

ANNEX C:

Two Case Studies

of

“International” Companies active in

Water Utility Management

within the

Eastern – Central Europe and Central Asia Region

EXECUTIVE SUMMARY

The World Bank and Bank Netherlands Water Partnership conducted 2 case studies of international companies active in the water utility management of the ECA (Eastern/Central Europe and Central Asia) region, as part of a region wide market development study. The purpose is to assess the market opportunities and performance of international and non-traditional entities (non-operators) in the execution of private water utility management contracts.

Case Study No. 1: A Consultant as “defacto” Operator

The case study in Korca, Albania presents ILF Consulting Engineers in a Technical Assistance financed by the KfW – German Development Bank - for the commercialisation of the Utility and replacement of the water supply infrastructure. This example demonstrates the ability of a consultant to independently compete, enter and perform in the water utility management market. Although the contract form was a technical assistance with no formal contractual responsibility as operator, the consultant led a full-scale transformation of a defunct utility into a commercial entity, acting as an operator.

Yet, the project is likely unrepeatable as generous investment amounts (Euro 235 per capita) were spent for a complete water supply system replacement and outfitting of the utility. However, this shows a viable strategy for consultants to gain water utility management experience, for greater market competition in the future.

Case Study No. 2: A Consultant on behalf of an Operator

The case study in Dushanbe, Tajikistan illustrates the experience of MVV Consultants and Engineers in the consortium of MVV Energie and Hydroplan for a service contract financed by the World Bank for the strengthening of the utility and rehabilitation of key infrastructure. While the team leader is an established operator, it chose to engage its subsidiary and another company to implement the project. Indeed, the two consultants combine to execute about 95 % of the project tasks, with the operator called on for trouble shooting or backstopping.

The project presents a successful (to date) mechanism to implement programs in destitute and post-conflict countries. This example also shows how consultants can team with established operators on lower-responsibility type private sector inputs, to gain market experience and position.

Conclusions:

The case studies prove the market development study premise:

- **Yes**, non-traditional entities, beyond operators and utilities, can also perform as water utility managers.

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Table of Contents

1. CASE STUDY METHODOLOGY	1
1.1. Purpose	1
1.2. Criteria	1
1.3. Selection	2
2. CASE STUDY: CONSULTANT FOR UTILITY COMMERCIALISATION	3
2.1. Overview	3
2.2. Case Study Data	3
2.3. Country Setting	4
2.4. Water Sector	5
2.5. Local Setting	5
2.6. Project – Contract Preparation	5
2.7. Procurement	6
2.8. Contract Structure	6
2.9. Contract Implementation and Results	7
2.10. Assets and Investments	9
2.11. Best Practise Milestones	11
2.12. Keys to Success	12
2.13. Lessons Learned	12

3. CASE STUDY: CONSULTANT ON BEHALF OF AN OPERATOR	13
3.1. Overview.....	13
3.2. Case Study Data.....	13
3.3. Country Setting	14
3.4. Water Sector.....	14
3.5. Local Setting.....	15
3.6. Project – Contract Preparation	15
3.7. Procurement	18
3.8. Contract Structure.....	19
3.9. Contract Implementation and Results.....	20
3.10. Assets and Investments.....	22
3.11. Best Practise Milestones	22
3.12. Keys to Success.....	23
3.13. Lessons Learned.....	24
4. CONCLUSIONS	25

1. CASE STUDY METHODOLOGY

1.1. Purpose

The study team conducted two case studies to gain an “in-depth” perspective of international company activities in the ECA (Eastern - Central Europe and Central Asia) water utility management market. The case studies were used to check and calibrate the general findings of the market survey (results of the questionnaire) and also to identify particular “keys to success” for market entry and activity by international companies.

The case studies are a mechanism to address the basic questions of the ECA market study at the company, community, stakeholder and contract level:

To gain onsite Market Insights

- Can non-traditional entities, beyond operators and utilities, also perform as water utility managers?
-

The case studies especially support and promote the overall World Bank and OECD program objectives for the ECA region:

1. to engage the private sector, financing community (donors/ international financing institutions - IFIs) and stakeholders to share experiences on market activities and strategies
2. to discuss ways to maximize the flow of investment capital and technical know-how to the region.

In particular, the case studies offer an opportunity for input from local stakeholders, such as utility owners (municipalities) and public utilities.

1.2. Criteria

To focus on and test the basic premises of the market study, the study team sought out case studies, which characterize the experiences of “non-traditional” water utility managers in the ECA region, according to the basic criteria:

Case Study Criteria	
Project Location	ECA region (Eastern/ Central Europe and Central Asia)
Project Type	Water Utility Management (community water and/or wastewater services) in a Public-Private Partnership model
Project Status	Complete or underway for comprehensive assessment from procurement to implementation
Company	International company/ utility (headquarters outside of the ECA region)
Company Role & Capacities	“Non-Traditional” entity (not a utility or operator) working as water utility manager

1.3. Selection

The study team selected the two case studies upon evaluation and clarification (by telephone interview, correspondence, etc.) of 19 suggestions provided by the respondents to the questionnaire.

Selection of the Two Case Studies		
Project Location	Korca, Albania (Balkans)	Dushanbe, Tajikistan (Central Asia)
Project Type	Technical Assistance	Service - Management Contract
Project Status	(1996 - 2003) Complete	Year 2 of 3 year contract
Company	ILF Consulting Engineers of Germany and Austria	Joint Venture: <ul style="list-style-type: none"> • MVV Consultants and Engineers, Germany • Hydroplan of Germany
Company Role & Capacities	Consulting Engineer implementing a Commercialisation Project of a Public Water Utility for the German Development Bank (Kreditanstalt für Wiederaufbau)	Two Consulting Engineering firms (one a subsidiary firm of an established Operator, MVV Energie) in the role of water utility manager for a World Bank financed project

Each case study offers a unique perspective into the specific market conditions of a particular ECA country or region, according to the approach taken by each particular company. The experiences and results of the companies in each case study serve as examples of international company entry and participation in the water utility management market of the ECA region.

2. CASE STUDY: CONSULTANT FOR UTILITY COMMERCIALISATION

2.1. Overview

This example of a consultant, ILF Consulting Engineers, in the Town of Korca, Albania demonstrates the ability of a consultant to enter and perform in the water utility management market, orchestrating a comprehensive retooling of a public utility, as “defacto” utility manager, albeit without officially assuming full responsibility as operator. This chapter outlines the key factors and conditions that enabled the successful entry and performance of a consultant in a comprehensive technical assistance for water utility commercialisation, perhaps a viable strategy for market entry, possibly leading to greater levels of responsibility (service or management contracts, for example).

1. Can non-traditional entities, beyond operators and utilities, also perform as water utility managers?

Yes – conditionally; from 1998 to 2003 ILF has led and implemented the comprehensive transformation of the public utility, UKK, into a commercial and sustainable enterprise, which is now capable of fulfilling its obligations as operator for the urban water & wastewater systems of Korca. Yet, while it is true that all management and operations recommendations put forward by ILF were implemented by UKK, the consulting firm never assumed full contractual responsibility as “operator”. Yet, ILF can be judged to have performed as utility manager.

2.2. Case Study Data

All information presented in this case study was gained in voluntary interviews with key representatives of ILF Consulting Engineers, the public utility, current and former Municipality officials and the German Development Bank (KfW) onsite during 8 – 14 November 2003. The study team did not conduct a formal audit of technical or financial information of either the international company, utility or the municipality. Therefore, the case study is a cursory review of the developments in Korca over the contract term, with many details remaining unknown.

The study team wishes to thank the various entities for volunteering their time and participating in the case study:

- Ujesjelles Kanalizime Korca – UKK, Mr. Petrit Tare, Director
- ILF Consulting Engineers, Mr. Wolfgang Haibach
- Kreditanstalt fur Wiederaufbau, Mr. Christian Ohnmacht
- General Directorate of Water Supply & Sewerage, Mr. Bujar Reme
- Ministry of Territory and Tourism, Mr. Roland Olli

2.3. Country Setting

This example demonstrates some of the challenges facing participants in the water markets with volatile business environments.

Albania abandoned its international isolation and centrally dominated political-economic systems in 1990, but has experienced difficulties to achieve more democratic and market oriented structures. For example, economic recessions and the financial pyramid scandal of 1996-97 resulted in a loss of political confidence, even strife, in many parts of the country. However, the government recovered and a new constitution was ratified on 28 November 1998. The rivalry between political parties and challenges to the standing government continue through frequent public rallies at government buildings in Tirana. In 1999, large numbers of refugees from Kosovo sought safety in Albania during the conflict, straining the local populations and governments (public services to a non-tax paying population).

The economy continues to be impacted by the closure of former state industries with resulting high unemployment and low income levels. The redistribution of state property to private ownership has been a key factor in the political transition.



Photo: dismantling of state industry had a devastating effect on the economy and household income



Photo: land distribution was a key part of decentralization

FACTOR	COUNTRY DATA ^{1 & 2}
Population, total inhabitants	3.166 million
% urban/ % rural	44% / 56%
% Population living in Poverty	30%
Form of Government	Republic - democratic with party system
Rule of Law	Yes: continuing transition from former communist to continental civil law
Laws enabling international companies	Yes
Form of Economy	Continuing liberalization policies from a former state planned to market economy
World Bank Country Income Category	Lower Middle
GNI -Gross National Income per Capita	2002: US\$ 1,740 per year

¹ World Bank Website, 2004

² UNICEF Website, 2004

2.4. Water Sector

The primary state entity with jurisdiction for community water services is the General Directorate of Water Supply and Sewerage in the Ministry of Territory and Tourism. The sector boasts a professional water utility association: Association of Water Supply and Sewerage Enterprises of Albania (with the director of UKK is the president).

Water resources regulations have and continue to undergo transition, but are seen as increasingly stable and rational. Some key elements include:

- Decentralization Law in 2000: transfer of utility ownership from the Ministry to individual communities, including the authority to set tariffs, but with independent verification by a central review board.
- Drinking Water Standards in 1997
- Public Services and Works Code in 1996 granting enabling legislation for community water services

Overall, the Directorate of Water Supply and Sewerage reports an openness to PSP, citing several ongoing service contracts & concessions (typically including international companies and IFIs – Donors, i.e. The World Bank, KfW). An additional factor with influence on the water sector (costs for pumping, treatment, etc.) is the unreliable electric power throughout most of the country: many areas endure scheduled 1-2 hour outages a few times per day.

2.5. Local Setting

Korca is located in South Eastern Albania, about 50 km south of Lake Ohrid near the border to Macedonia. The town has a population of about 80,000 inhabitants. Unemployment is estimated at about 20-30% and about 10% of population (≈8,000 – 10,000) are considered poor.

Ujesjelles Kanalizime Korca (UKK) is the sole entity responsible for water and wastewater services in the town, with no other public service responsibilities. The poor population typically cannot pay water fees; otherwise, the town is reported to have sound history with payment rates for water services over 90 percent.

2.6. Project – Contract Preparation

The initiator of the project was UKK, the water & wastewater utility of Korca, with support from national ministries, which approached the KfW, the German Development Bank in 1996. The desire and willingness of UKK to embark on a comprehensive program towards commercialisation and sustainability convinced the KfW to proceed with the project.

Prior to initiating the development of the project in 1996, the KfW was active in the Albanian water sector starting in 1988. This knowledge of and experience in the national and local context was a key factor in the project conceptualisation and development of the project in Korca. Nevertheless, the executing company reports the initial strategy described in the initial Feasibility Study (and budget) required modification once implementation started. The project development phase lasted about 2 years.

A key element of the project & contract structure was the empowerment of and, in turn, necessary commitment by all parties. Each entity was assigned clear roles and responsibilities:

- Local utility(UKK): interest & principal, penalties, project execution, “Project Executing Agency”
- Municipality: was not an official party to the project, but pledged a cooperative role (this is a standard practice of the KfW to ensure direct commitment of the utility itself and avoid political influence)
- National ministry: loan commitment fees, VAT/ local costs, land costs, etc.
- International financing institution (KfW): foreign exchange, investment finance

2.7. Procurement

The procurement procedures utilized by the KfW can be characterized as an “open” internationally competitive bid with pre-qualification. The pre-qualification criteria focused on “similar project experience” and “financial capacity”. A total of five companies were short-listed and three companies submitted bids in arch 1998. The principle of “empowerment” was used from the onset, as the local water utility, UKK, approved the final selection of the most competitive company. The contract was signed on 15 June 1998.

2.8. Contract Structure

The contract with the private company was based on FIDIC standards and signed by the Project Executing Agency (UKK), again using integral mechanisms for local empowerment and assumption of responsibility.

Some key contract elements include:

- Local level (Project Executing Agency) contract control & monitoring
- Project objectives similar to performance standards, but no penalties (liquidated damages were clearly defined)
- Standard conflict resolution mechanisms

Contract Overview: Korca Water Supply & Sewerage Project	
FACTOR	DESCRIPTION
Type	Technical Assistance
Value	19.0 Mio. Euro (12 mio. Phase 1; 2: 7 mio. Phase 2)
Duration	5 Years (1998 - 2003): Phase 1 & Phase 2
Overall Objective	<ul style="list-style-type: none"> • Restoration of safe & reliable water supply • Reduction of sewerage impacts (to aquifer, irrigation practice) • Commercialisation of the service enterprise
Public Utility:	Ujesjelles Kanalizime Korca (UKK)
Contractor:	ILF Consulting Engineers
National:	General Directorate of Water Supply & Sewerage
International:	German Development Bank (KfW)
Key Responsibilities:	
• Asset Ownership	Public Utility (UKK)
• Investment – Assets	German Development Bank (KfW)
• Revenues – billings & collections	Public Utility (UKK) - with strategy & capacity building by ILF
• Operations & Maintenance	Public Utility (UKK) - with strategy & capacity building by ILF
• Management & Administration	Public Utility (UKK) - with strategy & capacity building by ILF
• Utility Staff (hiring – firing)	Public Utility (UKK) - with strategy & capacity building by ILF

2.9. Contract Implementation and Results

Contract implementation appears to have proceeded without major difficulties, with the contractor providing the required services as intended for all water supply aspects. The project term was sufficient to reach intended results with technical acceptance (by UKKO) for Phase 1 granted by August 2002 and for Phase 2 by August 2003. Yet, the wastewater component of the project was abandoned, as the initial strategy was deemed inappropriate (see above) and project focus (and funds) concentrated on the water supply component, according to recommendations of the contractor.

The basic strategy for the transformation of the utility appears to have been correct. The initial focus was to restore safe and reliable water supply (to provide a valuable service, as a viable basis upon which to demand payment from customers). This accounts for the extensive investment in the water supply system and the replacement of practically all the assets (98%).



The utility was completely retooled, with measures for staff empowerment, with replacement of those not capable of assuming their responsibilities. A human resource plan was key to provide individual guidance to staff members and retain the confidence of the overall work force, especially during the difficult periods of staff reduction. Other key aspects were the construction and outfitting of a new administration building to house the utility headquarters and staff.

Figure: A new image for a “new” utility

PROJECT OBJECTIVES & RESULTS		
FACTOR	BEFORE	AFTER
DRINKING WATER OBJECTIVES		
1. Reduction of health risk for the population in Korça		
2. Protection of groundwater resources against impact of inadequate wastewater disposal		
DRINKING WATER INDICATORS		
24 h water supply	2-4 h/d, summer 5-6 h/d, winter	24 h/d
95 % of the households with a supply capacity of 120 lpcd	?	≥ 95 % of the households have been connected to the system the billed water quantity (peak season) resulted in an average consumption of 130 lpcd
Production (m3/d)	26,000 m3/d avg. 32,000 m3/d (8/02- phase1)	12,000 m3/d avg. 16,000 m3/d (8/03 phase 2)
with the water quality observing WHO standards	?	the water quality is in conformance
Positive Bacteriological water tests	Several % /year	0% /year
Unaccounted for Water Ratio	0.75 – 0.85	0.2
Network Age	Early 1940s and 1960s	2002-2003
Network Length, total	107 km	105 km
Connection Rate to WS system	76%	95%
Customer Meters	13,300	17,255 (15,144 active – diaspora)
ENTERPRISE OBJECTIVES		
1. Commercialisation of Enterprise		
ENTERPRISE INDICATORS		
Tariff Rate	21 lek/m3 Exceptionally low tariffs (flat rates) & insufficient debt tracing	54 lek/m3 Lack flat rate for “absent” user, & “coverage” for poor users
Billings	74%	95.6%
Revenues (lek/mnth)	3.4 mio. Lek/mnth	11 mio. Lek/mnth (no VAT)
Revenues (lek/year)		
Administrative Losses	75%	12%
Personnel (No.)	121	83
Ratio of Personnel Costs to Operating Costs	36%	50%
Number of Staff / 1000 connections	6.2	5, 4.8
Collections Ratio	68-88%	95%
Operating Costs/ Operating Revenues	100%	50%
WASTEWATER OBJECTIVES		
1. to exclude pollution of the aquifer		
2. to reduce the utilisation of raw wastewater for irrigation purposes		
WASTEWATER INDICATORS		
Rerouting/ isolation of sewage flows from Tirani well field	Water quality violations	Not achieved (funds channelled to WS); but first aquifer has been sealed
Number of Sewer main Outfalls	5	5
New Irrigation Practices	Farmers use wastewater flows from open channels for irrigation	Not achieved (sewerage component abandoned)

Customer service was a key focus of the utility commercialisation process. An extensive customer and public communication campaign was undertaken, in conjunction with the establishment of a new, conveniently located bill payment office in the town centre.



Photos: a new, centrally located payment centre for the customers of Korca

Another key factor was the supportive role played by the municipality, which did not meddle in the affairs of the utility.

A vital aspect of the implementation was the role of the private company, ILF. The company orchestrated a complete transformation in the water utility, to a sustainable entity, and a complete replacement of the water supply system, for safe and reliable service. While the company was not the contractual entity, ILF led and built up the under-performing water utility, such that ILF took the lead in a cooperative manner with UKK of devising and implementing the company strategy. All recommendations presented by ILF were accepted and implemented accordingly by UKK. Therefore, ILF was acting as a “defacto” operator.

2.10. Assets and Investments

This case study demonstrates a unique project, in that an extensive amount of the assets (98%) were replaced. These funds were not provided through the local customer base via payments nor other local or national means. Rather the financing was provided by the German Development Bank.

Finance Package	
Agreement	Loan, Financing and Project Agreement (16 May 1997)
Signatories	<ul style="list-style-type: none"> • Kreditanstalt für Wiederaufbau (German Development Bank) • Borrower: Republic of Albania, represented by Bank of Albania • Project Executing Agency: Public Water & Sewerage Utility, Korca
Finance Sum	19.0 Mio. Euro (12 mio. Phase 1; 2: 7 mio. Phase 2)
Finance Mechanism	Phase 1 <ul style="list-style-type: none"> • 6.5 mio. DM: Loan • 17.0 mio. DM: Grant • 0.5 mio. DM: Grant (foreign exchange costs)
“Borrower” Commitments	<ul style="list-style-type: none"> • National Government: Finance commitment fees (0.25% p.a.) • National Government: VAT, taxes, duties, customs, etc. • National Government: Land acquisition (for works project) • National Government (via Service Provider, per separate agreement: 0.75% p.a. interest; penalties, principal repayment after 10 year grace period))

The World Bank & Bank-Netherlands Water Partnership

This extreme approach was taken to “break” the unsustainable cycle of public water services in Korca. The intention was to dramatically improve the capacity of the infrastructure (through replacement – the old system dated from the 1940s – 50s), for reliable service and then payment by customers. This approach was successful.



Photos: a stark contrast of before and after asset renewal

However, it is unlikely that such a comprehensive approach is replicable in many instances throughout the ECA region, as the investment per capita (235 Euro per capita) is unlikely to be matched by local, national or international financing sources.

2.11. Best Practise Milestones

The greater setting in Albania and the local context in Korca lack many of the key elements necessary to promote private sector investment in infrastructure, according to the Best Practice Milestones advocated by the Asian Development Bank³.

1998	2003	Best Practice Milestones – Asian Development Bank
No	No	1. State-owned reform unit, specialized in privatisation
No	Yes	2. Scoping Study of the water utility
No	No	3. Costs & Benefits of separating natural monopoly businesses
No	No	4. Risk assessment and ranking with mitigation strategies
No	No	5. Determine most suitable PPP option – groundwork for privatisation tenders
No	Yes	6. Review legal framework affecting reorganization of water utilities (prepare draft versions of necessary amendments)
No	No	7. Support for local Capital Market reforms
No	No	8. Assess and prepare water resource management strategy; assess feasibility of tradable water rights
No	Yes	9. Assess data on non-revenue water and scope for revenue increases
No	Yes	10. Review Tariff Structures and financial statements
No	Yes	11. Assemble financial model of Utility, focusing on bulk and retail systems
No	Yes	12. Review bulk supply mechanism and develop time scale for meeting international standards
No	Yes	13. Implement sound commercial tariff structures, billings and collections
Yes	Yes	14. Define scope of market, investment obligations and quality/ performance targets
Yes	Yes	15. Independent regulatory authority for overall review
No	No	16. Commission advisors to prepare project preparation and tender documents

The status since 1998 has improved with the completion of the KfW project in Korca by 2003. Therefore, the project has served as a partial preparation for greater private sector involvement, should the local community choose so. (No indication that any local parties view private sector participation as necessary at this time).

³ *Developing Best Practices for Promoting Private Sector Investment in Infrastructure – Water Supply*; Asian Development Bank; 2000

2.12. Keys to Success

The contract - project was successful on almost every level, benefiting all parties, as sustainability was restored to the utility, the customer base was repositioned as a utility focus, the system assets were renewed, the financier met its development objectives and an international consultant was able to demonstrate its capacities as “defacto” operator. The primary causes of this success were:

1. **Team work:** The relationships between the inner circle of the contract entities (utility, financier and consultant), but also the perimeter project participants (local government, customer base, ministries, etc.) were based on trust and cooperation with a solution - not blame – oriented approach.
2. **Local Empowerment** – the integration of the local partner as an equal from the onset, with responsibility for key project items, sets the proper project tone and empowers the local entities more than any training course.
3. **Communication:** The utilisation and application of communication as part of the project strategy was integral to the workings of the contract entities, but also an essential element to integrate the general public and customers and re-establish the revenue base.
4. **Openness & Willingness:** The citizens of Korca, their government and the utility staff were open to better water services, but more importantly were willing to pay for them (tariffs more than doubled over the course of the project) and were open to a foreign entity leading the way.
5. **Sufficient Investment:** The significant investment amount provided by the KfW (about 235 Euro per inhabitant) enabled an unusually comprehensive project implementation, especially the assets renewal, eliminating much of the risk of failure.

2.13. Lessons Learned

This case study demonstrates the ability of a consultant to enter the market and successfully transform a neglected utility into a sustainable entity and build a new water supply system. Yet, several areas require improvement to replicate such a contract – project in other parts of the ECA region.

1. **Better Project Preparation:** A greater onsite presence during the project development phase, including substantial field investigations and even initial interventions (leak detection & repair, staff capacity building, etc.) to confirm baseline levels and understand the local context. (Such an approach may have enabled identification of the most appropriate project strategy sooner).
2. **Less Investment:** The generous investment amounts (235 Euro per capita) are not likely to be replicable in a significant number of ECA communities, if any. A better example would be making do with some of the local financial resources and infrastructure rehabilitation (rather than full system replacement) would serve as a better example.
3. **More Local & National Finance:** Involvement of the local or national banking entities in a capacity building mode as a means of developing a long-term mechanism for financing community infrastructure in Korca, as well as other communities in Albania.

3. CASE STUDY: CONSULTANT ON BEHALF OF AN OPERATOR

3.1. Overview

This case study of a World Bank water supply project in Dushanbe, Tajikistan demonstrates the ability of international consultants to enter, participate and perform (up to the halfway point of the project) in the ECA market for water utility management. This chapter outlines the key factors and conditions that enabled consultants to execute in a service contract including many utility management components through a strategy of collaboration with an established operator.

1. Can non-traditional entities, beyond operators and utilities, also perform as water utility managers?

Yes – conditionally, MVV Consulting Engineers has led the consortium of its parent company, MVV Energie with Hydroplan Consultants, for the onsite execution of the contract. Through an internal contract, the parent company, an established operator, has contracted the project execution to its subsidiary, MVV Consultants and Engineers, which has performed 95% of the scope of work. (No final evaluation of the consultant performance is possible, as the contract is still ongoing).

3.2. Case Study Data

All information presented in this case study was gained in voluntary interviews with key representatives of MVV Consultants and Engineers in September 2003 and a cursory review of the developments in Dushanbe according to the following project documents:

- World Bank Project Appraisal Document, 20 May 2002
- Country Assistance Strategy, 21 July 1998
- MVV – Hydroplan Proposal

The study team wishes to thank the various entities for volunteering their time and participating in the case study:

- MVV Consultants and Engineers, Dr. Petra Seidler, Project Manager
- MVV Consultants and Engineers, Ms. Tess Dobek
- MVV Consultants and Engineers, Ms. Barbara Gerhager

The project is still underway with a draft performance review provided after the first year. The study team did not conduct an onsite investigation because an onsite presence would have disrupted sensitive project developments; a cholera epidemic in Dushanbe during the summer of 2003 strained relations between the contract entities while the cause was determined – eventually proved to not be directly water system related). Nor did the study team conduct a formal audit of any project entities.

3.3. Country Setting

Tajikistan ranks as the poorest country in the ECA region, according to Gross National Income per capita, and has an estimated 83 percent of the population living in poverty. The population is largely rural and still lacks a rigorous economic base.

FACTOR	COUNTRY DATA ^{4 & 5}
Population, total inhabitants	6.245 million
% urban/ % rural	25% / 75%
% Population living in Poverty	83%
Form of Government	Republic - democratic with party system
Form of Economy	Continuing liberalization policies from a former state planned to market economy
World Bank Country Income Category	Low
GNI - Gross National Income per Capita	US\$ 190 per year (2002)

The context in Tajikistan illustrates the challenges facing some poorer and more volatile countries of the ECA region, since the dissolution of the Soviet Union and the East Block:

- Unsettled country setting, due to new independence and then civil war:
After gaining independence in 1991, the country experienced civil war between 1992 to 1997. The ensuing peace agreement entails a program of economic recovery and political stability, with support by the international community. The civil-social setting is still characterized by the large numbers of refugees and occasionally violence.
- Chronic poverty and weak economy:
The country economy collapsed during the civil war. Yet, with a peaceful setting and the structural reforms now in place (change from centrally planned to market economy), growth has resumed and inflation is under control (expected at 5-8 percent annually). The economy is largely dependent on commodities, such as gold and cotton. Unemployment is officially reported at 3 percent, but is likely as high as 33 percent. Government revenues are chronically low, at about 14 %, because of weak tax collection capacity.

3.4. Water Sector

The water sector continues to adjust to the disappearance of central subsidies and control. The national government relinquished most all its responsibilities in the water sector through the process of decentralization; yet the transfer of assets to the municipal (Hukumats) level was not accompanied with resources or training in asset management for the local governments or their public utilities. Enabling legislation specifies the responsibility for community water services lies at the municipal level.

Foreign company inputs and private sector participation is welcome, as demonstrated by this project; the inflow of international capital and expertise provides much needed assistance to this impoverished country.

⁴ World Bank Website, 2004

⁵ UNICEF Website, 2004

3.5. Local Setting

The City of Dushanbe has about 800,000 inhabitants. The most recent (1989) census sets the population at 543,000, but substantial increases have occurred due to emigrants from rural areas, internally displaced persons and refugees. About 83% of the country population live below the poverty line, but this figure is estimated to be even lower in Dushanbe.

The Dushanbe Vodokanal (DVK) is the municipal entity responsible for water supply services. The enterprise is financially and administratively autonomous, operates on a commercial basis, but is chronically insolvent and not able to meet its responsibilities; the city retains asset ownership and tariff authority.

The DVK provides an example of a water utility propelled into an unsustainable cycle of poor service levels, disenchanted customers providing insufficient revenues and, accordingly, ever more ineffective service mechanisms (both infrastructure and human capacity). The process of decentralization thrust the responsibility of asset management onto the city of Dushanbe and, in turn, the utility, without adequate resources or preparation. The DVK is reported to have survived the 1990s only because of emergency assistance of external donors.

The water system infrastructure has deteriorated, because of budget shortfalls for operation and maintenance since even before the end of the Soviet system and, further, was damaged in severe floods of the 1990s. As a result, drinking water supply was generally characterized as unsafe (e.g. turbid water, typhoid outbreak in 1998), unreliable and inefficient. As many as 85% of residents do not receive water in certain districts of the service area. Many residents must buy water, often at 200 times the price of tap water, or must fetch water at great distances.

3.6. Project – Contract Preparation

Project development was extensive, spanning from 1996 to 2002, and included the World Bank, the national & local governments and the Dushanbe Vodokanal.

Stakeholder willingness and engagement

The Prime Minister of Tajikistan and the Mayor of Dushanbe first approached the World Bank on the prospect of a water project in the country's largest city. Later, the national government demonstrated its commitment during the project preparation phase by undertaking key institutional and policy reforms. Similarly, the municipality also approved a tariff increase during project appraisal.

In addition to involvement and coordination during project development, the World Bank conducted a project preparation workshop to foster project understanding of and support by all stakeholders.

The challenging context required attention

The World Bank consciously went forward in this difficult environment according to its mission to reduce poverty and improve human welfare, fulfilling a role best termed as the "lender of last resort." The extensive risks were clearly known from the earliest documents:

"the proposed project in Tajikistan faces even more difficulties than in other CIS countries because the risks are higher and the financial viability of the Vodokanal, the technical and operational capacity of its staff and the affordability of high water tariffs by some segments of the population are lower."

Direct strategy focused on the basics...

The World Bank realized from the outset that the weak DVK capacity and poverty of the customer base placed limitations on the type of project selected. Therefore, it selected the simplest possible way to address the technically and financially most critical issues, at first on an emergency basis, to build for the future of the DVK and the City of Dushanbe:

- **Drinking water supply only** – no wastewater: the limited focus matched the limited financial resources of the World Bank as well as the absorptive capacity of DVK
- **Sustainability:** the project should help DVK take the first steps towards commercialisation and self-sufficiency in all technical, financial and administrative aspects of utility management (full cost recovery was not immediately expected)

...and simultaneously address both country and local factors

The World Bank developed a project with a multi-pronged strategy to “holistically” address the comprehensive situation not only in Dushanbe but also Tajikistan:

- Investments to address the dilapidated infrastructure and tools (water supply only)
- Service contract to introduce international operations expertise and capacity building
- Development of a regulatory unit (Project Coordination Unit) to prepare the future water sector
- Inclusion of stakeholders from start to finish, to ensure willingness and support
- Contracts to ensure stakeholder support and participation
- Bidding for transparent contractor selection

On a country level, the project in Dushanbe was part of the World Bank’s overall sector-related Country Assistance Strategy (CAS) to support Tajikistan in the peace process, economic transition, poverty reduction and restoring key health & education infrastructure & services. In particular, the CAS identifies the “rehabilitation of the existing, but deteriorated water supply infrastructure in Dushanbe, where epidemics of typhoid fever have become a frequent occurrence, as a critical need for the improvement of public health conditions for the Dushanbe population as a whole, but particularly its most vulnerable groups, the poor.”

Defining a project with undefined parameters

The World Bank, with the national and local entities, undertook significant assessments over 6 years to prepare the strategy and project, according to and because of the known risks and setting, including:

- Technical evaluation of assets and operations
- Financial assessments of VK
- DVK Business Plan with financial recovery strategy
- Interim financial management system
- Environmental Management and Monitoring Plan
- Social Assessment Study (Participatory Rapid Appraisal of Water Users)
- Public Notification Process

Yet, the evaluation of DVK's financial and technical status was found to be "speculative" due to the limited and contradictory nature of operational, technical and financial data available. The World Bank countered this uncertainty with a realistic project approach and mechanisms, based on lessons learned in on prior projects in Tajikistan and the CIS:

- need for high-level support and political commitment
- significant time is needed for institutional reforms
- continuous interaction with stakeholders during project preparation & implementation
- emphasis needed from beginning on staff development and training
- involvement of an international operator
- realistic assessment and projections for financial recovery (for utility & municipality)
- implementation arrangements and roles must be clearly defined from the onset

A proactive measure during the data gathering period was the engagement of the DVK in the establishment of the "interim financial management system" to ensure adequate financial procedures, such as internal controls, accounting and reporting, satisfactory to the World Bank. The system was used until the commencement of the Service Contract. This step beyond mere observatory data-gathering to a "hands-on" intervention, provided real insights in the actual procedures of the DVK and not just the outputs.

Selecting a contract structure:

The World Bank considered numerous approaches prior to choosing a contract model:

- **Technical Assistance:** was deemed too limited in achieving a rapid commercialisation of weak utilities and rehabilitation of the infrastructure, primarily because the technical assistance provider lacks managerial responsibilities and financial incentive.
- **Long-term Lease or Concession:** was rejected because the current economic uncertainties in Tajikistan and the very limited financial capacity of the population will not attract involvement of the private sector in the provision of water services with private sources of financing.

Therefore, the World Bank determined that the private sector might be most interested in a **service contract** supported by investments financed by an international financing institution.

Performance based implementation and monitoring

The project was developed for step-by-step implementation, with a clear strategy laid out according to annual performance targets for the operator. While the annual targets are quite specific (as detailed in the Performance Standards Appendix to the contract), the intended improvements focus on four key areas:

- **Safety:** percentage of samples achieving standard chlorine residual
- **Reliability:** continuity of service and compliance with water supply schedule
- **Efficiency:** reduction in energy use per m³ of water; reduction in water losses; and increase in accounted for water
- **Financial Viability:** collection of revenues; annual ratio of collected revenues over the sum of operation and maintenance costs and project related expenses

Financial incentives, beyond the base level remuneration, would be offered to entice the operator to achieve the intended results. The Performance Incentive Compensation Appendix specify the formulas to establish operator incentive compensation, according to key project indicators.

Monitoring of the project achievements and operator performance is to be achieved by the newly formed project "regulator", the Project Coordination Unit. The establishment and running of the PCU (staff, logistics, etc.) are funded in the project.

Defined roles and coordination to achieve a “leap of faith”

A key element of the project development was to define the roles of the contract entities during implementation, starting with overall program coordination with other financing and donor activities (such as the Islamic Development Bank with a US\$ 9 million project focused on above ground facilities and the Japan Social Development Fund focused on a community based program to repair the distribution systems).

- **Stakeholders:** a key step in the project development was defining the commitments of the national & local stakeholders in the *Development Credit Agreement* and *Project Agreement* to establish and ensure a supportive framework and environment for the financial recovery of DVK, especially on politically sensitive issues, such as
 - tariff review & adjustment
 - collection of fees – permitting disconnection of delinquent customers
- **Utility - Vodokanal:** maintain overall responsibility for customer service and utility management (DVK's weak managerial and technical capacity prevents the company from addressing even the most urgent operational problems and would not allow it to implement the project)
- **Operator:** support the Vodokanal to improve service delivery and financial viability of the utility under a performance-based service contract, measured by (and compensated in part, according to) performance standards specified in the bid documents
- **Financier:** provide leadership (as catalyst) and support during project implementation to strengthen and maintain the existing commitment and interest (“DVK will embark on a venture for which they are very poorly prepared in terms of experience and mind set - turning over management and operation to a foreign company at high cost, introducing higher tariffs, enforcing collections and investing in rehabilitation and maintenance rather than in capacity expansions constitutes a complete break with old traditions and requires a large leap of faith”).

3.7. Procurement

The procurement process entailed an internationally competitive bid with pre-qualification and was conducted in 2002. A total of 4 companies were short-listed. The bid selection was conducted according to the “low-bid wins” procedure, whereby the lowest price wins from those bids which meet the minimum technical criteria (70 percent in the technical offer).

The low-bid wins procedure was criticised by some competitors as excessively stressing price over quality; the competitors which had both a higher technical score and price, indicated they would have provided better “value” (greater results per investment amount) had they executed the contract.

The joint venture of MVV Energie AG, an “operator” based in Mannheim, Germany, and Hydroplan Ingenieurgesellschaft mbH, a “consulting” engineering firm also from Mannheim won the competitive bid. The successful strategy for this “mixed” union was that the operator determined it needed stronger international project references and technical credentials (such as in network modelling) to compete for the job. Conversely, the consultant realized it had insufficient “operator-type” credentials to independently qualify for the project.

Operator engages consultant for procurement submissions

MVV Energie incorporated its subsidiary, MVV Engineers & Consultants GmbH, a legally and financially independent entity, from the beginning to help prepare the pre-qualification and bid submissions. MVV Engineers & Consultants was referenced in the consortium's procurement submissions. The parent company, required assistance in international procurement for the water sector, an area in which it had less experience; the proposal referenced the MVV Engineers & Consultants office in neighbouring Tashkent, Uzbekistan.

3.8. Contract Structure

The contract was signed into force in December 2002, commencing a comprehensive partnership between public and private, international and local entities for the improvement of community services and utility sustainability.

Contract Overview: Dushanbe Water Supply Project	
FACTOR	DESCRIPTION
Type	Performance-based Service Contract
Value	US\$ 19.43 Million <ul style="list-style-type: none"> • C1: Repair and Rehabilitation Fund (US\$ 13.09 mio.) • C2: Service Contract: Base fee (US\$4.71 mio.) & incentive (US\$0.72 mio.) • C3: Consulting Services to the Project Coordination Unit (US\$ 0.19 mio.) • C4: Project Coordination Unit - operating expenses (US\$ 0.32 mio.) • C5: Refinancing of Project Preparation Facility (US\$ 0.40 mio.)
Duration	Planned: September 2002 – December 2006 Actual: 12 December 2002 (contract signature) – December 2006
Overall Objective	Improve the Safety, Reliability, Efficiency and Financial Viability of the water supply services in Dushanbe, Tajikistan via: <ol style="list-style-type: none"> a. strategic rehabilitation and efficiency improvement of existing facilities b. institutional strengthening of the Dushanbe Utility through a performance based service contract with an internationally experienced operator c. strengthening of DVK's financial capacity through improved financial management and commercial practices
Contract Entities:	
Public Utility:	DVK: Dushanbe Vodokanal
Operator:	MVV Energie AG as Lead Partner and Hydroplan GmbH
Local:	City of Dushanbe
National:	Government of Tajikistan (financing of US\$ 2.43 mio.)
International:	The World Bank (financing of US\$ 17 mio.)
Key Responsibilities:	
• Asset Ownership	City
• Investment – Assets	The World Bank (executed by Operator per rehabilitation fund)
• Billings & collections	Operator
• Operations & Maintenance	Operator
• Management & Administration	Operator
• Utility Staff (hiring – firing)	Operator
Key Agreements:	<ul style="list-style-type: none"> • Credit Agreement between the World Bank and the Republic of Tajikistan , Ministry of Finance • Project Agreement between Municipality of Dushanbe and DVK • Subsidiary Loan Agreement between MOF and DVK

3.9. Contract Implementation and Results

Despite the challenging project setting in Dushanbe and Tajikistan, delays in the contract start date (winter rather than fall 2002) and an initially strained relation with the utility (awkward handover of responsibilities), the MVV Energie and Hydroplan consortium appears to be on-track to achieve the intended results.

Consultant performs the bulk of contract work on behalf of operator

This case study illustrates a key business decision and strategy by an operator – shifting responsibility for a water utility management contract to a consultant. According to an internal agreement MVV Energie shifted the project leadership and management to its subsidiary, MVV Engineers & Consultants; the consultants report carrying out about 90-95 % of the contract work, with the operator providing on-demand backstopping and trouble shooting inputs. An established operator found it advantageous to engage consultants to complete the scope of work in an “operator” service contract, rather than complete the work itself.

Operator Performance

The PCU with the input of an independent, international auditor is controlling the key technical and financial results of contract performance. Unfortunately, the audited results of the second year are not yet available for this case study. While many detailed criteria are specified, the key measurements are based on improvement on the following baseline conditions. (Overall, the operator reports being “on track to meet final targets”).

KEY PROJECT INDICATORS	BASELINE CONDITIONS (before start of service contract)	Selected Performance Target
Safety: % of samples achieving standard chlorine residual	<ul style="list-style-type: none"> Treatment plant filters are overloaded Disinfection units are out of operation 20 ml of suspended solids per litre at taps Frequent cases of typhoid & waterborne disease, one of highest in central Asian cities (8,900 cases in 1997 outbreak) 	Goal: 95% Un-audited Results: Year 1: 70% Year 2: 85%
Reliability: Continuity of service and compliance with water supply schedule	<ul style="list-style-type: none"> Intermittent at 10 hours per day Facilities are in severe disrepair 	Goal: 60% reduction in Annual Water Supply Interruptions Un-audited Results: Year 2: 30% reduction
Efficiency: Reduction in energy use per m3 of water; reduction in water losses; and increase in accounted for water	<ul style="list-style-type: none"> 60% of produced water lost in network leaks & wastage; 1,400 litres/person/day (10x Western European levels) Resources do not meet seasonal demand and untreated river water is pumped into system (16% of total demand) Due to water wastage, sewage is hydraulically overloaded – diluted 	Goal: Energy reduction of 20% Un-audited Results: Year 2: 10% Goal: Reduce water losses 40,000 m3/d Un-audited Results: Year 2: 25,000 m3/d
Financial Viability: Collection of revenues; annual ratio of collected revenues over the sum of operation and maintenance costs and project-related expenses	<ul style="list-style-type: none"> Low tariff (US\$ 0.004/m3) in 1998 ; rates about 10 times higher for commercial – public customers – cross subsidies; 20% collection rate (only 2% from domestic customers - view water as free commodity) 	Goal: Staff Training Un-audited Results: Year 2: 100%

The contract commenced in December 2002 (three months late) and progress was slow during the first two quarters of implementation. Work was proceeding and contracts were let for repair & rehabilitation works, despite the operator's claim of "unrealistic expectations". Inspection missions by the World Bank during June and September 2003 reported general satisfaction with the implementation progress, although some issues still needed to be addressed in order to improve the project's performance.

Some contract implementation difficulties reported by the operator include:

Performance standards

- Some key standards were set at unrealistic levels. For example, water treatment at 100% of water quality standards is "impossible" to attain, since no funds are allocated for plant rehabilitation – only distribution network related works.
- The contract focus on the performance standards and project deliverables (Skills Assessment of Operations Staff; Network Information System Plan; Subscription Plan; Public Education Program; Commercial Management Plan; Merit Payment Program; Customer Service Plan; Initial Condition Survey; Annual Repair and Rehabilitation Plan; Procurement Guidelines; etc.) limit the operator's flexibility in project implementation and drained resources from the actual execution of these tasks.
- Insufficient technical and financial data to prepare the *Base Year Data Report*.

Coordination

- The lack of a single contact point (e.g. country director) for all ongoing infrastructure projects caused occasional friction with other international financing agencies/ donors regarding co-financing and development of infrastructure components.
- Required registration of community based organizations (as part of the community based urban water supply management program, community groups/ mahallas served as intermediaries between the operator and community) with the central government, resulted in a sparse number of eligible groups and, thereby, reduced the execution of civil works to repair communal water systems in apartment buildings and houses in poor neighbourhoods.

Procurement

- Delays in approval of the operator's Procurement Guidelines, resulted in delays in letting and realising rehabilitation works contracts.
- The lack of a "single-responsibility" procurement policy for infrastructure components caused friction between entities and project delays (e.g. various financiers responsible for different parts of the SAM Sedimentation Pond rehabilitation).
- Limited international interest in several ICB contracts, apparently due to challenging setting, compromised some installation works.

Local Capacity for Inputs

- Adding project responsibilities to the daily job requirements overextended many DVK staff, leaving insufficient time for involvement in many project activities, which resulted in a decreased sense of project ownership.
- Government restrictions on attendance of training courses resulted in missed capacity building opportunities
- Finding and hiring sufficient numbers of qualified local staff, slowed the establishment of the operator's site office

Customer Impressions

A water user's survey conducted by the operator provided generally positive results: the customer's expressed a willingness to pay for improved quality and access to drinking water. Further, the majority were in favour of consumption based payment with water meters and abolition of the block rate fee system.

Establishment of a project (and future water sector) regulator

A key result and success of the Dushanbe project was the establishment of the Project Coordination Unit. The purpose of the PCU is to provide project oversight (e.g. performance indicators) and coordination (project – contract entities), but also to eventually establish policy and strategy in the regional - country context. This is a necessary step for Tajikistan, as a viable water sector regulator is a key component necessary for future private sector inputs.

One complaint lodged by the operator were the delays during project commencement until the PCU became operationally self-sufficient.

3.10. Assets and Investments

The water supply system assets remain the property of the City, as is common with service contracts – no transfer of asset ownership. A repair and rehabilitation fund is a key component of the World Bank project; at a total of US\$ 13 million, this amounts to US\$ 16 for each resident of Dushanbe. The MVV & Hydroplan consortium has responsibility for selection and implementation of investments in the repair and rehabilitation fund. Other international financing agencies and donors are also active in Dushanbe:

- Islamic Development Bank: about US\$ 9 million investments for “above ground” facilities (not transmission or distribution pipes)
- Japan Social Development Fund: about US\$ 2.8 million for repair of internal distribution systems in multi-unit buildings and mahallas/ neighborhoods.

3.11. Best Practise Milestones

The activities to develop and enact the service contract in Dushanbe, with associated national and water sector elements, meet most of the Best Practice Milestones advocated by the Asian Development Bank to promote private sector investment in water infrastructure⁶.

2002	Best Practice Milestones – Asian Development Bank
Yes	1. State-owned reform unit, specialized in privatisation
Yes	2. Scoping Study of the water utility
No	3. Costs & Benefits of separating natural monopoly businesses
Yes	4. Risk assessment and ranking with mitigation strategies
Yes	5. Determine most suitable PPP option – groundwork for privatisation tenders
Yes	6. Review legal framework affecting reorganization of water utilities (prepare draft versions of necessary amendments)
No	7. Support for local Capital Market reforms
No	8. Assess and prepare water resource management strategy; assess feasibility of tradable water rights
Yes	9. Assess data on non-revenue water and scope for revenue increases
Yes	10. Review Tariff Structures and financial statements
Yes	11. Assemble financial model of Utility, focusing on bulk and retail systems
Yes	12. Review bulk supply mechanism and develop time scale for meeting international standards
Yes	13. Implement sound commercial tariff structures, billings and collections
Yes	14. Define scope of market, investment obligations and quality/ performance targets
Yes	15. Implement and independent regulatory authority for overall review
Yes	16. Commission advisors to prepare project preparation and tender documents

⁶ *Developing Best Practices for Promoting Private Sector Investment*, Asian Development Bank; 2000.

Given the dire setting in Dushanbe and Tajikistan, this is an impressive achievement. The milestones not yet achieved are generally the more sophisticated elements (e.g. separating natural monopolies, tradable water rights), which are often not met in many “industrialized” countries.

3.12. Keys to Success

The project moved forward despite the obstacles presented by country-wide changes in political, economic and water sector mechanisms and chronic poverty of the population. Of particular interest, a consultant assumed and executed (so far, the project is scheduled for completion by 2006) the vast majority of a significant service contract (US\$ 4.7 million) with a water utility management focus, on behalf of an established operator. The keys to the (apparent) success of the private sector project and international consultant are:

1. **“Think nationally – act locally”**– the project is designed to address the specific drinking water supply deficiencies in Dushanbe, but also, with foresight, sets in motion greater reforms to add a vital component for a viable water market and for private sector inputs (e.g. establishment of regulator to safeguard community & consumer interests)
2. **Stakeholder involvement and commitments** – the project is based on coordination and integration of the national & local government and utility from the project inception to completion, which fosters project ownership. Also, the project includes written agreements, which stipulates local stakeholder required inputs on potentially politically sensitive aspects (tariffs, reorganization, etc.)
3. **Water Service is valuable to the poor**– a key output of this project is that even in a very destitute and disrupted setting, the poor are willing to pay more for a safe and reliable service; the alternative is even more expensive. This positive reception by the customer base was a positive and surprise result.
4. **Inclusion of private sector** – despite the apparently risky setting, the financier has integrated the private sector in this endeavour to bring about efficient execution and inputs of modern expertise for the benefit of the utility and inhabitants of Dushanbe.
5. **Embedded strategy** – both consultants have used a strategy of teaming with an established operator, to gain market entry and, then, add to their know-how and project references in an “operator type capacity” for water utility management.

3.13. Lessons Learned

This case study demonstrates the ability of a consultant to enter the market and successfully perform (about 95% of an operator's tasks) in a service contract. Yet, several improvements may be possible, especially if such a contract is to be replicated in other parts of the ECA region:

1. **Augment Project Preparation with Onsite Base Line Preparation and initial interventions:** the Dushanbe project was thoroughly prepared with professional care and expertise, consisting of interviews, desk-top evaluations, onsite assessments, audits, etc. Yet, a key complaint raised by the “operator” was the unrealistic nature of some performance standards, based on uncertain baseline conditions.

One strategy to attain a more accurate understanding of the existing conditions, is to precede each project with a **short-term (1 to 2 years), onsite technical assistance** to carry out initial utility capacity building and undertake real onsite inputs (e.g. leak detection & repair, financial management information system) to gain a hands-on understanding of the onsite situation. This lead time also presents the **Project Coordination Unit/ Regulator** the time necessary to assume and learn its duties.

For economies-of-scale, this initial input should be part of the contract for the “**independent auditor**”, who is to carry out the annual performance evaluations of the operator, such that the auditor gains a significant understanding of the project, before the operator arrives on site. The key output of this initial input should be the Baseline Report, thereby eliminating the conflict-of-interest in having the operator prepare this document.

2. **Less-detailed Performance Standards** – the operator raises the point that more basic – less detailed, though just as stringent, performance standards may provide the operator with greater flexibility during project implementation to achieve the intended results, with strategies adjusted according to the onsite conditions.
3. **More Qualitative Procurement** – some international participants are disgruntled with the low-bid-wins policy, which may limit attraction (and future participation) to the water markets.

Options exist for greater consideration of quality in the bid selection process (for example, raising the technical proposals “threshold” to an 80 % score; shifting the technical to financial weighting of the final bids to 70%-30% or 80%-20%). Yet, conversely, financing institutions are wary of runaway costs, without the control from bid price competition.

4. **Grow Investment Capital Mechanisms**– a key conclusion of the project development process is that the private sector is unlikely to provide investment capital in an impoverished setting. Yet, mechanisms could have been incorporated into the project design, similar to the establishment of a water sector regulator, to spur the **development of the local capital market** (project components to partner local banks in some project financing) or provide **investment guarantees** for minimal international company inputs.

4. CONCLUSIONS

The case studies in Korca, Albania and Dushanbe, Tajikistan present two examples of “consultants” (non-traditional water utility operators) as successful water utility managers. The caveat must be added that one consultant performed in a technical assistance as a “defacto operator”, but without contractual responsibility as operator; the other consultant performed 95% of the scope of works, under the banner of the operator.

Yet, both case studies demonstrate that “non-traditional” participants have opportunities, can penetrate and can perform in the Europe and Central Asia markets for water utility management. Indeed, both consultants demonstrate success in executing a strategy for success in the market, to build upon in the future, perhaps to achieve greater market share.

Assessment of Market Development Study Premise – Results of the Case Studies	
Can non-traditional entities, beyond operators and utilities, also perform as water utility managers?	<p>YES</p> <p>A consultant successfully managed a utility in a significant service contract with management components, (but with back-up by an established Operator).</p> <p>A consultant attained full commercialisation of a utility, but in a technical assistance model.</p>