

***Framework conditions for Private Sector Participation in
Water Infrastructure in Lebanon***

List of Acronyms

BOT	Build Operate Transfer
CDR	Council for Development and Reconstruction
FDI	Foreign Direct Investment
GWP-Med	Global Water Partnership - Mediterranean
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HCP	Higher Council for Privatization
LWPP	Lebanon Water Policy Program
MED EUWI	Mediterranean Component of the EU Water Initiative
MENBO	Mediterranean Network of Basin Organisations
OECD	Organisation for Economic Co-operation and Development
PPP	Public Private Partnership
PSP	Private Sector Participation
UNDP	United Nations Development Programme
USAID	United States Agency for International Cooperation
WSE	Water and Sanitation Establishment
WSE BML	Water and Sanitation Establishment of Beirut-Mount Lebanon
WSE BS	Water and Sanitation Establishment of Bekaa
WSE NL	Water and Sanitation Establishment of North-Lebanon
WSE SL	Water and Sanitation Establishment of South-Lebanon

This document was developed as part of a dialogue on private sector participation in water infrastructure in Lebanon led by GWP-Med and OECD, in collaboration with the Lebanese Ministry of Energy and Water – Directorate General of Hydraulic and Electrical Resources, in the framework of the MED EUWI¹ Policy Dialogue on Integrated Water Resources Management in Lebanon. It is based on the OECD *Checklist for Public Action*² and on the discussions and results of a series of workshops conducted in 2010, including the national workshop on "Private sector participation in water infrastructure in Lebanon" (8-9 March 2010), the 3rd Beirut Water Week (24-27 October 2010) and the national workshop on "Private Sector Participation in water infrastructure in Lebanon and the role of private banks" (9 December, 2010). The document builds on publicly available material, answers to the *Checklist*-based Questionnaire (filled in by 4 key institutions), as well as extensive communication with key stakeholders and several bilateral and multilateral discussions/interviews³ held during 2010. It provides an overview of recent developments on private sector participation in the water and sanitation sector in Lebanon and highlights three areas for consideration by the government: the institutional framework under development; the administrative capacity; and the sustainability of projects.

Since the year 2000, the Government of Lebanon has undertaken an important reform process aiming at improving the governance of the water sector. This reform mainly concerns the restructuring of the sector's institutions and the revision of its regulatory framework. One of the main results of this reform concerned the creation, in the perspective of delegated services and financial autonomy, of 4 Public Water Establishments in charge of the management of drinking water, sanitation and irrigation services. In parallel, the 10-year Strategy Plan (2000-2009) has been revised and renewed until 2018. A Strategy for the water sector is also currently being prepared by the Ministry of Energy and Water (MEW). It focuses on investments in water infrastructure, including the mobilization and treatment of the resource, the supply and distribution of drinking and irrigation water and the collection and treatment of wastewater; it also focuses on "soft" investments for the management of the sector including institutional, tariff, legal and regulatory reforms. The investment needs

¹ MED EUWI is the Mediterranean Component of the EU Water Initiative (EUWI). Launched in 2003, it aims to assist developing countries to meet the water-related Millennium Development Goals (MDGs) and Johannesburg (WSSD) Targets. It represents a strategic partnership among stakeholders (national, regional and international) in the Mediterranean region. MED EUWI is led by the Government of Greece (Ministry of Environment, Energy and Climate Change and Ministry of Foreign Affairs) that provides political, financial and technical support to its activities. The secretariat of MED EUWI is serviced by the Global Water Partnership – Mediterranean (GWP-Med). Since 2005, the Euro-Mediterranean Water Directors' Forum and its successor the Water Expert Group has been providing institutional support for the implementation of MED EUWI activities at regional and national levels, offering advice and guidance on its work and further development. MED EUWI activities are demand-led and adopt consultative and participatory methodologies in order to maximise inclusiveness and ownership of relevant stakeholders.

² www.oecd.org/daf/investment/water

³ Interviews were held with 26 high level staff and senior experts representing 16 various institutions including Ministries, national establishments and public authorities, major donors and international agencies involved in the water sector as well as private sector and banks. A complete list of contacted people is provided in the Annex.

for infrastructure development identified by both the Plan and the Strategy are significant and come up against strong financing constraints. The MEW estimates the needed investments in the water sector for the next 10 years at \$ 7.7 billion, among which \$ 1.6 billion have already been secured⁴. The Government estimates that financial contributions through the State budget and the Official Development Assistance will not suffice to cover the needs. That is among the main reasons for the renewed interest in private sector participation in relation to the building, operation and management of water infrastructure. A national commission, chaired by the Ministry of Energy and Water, was created in June 2010 to examine the possibilities and the conditions of this participation⁵.

In this context, and in the framework of Phase II of the MED EUWI Policy Dialogue on Integrated Water Resource Management in Lebanon (Phase I 2005-2009; Phase II 2009-ongoing), a national workshop on private sector participation in water infrastructure in Lebanon was organized on 8-9 March 2010 by the Lebanese Ministry of Energy and Water (MEW) – Directorate General of Hydraulic and Electrical Resources- and the Global Water Partnership - Mediterranean (GWP-Med) in cooperation with the Mediterranean Network of Basin Organisations (MENBO), the United Nations Development Programme (UNDP) and the Central Bank of Lebanon. On the occasion of this workshop, the MEW, GWP-Med and the Organisation for Economic Cooperation and Development (OECD) launched a joint activity aiming to evaluate the Lebanese context related to private sector participation in the water sector based on the OECD *Checklist for Public Action*.

1. Recent developments on private sector participation in Lebanon

Although the evaluation of future water needs varies according to different sources, there is a general agreement on the fact that Lebanon will face a water deficit situation in the near future. According to World Bank's calculations dating back to 2003⁶, the deficit will rise to 119 Mm³ in 2010 and will reach 722 Mm³ in 2030. At present, groundwater aquifers are over-exploited, while surface water storage infrastructure is limited to the two dams of Qaraoun (220 Mm³) and Chabrouh (15 Mm³). Regarding drinking water supply, the progress accomplished by connecting large parts of the population (79% on average, with 87% in South Lebanon, 85% in Beirut-Mount Lebanon, 68% in North Lebanon and 62% in the Bekaa)⁷ contrasts with high levels of service discontinuity. The Regional Water and Sanitation Establishment of Beirut-Mount Lebanon, which has the highest connection rate, provides water only for three hours per day during summer time. Only the urban area of Tripoli gets water on a 24-hour basis. The percentage of non revenue water, due to both physical and commercial losses, is high and amounts to approximately 48%. Regarding sanitation, the sewerage system coverage is 60%, while wastewater treatment is currently almost non-existent (8%). Existing sewage treatment plants are located mainly on the coast. Out of the seven major plants for primary treatment built on the coast, only two are

⁴ National Water Sector Strategy, 2010

⁵ Until now, the Commission has devoted its meetings to the energy sector (renewable energy, natural gas,...). It is envisaged that water will be discussed during future Commission's meetings.

⁶ World Bank (2003) "Policy Note on Irrigation Sector Sustainability". Report No. 28766 – LE. Water, Environment, Social, and Rural Development Group, Middle East and North Africa

⁷ National Water Sector Strategy, 2010, Lebanese Ministry of Energy and Water

operational (Ghadir and Saida); the other five do not contain the sewage systems necessary for their operation. Inland, two treatment plants have been built (Baalbek and Yamouneh). All of the stations operate well below their design capacity (Ghadir 40%, 50% and Baalbek Yamouneh 10%). In addition, some sixty small stations have been constructed by municipalities through foreign financial aid but are, in most cases, non-functional due mainly to financial constraints.

In order to tackle the sector's shortcomings, the Government reviewed its 10-Year Sector Strategy Plan, initially developed for the 2000-2009 period, renewed it until 2018 and also initiated the preparation of a long-term National Strategy for the Water Sector. The planned projects relate to irrigation, drinking water and sanitation as well as to the increase of storage capacity through the construction of 23 hill lakes and 18 dams, out of which 3 will also be used to produce hydroelectric power. Investment needs identified in the National Water Sector Strategy are estimated at \$ 7.7 billion for the next ten years, while current commitments are estimated at approximately \$ 1.6 billion. The financing gap in the implementation of the Strategy has revived the interest of the Government in relation to the participation of the private sector.

Until now, private sector participation in the water sector in Lebanon has been limited to service contracts for the conduct of specific tasks or the operation and maintenance of pumping stations and small wastewater treatment plants. The contracts are normally awarded to small local private companies and aim at tackling the lack of human resources and capacities within the Public Water and Sanitation Establishments. The contracts' duration is limited to one year, reflecting more the annual programming budget cycle than the operating needs of the plants. The awarding process and the supervision of these contracts are advantageously flexible for the administration. However, the use of these contracts is circumstantial and is not included in a comprehensive outsourcing approach seeking to make a better/more targeted use of these contracts. It would be beneficial undertaking a review of these contracts so as to explore their advantages and weaknesses, as well as the ways to improve them.

A more elaborated service contract of 3-year duration was awarded in 2007 by the Water and Sanitation Establishment of South Lebanon (WSE SL) for the operation of its financial and accounting systems. The Establishment used a private company for this task because of the lack of in-house expertise and the difficulty in recruiting new qualified employees⁸. The preparation of the contract was supported with technical assistance by the Lebanon Water Policy Program (LWPP) financed by USAID. The WSE SL was in charge of the contract's monitoring and has tried to make use of this experience in order to develop the required in-house expertise to operate the system. The WSE SL is planning to take over this task at the end of the contract in April 2011. A retrospective analysis could assess the achievement of the contract's objectives.

In the mid 1990s, and on the occasion of the water conveyor project from the Awali River to Beirut, a more advanced model of private sector participation was put forward. The Council for Development and Reconstruction (CDR), based on a Council of Ministers' decision,

⁸ USAID (2007) *"Lebanon Water Policy Programme (LWPPP), Final Report, May 2002- May 2007"*

launched a call for tenders for carrying out this water transfer work through a BOT contract with a 28-year duration (3 years for the construction and 25 years for the exploitation). In order to attract the needed private capital, the World Bank envisaged the provision of a Partial Risk Guarantee⁹. The tendering procedure, in which foreign private companies participated jointly with Lebanese companies, reached the phase of prequalification. However, two different interpretations of the legal framework for BOT created uncertainty about the legal anchoring of the project. On the one hand, the Court of Account considered that the BOT contract was subject to Article 89 of the Lebanese Constitution requiring that concessions are granted under a specific law¹⁰. On the other hand, the Legislation and Consulting Department of the Ministry of Justice considered Law 89 not applicable to this BOT contract and that a statement from the Government would be enough to launch it, in accordance with the usual contract awarding procedure. In the end, Beirut's Water Authority (currently the Water and Sanitation Establishment of Beirut-Mount Lebanon) decided to cancel the BOT process. Instead, the Government opted for a traditional setting for the project, with external financing from the World Bank with 200 million \$, national contribution by the WSE BML with 140 million \$ and by the Government with 30 million \$ (respectively 54%, 38% and 8% of the overall budget). The work is scheduled to start in mid-2011.

With the impetus deriving from the water sector reform process, launched in 2000, private sector participation is once again part of the political agenda. The Higher Council for Privatization recruited the group Société Générale France/Société Générale of Banks Lebanon to examine the development of approaches for private sector participation in the water and sanitation sector. The option for a transfer of assets was soon abandoned in favour of lease/affermage or concession contracts (in particular for the Establishment of Beirut - Mount Lebanon) and management contracts (later convertible into lease/affermage contracts or into concessions in the case of other Establishments)¹¹.

Nonetheless, the Lebanese legal framework has not been yet amended to allow advanced forms of concessions and lease/affermage for private sector participation. The only experience to date, has been limited to a service and management contract for drinking water services in the urban area of Tripoli (400 000 inhabitants - 10% of the Lebanese population). This contract was concluded in the framework of a project financed by the French Development Agency and governed by law 401 (dated 05/06/2002). The project included two components: the construction of infrastructure with a budget of 11 million € (enlargement of the water treatment plant of Bahsass, extension of the secondary and tertiary network of Tripoli) and institutional support targeting performance improvement of the Tripoli Water Office (replaced later by the Regional Establishment of Water and

⁹ The Partial Risk Guarantee envisaged by the World Bank protects the lenders against debt service default due to political risks (defined in the contractual arrangements which underlie the project). It does not cover the commercial and non-commercial risks which are supposed to be covered by the market. Source: World Bank (1998) "Lebanon-Awali-Beirut Water Conveyor and Project (Guarantee)" – Project Sheet.

¹⁰ Article n° 89 of the Lebanese Constitution: No contract or concession for the exploitation of the natural resources of the country, or a public utility service, or a monopoly may be granted except by virtue of a law and for a limited period.

¹¹ Freiha R. (2009), "Organisation of Institutions and Human Resources" in MED EUWI "Policy Dialogue on Integrated Water Resources Management Planning in the Republic of Lebanon".

Sanitation of North Lebanon). The management contract, at € 4.6 million over 4 years¹², was awarded to the company Ondeo Liban. It started in 2003 and was completed in 2007, without renewal.

The objectives of the management contract were to improve the technical, commercial and financial performance, to establish information and management systems and improve communication¹³. The evaluation of this experience based on the pre-defined performance indicators is mixed and has been the subject of a large debate. Among the targets achieved through the implementation of this contract, figure the continuous supply of good quality drinking water, the recruitment and training of staff and the installation and running of management software (customer services, computer-assisted maintenance management, geographic information system). Other indicators, however, recorded progress without reaching the anticipated targets. For instance, the technical performance of the water system went from 35% to 55% against a target of 75%. But mainly the financial targets were not achieved: the billing rate went from 34% to 55% against a target of 75% and the debt recovery rate went from 29.7% to 33.8%, against a target of 90%¹⁴.

While at its conception the contract was supposed to be replaced by a more advanced form of private sector participation¹⁵, negotiations between the two partners -the public authority and the private sector operator- proved unsuccessful. As a result, the management of the water service was transferred back to the responsibility of the Public Water and Sanitation Establishment of North-Lebanon (WSE NL). Interviewed experts pointed out the institutional complexity and the fragmentation of responsibilities as the principal factors limiting the outcomes of the Tripoli experience, more particularly the existence of two contracting authorities, CDR and WSE NL. Additional factors include the fact that the Establishment maintained the administrative and legal responsibilities after the signature of the contract; or the limited involvement of the MEW and the weakness of the monitoring and arbitration mechanisms. The debt problems of the WSE NL and the obligation of the private sector to use public rules¹⁶ posed an additional burden. Ondeo Liban has completed an evaluation of the Tripoli experience that examines the performance with regard to human resources and at the commercial, financial, technical (water production, water quality, distribution networks) and communication levels. The evaluation outlines also the main challenges

¹² A fund (€ 4.4 million) allocated to maintenance or connection works complemented the management contract.

¹³ Initially, the management contract included also the supervision of works related to the extension of the drinking water treatment plant and to the replacement of drinking water networks in Tripoli. The management contract expired before the works were launched. Therefore, an addendum to the contract related to the works supervision was negotiated over the counter between Ondeo-Liban and CDR and started in August 2007 and ended in February 2010.

¹⁴ AFD (2010): "*Expérience de partenariat Public-Privé dans le secteur de l'eau à Tripoli (2003 – 2007)*", National Workshop on "Private sector participation in water infrastructures in Lebanon" Beirut, 8 and 9 March 2010.

¹⁵ Law 401/2002, which allowed the signature of the managing contract, stipulated explicitly that "this contract is a first try, in the framework of temporary regulatory arrangements, for private sector participation. It is an anticipated vision of future private sector participation models for water service management" and that "upon the evaluation of the Beneficiary and the Creditor regarding the predicted evolution of the water sector, during the four years of completion of the service and management contract, the Government chooses, based on the experience achieved and on executed research, the option of "delegated management contract" in order to replace the service and management contract".

¹⁶ For example, limits in the amounts of bills collected by collector.

encountered throughout the implementation of the contract and highlights the benefits for the consumer, the Establishment and the Government, as assessed by the private company. These results may serve as a basis for discussion and comprehensive evaluation of the factors that influenced the contract's performance in order to draw lessons for future experiences and identify the needed reforms to improve the conditions for private sector participation.

2. The institutional framework under development

The OECD Checklist for Public Action: enhancing the enabling institutional environment

The government has the essential responsibilities of establishing adequate policy and regulatory frameworks, institutions and contractual arrangements and overseeing their functioning (**Principles 5 & 17**).

Principle 5. Enabling environment. A sound and enabling environment for infrastructure investment, which implies high standards of public and corporate governance, transparency and the rule of law, including protection of property and contractual rights, is essential to attract the participation of the private sector.

Principle 17. Competent, well resourced and independent regulatory bodies. Regulation of infrastructure services needs to be entrusted to specialised public authorities that are competent, well-resourced and shielded from undue influence by the parties to infrastructure contracts.

Source: OECD (2009), "Private sector participation in water infrastructure, OECD Checklist for Public Action".

Before 2000, water service management in Lebanon was fragmented among 21 Water Offices and 209 local committees established throughout the country. In the year 2000, the Lebanese government decided to rationalize the institutional organization of the sector. Consequently, the management of water services was grouped into 4 Public Water and Sanitation Establishments in accordance with Law 221/2000 and its amendments (Law 241 and Law 377). However, the enforcement of this Law was delayed and related application Decrees were finalized only at the end of 2005. Moreover, the Water and Sanitation Establishments have not yet received the necessary resources (human and financial) for their efficient operation as administratively and financially autonomous entities. Regarding the participation of the private sector, Law 221 was examined by the Parliament at the same time as the framework law on privatization (Law N°228 of 31/5/2005 for the establishment of the Higher Council for Privatization). To avoid overlapping, Law 221 does not mention private sector participation. Moreover, the reform initiated by Law 221 does not tackle the fragmentation of responsibilities in planning and executing investments. Therefore, the Council for Development and Reconstruction (CDR) is responsible for the planning and execution of the externally-financed investments, the Ministry of Energy and Water (MEW) is responsible for the investments financed by the domestic budget and the Public Water

and Sanitation Establishments (WSE) handle only small investments based on available self-financing. The fragmentation of roles influences negatively not only the coherence between the policies of the water sector and other sectors (agriculture, energy, environment), but also the consistency of intra-sectoral policies and investment programs, particularly between the national and local levels¹⁷.

The reform is also ambiguous as regards sanitation services. According to article 2 of Law 377, WSE are in charge of the management of sanitation services. However, article 6 of the same Law stipulates that the prerogatives of municipalities or unions of municipalities are not reduced, and makes particular reference to Law N° 118 of June 30 1977 that entrusts municipalities with sanitation infrastructures and their management. This legal ambiguity leads, in practice, to a dispersion of functions and responsibilities between the Establishments and the municipalities, which is not conducive to the effective development of the sector. Sanitation services are not subject, so far, to any billing apart from taxes collected by the municipalities for the maintenance of networks. Responsibility on the operation of future wastewater treatment plants and networks is, thus, confronted with the ambivalence of legal provisions and the consequent financial arrangements.

The failure to complete the institutional reform and its implementation leads to institutional uncertainties on the allocation of responsibilities at central (CDR/MEW) and local (Establishments/Municipalities) levels. The *de facto* allocation of responsibilities is shown in Table 1.

Table 1 : Distribution of responsibilities in the water sector in Lebanon

	Policy Formulation	CAPEX planning and execution			Service provision (O&M)
		Donor financed	National Budget	Cash-flow	
Water	MEW	CDR	MEW, CoS, CFD	WSE	WSE, MEW
Wastewater	MEW	CDR	MEW	-	Municipality, private operators
Irrigation/ resources Management	Water MEW	CDR	MEW LRA	-	Local committees, Farmers groups

Keys: CDR: Council for Development and Reconstruction , CoS: Council of the South, WSE : Water and Sanitation Establishments, CFD: Central Fund for the Displaced, MEW: Ministry of Energy and Water, LRA : Litani River Authority
Source: World Bank, 2009

The institutional ambiguity, along with the lack of a legal framework regulating Public Private Partnership (PPP) contracts in general and in the water sector in particular, does not favour private sector participation because it can be perceived as a political and regulatory risk, and therefore constitute a heavy constraint to the development of private sector participation. A set of draft laws dealing with the lack of a legal framework in the area of PPPs is currently under preparation or approval. A first draft law, related to PPP contracts for all sectors, was

¹⁷ Following the example of the 30 rural wastewater treatment plants built by the CDR of which 28 have never worked or are no longer functional (MED EUWI (2009), “Sanitation Needs and Management” Policy Dialogue on Integrated Water Resources Management Planning in the Republic of Lebanon).

prepared by the Higher Council for Privatization (HCP) and was approved by the Council of Ministers on 25/06/2007. The Law is currently subject to the approval of the Lebanese Parliament. It stipulates that the Higher Council for Privatization is responsible for the evaluation and the validation of PPP projects¹⁸, the preparation of specifications and the negotiation procedures for choosing the private company as well as the definition of mechanisms for the control and monitoring of the private company's performance during the implementation of the project. The PPP contract is signed by the public authority concerned with the subject of the contract with the approval of the Council of Ministers. The maximum duration of the projects is set at 25 years.

The other draft laws, specific to the water sector, are:

- The Water Code, which is under preparation, foresees the possibility of delegating drinking water, sanitation and irrigation services for a maximum period of 25 years. The forms of concession, affermage, management, third party management as well as construction, operation and transfer contracts are listed under the designation of services' delegation.
- A draft law prepared by MEW and submitted for approval to the Council of Ministers envisages the regulation of delegation and BOT projects for the construction, operation and transfer of dams and annexed works, including water and sanitation networks as well as drinking water and waste water treatment plants. According to this draft law, the evaluation of projects and the preparation of specifications is the responsibility of MEW who is signatory of the PPP contracts with the approval of the Council of Ministries. This draft law sets the maximum duration of such contracts to 30 years.

The interface between the legal framework specific to the water sector and the more general draft law on the PPP has to be clarified. In particular, significant uncertainty remains in terms of allocation of responsibilities for the set-up of projects. In addition, deadlines for the promulgation of laws are unpredictable and the process can be considerably prolonged.

3. Strengthening the administrative capacity

The OECD Checklist for Public Action: Goals, strategies and capacities at all levels

Water is a segmented sector, with oversight responsibilities for resource management and service provision often split horizontally between different Ministries, and vertically across national, regional and local authorities. This may raise important capacity challenges and also generate issues of consistency across government levels. Careful allocation of roles and responsibilities is needed across different authorities, taking into account existing capacity gaps, and based on resources allocated in line with duties and distributed in a predictable

¹⁸ According to the draft law, PPPs exclude simple forms of management contracts as well as lease/affermage contracts. It relates specifically to concessions and BOT contracts.

way (**principle 10**), as well as building common understanding across levels of government on the objectives, means and resources for water provision (**principle 11**).

Principle 10. Empower authorities responsible for privately-operated infrastructure projects. Authorities responsible for privately-operated infrastructure projects should have the capacity to manage the commercial processes involved and to partner on an equal basis with their private sector counterparts.

Principle 11. Clear and broadly understood objectives and strategies. Strategies for private sector participation in infrastructure need to be understood, and objectives shared, throughout all levels of government and in all relevant parts of the public administration.

Source: OECD (2009), *“Private sector participation in water infrastructure, OECD Checklist for Public Action”*.

Good preparation and proper structuring of PPP projects are key elements for success. The complexity of PPP contracts and the importance of their economic, social and political repercussions require high expertise for project preparation.

The policy for privatization of public infrastructure (total or partial cession of assets or management transfer to the private sector through PPP contracts), as adopted by the Lebanese Government, aims at promoting the development of infrastructure, the transfer of expertise to public entities and the reduction of the public debt¹⁹. With the intention of setting up and implementing privatization programmes, a Higher Council for Privatization (HCP) was created in the year 2000 within the Prime Minister’s Office. Specific missions (see box below) have been assigned to the HCP, including the preparation of draft laws and decrees as well as the provision of the necessary recommendations for implementing privatization programmes. The draft law on PPPs confers to HCP the role of a PPP Central Unit, whose composition would ensure coordination between the different public authorities. The HCP Board of Directors is chaired by the Prime Minister and includes permanent members representing the Ministries of Finance, Economy and Trade, Justice and Labour. Moreover, for each project examined, the related Ministry joins the Board of Directors as a temporary member (for the water sector the Ministry of Energy and Water is concerned). Nonetheless, and while awaiting the approval of the law by the Lebanese Parliament, the evaluation of the projects’ feasibility, the preparation of the contracts and the distribution of responsibilities between the various public authorities are done on a case by case basis.

Furthermore, a Commission was created in June 2010 inside the MEW in order to explore the potential and the possibilities for private sector participation in the water and energy sectors. Chaired by the Ministry of Energy and Water and having as members the General Director of Hydraulic and Electrical Resources, the General Director of the Lebanese Centre for Energy Conservation, representatives from the banking sector and 2 independent experts

¹⁹ Article 13 of the law 228/2000: *“...The remaining net privatization proceeds will be transferred to the Treasury and immediately used to reimburse the public debt”*.

on privatization, this Commission is also in charge of identifying and preparing the necessary procedures for the implementation of a pilot project for the construction and operation of a dam under a BOT contract²⁰.

The Ministry of Energy and Water is considering the preparation of "Business Case Studies" and "Information Memorandum" for a number of PPP projects²¹. This would allow the assessment of the technical and financial feasibility of projects as well as the real willingness of the private sector to become engaged in these concrete cases. Moreover, it would also demonstrate the government's political will to set up a pilot project. Political commitment for a pilot project can facilitate its implementation and promote its success. However, it cannot substitute the needed improvement of the institutional, regulatory and business environment, which is the unique guarantee for long-term private sector interest on PSP in Lebanon and for beneficial cooperation between the parties.

The mission of the Higher Council for Privatization is to:

- i) Put forward the general privatization policy and the means of its implementation and submission to the Cabinet for approval,
- ii) Set up a timetable for the public projects to be privatized and submit it to the Cabinet for adoption,
- iii) Issue the necessary decisions in order to complete the privatization operations and their procedures according to the timetable adopted and supervise their implementation,
- iv) Evaluate the assets and properties of the public project, according to internationally approved financial and economic basic standards; establish the productive budget of the privatized projects and submit it to the Cabinet for approval,
- v) Prepare the draft laws and decrees if and when required; and present the necessary recommendations to guarantee the implementation of privatization programmes and operations.

Source: Law n° 228 of Mai 31, 2006

Like other public authorities in Lebanon, the Ministry of Energy and Water and the 4 Water and Sanitation Establishments lack the human capacity²² and expertise that would allow them to efficiently fulfil the missions related to the monitoring of private sector activities. No special measure has been taken to improve the capacities and the number of staff in charge of supervising private sector activities, neither at central level - within the Ministry – nor at local level, within the Establishments and municipalities. According to article 54 of the

²⁰ Until now, the meetings of the Commission looked into questions related to energy (renewable energies, natural gas, etc.). It is envisaged that water will be discussed during future Commission's meetings.

²¹ The usefulness of preparing a "Memorandum of Information" for specific examples of PPP projects was also stressed by the banking sector and was included in the recommendations of the consultation workshop organized in Beirut on December 9, 2010 by the Ministry of Energy and Water and the Association of Banks of Lebanon in cooperation with the GWP-Med/MED EUWI Secretariat on "Private Sector Participation in Water Infrastructures in Lebanon: The Role of Banks". It was recommended to develop a roadmap to fit well the preparation of these memoranda.

²² The Ministry of Energy and Water estimates the understaffed at about 2700 employees against 1342 employees today in the Ministry and the Establishments (<http://www.lecommercedulevant.com/node/17789>)

budget law of 2004, the authorization for recruitment of personnel within all public establishments in Lebanon is under the authority of the Public Function Council. Unwieldy procedures of public function recruitment and its control are therefore applicable to the Water and Sanitation Establishments despite Law 221, which stipulates the annulment of the Public Function Council's authority and its replacement by more flexible control modalities within the Ministry of Energy and Water.

Regarding the improvement of staff qualifications, efforts have been limited to a few isolated activities, among which the most important were achieved in the framework of the Lebanon Water Policy Program (LWPP) financed by USAID and carried out between 2002 and 2007²³. Moreover, while the draft law on PPPs assigns to the HCP the tasks related to the preparation of the general policy, the privatization programmes and the means for their implementation, it does not award it with any role concerning the promotion of capacity building for the administrations and establishments that will be in charge of implementing and monitoring these programmes. The international experience shows that in other cases (England, South Africa, Korea, Victoria [Australia]), where PPP Central Units are in place, capacity reinforcement represents an important part of the missions insured by these units²⁴. Public authorities should have the needed capacities in order to partner on an equal basis with their private sector counterparts.

A new programme aiming at developing performance indicators for the 4 Water and Sanitation Establishments, whether their management is public or private, is currently being elaborated with the assistance of GIZ. There are two types of indicators: common indicators²⁵ for all 4 Establishments and specific indicators for each Establishment. Data collection should be done on a monthly basis and their submission to the Ministry of Energy and Water on a quarterly basis. Law 221/2000 planned the creation of a Committee for Performance Evaluation of Public Water and Sanitation Establishments within the Ministry of Energy and Water. This Committee, which would be established by a decree approved by the Council of Ministers on a joint proposition by the Ministry of Finance and the Ministry of Energy and Water, has not been yet created. In the absence of this structure, it has been decided to temporarily dedicate a team inside the Exploitation Directorate within the Ministry of Energy and Water to collaborate with the Water and Sanitation Establishments in order to gather, verify, consolidate and report related data. In the current context, and in the absence of the structure in charge of making a comparative evaluation of the respective establishments' performances, the indicators can enable the identification of areas where the capacities of the Establishments could be strengthened, including through reinforced collaboration between Establishments for best practices' learning/exchange.

The Tripoli experience showed that the management contract offered employees and managers the opportunity to learn about private sector participation while being involved in

²³ Activities consisted of the organization of a series of meetings and information workshops in order to promote a common vision for the PSP as well as the facilitation of participation to training and exchange visits to countries in the Mediterranean region in order to support experience exchange. Source : USAID (2007), "Lebanon Water Policy Programme (LWPPP), Final Report, May 2002- May 2007"

²⁴ OECD (2010) "*Dedicated Public-Private Partnership Units A Survey of Institutional and Governance Structures*"

²⁵ There are 12 common indicators containing 4 categories: technical indicators, financial indicators, management indicators and customer service indicators.

its implementation and monitoring. Short-term contracts entailing low risk for the private sector, such as management contracts, could possibly help build capacity within government and local authorities and provide them with the expertise and know-how to manage more advanced PSP contracts.

4. Ensuring financial sustainability of projects

The OECD Checklist for Public Action: Deciding on private provision of infrastructure services and making the co-operation between the public and private sectors work in the public interest

An appropriate risk allocation should be driven by an assessment of the party best able to manage risk (the party best able to influence the probability of occurrence or to deal with its consequences), so as to ensure value for money and the sustainability of the partnership (**principles 2-4**). In addition, contractual arrangements with the private sector for water infrastructure are typically long-term and as such not likely to cover all aspects of the complex relationship between the private sector and the public sector. Mechanisms exist that may help reduce the uncertainty that comes with long-term incomplete contracts or deal with its consequences. In any case, good faith and willingness of the parties to co-operate and find solutions will remain crucial. In that context, engaging the private actors to formulate their requirements and constraints can promote mutual understanding and better appropriateness of contracts (**principle 13**).

Principle 2. Financial sustainability of infrastructure projects. No infrastructure project, regardless of the degree of private involvement, should be embarked upon without assessing the degree to which its costs can be recovered from end-users and, in case of shortfalls, what other sources of financing can be mobilised

Principle 4. Preserve fiscal discipline and transparency. Fiscal discipline and transparency must be safeguarded, and the potential public finance implications of sharing responsibilities for infrastructure with the private sector fully understood

Principle 13. Establish communication and consultation with private sector. To optimise the involvement of the private sector, public authorities should communicate clearly the objectives of their infrastructure policies and they should put in place mechanisms for consultations between the public and private partners regarding these objectives as well as individual projects.

Source: OECD (2009), Private sector participation in water infrastructure, OECD Checklist for Public Action

The interest of private operators in infrastructure projects depends mainly on the incurred risks and the existence of risk mitigation mechanisms. These risks can be commercial, financial, political, contractual, etc. Risks represent important parameters for private investors and can make projects less attractive to foreign investors and/or may necessitate the provision of significant guarantees. Insurances covering these risks can be contracted by the foreign investors but are added to the PPPs costs (see following box on risks and guarantees).

In Lebanon, the political risk, both domestic and external, is important because of the turbulent situation in the region. The infrastructure can be damaged during armed conflicts without provisions for compensation by the State to private investors. Political interference causing unilateral changes in the legal and regulatory frameworks in general or in specific contracts is also an important risk. The banking sector's concern about these risks was highlighted during a workshop organized by the Ministry of Energy and Water as part of the dialogue with private sector on PSP in water infrastructure²⁶. The experience of the water conveyor project from the Awali River to Beirut shows that the partial risk guarantee, provided by the World Bank to protect lenders against debt service default due to political risks, was necessary for attracting private investors.

Typology of risks related to the water sector and mitigation mechanisms

Private sector participation involves some transfer of responsibilities and thus of risks to the private partner. These risks can be classified in two main categories:

- **Legal and political risks:** i.e. infrastructure expropriation, political interference, payment default by public institutions, wars and instability, weak legal framework, weak or arbitrary regulator, devaluation and currency inconvertibility, etc.
- **Commercial risks:** i.e. tariff affordability and population's resistance to pay, demand variation, information asymmetry and hidden costs, costs of inputs in particular energy, etc.

Mitigation mechanisms involve in the first instance an assessment of the party best able to manage it. A wide range of contractual arrangement for risk sharing optimization is available to policy makers and forms a quasi continuum between cases where the public sector assumes most of the risk to cases where there is significant risk transfer to the private sector.

Governments can also provide guarantees to mitigate the risks (typically sovereign guarantees against the contracting authority' default risk). A wide range of insurance, premium and guarantees depending on the covered risk's nature are also offered by specialized agencies such as:

- MIGA (the Multilateral Investment Guarantee Agency): offers premium guarantees against political risk that can covers up to 200 million \$ based on the evaluation of the country risk and the project risk. Sovereign counter guarantees are not required in general. MIGA has recently joined the Dubai International Financial Centre (DFIC) to launch a joint political risks insurance programme for the Arab world in order to support foreign direct investment flows.
- COFACE: offers premium guarantees to cover associated or isolated commercial and political risks. The premium varies according to the nature of the covered risk, the country classification (7 categories for country classification), the type of buyer, the risk period, the financing structure.

²⁶ Workshop on Private Sector Participation in Water Infrastructure in Lebanon: The Role of Banks", organized on December 9, 2010 by the Ministry of Energy and Water and the Association of Banks of Lebanon in cooperation with the GWP-Med/MED EUWI Secretariat.

- Ex-Im Bank: In exchange of an affordable premium (depending on the sector activity and the requested amount), the Ex-Im Bank insurance covers the buyer's default risk related to some commercial and political risks, such as bankruptcy, default, war, or currency inconvertibility.

Guarantees that are designed to shield the private sector from specific risks may also, however, constitute contingent liabilities on national budgets. Their use should carefully be assessed against the need to safeguard fiscal discipline and transparency. In any case, mitigating the risks of the water sector crucially depends on the establishment of an enabling environment that includes high quality regulatory framework.

Source : OECD (2009), *"Private sector participation in water infrastructure, OECD Checklist for Public Action"* and Nasr S. (2010) *"Risques et garanties pour les projets BOT et opportunités pour le secteur bancaire"*.

Capital market in Lebanon is characterized by the absence of access restrictions to the local and international capitals as well as to the lending markets. The exchange risk seems to be under control due to the current foreign exchange reserves of the Bank of Lebanon. Indeed, the exchange rate has been maintained unchanged despite the conflict of summer 2006 and the internal unrest during 2006-2008. The country greatly depends on tourism (mainly Lebanese expatriates), on remittances from expatriates and Foreign Direct Investment flows - FDI (mainly Arab investments in real-estate, i.e. in a sector with high return in the short term). Events impacting security have a strong effect on tourism and FDIs; nonetheless, experience from past years seems to show a certain resistance of tourism and FDIs during periods of instability and conflict. Moreover, and at first sight, the recent international economic crisis does not seem to have slowed down FDIs in the case of Lebanon.

Regarding revenues in the drinking water sector, the applied tariffs and the collection rates are under the responsibility of the Sanitation and Water Establishments. Currently, they do not allow the recovery of costs, even the operational ones. Among the 4 Water and Sanitation Establishments, only the Beirut Mount Lebanon Establishment succeeds in covering the operation costs. The two Establishments of North-Lebanon and South-Lebanon manage to cover the operation costs excluding the energy costs, which represent respectively 43% and 50% of their operation costs. The Békaa-South Establishment does not manage to cover its operation costs, even without considering the energy costs. It is worth noting that the Ministry of Energy and Water is indirectly subsidizing the O&M costs of the Water and Sanitation Establishments by managing service contracts for pumping stations that fall under their responsibility. In 2009 for example, the MEW spent 2.4 million US \$ for service contracts in the three Establishments of North-Lebanon, South-Lebanon and Békaa-South. These amounts have not been reported in their balance sheets and therefore they cannot be included in the analysis of their financial performance²⁷. Nonetheless, these subsidies are steadily declining and have been nearly obliterated in the case of the North-Lebanon and South-Lebanon Establishments.

²⁷ World Bank (2009) *"WSS sector : public expenditure review"* Middle East and North Africa Region Sustainable Development Department

Sanitation charges have -until now- been included in the municipal taxes collected by the municipalities²⁸. However, the National Strategy foresees a tariff sanitation fee at the level of 25% of the drinking water bill, which will be applied in 2011 and will be gradually increasing. Charging for sanitation services will help to bring out its revenue and support the Establishments' financial capacities so they can be in charge of the service. This tariff will be applied in the first stage to some pilot areas connected to sewerage networks and treatment plants. For 2011, institutions have adopted a flat fee for the service of sanitation in these pilot areas.

The tariff structure currently applied for potable water, is based on a fixed annual fee for a contractual volume of 1m³/day. This annual fee varies from 140 000 LBP (Békaa-South Establishment) to 200 000 LBP (BML Establishment).

Sheet 2: Water tariffs for drinking water by regional establishments (annual fees in LBP)

	BML	North-Lebanon	South-Lebanon	Békaa-South
Annual fee (based on a consumption of 1m ³ /day)	200 000	180 000	175 000	140 000
Maintenance of the gauging devise	35 000	10 000	25 000	20 000
Total	235 000	190 000	200 000	160 000

Note: does not include government VAT (10 percent) and stamp fee (1,000 LBP)
 Source: World Bank (2009)

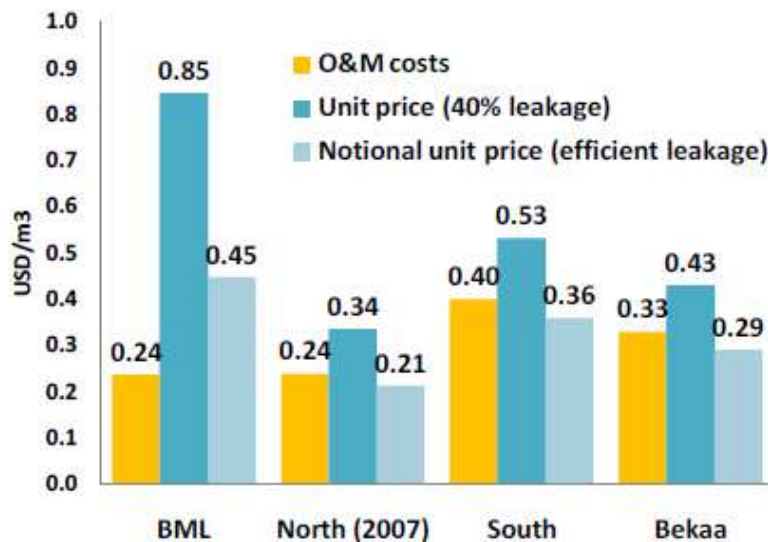
Cost recovery rates are difficult to evaluate, mainly due to the absence of volumetric metering and leakage detection mechanisms. However, according to an estimate made by the World Bank²⁹, the current tariff structure could theoretically cover the operation costs (see the comparison between operation and maintenance costs and unit prices in Figure 1). However, cost recovery is not achieved because of the weakness in bill collection induced by non-payment of bills by consumers but also by public administrations and local authorities. Only the Establishment of Beirut Mount Lebanon, that shows a bill collection rate of 66%, is able to cover its operation costs.³⁰ Unreliable consumers' inventory and cumbersome legal procedures for water cut-offs are the major constraints to improved bill collection rates.

Figure 1: Estimate of the unit price per m³ in comparison to the O&M costs

²⁸ It corresponds to the tax on building permits equivalent to 0.05% of the patrimonial value of new construction and tax "maintenance of sidewalks and sewers" billed annually at 1.5 % of the rental value of the house.

²⁹ World Bank (2009) "WSS sector : public expenditure review" Middle East and North Africa Region Sustainable Development Department

³⁰ On the contrary, the Establishment of the South Bekaa records the lowest rate of collection of invoices. According to the report of the World Bank (2009) the rate is 11% which enables to cover 13% of the operating costs through revenues from water sales.



Note: Unit price (USD/m³) is calculated by dividing total billed fixed fee for residential customers (i.e. fixed fee multiplied by number of connections) by the total water sold to households (assuming 40 percent leakage). The notional unit price is calculated as above assuming an efficient level of leakage (20 percent)
 Source: World Bank (2009)

The connections inventory work initiated under the management contract of Tripoli showed that a large number of consumers' records contained inconsistencies and/or inaccurate information: subscriptions transferred under other names without informing the Establishment, records with numbers but no consumers' names, records containing a request for cancellation while the connection has not been effectively cancelled and *vice versa*. It was also found that several connections are made without record numbers being assigned to them. Most of them concern religious establishments, universities, public administrations, police stations, cemeteries, etc. Legal procedures for managing unpaid bills require that each case is addressed/dealt with separately. WSE are discouraged to apply water cut-off measures because of procedural delays and additional costs incurred, a fact that does not incite consumers to pay their bills.

Weak or limited cost recovery has important repercussions on maintenance, operation and rehabilitation investments. The leakage rate registered in the network is on average at about 40%. The service contract experience of Tripoli revealed that it was difficult to improve the invoice rate indicators, the debt recovery indicators and consequently the technical performance of the network.

5. Going forward

Constraints to the development of private sector participation in the Lebanese water sector are important despite the efforts made by the Government to improve the related enabling environment:

- The illustration of the Government's political will and true engagement in this type of cooperation is altered by slow implementation of the legislative and regulatory framework reforms. The legislative framework reform, initiated in 2000, including the adoption of laws and decrees allowing PPP contracts and guaranteeing their implementation, is still in progress. The role and responsibility allocation among the government, the public establishments and the local authorities, mainly regarding

the supervision of the performance and the contractual obligations of the private sector, is still unclear. The lack of means and capacity within the public administrations leads to a *de facto* re-allocation of responsibilities and increases the institutional perplexity.

- The investment framework is still marked by high political risk. Private sector and Foreign Direct Investments (FDIs) are essentially interested in high profitability sectors on the short term, such as real-estate and financial investments of the diaspora.
- The commercial risk is also high in view of the current performances of the Water and Sanitation Establishments. In particular, the weakness in cost recovery rates limits the private sector's profitability perspectives. An additional difficulty, as the Tripoli experience has shown, concerns the improvement of the financial indicators.

In this context, it is essential that the Lebanese Government examines the governance challenges related to legal reform and institutional restructuring and facilitates their implementation through capacity building and operational strengthening of the concerned structures in order to send a strong signal of its engagement to the private sector.

In view of the important risks incurred currently by the commercial financing of infrastructure in Lebanon, a substantial transfer of risks to the private sector, as would be the case in contracts such as concessions, is unlikely, except for limited and well structured pilot projects. On the contrary, less risky contracts, such as short term management contracts, could be interesting for the private sector and at the same time promote a better understanding of the respective partners' expectations. However, the experience of Tripoli showed the difficulty in leading, under the current conditions, a partnership with the private sector, even in its most elementary forms. The lessons learned from this experience need to be drawn and better appreciated in order to benefit potential future private sector participation initiatives.

In the long term perspective, and if the institutional conditions are in place, it could be useful to sound out private sector interest in investing in the water sector in Lebanon. In that respect, the Government could carry out wide consultations with the private sector to see which type of activities and models of partnership could be of interest to private investors within the water sector. This would also allow a greater understanding of the difficulties preventing a more dynamic participation of the private sector and the measures that need to be taken in order to overcome them and make the water sector more attractive.

In this context, the detailed study of a number of dam projects to be build by the private sector under BOT contracts and the preparation of related material (as the "Memoranda of information") considered by the MEW are important exercises that will help anchor the technical and financial issues on concrete examples.

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Annex

List of contacted persons

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Filled questionnaire received

- The Prime Ministry
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- The Ministry of Energy and Water
- The EU Delegation in Lebanon