1. Introduction
At the September 2000 Millennium Summit, leaders of over 180 nations agreed on an ambitious 8-goal Millennium Development Goals (MDGs) agenda, which aims, among other things, to ensure environmental sustainability. Efficient delivery of utility services such as drainage/wastewater and solid waste services certainly plays an important role in contributing to the achievement of this particular goal.

To ensure efficient delivery of utility services, governance and finances are two most important factors. In almost all developing countries, government finances are limited since the Government’s priority lists include all sectors including defence, education, infrastructure, transportation, healthcares and so on. Private finances are available but need an enabling and relaxing legal framework in place to remove barriers to entry, so that the private sectors can participate in financing physical and related works traditionally monopolized by State utility service companies. It is estimated that it is always more costly to issue public debts to finance sectors in which cost recovery through user-pays is possible. In light of these, it is important that public-private partnership be promoted to minimize financing costs and achieve sustainable service delivery. This will in turn contribute significantly to the achievement of the MDGs in environmental sustainability.

This paper focuses on public-private partnership in financing utility services such as drainage/wastewater and solid waste. Section 2 highlights the common current situation in delivery of utility services such as drainage/wastewater and solid waste in developing countries. Suggestions related to public-private partnership in financing is presented in Section 3, and Section 4 concludes.

2. Situation Overview
Financing of utility services such as drainage/wastewater and solid waste operations are dominated by Government finance, which is limited. The delivery of these services is mainly by state-owned ‘companies’, financed from the provincial/municipal budget. The financing mechanism is such that utility ‘companies’ submit service level/quantity proposals for financing and the final approval of funding depends on the availability of fund of the province/municipality for any particular year. This practice often makes it uncertain for utility ‘companies’ to decide on operational budget schedules. The financing of capital costs is often insufficient so infrastructure items such as drains and wastewater treatment plants, landfills, transfer stations …are not in good working conditions. Similar can be said for the financing of operation and maintenance (O&M) costs such as O&M equipment, trucks, bulldozers, backhoes…etc. As a consequence, service levels and frequencies are inadequate to ensure high quality services, i.e. road/residential solid waste is collected and water resource is not polluted by improperly treated drainage and wastewater.

Governance and management structures are often weak and decided upon by the provincial/municipal authorities. It is often the case that these
‘companies’ are not ‘companies’ in real senses, because they (i) are in essence ‘spending units’ under the management of the provinces/municipalities; (ii) are not authorized to recruit the management team; (iii) are not able to decide on service costing and pricing, depreciation, and retained earnings (if any).

**Private sector participation (PSP) is minor.** PSP in any stage of service delivery is negligible due to the State-owned governance nature of utility service companies. Further, there is little budget to outsource works, so the companies usually have to work within the budget allocated. Outsourcing, if any, is often directed to ‘capable’ state-owned companies or favoured private sector enterprises, rather than through a competitive bidding process.

**Cost recovery via user-pays is possible but constraints exist.** An enormous number of target group surveys indicate a sound ability to pay (using average income figures), but a very low willingness to pay. This is presumably due to the fact that most utility services including drainage/wastewater and solid waste have either been priced at low tariffs or provided for free for a long period of time, with the existence of Government subsidies. Even when the demand for service quality is high, the willingness to pay is still at minimum due to the expectation of high quality services. This is obvious that users wish to receive quality services before they are willing to pay.

### 3. How is public-private partnership fit in?

Facing these constraints, governments in developing countries can adopt two complementary set of policies to attract private finance for the financing of drainage/wastewater and solid waste services: (i) First, policies to improve the efficiency on sub-national finance markets; (ii) Second, policies to privatize the provision of utility services and financing.

#### 3.1. Improving the efficiency of sub-national finance market

Governments can improve the efficiency of sub-national finance markets by reducing moral hazards, improving market transparency, strengthening market governance, establishing a level playing field on the market, and developing local capacity for budget, accounting and financial management. Policies can be prioritized in accordance with the degree of openness of the domestic financial market, across a spectrum spanning from closed systems (monopoly financing by the state), to intermediate systems (mixed of state and private finance mainly through financial intermediaries), to open systems (private finance only, increasingly through capital markets).

**Reducing moral hazards.** Reducing moral hazard requires the adoption of a complex set of policy measures aimed at establishing hard budget constraints across the fiscal decentralization, public debt and financial sector channels.

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1. It is shown that to ensure efficient user-pays cost recovery, the following best practices should be followed: (i) the legal authority should be defining clearly - this authority should be a general framework for the application of user charges and should not set the precise amount of the charges to be applied. This allows the charges to be adjusted without further legislative authorization; (ii) Consultation with users should be conducted when a charge is being introduced or significantly altered. This serves to communicate to the users the rationale for the charges and avoid misunderstandings; (iii) Full costs principle should be applied to determine the level of cost recovery.

2. Moral hazard arises in sub-national finance markets when borrowing by sub-national entities exceeds its optimal level because borrowers expect a bailout by the central government in case of a sub-national default. It originates from two main sources. Ex-ante, moral hazard results from deficiencies in the structure of incentives faced by market participants. Ex-post, moral hazard results from modalities of specific government interventions.
Within the fiscal decentralization channel, the first priority in closed systems is to unify the capital grant allocation scheme in order to reduce the moral hazard problems associated with multiple grant allocation systems. As the market structure opens, the key priorities are to establish clear rules for capital grant allocation and to introduce a monitoring system for conditional grants. In parallel, current transfers need to be stabilized through introducing fixed shared revenue formula and through establishing local government authority over own-source revenue setting. Finally, as the market structure moves to open systems, the focus can shift to building diversified, market-based own-revenue sources for local governments.

Within the public debt channel, the first priority is to establish control over quasi-fiscal liabilities of sub-national entities, and to introduce limits on central government and/or state agencies lending to them. As market structures evolve, the key is to establish explicit limits on sovereign guarantees for sub-national borrowing, establishing clear provisioning rules for sub-national guarantees and other contingent liabilities, and introducing a prudential framework for borrowing by sub-national entities. As the system opens to competition, the government can focus on developing a market-based system based on pricing of guarantees and other contingent liabilities as part of sub-national entities budgets, and relax prudential rules in line with the general hardening of the budget constraint.

Within the financial sector channel, the first priority within intermediate systems is to remove the preferential adequacy treatment for sub-national debt in capital adequacy calculations, and to control large sub-national exposures by financial intermediaries. In addition, several measures that are essential to establish a level playing field on the market are also instrumental to reducing moral hazards, i.e. phasing-out hidden financing schemes such as treasury or specialized agency lines of credit, and phasing out the protective framework surrounding provincial/municipal development funds.

Improving market transparency. Within intermediate market structures, a broad array of policy reforms should be implemented to improve market transparency. The first priority is to establish a local government accounting framework separating current and capital expenditures, to establish a legislative framework clearly designating provincial/municipal government assets, to develop auditing of local government accounts by the state audit office or by private auditors, and to regulate procedures and formats for debt disclosure and registration by local governments.

As an open market structure takes hold, the key policy priorities are to strengthen the local government accounting system through the introduction of accrual accounting in addition to cash accounting system, to introduce market-based valuation for local government assets, to regulate the treatment of provincial/municipal government guarantees and other contingent liabilities in concession contracts and the pricing and accounting of these guarantees in provincial/municipal government budgets, and to revise formats for debt disclosure and registration in line with the evolution of the provincial/municipal government accounting framework.

Strengthening market governance. Within intermediate market structures, key policy reforms are required to strengthen governance in sub-national finance markets. The main priority is to ensure that the legal framework provides the same protection to creditors in the case of claims against sub-national entities as in the case of private corporations under the commercial codes. As competition develops, the government should focus on establishing sufficient distance between competent courts and provincial/municipal governments.

Establishing a level playing field on the market. Establishing a level playing field on the market requires to take a range of policy measures early on in the process of market development and to follow them through as the market evolves to an open structure.
Within closed structures, the key priority is to clearly separate the management of unified capital grant allocation and of central government-run financing schemes. Once intermediate markets develop, the focus should shift to phasing out central government financing schemes and the protective framework surrounding municipal development funds (MDFs). Once an open market takes hold, the key priority is to privatize or liquidate MDFs, and to liberalize entry by capital market institutions on the sub-national finance market.

**Developing local capacity for accounting, budgeting and financial management.** As an intermediate market structure develops, as budget constraints take hold through the fiscal decentralization, public debt, and financial sector channels, and as basic regulations for market transparency and market governance are put in place, local governments will have an incentive to produce transparent accounts and to build a good credit record on the market.

As these incentives take root, provincial/municipal governments need to develop their capacities in accounting, budgeting, and financial management. Initial capacity building efforts should focus on developing a basic capacity for liability management at the local level. As an open market takes hold, further capacity building should focus on more advanced asset-liability management techniques, including the optimization of investment plans and the adoption of risk mitigation techniques.

**3.2. Privatizing utility services**

In parallel with the implementation of policy measures to improve the efficiency of sub-national finance markets, privatization is the most powerful policy to attract private finance for the financing of utility services.

Across developing countries, an increasing share of local utilities and services are being shifted to provincial/municipal corporations, from water supply to drainage, wastewater treatment, and solid waste disposals.

Corporatizing local services provision offers major opportunities. First, it provides an opportunity to segregate the financing of utility investments outside the general government budget, thereby reducing its impact on sovereign debt, either directly through government borrowing from international financial institutions (IFIs) or indirectly through the provision of sovereign guarantees for borrowing by sub-national entities from IFIs. Second, it opens the way for direct financing of utility investments from the private sector, thereby avoiding most moral hazard problems associated with sub-national finance markets. And third, it opens the door for efficiency improvements in the delivery of local services through the participation of the private sector in the ownership and management of these corporations.

Several main policy reforms are critical to support these developments: (i) establishing the legal foundation for municipal companies; (ii) encouraging private sector participation in municipal companies and in the provision of local services; and (iii) streamlining capital grants to municipal company projects.

**Establishing the legal foundation for provincial/municipal companies.** The first priority is to establish a legal and regulatory framework that provides a basis for local governments to create municipal corporations and to assign the provision of a broad range of local services to them. In particular, given the small size of municipalities in many developing countries, governments should establish a clear framework for the establishment of inter-municipal companies, allowing several municipalities to pool the provision of a local service and to reach economies of scale in service provision and investments.

**Encouraging private sector participation in utility services.** The second priority is to encourage the participation of the private sector in utility services. This in
turn requires establishing a framework for the privatization of municipal or inter-
municipal companies, and allowing private companies to bid for the provision of utility
services. Of particular importance is to develop an adequate legal and regulatory
framework to ensure transparency in the privatization process for provincial/municipal
companies and in bidding procedures for the provision of utility services.

Streamlining capital grants to provincial/municipal company projects. As
in the case of sub-national finance markets, access to private finance by municipal
companies will be affected by the capital grant system for local infrastructure projects.
Governments need to ensure that capital grants do not exceed the cost of externalities
that cannot be internalized by the market, and that the allocation process for these
grants is both transparent and predictable. Otherwise municipal companies would risk
being diverted into rent seeking behavior, thereby jeopardizing the efficiency gains
resulting from local services privatization.

4. Concluding Remarks
As a result of widespread decentralization, the financing of utility services has become
the responsibility of sub-national entities in developing economies. Because of tight
fiscal constraints imposed on general government finances, the financing of these
investments will need to come in large part from the private sector. The development
of sub-national finance markets faces major constraints, including moral hazards, lack
of transparency, and the presence of quasi-fiscal financing schemes that prevent the
emergence of a level playing field on the market. A vast majority of local services can
be performed by local utility and services companies, thereby avoiding most of these
constraints. However, despite the development of local capital markets, access of
utility service companies to local capital markets is hampered among others by their
small size, the lack of long-term market benchmarks, and the absence of mechanisms
to enhance private financing of utility projects. Capital market instruments can be a
powerful instrument to overcome these constraints and provide the financing required
by utility service companies for privatization.