases	30		

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 57

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q24. If there is an agreement, what do you think the headquarters should be in charge of?	Yes	Count % within Country of Origin	9 81.8%	8 72.7%	8 100.0%	25 83.3%
	No	Count % within Country of Origin	1 9.1%	3 27.3%	0 0.0%	4 13.3%
	Other	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 57

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.964 ^a	4	0.291
Likelihood Ratio	5.943	4	0.203
N of Valid Cases	30		

a. 6 cells (66.7.0%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 58

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q25. If you thought there should be a headquarters, where should be located?	Georgia	Count % within Country of Origin	4 44.4%	7 63.6%	7 87.5%	18 64.3%
	Other neutral country	Count % within Country of Origin	2 22.2%	0 0.0%	1 12.5%	3 10.7%
	6	Count % within Country of Origin	3 33.3%	0 0.0%	0 0.0%	3 10.7%
	Georgia and Turkey	Count % within Country of Origin	0 0.0%	4 36.4%	0 0.0%	4 14.3%
Total		Count % within Country of Origin	9 100.0%	11 100.0%	8 100.0%	28 100.0%

Chi-Square Tests 58

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.052 ^a	6	0.013
Likelihood Ratio	18.732	6	0.005
N of Valid Cases	28		

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is 0.86.

Crosstab 59

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q26. Are you familiar with projects funded by intl and non-governmental orgs?	Yes	Count % within Country of Origin	5 45.5%	6 54.5%	4 50.0%	15 50.0%
	No	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	Some of them	Count % within Country of Origin	6 54.5%	5 45.5%	4 50.0%	15 50.0%
	I have no idea	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 59

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.182 ^a	9	1.000
Likelihood Ratio	0.182	9	1.000
N of Valid Cases	30		

a. 12 cells (75.0%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 60

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q27. Are you familiar with projects funded by intl and non-governmental orgs?	Yes	Count % within Country of Origin	5 45.5%	6 54.5%	4 50.0%	15 50.0%
	No	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	Some of them	Count % within Country of Origin	6 54.5%	5 45.5%	4 50.0%	15 50.0%
	I have no idea	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 60

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.218 ^a	9	1.000
Likelihood Ratio	0.217	9	1.000
N of Valid Cases	30		

a. 14 cells (87.50%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 61

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q28. Do you think that some of these projects are overlapping and-or conflicting with each other?	Yes	Count % within Country of Origin	2 18.2%	9 81.8%	5 62.5%	16 53.3%
	No	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
	Some of them	Count % within Country of Origin	7 63.6%	2 18.2%	3 37.5%	12 40.0%
	I have no idea	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 61

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.661 ^a	6	0.099
Likelihood Ratio	11.957	6	0.063
N of Valid Cases	30		

a. 10 cells (83.30%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 62

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q29. Do you think there is coordination among these projects?	Yes	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
	No	Count % within Country of Origin	4 36.4%	8 72.7%	7 87.5%	19 63.3%
	Some of them	Count % within Country of Origin	5 45.5%	2 18.2%	1 12.5%	8 26.7%
	I have no idea	Count % within Country of Origin	1 9.1%	1 9.1%	0 0.0%	2 6.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 62

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.9642 ^a	6	0.324
Likelihood Ratio	7.832	6	0.251
N of Valid Cases	30		

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 63

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q31. Do you think these projects should be combined and managed in an integrated and sustainable manner under the same roof by the 3 countries?	Yes	Count % within Country of Origin	9 81.8%	6 54.5%	5 62.5%	20 66.7%
	No	Count % within Country of Origin	0 0.0%	3 27.3%	0 0.0%	3 10.0%
	Some of them	Count % within Country of Origin	2 18.2%	2 18.2%	3 12.5%	7 23.3%
	I have no idea	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 63

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.762 ^a	9	0.662
Likelihood Ratio	7.504	9	0.585
N of Valid Cases	30		

a. 13 cells (81.3%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 64

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q31. Do you think these projects should be combined and managed in an integrated and sustainable manner under the same roof by the 3 countries?	Yes	Count % within Country of Origin	9 81.8%	6 54.5%	5 62.5%	20 66.7%
	No	Count % within Country of Origin	0 0.0%	3 27.3%	0 0.0%	3 10.0%
	Some of them	Count % within Country of Origin	2 18.2%	2 18.2%	3 37.5%	7 23.3%
	I have no idea	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 64

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.182 ^a	9	1.000
Likelihood Ratio	0.182	9	1.000
N of Valid Cases	30		

a. 12 cells (75.0%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 65

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q33. Do you think these organizations have been cooperative with your country?	Yes	Count % within Country of Origin	3 27.3%	3 27.3%	2 25.0%	8 26.7%
	No	Count % within Country of Origin	2 18.2%	4 36.4%	2 25.5%	8 26.7%
	Some of them	Count % within Country of Origin	6 54.5%	4 36.4%	2 25.0%	12 40.0%
	I have no idea	Count % within Country of Origin	0 0.0%	0 0.0%	2 25.0%	2 6.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 65

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.273 ^a	6	0.296
Likelihood Ratio	7.069	6	0.315
N of Valid Cases	30		

a. 12 cells (100.0%) have expected count less than 5. The minimum expected count is 0.53.

Crosstab 66

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q34. Do you think there is coordination between these organizations?	Yes	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	No	Count % within Country of Origin	1 9.1%	7 63.6%	3 37.5%	11 36.7%
	Some of them	Count % within Country of Origin	9 81.8%	4 36.4%	4 50.0%	17 56.7%
	I have no idea	Count % within Country of Origin	1 9.1%	0 0.0%	1 12.5%	2 6.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 66

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.794 ^a	9	0.555
Likelihood Ratio	9.003	9	0.437
N of Valid Cases	30		

a. 14 cells (87.5%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 67

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q35. Do you think there is coordination among the ongoing projects?	Yes	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	No	Count % within Country of Origin	7 63.6%	8 72.7%	7 100.0%	22 75.9%
	Some of them	Count % within Country of Origin	2 18.2%	3 27.3%	0 0.0%	5 17.2%
	I have no idea	Count % within Country of Origin	2 18.2%	0 0.0%	0 0.0%	2 6.9%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	7 100.0%	29 100.0%

Chi-Square Tests 67

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.896 ^a	9	0.750
Likelihood Ratio	7.574	9	0.578
N of Valid Cases	29		

a. 13 cells (81.3%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 68

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q36. We you or your organization involved with these projects in any stage?	Yes	Count % within Country of Origin	6 54.5%	10 90.9%	7 87.5%	23 76.7%
	No	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	Some of them	Count % within Country of Origin	5 45.5%	1 9.1%	1 12.5%	7 23.3%
	I have no idea	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 68

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.781 ^a	9	0.853
Likelihood Ratio	4.708	9	0.859
N of Valid Cases	30		

a. 13 cells (81.3%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 69

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q37. If you answered yes, was the involvement satisfactory to you?	Yes	Count % within Country of Origin	2 20.0%	3 27.3%	4 50.0%	9 31.0%
	No	Count % within Country of Origin	8 80.0%	8 72.7%	4 50.0%	20 69.0%
Total		Count % within Country of Origin	10 100.0%	11 100.0%	8 100.0%	29 100.0%

Chi-Square Tests 69

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.986 ^a	2	0.370
Likelihood Ratio	1.934	2	0.380
N of Valid Cases	29		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.48.

Crosstab 70

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q38. Do you think that the other countries were more involved in the projects compared to your country?	Yes	Count % within Country of Origin	1 9.1%	2 18.2%	0 0.0%	3 10.0%
	No	Count % within Country of Origin	10 90.9%	2 18.2%	7 87.5%	19 63.3%
	Other	Count % within Country of Origin	0 0.0%	7 63.6%	1 12.5%	8 26.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 70

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.318 ^a	4	0.003
Likelihood Ratio	19.624	4	0.001
N of Valid Cases	30		

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is 0.80.

Crosstab 71

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q39. Are there any topic or initiatives that Armenia, Azerbaijan and Georgia can work together on other than water issues?	Yes	Count % within Country of Origin	9 81.8%	9 81.8%	8 100.0%	26 86.7%
	No	Count % within Country of Origin	1 9.1%	2 18.2%	0 0.0%	3 10.0%
	Maybe	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 71

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.497 ^a	4	0.478
Likelihood Ratio	4.424	4	0.352
N of Valid Cases	30		

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 72

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q40. Do you think cooperation among Ar, Az and Ge could bring the countries together and support eff and fruitful comm. Among them?	Yes	Count % within Country of Origin	9 81.8%	11 100.0%	8 100.0%	28 93.3%
	No	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
	Maybe	Count % within Country of Origin	1 9.1%	0 0.0%	0 0.0%	1 3.3%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 72

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.701 ^a	4	0.448
Likelihood Ratio	4.265	4	0.371
N of Valid Cases	30		

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is 0.27.

Crosstab 73

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q41. Are you aware of the OSCE and its mission in the South Caucasus?	Yes	Count % within Country of Origin	9 81.8%	10 90.9%	8 100.0%	27 90.0%
	No	Count % within Country of Origin	2 18.2%	1 9.1%	0 0.0%	3 10.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 73

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.717 ^a	2	0.424
Likelihood Ratio	2.372	2	0.305
N of Valid Cases	30		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 0.80.

Crosstab 74

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q42. Do you think that conflict settlement negotiations between Ar, Az and Ge have been helpful?	Yes	Count % within Country of Origin	4 36.4%	2 18.2%	2 25.0%	8 26.7%
	No	Count % within Country of Origin	6 54.5%	7 63.6%	6 75.0%	19 63.3%
	I have no opinion	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	Other	Count % within Country of Origin	1 9.1%	2 18.2%	0 0.0%	3 10.0%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 74

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.545 ^a	9	0.980
Likelihood Ratio	3.195	9	0.956
N of Valid Cases	30		

a. 13 cells (81.3%) have expected count less than 5. The minimum expected count is 0.00.

Crosstab 75

			Country of Origin			Total
			Armenia	Azerbaijan	Georgia	
Q43. Do you think that mediation bet Ar, Az and Ge would be helpful to reach any kind of water res mgmtn related agreement?	Yes	Count % within Country of Origin	9 81.8%	6 54.5%	8 10.0%	23 76.7%
	No	Count % within Country of Origin	0 0.0%	2 18.2%	0 0.0%	2 6.7%
	I have no opinion	Count % within Country of Origin	0 0.0%	0 0.0%	0 0.0%	0 0.0%
	Other	Count % within Country of Origin	2 18.2%	3 27.3%	0 0.0%	5 16.7%
Total		Count % within Country of Origin	11 100.0%	11 100.0%	8 100.0%	30 100.0%

Chi-Square Tests 75

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.854 ^a	9	0.652
Likelihood Ratio	8.653	9	0.470
N of Valid Cases	30		

a. 13 cells (81.3%) have expected count less than 5. The minimum expected count is 0.00.

Appendix V: Fact Findings and Recommendations Chart

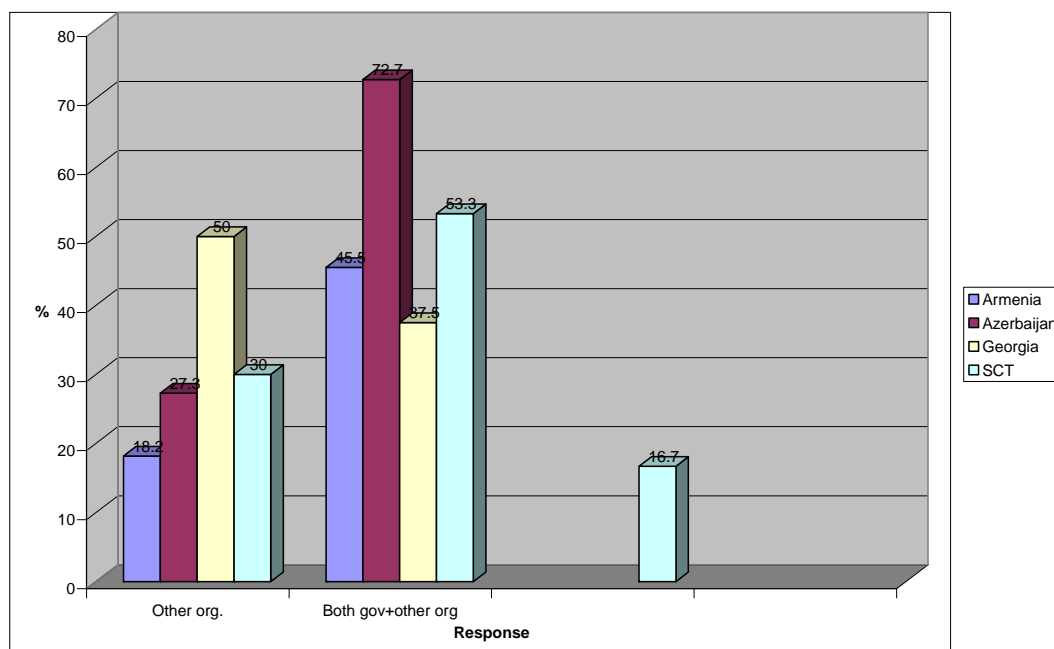
	OBSTACLES	COMMON OBJECTIVES	RECOMMENDATIONS
1	Ongoing disputes (mainly Nagorno-Karabakh issue between Armenia and Azerbaijan) between the countries and the political complications and consequences of these ongoing disputes	The Kura-Araks Basin (KAB) related issues can be considered as technical level rather than political. Each country benefits from technical level projects.	Technical level cooperation rather than governmental level solutions.
2	The governments of Armenia, Azerbaijan and Georgia are not ready to sign an Integrated Water Resources Management (IWRM) agreement for the KAB.	Countries are aware of the importance of managing the KAB as a whole. The experts of the countries were agreeing upon managing the KAB with the same criteria in each country.	No change for an international agreement yet. However bi-lateral agreements, regional cooperation and technical level projects will be considered.
3	Administrative and bureaucratic problems Too many governmental units in charge of water resources management. There are communication and cooperation problems among the governmental units as well as among the countries.	Each country is aware of the problems. They are hoping to solve them but they do not know how.	Third party organization(s) should carry an initiate development of a River Basin Management Plan (RBMP) for the KAB based on the European Union's Water Framework Directive (EU's WFD). Establishment of the KAB Regional River Basin Headquarters Each river basin within a South Caucasus country must be assigned to a River Basin District (RBD) . Each country must arrange to coordinate administrative arrangements for water management in relation to each RBD lying within its territory. RBDs will be in charge of the countries and the headquarters will be in charge of these districts.

	OBSTACLES	COMMON OBJECTIVES	RECOMMENDATIONS
4	Legislative and regulatory problems.	The countries have been working on their legislation and regulations. The countries are willing to join the EU in the future, thus they are already in the process of adjusting their water codes to the EU's WFD.	They need assistance especially from the EU to implement new legislation and regulations.
5	Each country has different basin priorities and needs.	Each country has its own priorities. However they accept that the KAB should be managed as a whole with the same management criteria like the EU-WFD's good water status . Each country will benefit more in the long term if they manage their resources in a sustainable manner.	Develop a KAB River Basin Management System, including a program of measures designed to maintain and/or achieve at least good water status for all waters, and to facilitate the preparations of RBMPs. Each country's RBMP will have its own priority programs. The RBMP and the good water status will be drawn from the EU's WFD.
6	Unreliable data and information	All three countries need accurate and sufficient data and modern data gathering techniques.	Need for help. Donor organizations and international and inter-governmental organizations (IGOs) should develop a project.
7	Lack of trust between the countries	Once they were part of the Soviet Union. Thus they are accustomed to work together. They also think that besides water resources there are other areas to cooperate.	An initiative by IGOs such as World Bank, the EU etc. would help the region come together and build trust among the nations.
8	Lack of expertise (experts, specialists?)	They do not have enough expertise but they have a great potential. Different IGOs have been organizing training.	Capacity building projects will be helpful for the countries to build their own expertise.
9	Lack of funding	They are willing to work with the donor organizations and the IGOs in the region to find funding opportunities for the IWRM projects.	Even though countries do not have enough funding resources, there are many donor IGOs in the region to fund IWRM projects.
10	Lack of technical resources - countries have outdated technical equipment left over from the Soviet Union era.	They all need newer equipment so they can collect parallel and consistent data.	Technical equipment and also training in the use of this equipment by the local experts should be part of the RBMP.

	OBSTACLES	COMMON OBJECTIVES	RECOMMENDATIONS
11	Adjusting to post-Soviet Union era	They were part of the Soviet Union and are accustomed to working together. Russian is still the common language in the region.	Unique experience. Lots of similarities. ADR techniques such as mediation, shuttle diplomacy etc., should be used for an RBMP. Government level mediation has not been effective yet. It is very important to highlight their common objectives rather than their conflicts. This requires a trustworthy third party initiation.
12	Political will	At the governmental level, it is difficult to create political will for any kind of agreement between Azerbaijan and Armenia. Peace negotiations among the countries have been conducted by OSCE. However, there are no results yet. Thus, the experts think that it is best for the region to work on a technical based initiation for the KAB from a donor IGO such as the EU and/or the WB.	There are already good examples of technical cooperation in the region. Important to find a neutral IGO(s) that can play the donor and leader role in this initiation. Once the technical level co-operation works it might be expanded to other areas.
13	Involvement of the IGOs and their ongoing projects.	Too many cooks spoil the soup. Countries want to conduct and coordinate these projects in the initial stages.	The Kura-Araks Basin- River Basin Management Plan (KAB-RBMP) should be implemented. The headquarters communicates with the involved parties and coordinates related projects in the Basin. (See Figure 2)

Appendix VI: Graphical Results of the Interviews

Question 3 Results



Question 4 Results

