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Swiss Cooperation Office Kosovo

Review of the infrastructure sector of the Swiss Cooperation Office in Kosovo

Background paper for the elaboration of the Country Strategy 2013 – 2016

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Acronyms

BOD	Board of directors
CS	Country strategy
DMA	District metered area
EUOK	European Union Office in Kosovo
GOK	Government of Kosovo
GIZ	German Cooperation Agency
KfW	German Development Bank
NRW	Non-revenue water
O&M	Operation and maintenance
PIN	Public Infrastructure Domain of Swiss Cooperation
POE	Publicly Owned Enterprises
PMU	Policy and Monitoring Unit
RWC	Regional Water Company
RWSSP	Rural Water Supply and Sanitation Project
SEWSP	South East Kosovo Water Supply Project
SCO	Swiss Cooperation Office in Kosovo
SDC	Swiss Agency for Development and Cooperation
SECO	Secretariat of State for Economic Affairs
SIWS	Small Infrastructure for Water and Sanitation
WTF	Water Task Force
WWTP	Wastewater treatment plant

Rate of exchange
EUR 1.00 = CHF 1.20
CHF 1.00 = EUR 0.83

Executive summary

Programme description

Switzerland supports Kosovo through the Swiss Development and Cooperation agency and the State Secretariat for Economic Affairs. The interventions are coordinated by the Swiss Cooperation Office in Kosovo (SCO). More than 300 million Swiss Francs have been provided by Switzerland since 1999. The SCO programme for Kosovo follows a four-year country strategy (CS). For the current period, ending in 2012, the strategy includes three domains of cooperation, one of them being Public Infrastructure, focusing on water and sanitation, but also including a component in the energy sector.

The Swiss programme intervenes at the macro, the meso and the micro level, through projects having as partners central government institutions, Regional Water Companies, and village committees, to mention but a few.

Review purpose and methodology

SCO has commissioned this Review of its Infrastructure Sector, to guide the elaboration of the CS for the 2013-2016 period. The mission was to provide answers on key questions related to the present programme, and to formulate recommendations for the new CS. The mission was carried by a Swiss and a Kosovar consultants, both familiar with the context but not currently involved in the Swiss programme. The findings and recommendations presented in this report are based on a document review and interviews with key sector stakeholders, carried out in February and March 2012.

Key findings

About one fourth of the population of Kosovo has no access to water supply, and more than half are not connected to sewage systems. Almost all of the un-served are living in rural areas. Regional Water Companies (RWCs), in charge of water supply and wastewater, are facing daunting challenges. Their corporate performance is stagnating at a low level, and their relationship with Municipalities is not satisfactory. As a result, revenue is effectively being collected on only 60% of the billed water , on average half of produced water has been lost, and sustainability – the core issue – is not established.

In spite of existing government decisions, management of water resources is clearly insufficiently taking environmental aspects into consideration. Wastewater treatment is at its infancy stage, but there is a growing awareness for this in the Kosovo society and among the donor community.

Ultimately, solving the problems has to do with the general economic development of Kosovo. The Swiss Cooperation, however, has found ways to address the issue at more immediate levels. Two projects have adopted innovative approaches and are bringing about the potential for changes. The Rural Water Supply and Sanitation project has carried out an extensive analysis of the water and sanitation coverage throughout Kosovo, providing the basis for planning focused solutions. And the Water Task Force (WTF) Secretariat has the capability of putting the government in a position to make educated decisions on crucial bottlenecks. The role of Lead Donor of the water sector adds to the potential of Switzerland to exert strategic influence.

A characteristic feature of the Public Infrastructure Domain of the Swiss Cooperation in Kosovo is its integrative engagement and comprehensive approach, addressing water resources (in previous phases) as well as water supply, urban as well as rural areas, and investment as well as capacity building.

Lessons learned

The water sector needs institutional changes in three areas: bring the environment on top of the agenda, continue the institutional building effort, and adjust the distribution of roles and responsibilities. All Swiss projects are bringing opportunities to work in this direction.

The socio-economic context makes it difficult to make the changes sustainable, which is why a gradual pace of change is required. In this context, the affordability of waste water treatment plants (at the same time badly needed, and expensive to operate) must be carefully assessed.

Risks

The main risks faced by the programme are:

1. Aggravating the sustainability of the RWCs of Peja and/or Gjakova if for new WWTP a number of assumptions are not fulfilled;
2. Aggravating the sustainability of *Hidromorava* and *Bifurkacioni* if the integration of the new (Serb) municipalities created under the Ahtisaari plan put an excessive strain on their resources.

In addition, it must be recognized that the institutional environment is still weak and in need of adjustments. Qualitative support is still required to strengthen the institutions.

Recommendations

1. It can be extrapolated from the coverage assessment that 80% rural water supply coverage in the service areas of the two Regional Water Companies traditionally supported by Switzerland can be achieved by 2016. The follow-up approach adopted in another Swiss-supported project, SIWS, should be generalized in next rural activities for better sustainability prospects. Feasibility studies for rural systems should take economic, social and environmental impacts into consideration.

2. Considering the crucial role of institutional changes, including legislation, the best use should be made by the opportunity to make top-level policy decisions through the WTF. Key issues to be addressed are the proper integration of rural water schemes in the RWCs, the property of assets, and the tariff structure. These issues are central for the sustainability of the Swiss investments. The WTF should therefore be supported in the next CS, with sufficient flexibility to adjust to changes in the institutional structure and react to the opinions of local stakeholders and changing donor strategies.

3. A shift of focus towards the environment is necessary, and the intention to invest on waste water infrastructure would be an appropriate answer. Given the sustainability risk posed by WWTPs, an upgradable strategy should be developed through a Sanitation Master Plan, with successive improvement of the sewer networks, introduction of separate networks, and only then stepwise introduction of treatment, starting with primary treatments first, and biological treatments later.

4. All projects should continue to support the overall institutional set-up, with special attention to stronger inclusion of municipalities in water services. In addition, SCO should consider providing support to the RWCs in the South East for the integration of the new municipalities created by the Ahtisaari Plan (these are largely Serb municipalities).

5. On energy, the intention of a program on renewable energy as only option is reasonable, considering the developments in the Kosovo energy sector. Most relevant activities should be related to studies on the potential of renewable energy and small pilot projects.

6. A general recommendation of the Review is that projects should be designed in such a manner that the Swiss engagement gradually shifts towards mentorship, with growing involvement of local capacities. Private sector involvement and outsourcing of services should be strongly encouraged.

CHAPTER 1

Foreword

Switzerland has been providing support to Kosovo since 1999, through the Swiss Development and Co-operation Agency (SDC, a branch of the Swiss Federal Department of Foreign Affairs) and the State Secretariat for Economic Affairs (SECO, a branch of the Department of Economic Affairs). The interventions are coordinated by the Swiss Cooperation Office (SCO). Up to 2009 total civilian support to Kosovo amounted to 300 million Swiss Francs [12][1].

SCO defines a four-year country strategy (CS) for Kosovo. For the current period (2009 – 2012), the CS has defined three domains of cooperation:

> Economy and Employment;
> Rule of Law and Democracy; and
> Public Infrastructure (PIN).

SCO has commissioned a Review of its Infrastructure Sector, to guide the elaboration of the CS 2013 – 2016. The mission was to provide answers to key questions related to the present water programme, and to formulate recommendations for the new CS. The terms of reference (ToRs) are given in Annex 1 and summarised in Box 1. The review mission was carried out in February and March 2012 by Daniel Gubler and by Ilir Rodiqi, sector specialists. This report presents the findings, conclusions and recommendation of the mission. They are based on a document review, and semi-structured interviews with key sector stakeholders (see Annex 2). The preliminary findings were discussed with SCO at the end of the mission, and a preliminary draft of this document has been reviewed by SCO. The observations presented in this report reflect the opinions of the consultants. They do not commit SDC or SECO in any way.

Box 1 – Summary of the Terms of Reference

To assess the present water programm, focusing on the specificities of the Swiss engagement, on sustainability, and on key bottlnecks.

To formulate recommendations for the new CS, taking stock of the priorities of the Kosovo government, and identifing relevant areas of potentially successful contributiions.

To review impact hypothesis on rural water supply and on urban sanitation.

Give special attention to the support to the Water Task Force, and assess the potential of green/renewable energy.

SCO provided a perfect support to the mission, in particular by making its national project officers available throughout the mission. In spite of their busy agendas, senior staff of SCO and local sector organisations made themselves available for interviews. The mission thanks them heartily for their openness and friendly support.

The mission notes that among the considerable documents provided, no external evaluation report was provided, presumably because no such evaluation has been carried out during the period under review. This review report should not be expected to be a substitute for non-existent evaluations.

[1] Numbers in square brackets refer to the bibliography list at the end of the report.

CHAPTER 2

Sector context in Kosovo

The PIN domain of the Swiss cooperation in Kosovo includes: investments in water supply, sanitation and in electricity networks; capacity building support to Regional Water Companies, municipalities and village committees; involvement in policy dialogue through Water Task Force (WTF) and through the role of the Lead Donor for the water sector. The projects cover two different sectors, water and energy, but due to the marginal involvement in energy, water issues will be more thoroughly discussed in this report.

The description of the water sector context in this chapter concentrates on key findings, assuming that overall sector developments are well known to the readers. Table 1 summarizes the coverage figures for water and sanitation services sector in urban and rural Kosovo [11].

Table 1 – Coverage figures for water supply and sewage systems in Kosovo[2]

	Access to water supply	*No access to water supply*	*Access to sewage systems*	*No access to sewage systems*
Total population	76%	24%	65%	35%
Urban population	100%	0%	100%	0%
Rural population	61%	39%	42%	58%

These figures demonstrate that the most crucial backlog is in the rural areas. The comparison of these figures with 2006 data shows that coverage has improved in terms of infrastructure, as stated in the Kosovo Environmental Action Plan [10] p. 38: *"Only 44-50% of the Kosovo's population has access to water supply systems, ... The majority of cities are connected to systems, but less than 9% of rural areas are connected ... 28-30% of the population is connected to public sewage systems."*

"Access to sewage systems" in this context means that households are connected to a sewage pipe network[3].

In addition to the coverage problem, the seven Regional Water Companies (RWCs) are facing challenges in:

> High quantities of NRW (non-revenue water, in the range from 600~2,000 litres[4] per consumer per day); or on average 60% of water that have been produced is not billed [3];
> Low collection rates from 55% to 70% [13], with increasing tendencies[5].
> Inefficient operation and maintenance;
> High electricity bills;
> Unsolved issue of VAT payment[6];

[2] Based on CDI Report "Coverage Study and Assessment of WS&S Systems in Kosovo". These adata may differ from official statistical data.
[3] The sewers however are up to now not connected to a wastewater treatment plant, and – save a few small exceptions – are discharging untreated water into the environment.
[4] Water loss in excess of 600 l/d per consumer is regarded by the International Water Association as *"horrendously inefficient use of resources"* [3].
[5] Revenue collection rate is partialy lower due to unpaid water from customers identified as social cases and citizens from minority regions. Newly drafted Water Policy Paper addresses the problems of poor people.

> Tense relationships with municipalities, mainly on issues of rural schemes, still not harmonized institutionally (see further down in this report);

> Accumulated debts from consumer categories like recently privatised companies or State institutions.

A number of these challenges have been put on the government agenda by the WTF: policy on social cases, VAT, role of municipalities (see Box 2). The institutional environment is evolving positively, but clearly the translation of recommendations into reality is a slow process. The low performance of RWCs is the result of internal weaknesses, reflecting their low capacity in corporate governance. The external impact comes from weak and politically influenced Boards, and insufficient Government involvement in water issues.

Box 2 – Involvement of Municipalities in water and sanitation

In conformity with the Law on Publicly Owned Enterprises (POE), RWCs are owned by the Central Government, under the Ministry of Economic Development. This Law states under Article 3 (Ownership):

> "*3.1 Each enterprise identified in Schedule 1 attached to the present law shall be a Central POE. Every Central POE shall be owned by the Republic of Kosovo*." ... (Schedule 1): Regional Water Companies are: Pristina; "Hidrodrini", Peja; "Hidroregjioni Jugor", Prizren; Mitrovica; "Hidromorava", Gjilan, "Radoniqi", Gjakove.

The same Article, part 3.3. further states:

> "*If an enterprise so identified is providing services either to less than three (3) municipalities or in the field of waste collection, it shall be a Local POE, otherwise it shall be a Central POE. A Local POE so identified shall be owned by the municipality or municipalities in which it is providing service as of the date of its identification as a Local POE. If such a Local POE is providing service to more than one municipality, the ownership percentage of each municipality shall be equal to the percentage of such Local POE's registered customers located in that municipality*."

Such case is with Regional Water Company Bifurkacioni J.S.C, Ferizaj (Ferizaj 85.3% shares, Kacanik 14.7%), identified as a Local Publicly Owned Enterprise.

However, the Law on Local Self Government, in Article 17 (Own Competencies) states:

> "*17.1 Municipalities shall have full and exclusive powers, insofar as they concern the local interest, while respecting the standards set forth in the applicable legislation in the following areas(...) f) provision and maintenance of public services and utilities, including water supply, sewers and drains, sewage treatment, waste management, local roads, local transport, and local heating schemes;*"

This statement is beeing interpreted differently by central and local governments actors. The Central Government very clearly claims ownership for POEs and executes that role based on regionalization of the water utilities. The GoK selects the current Boards of Directors, being willing to accept up to 50% of members from the municipalities of the particular RWC; however, the final appointment will be made by the Government.

Municipalities, however, claim that they have right to be involved in water services because of the previously mentioned Article 17, because of the "decentralization principle" from the Ahtisaari Plan and because the water infrastructure lays in their territory.

Another claim from municipalities is that they have not been able to participate in tariff setting. Where water has been distributed by gravity the costs are lower and these municipalities are not willing to pay high tariffs influenced by other municipalities in the same RWC. This has caused disagreement, to the point that two municipalities (Kaqanik and Decan) have unilaterally moved out of their RWC.

Under such an institutional environment, mayors felt no responsibility to look for the long-term interests of the water company, and their only stake was the political dividends of posing as consumer advocates. Corrective initiative is being taken, with the support of the WTF[7], but has not been concretized by effective changes so far.

The Government of Kosovo administers RWCs through Ministry for Economic Development (MED). This role is played by the Policy and Monitoring Unit (PMU). This unit deals with all POEs covering also other sectors like transport and energy. The control is exerted through BoD. The PMU deals more with the follow-up of the situation, and with policy changes. They are non-voting members in the BoD, they regularly receive reports and minutes of the BoD meetings, along with financial data. Since this unit is dealing with all PoEs, and because it focuses mainly on monitoring the companies, it is not conducting effective leadership. The leadership gap requires that another institution takes this role. Some of the leadership initia-

[6] The VAT burden is high because VAT is charged on invoices and not on effective collection.
[7] The Report "The role of municipalities in the water service sector in Kosovo" [19] commissioned by the WTF Secretariat, recommends balanced solution accepted by most of the stakeholders.

tives were taken by the WTF, which highlights the importance and necessity for the existence of a body like the WTF.

The role of the Water and Waste Regulatory office (WWRO) in sector development is to set up the tariff system and to control the performance of RWCs. New tariffs have been decided from January 2012, based on the RWCs' plans and requirements. WWRO is aware of the weaknesses of the RWCs and requires more accountability from them. Therefore, WWRO wants to penalize companies if they don't reach their targets. Accordingly, recent annual reports have a changed presentation of statistical data. Companies are now asked to prepare accurate Business Plans because, at the end of the year, these parameters will be compared with actual performance, and if the RWCs are not performing effectively the regulator will undertake corrective actions. Again, it can be stated that WWRO has been playing the function of controlling the performance, however still lacks the leadership role to deal with other problems of the RWCs. Just as in the PMU case, the WWRO example shows the need for a leadership capacity to coordinate stakeholders.

Apart from direct involvement in RWC business, the water sector at large falls within the competence of several ministries: the Ministry of Environment and Spatial Planning (MESP, water resources), the Ministry of Economic Development (MED, water and wastewater services), the Ministry of Local Administration (MLA, Municipalities), the Ministry of Agriculture and Forestry (MAF, Irrigation), and Ministry of Health (MH, drinking water quality). This structure shows weaknesses in communication and cooperation; there are problems of overstepping competencies and improper assignation of responsibilities. The main challenges in this environment are: adjustments of legislation, coordination between local and central government levels, and inter-ministerial coordination. Other problems related to water resources have been identified in the Environmental Action Plan 2006 – 2010 [10]:

> "Lack of infrastructure for treating waste water,
> Largely insufficient protection of water from dangerous activities and from pollution in general,
> Low level of maintenance for water infrastructure,
> Insufficient capacity of water supply and sewage networks,
> Lack of a monitoring system,
> Lack of a plan for protection of water reserves,
> Lack of a strategy and of financial means for maintenance of water infrastructure."

Donors are playing key role in overall development of the sector by filling the gaps in investments and constantly supporting sector institutions. Besides Switzerland, the major donors of the sector are KfW, the European Union, USAID, Luxemburg, and the World Bank.

CHAPTER 3

Current Swiss Public Infrastructure Programme

Switzerland, a reliable and respected partner

The PIN domain has currently five ongoing projects. They are succinctly described in Annex 1, and summarized in Table 2. As already mentioned, no external evaluation report is available for any programme component in recent years.

Table 2 – Swiss projects of the PIN domain, as of March 2012

Project *Phase duration*	*Main implementer*	*Partners*	*Phase budget*
RWSSP IV (SDC) Component 1 Component 2 Component 3 Component 4 2011-2013	 CDI KIWER KIWER STE	 RWCs, Mcps; community RWCs RWCs PMU and other Policy making institutions	4.8 million CHF
SIWS Ph. II (SDC) 2012-2013	IRD through USAID	RWCs, Mcps; community	2.0 million CHF
WSSEK (SECO) 2012-2014	Holinger (implementation consultant)	RWCs Hidromorava and Bifurkacioni	7.6 million CHF
Water Task Force (SECO) 2009-2012	Local Advisors Short Term Experts (local & international)	GoK	0.6 million EUR
Gjilani V Substation (SECO) 2008-2012	Alstom Grid and Energoinvest	KEK, Municipality of Gjilan	10.2 million CHF

Being continuously present in the public infrastructure sector in Kosovo, Switzerland is regarded as an exemplary donor, showing seriousness, stability and professionalism. During a decade of institutional changes in the sector, SCO held up with the official strategy of unbundling, merger, consolidation and incorporation, although this strategy diverges from the Swiss principles of decentralization and subsidiary. The Swiss programme brought added value to the sector, through an integrative engagement and a comprehensive approach: water resources/water supply; urban water/rural water; hardware (investments)/software (capacity building).

Switzerland – although not the largest donor – is currently playing the role of lead donor agency for the water and sanitation sector. As such, SCO has been chairing donor coordination meetings of the sector since 2009, and is a permanent member of the WTF. The water donor group is reportedly the most active donor group in Kosovo. SCO is credited for this by all sides: Undoubtedly, Switzerland has gained great visibility by playing this role.

The most visible effects of the lasting Swiss support are to be found in South-East Kosovo, where the two RWCs *Bifurkacioni* and *Hidromorava* have received investment and institutional support continuously since 1999.

Actually Swiss-supported achievements

The ongoing RWSSP IV (Component 1) is an investment project dealing with construction of rural schemes and with their inclusion into RWC management. These projects are implemented with the participation of Municipalities, RWCs and the beneficiary communities. These projects are filling the coverage gap in rural areas. In parallel to infrastructure development, Components 1 and 2 have completed a thorough study on the coverage of population with water and sanitation services throughout Kosovo.

The coverage assessment was an invaluable tool for sector monitoring throughout Kosovo.[8]

The SIWS project is co-financed by USAID. The tasks are the same as for RWSSP Component 1: to build and handover to RWCs new or rehabilitated rural water systems. The methodology of implementation of the project is also similar, with one difference that within SIWS, the implementing partner follows-up the situation of the system for a few years. Both projects, SIWS and Component 1 of the RWSSP IV, are successful.

Nevertheless, sustainability cannot be taken for granted and the weaknesses of the system have to be addressed. Component 2 of the RWSSP aims to support the integration of rural systems in RWCs. The approach is to work with all stakeholders, to reach the main objectives, which are to build instruments for improving the management, operation and maintenance (O&M) capacities of the rural schemes. This is done through training and coaching activities in the service areas of three RWCs (Pristina, Prizren and Ferizaj). Additionally, Component 2 is developing instruments for enabling the participation of Municipalities in the rural schemes; advocating for the rehabilitation of non-functional rural systems; introducing private partnership scheme in a pilot case; and introducing and monitoring the implementation of revised service agreements [22].

Component 3 aims at improving the financial sustainability of RWCs through improvements in Sales and Customers Departments. The methodology of this component is direct involvement and coaching with line managers to improve revenue collection, reduce water losses as well as operational costs. Specific objectives are to: develop and follow up action plans; coach and support the Finance and Consumer Care Departments; coach on investment planning; explore the potential for Public Private Partnerships; develop lobbying capacity; and support awareness campaigns [22].

Departing from the South-East, the Swiss programme has now country-wide institutional components. This started with the initiative to support the establishment of the Water Task Force (WTF) as government body responsible for addressing and coordinating water issues at the top level. The SECO project is not the WTF itself – the body of ministers – but the Secretariat, manned by long-term advisors (one at the time of the Review) supported by short-term local and international consultants. As a major achievement, the WTF brought up water policy issues on the agenda of the Government. This is mainly done through the production of thematical papers (Box 3). These address crucial sector issues, and provide an excellent basis for the decision-making process. Clearly, the decisions themselves, and their implementation, is outside the scope of the Secretariat. The potential of this project will be discussed further in the next chapters.

[8] Framed text such as this one, indicate “key issues” identified by the review. They will be addressed on page 13, and in particular in Figure 2.

Box 3 – Studies produced by the WTF Secretariat

The WTF has produced the following studies between 2009 (the list may be incomplete):

> Water Mass Balance;
> Role of Municipalities [19];
> Institutional Appraisal of the Water Sector;
> Support to capital investments planning process;
> Building Procedural Framework for Development of efficient Revenue Collection System;
> Legal Review of the Water Sector;
> Flood Protection Management Framework;
> Drought Management Framework;
> Development of Academic Programme;
> Water Policy Paper.

Finally, investments in energy infrastructure have addressed critical needs for energy in the Gjilan region. Such an emergency situation can now, to some extent, be regarded as a thing of the past.

Sustainability is the core problem

The Annual Performance Reports [3; 13] show that the two RWCs supported for a decade by Switzerland does not perform better than the five other RWCs (see Box 4).

Box 4 – Why are the RWCs supported by Switzerland not better than the other ones?[9]

The facts: **A few figures on the water supply performance of *Bifurkacioni* and *Hidromorava* for 2010 [3]**

	Ferizaj		*Gjilan*	
	Value	*Rank*	*Value*	*Rank*
Service reliability % properties with 24 hr supply	15%	5th	97%	2d
NRW % of production	59%	1st	60%	2d
Service coverage % householdes	69%	4th	45%	7th
Water sales to households % of plan estimates	41%	7th	48%	6th

Constraints common to all RWCs have been briefly reviewed in the previous chapter. The specific situation of Bifurkacioni and Hidromorava could be in part explained by their size (they are the smallest in Kosovo) and their bad situation in the pre-war period. All other RWCs were also supported by donors. Some questions that remain are:

- Are donors of more successful RWCs making their contributions subject to any conditionalities (enforcement of decisions, respect of cooperation agreements, appointment of managers, etc.)?
- Are Swiss projects lacking Implementation Memoranda of Understanding that would make the aid subject to reaching performance targets?
- Donors recognize that low competence can be addressed by training programmes. Is this approach extended to ineffective executives, or should donors require competent executive officers in their projects?

The sustainability of the Swiss investments is being threatened by the lack of capacities of involved stakeholders.

The issue is **physical sustainability** of investments and the **financial sustainability** of the RWCs. These two elements are interlinked because a prolonged deficit of financial capacity makes it impossible

[9] This Review has no mandate and ambition to answer this question, for which a three-week external evaluation by a multidisciplanary team would be more appropriate.

to consider replacing obsolete infrastructure, creating thus a vicious cycle jeopardizing future developments. The problem is intricate, and ultimately, it has to do with the general economic development of Kosovo. Short terms approaches will be discussed later in this report but let us mention here one concrete example heralded by SCO in past programme components, and now in Component 3 of RWSSP (in Pristina, Gjakova and Ferizaj):

The District Metered Area[10] is a replicable approach for lasting reduction of non-revenue water.

The sustainability of the impacts of the Swiss programme is being affected by the country-wide weaknesses outlined previously. Many bottlenecks require tough decisions at the central level. The instrument of the WTF provides SCO with influence to change current practices. Therefore, the WTF has a key role to play to ensure sustainability of the projects.

[10] Frequently referred to as “Pilot Zone”.

CHAPTER 4

Prospects of the new CS

Government priorities in the water sector

The government policy is spelled out in the program of the GOK 2011-2014 [9]. This document has not identified water as one of priority issues. However, the MED in its Strategy 2011 – 2014 is foreseeing support to public enterprises in general (including water) through these objectives [16]:

1. Improve service level of the companies and increase their respective asset value.
2. Train members of BoD and other officers on corporate governance, aiming to increase internal control and customers' satisfaction;
3. Support POEs with grants and subsidies;
4. Involve private capital in form of concessions;
5. Improve the performance of POEs by progressing on operational indicators.
6. Improve capacities of the Policy Monitoring Unit (PMU) through fulfilment of staff, international technical assistance and training in corporate governance.

In relation to water resources, it is planned to prepare and approve a new Water Law, establish the Water Council and complete the Water Strategy (an EU project currently in the tender process). Other projects are related to infrastructure investments and capacity building similar to the MED programme.

In the energy sector, GOK is trying to attract attention for renewable energy: hydraulic, windmills, geothermal and biomass. The study of possible alternative orientations in this prospect has been developed by USAID [15], and shows that Kosovo has a limited capacity for renewable energy; it proposes slow pace of contribution.

Objective needs of water sector

Institutional changes

The water sector in Kosovo requires several immediate actions. First, the GoK should pay more **attention to the environment** and overcome fears of an adverse financial impact. Adding the environment in policy agendas can have impact not only in solving water and energy problems but also in improving the economy, as environment protection has a strong potential of private sector involvement.

The next problem that requires vigorous intervention is **institutional building** through local initiatives and with the support of the donor community. Past and current approach in GoK was to reserve most of the finances for capital investments and rely on donor initiatives and support for so called "soft" projects which cover: internal strengthening of institutions, research and analytical studies, feasibility studies and trainings. Such an approach has, up to now, made an impact in filling the gaps but did not achieve success in developing institutions. The reason for this is because many projects have been designed following international models which were unsuitable to local capacities or do not match the absorption capacity of the partner. It is important that local actors participate actively in the preparation, design and

implementation of projects, as done in RWSSP Component 1 and SIWS at the micro-level, and in the WTF at the macro-level.

The third urgent need for Kosovar water sector institutions is to **adjust the roles and responsibilities**. The Review shows that although the inconsistency in the relationship between GoK as stakeholder of RWCs, and municipalities and/or other institutions, has been identified and placed on the agenda[11], achieving results is taking time. To improve this, it is necessary to establish institutional mechanisms of coordination. For example, the WTF is a mechanism to identify problems and suggest solutions which can be very useful if the GoK decides to implement them. Another mechanism is the Service Agreement between RWCs and Municipalities, complemented with the participation of municipalities in the BoD. Next important instrument in coordinating the water sector development is the facilitation between water services (MED) and water resources (MESP).

Achieving reasonable level in operation and maintenance

RWCs require change in their approach towards operation and maintenance (O&M). Up to now, maintenance of the assets has been done on ad-hoc basis by interventions on identified problems (focus on emergency maintenance). A preventive maintenance approach has to be taken by the companies, including recurrent and periodic maintenance, in addition to addressing emergencies. This should be target also for supervision and monitoring institutions like PMU and WWRO.

Billing and revenue collection

Several factors are hampering the introduction of successful revenue collection by public utilities. The problems are known (Box 5), but solutions are slow to come about, for capacity, political and other reasons. Switzerland, as sponsor and member of the WTF, can promote solutions at the highest level.

Box 5 – Revenue collection

Revenue collection is still carried out by door-to-door collectors *("inkasant")*: a RWC officer visits each house and requests payment of the water bill. Causes of inefficiency of the system are: unsuccessful "knock on the door", intimidation, low daily target and lack of incentives for the collector [20].

The follow-up of debts is carried out as a bureaucratic duty rather than through solution-seeking dialogues.

An alternative solution, now being introduced in some RWCs, is to have collection points (a water company office in town), including also a complaint registration point, supported by better customers care activities.

Interesting approaches are being tested, as more immediate, albeit partial, solutions. For instance, it is recommended to disseminate and enforce the policy of phasing out the door-to-door collectors and have collector points instead (as done in the Pristina RWC), and to keep updating the customer data base. In Gjilan and Viti, a somewhat radical approach is reportedly being implemented successfully:

Payment of water bills is made a condition for obtaining municipal services[12].

Alternatively, the WTF is pursuing this issue through various approaches, such as law on execution, law on obligations, policy for social cases.

[11] In the last Water Conference organized by WTF on June 2011, the decision has been made to invovle municipalities in decision making of RWCs but very little progress has been done by now.

[12] Such as building permits, municipal licences, etc. While this approach can bring about effective results, its compatibility with the Rule of Law principle has yet to be demonstrated…Further, this approach may be argued to be against human rights, and may deincentive the companies to meet customer complaints, since customers may be obliged to pay for services they may object to.

Highlighting the advantages of the Swiss cooperation

One opportunity for Swiss programmes is to support the institutional integration of the sector towards EU requirements. Necessities for integration with EU can bring enough content for interventions. However, an operational policy shift to be considered is to engage local players, especially in designing new institutional mechanism and coordinating activities. Newly initiated Swiss projects should install intervention methodologies such as: mentoring or coaching, participative methods of project management, and facilitative leadership. For instance, in definition of new strategies for the particular institution or group of institutions, "scenario planning" can be very useful approach because it enables all stakeholders to participate in definition of solution. In such case, through their participation, stakeholders consider the final result as their own success and later they are more keen to support it.

Twinning should be considered with institutions in countries that have adopted the model of single-purpose utilities that could be privatized (UK, France, Albania). Indeed, this is not the case of Swiss utilities, which are mostly multi-purpose municipal utilities.

Relevance of supporting the Water Task Force

The WTF has so far legitimacy only as an inter-ministerial committee. As such, relying on the pool of expertise of the WTF Secretariat provides it with intellectual leadership. Supporting the WTF Secretariat puts Switzerland in a key position, where bottlenecks can be addressed and interventions initiated. The issue is furthered discussed in the next chapter.

Relevance of keeping a leading role in the water sector

This role is welcomed and unchallenged. Keeping it gives Switzerland (well deserved) visibility, but also the possibility to influence the course of events. Potential issues are institutional reforms, coordinated donor policy (conditionality), or the pace of introduction of tougher environmental standards. Even if the water donor group is the most active one, a more proactive role of the lead donor would not hurt. Examples of possible initiatives are:

> Formulate a common donor strategy for sustainable wastewater management (including due consideration of the operation and maintenance costs, see also Box 6 in the next chapter), and negotiate it with the authorities (in particular with the Regulatory Office);

> Consider commissioning a multi-donor evaluation of the "Consolidation/Regionalization Strategy" ten years after it has been initiated by the donors: In retrospect, were the right decisions made? What institutional changes – if any – should be brought? The point is *not* to propose a change of course to the government. It is to throw a critical light on the long-term impact of a key decision, *for the benefit of donors*, who have a considerable responsibility in bringing about the existing institutional set-up.

The leading role provides information and the possibility to exert influence and Switzerland has everything to gain by continuing to play this role for the next few years.

CHAPTER 5

Impact hypotheses

Rural water supply

Progress of the Review so far confirms the impact hypotheses on rural water coverage by 2016. It can be extrapolated from the coverage assessment [11] that:

80% coverage in the rural areas of project intervention can be achieved by 2016.

This optimistic estimate is valid for the area of intervention of RWSSP IV only, based on previous results in the area and on the established approach. It is also based on the assumption that the institutional issues with the municipalities will improve rather than deteriorate. The issue, then, is not target achievement, but sustainability of impacts.

A key success feature of SIWS is monitoring of water supply efficiency by project staff beyond the handover of the infrastructure to the RWC. This should be generalized to all rural projects:

Sustainability of the intervention will be enhanced by adopting a follow-up by the implementer beyond the warranty period.

Feasibility studies for rural schemes should address also economic, social and environmental issues (through a standardized approach). Component 2 of the RWSSP has the mandate of addressing sustainability. A reflection on that component might lead to widening its scope, to include human resources at large (job description, not only training), and possibly logistics aspects of capacity building. Alternatively, the possibility of outsourcing the maintenance of rural water and sanitation infrastructure to private mobile teams could be considered.

Who owns assets provided by joint funding of the municipality and the donor (and, in certain cases also by the beneficiary themselves)? At the moment of handing over rural systems to RWC management, the assets should be transferred to the Water Company. However, municipalities are hesitating to hand over assets that have been financed with their own contribution.

The issue of ownership of the assets of rural water and sanitation projects must be resolved.

The current policy is that the water tariff is to be common in the entire service area of a given RWC. This policy has the merit of equity (the burden is the same for the lucky and the unlucky ones), but is not generally accepted. On one hand, customers connected to a gravity-fed water supply system, be it at the level of an entire municipality (Kaqanik) or, more frequently, at the level of rural systems, feel they pay too much. On the other hand, RWCs know that the costs of O&M of borehole based rural systems are not covered by the tariff.

The water tariff must be adjusted and made acceptable to all.

It is recommended that policy makers analyse again the issue of tariff structure, either by endorsing a lower tariff for gravity systems, or, better, by convincing the population of the equity aspect of a unified tariff. The WWRO should be strongly encouraged to wrap its decisions in a good communication package.

Urban sanitation

Save in one small town, no wastewater treatment plan (WWTP) exists up to now in Kosovo. Yet the requirements of environment protection amply justify investing in waste water treatment plants, and the donor community, aware of the issue, is shifting priorities in that direction. For SECO, co-financing WWTP projects in Peja and Gjakova in a joint venture with KfW has the merit of simplicity of implementation and the risk of threatening the sustainability of the RWC.

Figure 1
Outfall of the Ferizaj waste water in the Nerodime River

The introduction of WWTPs in Kosovo will have considerable consequences. In order to avoid the risk of creating "white elephants[13]", careful consideration must be given to a number of issues. The Review mission hopes that these reflections have been done, but in any event let us propose a checklist (Box 6).

Box 6 – Checklist for a WWTP programme

In its dialogue with KfW, SECO is advised to raise the following issues:

- Who has formally requested the donation of the WWTP?
- What are the proofs of GoK commitment for the serious support of sanitation once WWTPs are completed?
- Is the triburary sewer network a combined or a separate system[14]? (see Annex 3 for definitions);
- Have the operating costs been estimated?
- Who will pay for the operating costs? The consumers? If so, has the new tariff been estimated? Will unconnected rural populations contribute to paying the operating costs of the WWTP?
- What are the operation requirements in terms of manpower (number and qualifications)?
- A WWTP removes sludge and other rubbish from the waste water. How will these be disposed of? Is that compliant with existing or expected legislation? Do the operation cost estimates take sludge disposal into consideration?
- Has a staged implementation been considered? Could there be a first phase with just a pretreatment unit? That would consist in a screening unit and settling basins, with the biologogical treatment unit (presumably activated sludge) being provided later.

Additional considerations from a strictly Swiss point of view:

- Will Swiss firms be allowed to participate in the procurement? Presumably yes, but what are the odds that the SECO contribution is used for the purchase of Swiss goods and services, given the current EUR/CHF rate of exchange?

[13] Expensive investment that turns out, after completion, to be useless or unmanageable.
[14] *Combined system*: storm water and wastewater are evacuated through one single network; the usual situation in networks without treatment. *Separate system*: there are two networks: one for stormwater (leading to the closest natural discharge point), and one for wastewater (the sewer, leading to the WWTP). Combined systems entail oversized WWTPs and require stormwater overflows that will discharge polluted water in the natural environment.

If satisfactory answers can be brought to the above concerns, then prospects for a sustainable contribution to needed environmental improvements exist. If, however, answers are formulated as assumptions, these could be **killer assumptions** and extreme caution should be exerted.

The mission recommends to adopt (alternatively or additionally) a stepwise approach, as proposed by the director of *Hidromorava* in Gjilan, and **rehabilitate the sewer network before building a WWTP**.

Establish a sanitation master plan as basis for network rehabilitation.

The main steps of such a master plan are a sewer diagnosis (network cadastre, TV inspection, hydraulic modelling), and a sanitation concept (feasibility study of the rehabilitation). There is a considerable know-how on this in Switzerland, where all municipalities have been required by law to work out such a master plan[15] (see Annex 3). A key feature of such a master plan is the preparation of the implementation of a separate system. A WWTP could then be planned for the following phase, following lessons learned from the KfW projects.

Most activities of a sanitation master plan can be outsourced.

Wastewater treatment could be part of a sanitation master plan and be introduced stepwise as mentioned in Box 6, beginning with primary treatment based on low-cost technologies.

Water Task Force

The Water Task Force was initiated in the right moment and has contributed in placing water issue high on the GoK agenda. Although, the mandate of WTF has no legal base, through the activities of its secretariat it has improved awareness for water issues as well as showed a model for coordination of the entire sector.

The support to the WTF provides access to the level of decision making where addressing major bottlenecks is possible.

Under the current circumstances of the water sector, the WTF is of utmost importance and it should continue its work. In the next period of water sector development it is crucial to have a body that will oversee, coordinate and initiate changes in the whole sector. Relying on the support of a foreign donor like Switzerland is an asset. The commitment of the donor improves the reliability, in a context in which all inter-organizational responsibilities are lacking stability.

However, for the sake of improvements and increase of effectiveness, the WTF structure needs adaptations. These adaptations should be designed through separate studies and should take into consideration:

> The WTF should play a leadership role and its Secretariat a facilitating role. The structure of the WTF should change so that the Secretariat gains some operational capability in addition to advising politicians (the Secretariat could for example organize a decision-maker retreat; initiate solutions or

[15] *"Plan général d'évacuation des eaux/Generelles Entwässerungsplan".*

policies (like now) but also follow-up and report on the results). The evolution towards a Water Council must be taken into consideration, taking into account the differing interests of the stakeholders.

> Involvement of a local external team of experts to support the Secretariat with research studies and other analysis. When needed, international expertise can also be involved (as done until now).

> WTF should also play a role in coordinating problems related to rural schemes. If it doesn't, then it will be necessary to establish an *ad hoc* body for rural water and sanitation systems.

As examples, the WTF Secretariat activities could:

> Be involved in clarifying of procedures between municipalities, RWCs, MED, WWRO, on supporting RWCs in O&M of water and sanitation systems;

> Follow-up the issue of membership and quality of BoDs, and report the results;

> Mainstream the Rural Water Technical Standards Manual (RWSSP);

> Commission a survey of groundwater in Kosovo, and/or commission a study on the need to develop new water resources;

SDC may want to consider supporting the WTF in its entirety or by contributing with short-term experts.

Synergies with Component 4 of the RWSSP could be considered.

Green energy

The **viability of renewable energy has yet to be demonstrated in Kosovo.** The government has recently started to support the preparation of scenarios in that respect [15;18]. These scenarios show that the development of renewable sources will take place gradually, with windmills and biomass having more potential than solar energy.

Since the development of plans for renewable energy will take place at a slow pace, and since on the other side the regulatory base is still not in place, it is more suitable for the next CS to carry out analysis, assessments, feasibilities related to renewable energy. Small pilot projects with the participation of private capital could also be challenging and attractive.

A phase of studies and small pilot projects on renewable energy should be considered: biomass energy, solar energy, and green architecture are possible areas of intervention.

Regarding the opportunities for supporting renewable energy, considerable experience exists in Switzerland on building isolation, on biomass energy (digestion of green wastes) etc. In Kosovo, at this time the stress must be put on stimulating potential stakeholders, initiating small pilot projects and attract efficient technology.

Solar energy inclusion can be initiated in individual households and other buildings through pilot projects to show opportunities for savings of energy consumption through use of solar power.

Another approach would be to **reduce the consumption** of energy and heating. Given the high consumption of firewood for residential heating, building insulation and good forest stewardship are crucial.

Other donors (GIZ and EUOK) are already involved in energy saving projects and Switzerland might leave these concerns to their initiatives. However, there is a potential in energy savings and in environment-friendly initiatives through **green construction** where projects can cover: Awareness for environmental behaviour; separation of waste in the households and institutions; composting, micro waste water treatments for individual buildings, utilization of rainwater for gardening, etc.

CHAPTER 6

Conclusions and recommendations

The areas of interventions of the SCO programme can be represented in a triangle (Figure 2) having as vertices the **people** (the programme's ultimate beneficiaries),the **infrastructure** or "hardware" (pipes, treatment plants, reservoirs and other operational facilities), and the **institutions** or "software" (RWCs, municipalities, government). The three sides of the triangle are **service use, engineering,** and **governance.**

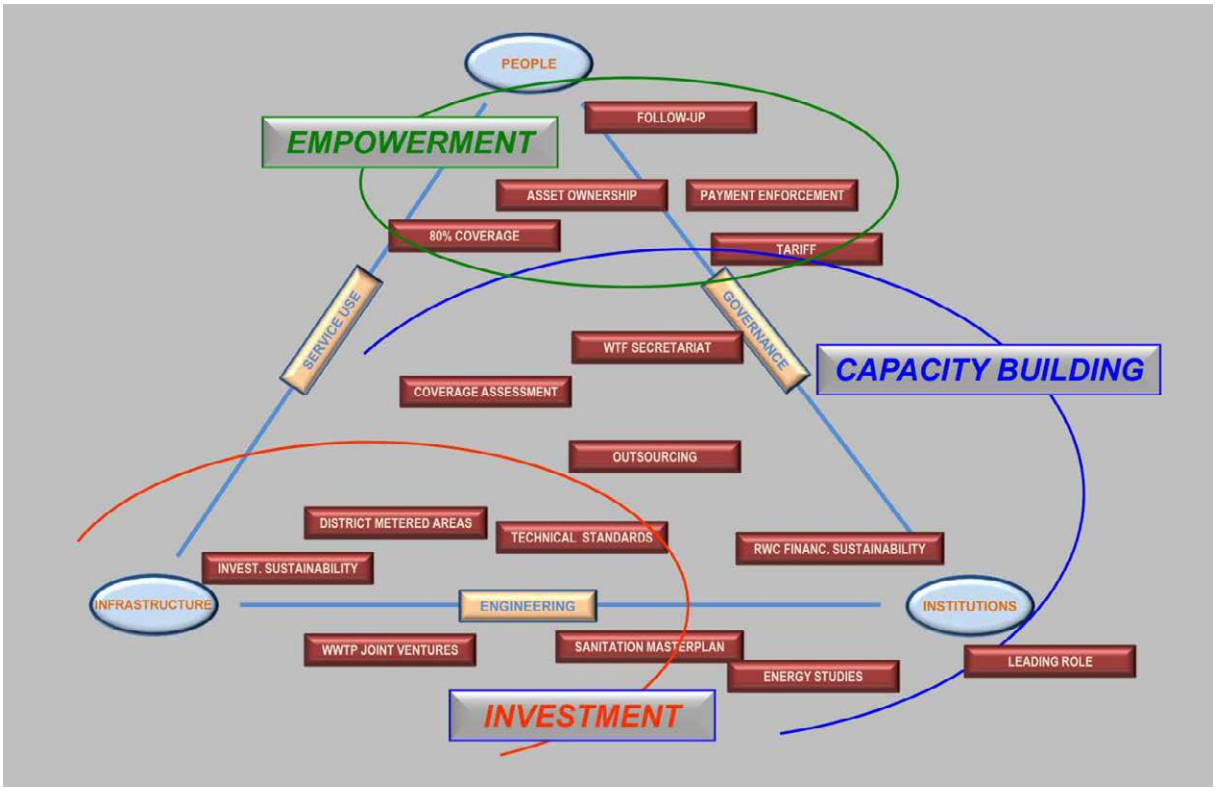


Figure 2 – PIN Issues and strategies

Along this triangle, we may position the issues that, in the view of the review team, need to be considered in addressing the core problem of sustainability[16]. They can be grouped along three available strategies:

> **Service delivery**, focusing on the infrastructure;

> **Capacity building**, focusing on institutions; and

> **Empowerment**, focusing on people (helping them to get what they are willing and able to afford).

> The Review shows that the integration of these approaches is an appropriate strategy and should be taken into account. The final recommendations of this Review are:

[16] Framed text in the previous chapters.

7. It can be extrapolated from the coverage assessment that 80% rural water supply coverage in the service areas of the two Regional Water Companies traditionally supported by Switzerland can be achieved by 2016. The follow-up approach adopted in another Swiss-supported project, SIWS, should be generalized in next rural activities for better sustainability prospects. Feasibility studies for rural systems should take economic, social and environmental impacts into consideration.

8. Considering the crucial role of institutional changes, including legislation, the best use should be made by the opportunity to make top-level policy decisions through the WTF. Key issues to be addressed are the proper integration of rural water schemes in the RWCs, the property of assets, and the tariff structure. These issues are central for the sustainability of the Swiss investments. The WTF should therefore be supported in the next CS, with sufficient flexibility to adjust to changes in the institutional structure and react to the opinions of local stakeholders and changing donor strategies.

9. A shift of focus towards the environment is necessary, and the intention to invest on waste water infrastructure would be an appropriate answer. Given the sustainability risk posed by WWTPs, an upgradable strategy should be developed through a Sanitation Master Plan, with successive improvement of the sewer networks, introduction of separate networks, and only then stepwise introduction of treatment, starting with primary treatments first, and biological treatments later.

10. All projects should continue to support the overall institutional set-up, with special attention to stronger inclusion of municipalities in water services. In addition, SCO should consider providing support to the RWCs in the South East for the integration of the new municipalities created by the Ahtisaari Plan (these are largely Serb municipalities).

11. On energy, the intention of a program on renewable energy as only option is reasonable, considering the developments in the Kosovo energy sector. Most relevant activities are related to studies on the potential of renewable energy and small pilot projects.

12. A general recommendation of the Review is that projects should be designed in such a manner that the Swiss engagement gradually shifts towards mentorship, with growing involvement of local capacities. Private sector involvement and outsourcing of services should be strongly encouraged.

Risks

The main risks faced by the programme are.

> Aggravating the sustainability of the RWCs of Peja and/or Gjakova if a new WWTP a number of assumptions are not fulfilled (see the checklist in Box 6);

> Aggravating the sustainability of *Hidromorava* and *Bifurkacioni* if the integration of the new (Serb) municipalities created under the Ahtisaari plan put an excessive strain on their resources.

Regarding the first risk KfW should be requested to bring satisfactory assurance. For the second risk, SCO could consider an appropriate support project.

To mitigate the risk on the ability of SCO to steer the program, it is recommended to foresee timely evaluations of the projects.

List of documents reviewed

[1] – (2009) “Cooperation Strategy, Kosovo 2009-2012”. Berne: SDC/SECO.

[2] – (2008) “Annual Performance Report of the Public Water and Waste Companies in Kosovo, 2007”. Pristina: WWRO.

[3] – (2011) “Annual Performance Report of the Public Water and Waste Companies in Kosovo, 2010”. Pristina: WWRO.

[4] – (2012) “Water Sector: Contributions of the Swiss Government 1999/2013”. Pristina: SCO.

[5] – (2011) “Kosovo Annual Report 2011”. Berne : SDC/SCO.

[6] – (2010) “Kosovo Annual Report 2010”. Berne : SDC/SCO.

[7] KOKOLLARI R. (2009) “External Review of the Domain of Cooperation – Public Infrastructure”. Pristina: SCO.

[8] – (2010) “Report – The state of water in Kosovo”. Pristina: MESP.

[9] – (2011) “The Program of the Government of the Republic of Kosovo 2011 – 2014”. Pristina: Government of Kosovo.

[10] – (2006) “Kosovo Environmental Action Plan 2006 – 2010”. Pristina: MESP.

[11] – (2012) “Coverage Study and Assessment of Water and Sanitation Systems in Kosovo”. Pristina: CDI.

[12] – “Swiss Cooperation in Kosovo at a Glance, 2009-2012”. Pristina: SCO.

[13] - (2011) “Performance Report of Public Owned Enterprises”, MED, PMU POE.

[14] – (2011) “THE ROLE OF MUNICIPALITIES IN THE WATER SERVICE SECTOR IN KOSOVO”, WTF, SCO

[15] KAMMEN, D. Et all (2012) “Sustainable Energy Options for Kosovo - An analysis of resource availability and cost”, Renewable & Appropriate Energy Laboratory Energy & Resources Group University of California, Berkeley

[16] – (2011) “Strategic development plan of Ministry for Economic Development for the period 2011-2014” (in Albanian), MED

[17] WALDRON, J. (2011) ”Further Institutional Strengthening Support To WWRO Project”, Report on Collection Efficiency Issues No 1, EU-WATREG, ECLO PROJECT 2010/235-011

[18] – (2009) “Strategy for energy of Kosovo Republic 2009 – 2018”, Ministry of Energy and Mining.

[19] HOLZMANN F. (2011) “The Role of Municipalities in the Water Service Sector in Kosovo”. Pristina: SCO/GOK

[20] RODIQI I. (2009) “Research-Action Module on Revenue Collection, Final Report.” Pristina: Perreten & Milleret SA.

[21] – (2011) “The Mid-Term Expenditure Framework (MTEF) 2012-2014 is approved”. Pristina: Gap/Monitor

[22]] – (2011) “Final Inception Report” , Local Consultants to implement Component 2 - Enhance capacities for sustainable operation and maintenance of rural water systems, and Component 3- Improve the financial sustainability of the Regional Water Companies of the Rural Water and Sanitation Support Program Phase IV

Annexes

1. Terms of Reference

2. List of people met

3. Sanitation Master Plans: the Swiss practice

ANNEX 1

Terms of Reference for a Consultant

to conduct a Review of the Infrastructure sector of the Swiss Coordination Office in Kosovo, namely in water and energy for the elaboration of the CS in Kosovo

The Swiss Cooperation Office Kosovo (SCO-K) is soliciting the services of an experienced consultant or of team of consultants (one local and one international) to conduct review the Infrastructure sector (namely water and energy) to guide the SCO-K in setting the general framework for the elaboration of the Country Strategy (CS) 2013 till 2016. The terms of reference outline the framework upon which the prospective consultant shall provide his / her services.

1. Context

1.1 Background

The Swiss contributions within the Public Infrastructure (PIN) Domain, has targeted mainly the supply of drinking water in urban and rural areas of South-Eastern Kosovo since 1999, as well as the transmission of electric power of the same region. Since 2011, Switzerland was expanding the interventions also in the central and western part of Kosovo, including also newly established municipalities with Serbian majority community. The institutional and financial sustainability has been the core objective of the Swiss support.

The Program is financed partly by SECO and partly by SDC, and the projects allowed the Swiss Cooperation to become one of the lead donor in water supply. The establishment of the Water Task Force in 2009 (WTF), an inter-ministerial coordination body for the water sector at the highest decision-making level, was particularly important.

The Swiss Cooperation is involved in technical issues concerning water and energy infrastructure, but also increasingly on institutional issues regarding the provision of water services to the public, as well as on the sustainable management of water resources. For this reason, last year the SCO has developed a comprehensive intervention approach; combined program of direct technical investments in water infrastructure with the soft components of capacity building where special attention is given to the development of effective public services and utilities.

Main achievements of investments in urban and rural areas:

- Around 150'000 people in urban area have access to safe drinking water (by improving infrastructure in the towns of Gjilan, Ferizaj, Kamenica, Kaçanik and Viti) and improvement of the water quality through rehabilitation/construction of water treatment plants in the towns of Gjilan, Ferizaj and Viti
- Water supply & sanitation systems in place in around 60 villages; Around 140'000 people have access to safe drinking water & sanitation.

1.2 Result statement (overall assessment on results achieved in 2011)

The synergetic SDC and SECO interventions represent the continuation of long term Swiss engagement in the water sector in Kosovo. This resulted not only in improving the water services in rural areas but also enhancing the management of the water utilities and the promotion of water policies. The Swiss funded Water Task Force (WTF) had a significant impact in the sector at national level.

Within the frawork of the Rural Water and Sanitation Support and Small Infrastructure (RWSSP) for Water and Sanitation (SIWS) *projects* 8 new water systems and 3 sanitation facilities will be completed, covering 18 villages within 6 selected municipalities with 45'000 inhabitants.

Women and children in all beneficiary villages have actively participated in the awareness training programme on water-borne diseases and rational water use.

Despite all these efforts, the water supply and sanitation situation in Kosovo remains a challenge: Only 69% of the population receives water through public systems, on average only about 42 % of the water produced is billed to costumers and only 64 % of the bills are paid. Comparing with 2009, water production increased by 5% in 2010 and the total billing increased by 6%.

The construction work of Gjilani V Substation started in July 2011 and is scheduled to be finalized in 2012.The project which will contribute to the stabilization of the electricity network will serve directly around 134'000 people.

1.3 Information on the major active projects

The main projects are: RWSSP IV, SIWS, SEWSP (seco), Gjilane V substation (seco) and Water Task Force

RWSSP IV:

Goal of project: Improved health and well-being of communities through sustainable water and sanitation services in line with Kosovo national sector strategies and legislation.

The project has four components, its objectives are:

- Component 1: increase access to water and sanitation in rural areas; 50'000 additional inhabitants of 26 villages in 6 selected Municipalities in SE (Gjilane, Ferzaj, Kamenice, Viti, Raniluk, Suha Reka) will have access to piped drinking water
- Component 2: enhance capacities for sustainable operation and maintenance of rural water systems. Provide technical assistance to RWC's on sustainability of rural systems and integration of these systems into the management of respective RWC.
- Component 3: improve RWCs' financial sustainability; technical assistance to improvements of service quality, revenue collection and non revenue water and decrease of water losses. Tailor made training modules will be developed based on the identified needs and requirements.
- Component 4: strengthen capacities of policy making institutions at the national level, mainly in the area of water services.

SIWS:

The overall goal: improved health conditions and socio-economic well being of the population of around 35 villages in 4 municipalities (Peja, Lipjan, Malisheve and Dre-nas) through investments in the water and sanitation sector, and to promote the sustainable operational management of such infrastructure in line with the Kosovo Water Law.

SEWSP:

Goal of project : to improve the water supply service and water quality in the municipalities of Ferizaj and Gjilan, as well as to enhance the sustainability of the two supported RWC's Hidromorava and Bifurkacioni and therefore of the former Swiss investments.

In order to improve the water safety and water supply in Gjilan and Ferizaj and to safeguard the sustainability of previous investments, the project expected outcomes are:

- network rehabilitation and extension in Ferizaj and complementary measures at the existing surface water intake in Proii I Syles (Ferizaj),
- an upgrade of the existing billing and accounting software of RWC Bifurkacioni. Replacment of the existing reservoir on Popovica Hill in Gjilan with a new and larger reservoir.

Gjilani V Substation:

The overall goal: Improve the 110/20(10) kV energy distribution system of Gjilan Municipality, aiming at achieving a sufficient and reliable energy supply at the southeast region of Kosovo.

Specific objectives are:

- Improvement of the power infrastructure and living conditions in the Gjilani region.
- Contributing towards stabilisation of Kosovo's energy sector
- Consolidation of SECO's previous investments in the energy sector in Gjilani

Expected results:

- Construction of a new Transformer station 110/20(10) kV, 31.5 MVA, Construction of about 9 km 110 kV Overhead Transmission Line, Construction of 20 kV Distribution Network connections.

Water Task Force

- The water task force (WTF) is an inter-ministerial task force composed by five ministries and lead by a Dep. Prime Minister. The Task force deals with issue of national interest which are beyond the competence and responsibility of a single ministry. The WTF is supported by secretariat with two Advisors and uses based on needs short term specialist. The water task force has been created on the demand of the government in 2008 and it shall be transformed into a National Water Council. The WTF has been solely financed by Switzerland.

Leading Role of Switzerland

- Due to its longstanding engagement, Switzerland has been nominated since 2009 the lead donor agency for the coordination in the water sector. Switzerland chairs the donor water meeting on monthly basis and it is a permanent member of the WTF.

2. Objective of the assessment

The present chapter outlines the facts, assumptions and questions related to the present country strategy (CS) and related to the new CS which is to be elaborated. **These are the lead questions for the Review to be answered.**

2.1 Water: Facts, Assumptions and Questions

Facts about present water domain:

- There has been a continuous Swiss engagement starting with Humanitarian Aid in 1999 which was taken over by SDC and SECO programs;
- It is a comprehensive approach: urban and rural, water supply and sanitation, all levels involved including highest level with Water Task Force

Comment on present portfolio:

- In water, there has been a program approach the main goal was to support a sustainable water supply system in Kosovo and the different actions at different levels were done in a coherent manner

- Switzerland / SCO has an excellent reputation due to its long standing and consistent water engagement

Questions, related to the present water programme

- What difference did the Swiss engagement make?
- Is the leading role in the sector a fact (or just a perception) and is it justified?
- How many of the systems which have been built by Switzerland are still in operation now?
- What is the development of the water sector as such and what was the Swiss contribution?
- What is the sustainability of the Swiss intervention so far? (Answer to be based on interviews and not on depth study).
- Why are some core parameters in the water sector like revenue water and billing not progressing?
- Was the level of the (financial) resource allocation during the previous CS (2009 -2012) adequate to further its objectives? What would be needed to make a difference / deploy a comparative advantages of Switzerland in the sector for the new CS?

Questions related to the new CS:

- What are the priorities and planned development interventions of the Kosovo Government in the water sector?
- What are the objective needs in improved water supply and sanitation (for new systems),
    - What is the objective needs in water supply and sanitation, is it measurable and
    - what are political needs (EU adhesion)
    - What are the morbidity / mortality parameters related to water supply and sanitation?
- What are the needs of the RWC to achieve a reasonable level (and an EU level) in operation and maintenance and in billing and revenue collection?

- Where can Switzerland make a difference to other donors?
- Where does Switzerland have a comparative advantage?
- Should the engagement at the policy level by supporting the WTF be maintained?
- Under which condition should Switzerland keep a leading role (lead donor) and how long?

2.2 Energy: Facts, Assumptions and Questions

Facts:

- SECO has been involved in the past in the energy sector in Kosovo. Previous projects in the energy sector contributed to improving the energy distribution system in Gjilan region through the construction of two new distribution substations and the rehabilitation of two existing substations. These priorities had been set in consultation with other donors and have been successfully concluded.
- SECO is presently constructing a Substation in Gjilan with around CHF 8 Mio

Assumption:

Despite the present investment, this will be last energy project funded by SECO in conventional energy, only option for further engagement would be 'renewable energy' (RE)[1].

- As projects in energy will be only be taken up if opportunities arise, the energy will only be marginally mentioned in the new CS.

Questions:

- What are the prospects for projects in green / renewable energy production in Kosovo?

3. Main Duties

The consultants are expected to complete the following tasks:

(a) Provide a general assessment of the domain **by answering the questions in the previous chapter** and thus providing general guideline for the elaboration of the CS.

(b) To do an exercise on lessons learned from the past and draw conclusions.

(c) The following questions need particular attention:

- Given that SECO focuses on urban water supply and increasing on urban waste water treatment and SDC on rural water supply and sanitation including the construction of rural waste water treatment plants in form of reed bed treatment: a goal for the period 2013 till 2016 could be: "Switzerland promotes and invests in rural water supply in order to raise the present coverage of 60% of piped water supply to 80%; and supports the sustainability of water supply, the goal is to increase revenue collection from consumer of water from presently about 60 to 80% by 2016; etc." and a similar target could be formulated for urban waste water treatment (Switzerland invests in the first major waste water treatment plant and renders them sustainable) Question: Are objectives like this feasible and recommendable?
- Switzerland will continue a comprehensive approach on three levels: i) construction of new schemes in the field; ii) to provide technical assistance to the water companies and local entities to enhance Operation and Maintenance and the financial sustainability of the respecting bodies by improving their accounting and billing system and iii) to support the government at the top level in decision making by transforming the present Water Task Force into a national Water Council.
    - Question: How much weight is given to each level which strategic partnerships (eg municipalities, resp. Associations of Municipalities) should be formed; which synergies with others can be engaged mainly at meso and macro levels to become holistic.
    - Questions related to Water Council: should Switzerland go on to support the WTF / Water Council and under which conditions. The financing of the the Secretariat / Advisors of the Water Council puts the sustainability of the institution into question.

[1] An opportunistic focus would be to facilitate RE projects, which would not be realized without ODA support. E.g. a power connection to a windpark if the grid is still in public ownership. Also Energy Efficiency (EE) is a key topic for SECO in the Climate/Energy fields. Finally SECO supports regional facilities to help public entities with PPPs and privatization issues (SEIA, PIDG). This is relevant to the power sector.

- Particular attention as well to the question of the centralization and decentralization: The government issued "Consolidation decision" attributing to the Regional Water Companies the final responsibility for water, waste water and waste management and not to the municipalities. The role of the municipalities has however still to be defined.[2]
- Aid modalities: which aid modalities are most promising and realistic: bilateral, contributions, pooled funding or Twinning with Swiss partners?

4. Methodology and approach

The consultant shall consider the following main steps for accomplishing this mandate:

- Briefing with the SCO management
- Relevant desk review work (a list of documents proposed in Annex 1)
- Interviews with relevant partners (government officials, donor representatives, implementing partners and backstoppers as well as Advisor to WTF)
- Debriefing with the SCO management – discussion of the main findings
- Preparation of the report

The result is meant to provide guidelines for the new CS, it is therefore at the level of policy making. Therefore detailed technical assessments are not required; the answers to technical questions are to be derived from interviews and general appreciations.

The above list of steps is not exhaustive and the consultant may engage in other activities deemed important for accomplishing this mandate.

5. Qualification and Professional requirements

The consultant should demonstrate a strong expertise in the following areas:

- Excellent knowledge of the Kosovo water / and to a lesser extend of the energy sector (policies, development and donor agendas)
- Good knowledge of SDC interventions in the Balkans / Kosovo;
- Excellent and proven experience in similar mandates;
- Excellent coordination, communication and reporting skills;
- Excellent in both spoken and written English.

6. Reporting

The report shall not be longer than 20 pages and shall comprise the following chapters:

- Executive summary (max 2 pages)
- Background and rationale for the assessment (max 1 page)
- Findings (based on the ToR) and conclusions (max 12 pages)
- Main priority areas and options for concrete support (max 5 pages)
- Annexes

The Swiss Cooperation Office reserves the right to request changes in the report or additional information.

[2] The decision to make the utility companies responsible is a major achievement of the WTF. We should not motivate a step back in that matter. The municipalities should make supply agreements with the Regional Water Companies. They may be part-owners and/or represented on the Boards. But the direct involvement of municipalities in the water supply and sanitation is generally not an advantage

A fist draft report shall be delivered to SCO Kosovo on February 3rd. The final report revised based on comments and remarks of the SCO shall be submitted on February, 17th 2012.

7. Timeframe

The assessment shall be conducted during January and February 2012. A more detailed timeframe and schedule will be elaborated by the consultant in cooperation with SCO-K.

Activities (Consultant)	International consultant	National consultant
Relevant desk review	3 days	4 days
Briefings/debriefings to SCO-K	2 days	2 days
Interviews with stakeholders	3 days	4 days
Report Writing (3 days for the draft report and 3 day to consolidate comments and finalize the report)	4 days	4 days
Total	**12 days**	**14 days**

The days for the consultants are indicative, the consultants may propose alternatives. This option here is the preferred option, but the consultancy could as well be done by a international consultant only.

8. Application

8.1 The following documents are requested for application:

1) Technical proposal (max. 3 pages), which shall include:
   - Understanding of the consultancy:
     - Description of the relevant context
     - Proposed approach and methodology to complete the task
     - Proposed timeframe
   - Annexes:
     - Curricula vitae of the proposed consultant
     - Relevant reference projects from previous successful mandates

2) Financial proposal: the financial proposal shall be submitted using the standard form “8B” that is sent together with these Terms of References.

The completed application shall be sent electronically to Mrs. Ardiana Zhuri, NPO at the SCO-K at the e-mail address ardiana.efendija-zhuri@sdc.net ***no later than January 13th 2012, Closure of Business****.*

8.2 Criteria

Criteria for selection:

i. CV and relevant experience (30%),
ii. the technical proposal (30%) and
iii. availability in the indicated period (20%)
iv. price per working day (20%)

Annex 1: List of documents to be consulted

- All relevant water and energy project proposal as mentioned in the TOR's;
- Country Strategy Kosovo 2009-2012
- Annual Reports 2010 and 2011

Pristina, 22.12.2011

Gubler Daniel

ADDITION TO THE TORs

De: Baechler Markus DEZA BCM <markus.baechler@sdc.net>
Envoyé: dimanche 12 février 2012 12:42
À: Gubler Daniel
Cc: Efendija - Zhuri Ardiana DEZA EFEAR
Objet: FW: PIN Review / impact hypotheses

Dear Mr Gubler,

Please see below the issue related to impact hypothesis for the review, it is important that you give answers as well to this questions and to the impact hypothesis; therefore during the review of Infrastructure domain it is important to give some priority and special emphasis on the impact hypothesis and to give a feedback in the report.

The impact hypotheses are :

- Rural water supply: Switzerland promotes and invests in rural water supply in order to raise the present coverage of 60% of piped water supply to 80%; and supports the sustainability of water supply, the goal is to increase revenue collection from consumer of water from presently about 60 to 80% by 2016; etc." (as already formulated in the TOR's)

Question: Is this objective like feasible and recommendable?

- Urban sanitation Is the right time now to enter into urban sanitation and what will be consequences; Are there general concerns about the financial sustainability of Wastewater Treatment plants in a regime of low water tariffs? (This points are additional and were not yet in the TOR's)

Could a similar target as in rural water supply be formulated for the urban sanitation, for example: "Switzerland invests in the first major waste water treatment plant and renders them sustainable"

The underlining thought is to close water sector /domain in the CS 2013-2016 at least the activities in rural water supply once the above mentioned target is reached;

This of course could look quite different once SECO has decided to enter into urban sanitation, in this case SCO has stay engaged for another decade in the sector.

Additional point to be addressed regarding water and energy sector:

- What should the Water Task Force do in order to develop sustainable solutions for revenue water and billing?

- Are these projects (green / renewable) commercially viable (and therefore viable without donors' help)?

I will be absent as of mext Wednesday and be back only when the review starts, please be in contact with Ardiana and we shall discuss this point during the initial briefing on February 27th.

Best regards,

Markus Baechler

Mission agenda and list of people met

23-02-12				
Ms Nadire Vitija	Executive Director	ShUKOS		Pristina
24-02-12				
Mr Astrit Vokshi	Director	CDI	SCO Project implementation partner	Ferizaj
26-02-12				
Arrival of Team Leader, team mission preparation				
27-02-12				
09:00 – 11:00				
Mission preparation				
11:00 – 13:00	Mission briefing meeting			
Mr Markus Baechler	Coordinator	Swiss Cooperation Office		Pristina
Ms Ardiana Zhuri	National Programme Officer	Swiss Cooperation Office	Public Infrastructure Domain	Pristina
13:00 – 15:00				
Mr Baton Begolli	WTF Advisor	Prime Minister's Office	Water Task Force	Pristina
15:00 – 16:00				
Mr Gazmend Selimi		European Commission Liaison Office in Kosovo		Pristina
16:30 – 17:30				
Mr Azem Kastrati	Chief of Party	IRD	SCO Project implementation partner	Pristina
Merita Kasapolli	Deputy Chief of Party	IRD	SCO Project implementation partner	Pristina

28-02-12				
09:00 – 10:00				
Mr Premtim Islami	Project Coordinator	KfW	Municipal Infrastructure Kosovo	Pristina
10:00 – 11:00				
Mr Besim Beqaj	Minister	Ministry of Economic Development		Pristina
13:00 – 14:00				
Ms Perihane Ymeri	Program Coordinator	USAID		Pristina
15:00 – 16:00				
Mr Hazir Çadraku	Policy Officer	MESP	Water Department	Pristina
Mr Shiqeri Dermaku	WRM Officer	MESP	Water Department	Pristina
16:00 – 17:00				
Mr Ramadan Sejdiu	Director	MED	PMU	Pristina
29-02-12				
8:30 – 9:30				
Mr Ardian Ferizi	Director	Municipality of Ferizaj	Dep't for Planning and Development	Ferizaj
10:00 – 12:00				
Mr Faton Frangu	Executive Director	Bifurkacioni		Ferizaj
12:00 – 13:30				
Mr Astrit Vokshi	Director	CDI	SCO Project implementation partner	Ferizaj
14:00 – 15:00				
Ms Myrvete Hoti	Chief Executive	Hidromorava		Gjilan
15:00 – 16:00				
Mr Azem Mujku	Water and Sanitation Officer	Gjilan Municipality	Public Services Department	Gjilan
Ms Drita Berisha		Gjilan Municipality	Public Services Department	Gjilan

01-03-12				
8:30 – 9:00				
Ms Leonora Hysenaj	Manager	KEK	Project Implementation Department	Pristina
9:30 – 10:30				
Mr Raif Preteni	Director	WWRO		Pristina
10:30 – 11:00				
Ms Vera Muhaxhiri	Monitoring Officer	WWRO		Pristina
11:00 – 12:00				
Ms Saranda Cana	Sr National Programme Officer	SCO	Rule of law/Democracy Domain	Pristina
19:00 – 20:00				
Mr Ramiz Kokollari	Executive Partner	KIWER Consulting	SCO Project implementation partner	Pristina
Ms Hajrije Morina	Consultant	KIWER Consulting	SCO Project implementation partner	Pristina
02-03-12				
10:00 – 12:00	Mission debriefing meeting			
Mr Markus Baechler	Coordinator	Swiss Cooperation Office		Pristina
Ms Ardiana Zhuri	National Programme Officer	Swiss Cooperation Office	Public Infrastructure Domain	Pristina
Ms Saranda Cana	Sr National Programme Officer	SCO	Rule of law/Democracy Domain	Pristina
Ms Merit Stavileci	National Programme Officer	Swiss Cooperation Office	Migration Domain	Pristina
05-03-12	Telephone conversations			
Mr Roger Schmid	Programme Officer	SKAT	WTF Advisors Backstopper	St Gallen
Mr Laurent Widmer	Programme Officer	SECO	Kosovo Desk	Bern

Sanitation Master Plan : the practice in Switzerland **ANNEX 3**

The Swiss Water Protection Ordnance *(G: GSchV, F: OEaux, art. 5)* makes it mandatory for municipalities (or group of municipalities) to establish a Communal Wastewater Management Plan *(G: Generelles Entwässerungsplan, F: Plan général d'évacuation des eaux).*
See: http://www.bafu.admin.ch/gewaesserschutz/01295/01303/01304/index.html?lang=en

The following elements of the approach are relevant to the present situation in Kosovo towns. The job would be outsourced to the private sector (except network flushing, done by the RWC).

Definitions

combined system - A sewer system designed to carry sewage water and storm water within the same pipe.

separate system - Facilities including one network for sewage water, and another one for storm water. Storm sewers usually carry surface runoff (rain water) to a point of disposal in a stream or river. Wastewater sewers usually carry sewage to a wastewater treatment plant.

catchment area - The area contributing surface water to a point on a drainage or river system, or sewage water to a WWTP. They may be divided in to sub-catchments.

urban drainage system - The infrastructure handling foul water (sewers) and stormwater (rainwater), including the sewer network, the stormwater network, all other structures (overflow structures, outfall structures, pump stations, WWTP), inasmuch as they are under the responsibility of the public sector (i.e. outside private residences).

WWTP – Waste water treatment plant.

GIS - Geographic Information System

Objectives of a sanitation master plan

Under the guiding principles of environment protection and economic use of resources, to provide the owner of the sanitation infrastructure with a tool for planning, operating, maintaining, renewing and monitoring the urban drainage system.

Implementation of a Sanitation Master Plan

No	*Module*	*Fig.*	*Suggestions for implementation in Kosovo*
I	**DIAGNOSIS PHASE**		
1	**Establishment of a Network Cadastre** Field and desk work leading to data entry in a GIS system of at least the following parameters, for all pipe sections, to provide a **cadastre map**: - End point coordinates - End point levels - Diameter - Length - Slope - Material - Content (sewage, stormwater, or combined) Field and desk work to produce **manhole sketches** for every manhole, indicating : - Coordinates - Configuration (rectangular, oval, or otherwise) - Elevation of key points (inlet and outlet pipes, cover) - Network (sewage, stormwater, or combined)	1 2	Local Surveyor with GIS capability International consultant (provision of hands-on training) RWC

No	*Module*	*Fig.*	*Suggestions for implementation in Kosovo*
2	**Status report on the sanitation infrastructure** The focus of the status report is the networks. Following steps are required: - Network flushing (in order to clean the pipes to make the next step possible) - Sewer camera inspection[1], resulting in : a DVD with the video footage, a database of identified damages, and a paper report - Analysis of camera inspection, resulting in a map showing the location and nature of identified damages, as well as the emergency category of interventions (immediate, in the next two years, in three to five years, later than five years) Review of other infrastructure elements: special structures (storm overflow, etc.), points of disposal, pumping stations.	3 4 5	RWC International and local consultant joint venture(ToR and supervision); local international contractor International and local consultant joint venture
3	**Status report on the catchment area** This report is required to provide reliable data for the hydraulic calculations. The subcatchment areas are identified in space, on a GIS map. Then at least the following parameters are entered, for each subcatchment area: Stormwater: - Surface (ha) - Average ground slope - Present runoff coefficient - Final[2] runoff coefficient - Max. present rainfall for a return time T=10 y - Max. final rainfall for a return time T=10 y Wastewater: - Surface (ha) - Average slope - Runoff coefficient - Max. present rainfall for a return time T=10 y - Number of inhabitants - Number of equivalent inhabitants (trade and industry) For combined systems, all the above parameters must be determined and entered. The determination of the runoff coefficients may be done with the help of aerial photographs.		Local engineer with GIS capability International consultant (hands-on training) International specialist (for the determination of the runoff coefficient using aerial photos).
4	**Analysis of the discharge capacity** Hydraulic calculations of the network flow capacity, identification of capacity bottlenecks		Local engineer with computer flow modelling capacity International consultant (hands-on training)
	Other modules of the Swiss procedure are: status of effluent watercourses, external water intrusion, risk zones. They are not relevant to the Kosovo context as long as WWTP do not exist and the separate system is not generalized.		

[1] See : http://www.liaudet-pial.ch/nos-prestations/inspection-tv-des-canalisations/ click on "+"
[2] When the urbanization of the area is completed.

No	*Module*	*Fig.*	*Suggestions for implementation in Kosovo*
II	**CONCEPT PHASE**		
	Analysis of the potential and the relevance, in the local context, of: - Rainwater infiltration, - Stormwater retention, - Network separation, - Addressing weaknesses identified in the Diagnosis Phase, - Taking urban densification into consideration - Connection of unconnected areas.		International and local consultant joint venture
III	**IMPLEMENTATION PHASE**		
	Prioritization of actions to implement the Concept Planning and budget of actions for the next 20 years (based on rough estimates). Preventive maintenance plan. Preliminary design of the most urgent interventions.		International and local consultant joint venture

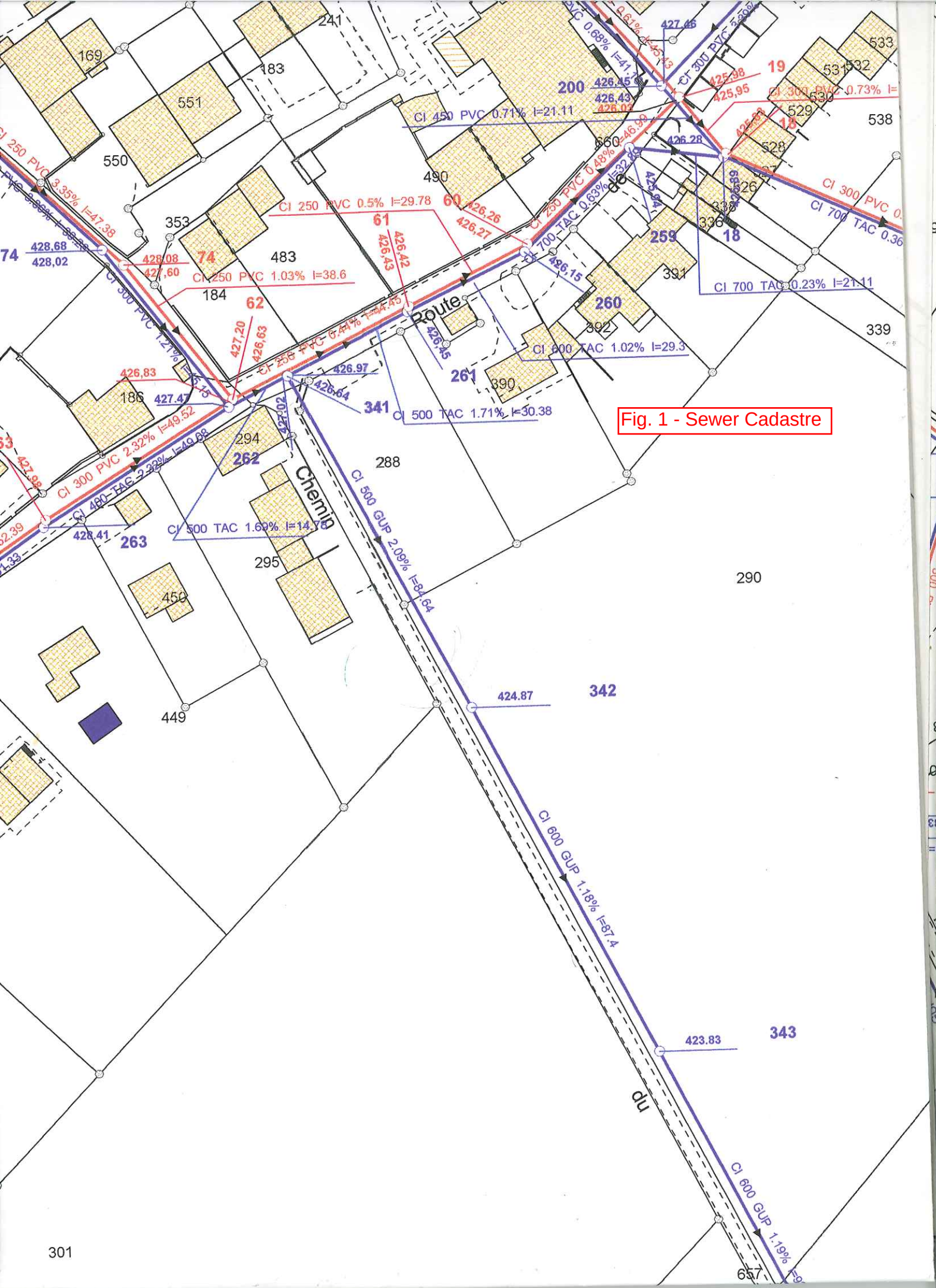


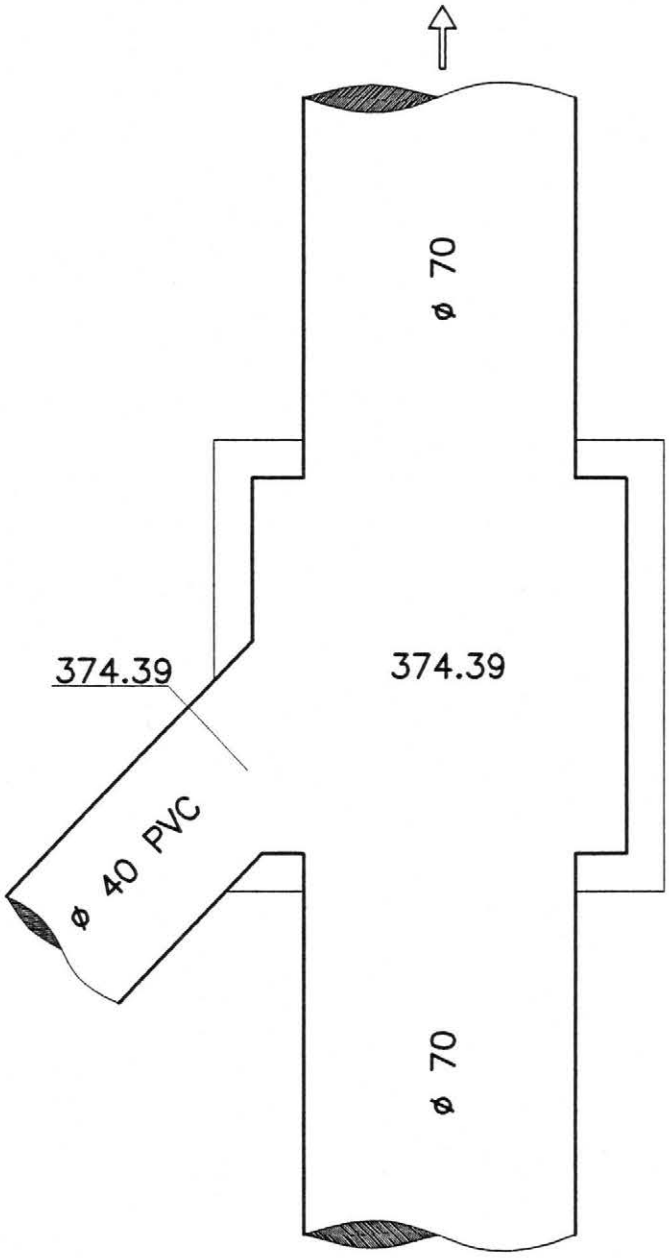
Fig. 1 - Sewer Cadastre

Fig. 2 - Manhole Sketch

CADASTRE DES EGOUTS

Commune de CAROUGE			N°8
RESEAU EU	Cheminée	Ouvrage No	82
Coordonnées du plateau :	Y 499924.97	X 115811.63	Alt 378.38

Etat de la cheminée	Date	Dimensions	Profondeur	Echelle
1	15.06.92	100/100	3.99	1/20



Mandataire de la Commune: Bureau d'Ingénieurs F. Lachenal

Les renseignements figurant sur cette fiche doivent être vérifiés.
Ils sont communiqués sous toutes réserves et n'engagent pas l'Etat de Genève.

Fig. 3 – Sewer flushing

Fig. 4 - Sewer TV Report (sample page)

Ch. de la Verseuse 7-9
1219 Aïre - Le Lignon
Tel: +41 22 342 65 20, Fax: +41 22 342 65 22

Rapport d'inspection

Date:	N° commande:	Météo:	Opérateur:	N° du tronçon:	Nom tronçon:
06.03.2006		**neige**	**Silva Miguel**	**10**	
Présent:	Véhicule:	Caméra:	Insertion mètres:	Curage:	Gravité:
	Iveco U03	**Rico SR 90 - FW 150**	**1.05**		

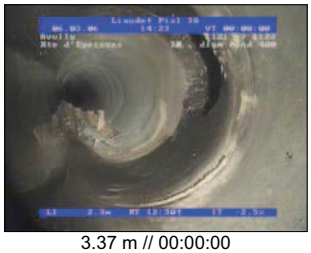
Rue:	**Rte d'Epeisses**	Plan N° 1:	**8-3**	Regard:	**1121**
Localité:	**Avully**	Plan N° 2:		Regard:	**1122**
Situation:	**route communale**	N° cassette:	**01-06**	Long. tronçon:	**4.16 m**

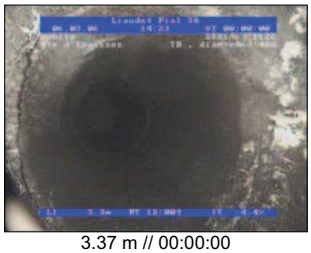
Raison de l'inspection:	**contrôle de l'état général**	Diamètre:	**diam rond 400**
Type de canal:	**eaux claires**	Matériau:	**TB** Long. unit.: **1m**
Zone:		Revêtement intérieur:	
		Réservé:	

Remarque: **Dépôt moyen au radier**

1:50	Position	Code	Observations, anomalies	Gravité
1121	0.00	RD	Regard début d'inspection	
	1.05	TC	Tête de caméra	
	1.05		Dépôt de calcaire au radier, de 04 à 08 h.	3
	3.37		Branchement à 12 h., pas crépi	1
	3.59		Obstacle de 02 à 07 h.	4
	4.16		Interruption de l´inspection, par l'objet précité, la caméra ne passe pas. Prévoir Hydrocurage.	


1.05 m // 00:00:00


3.37 m // 00:00:00


3.37 m // 00:00:00


3.59 m // 00:00:00


4.16 m // 00:00:00

Légende

- Collecteur primaire
- Collecteur secondaire
- Conduite sous pression
- Eaux usées
- Eaux mélangées
- Eaux pluviales
- Eaux de drainage
- SP station de pompage
- STEP station d'épuration
- Déversoir d'orage / surverse de sécurité / by-pass
- Ouvrage de rétention / Bassin
- Autres ouvrages spéciaux
- Chambre de visite sur collecteur

Etat des canalisations: priorités d'intervention

- Action immédiate nécessaire
- urgent (1 à 2 ans)
- à moyen terme (3 à 5 ans)
- à long terme (plus de 5 ans)
- pas d'intervention nécessaire
- pas de contrôle effectué

Age des canalisations

- 55 — plus de 50 ans
- 45 — de 20 à 49 ans
- 15 — de 10 à 19 ans
- 8 — de 5 à 9 ans
- 2 — moins de 5 ans

Importance des défectuosités :

- Action immédiate nécessaire
- Action urgente (1 à 2 ans)
- Action à moyen terme (3 à 5 ans)
- Action à long terme (+ de 5 ans)
- Pas d'intervention

Type de défaut / dommage

A	Altération du matériau
B	Cadre du regard de visite non scellé
C	Contre-pente
D	Couvercle de regard non adapté aux charges de service
E	Défaut d'alignement
F	Défaut de branchement
G	Déformation (ovalisation)
H	Dépôts
I	Effondrement
J	Equipement de regard défectueux
K	Fissurations
L	Infiltration d'eau parasite
M	Joints défectueux
N	Matériaux divers dans canalisation
O	Mauvais remplissage des fonds PVC du regard de visite
P	Mauvais rhabillage du regard de visite
Q	Perforation
R	Racines
S	Terrassement
Z	Autre

Fig. 5 - DAMAGE MAP