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Water Supply and Sanitation Sector Reform

**The Role of Central Governments to Facilitate the Development of Decentralised WSS Services
Focus on the Financial Dimension**

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1. EXECUTIVE SUMMARY

Decentralisation, defined as the devolution of responsibilities for water supply and sanitation infrastructure and services to local authorities, is one of the key governance challenges facing EECCA countries. In addition to institutional reform, it relates to two main issues:

- The capacity of local authorities to make decisions and to allocate resources;
- The capacity of these institutions to fund these decisions, and to raise adequate revenues.

Success in this area would have an important bearing on the achievement of national and internationally-agreed targets for water supply and sanitation.

Decentralisation of environmental management has formed part of the institutional restructuring and reform process, but it has not yet yielded the expected results. The paper examines the role that central states should play to facilitate the effective devolution of responsibilities to local authorities. The focus is mainly on the financial dimension of decentralisation in EECCA.

While acknowledging the heterogeneity of EECCA countries, the paper stresses the need for a more consistent and coherent policy, covering national strategies, including poverty reduction strategy papers (PRSPs) and integrated water resource management (IWRM), and the overall institutional framework (the legal code that defines the roles and responsibilities of local jurisdictions, utilities, and the modalities of private sector participation).

This policy should have a coherent financial component, which includes tariff policy, and support for the creditworthiness of local governments. The latter refers to both the confidence that central authorities have in transferring budgetary resources to the local level, and the capacity of subsovereign jurisdictions to attract finance on local capital and financial markets.

The consequences for policy making are manifold. In particular, national authorities that remain major players in a decentralised system, should:

- determine the appropriate level of devolution, and the incentives to reach this level (to overcome the risks associated with excessive fragmentation); this entails incentives for cooperation and coordination among local jurisdictions, including at the level of river basins¹;
- review norms to make sure that they are most appropriate from an environmental and economic perspective; in EECCA, construction standards and health-related norms tend to be very restrictive (sometimes more restrictive than international standards), and generate excessive capital and operation costs;
- revise accounting and budgetary standards at local level, so that they are task- and performance oriented;
- update tariffs formulae to take into account the consequences of decentralization, and to strengthen the capacity of local jurisdictions to adapt tariffs to their own situation and priorities (including demand management); this would help to avoid the negative consequences of the first stage of decentralisation experience in EECCA in the 1990s;
- allocate financial resources in a way that is compatible with the responsibilities assumed by local authorities; this concerns in particular the magnitude and the design of intergovernmental transfers of public finance. In general, transfers associated with the provision of WSS should not be associated with transfers related to regional redistribution schemes; and, earmarked grants should be replaced by global grants, associated with conditions including standards, modes of expenditure management, and most important performance criteria for the services;

¹ This is particularly relevant in the context of integrated water resource management, for which planning ought to be coordinated between municipalities of the same river basin, in order to make the best use of financial resources. This approach of IWRM will be discussed during the preparatory meeting and developed in a later version of the background paper

- implement a framework to harness local capital and financial markets, in a way that is consistent with the overall institutional, financial and operational capacities of local authorities; this framework should include measures to monitor and control the situation of local authorities, in a way that mitigates the risks associated with the responsibilities devolved to them;
- disseminate information and tools that support the municipalities' effort to develop effective plans and establish contracts with utilities.

Along these dimensions, alternative, but consistent policy packages can be envisioned, to serve sound and realistic strategies for the water and sanitation sector in each country. In this process, environment ministers will have to engage in a dialogue with government partners, on issues which will be new and challenging. However, it is important that choices made at the intergovernmental level are consistent with the policies for the provision of environmental infrastructure and services, in particular for water supply and sanitation.

2. INTRODUCTION

In Almaty in 2000, Economic/Finance and Environment ministers of EECCA acknowledged that structural reform was needed to raise the financial resources necessary to modernise the water supply and sanitation (WSS) sector in the region. They identified an urgent need for a new institutional framework. This entailed devolving responsibility for water service provision from national to local level, and strengthening the related capacity of local authorities, in particular locally-elected governments, to assume their new responsibilities.

The consequence is a shift of central government role from active service provider to overall regulator of the sector, with responsibilities for:

- Setting the national policies, which include national development strategies, poverty reduction plans, and integrated resource management;
- Creating the economic, financial, and legal conditions in which utility management can meet the long term objectives of the sector;
- Monitoring the performance of the utilities, and taking corrective action within the agreed regulatory framework to address shortcomings in performance.

In parallel, local authorities should focus on the organisation of the WSS sector in their area of constituency: they should build the capacity to make decisions on local objectives (consistent with the national policies), to generate the resources (including financial resources) to implement these decisions, and to organise the service accordingly.

Devolution of responsibilities has been initiated and is well under way in most countries. Now, the focus of policy makers should shift to supporting local governments and utilities to implement the Almaty Guiding Principles.

The financial dimension plays a critical part here. Indeed, if the local governments are to assume certain financial responsibilities for the sector, they must be able to access financial resources. Kazakhstan is a rare example where devolution of responsibilities to the local level has been matched with delegation of adequate powers and provision of resources.

The need for diversified sources of finance

As owners of the communal service infrastructure, municipalities are responsible for its rehabilitation, modernisation, and development. But most municipalities in EECCA do not have sufficient funds to carry-out these responsibilities, because they are not financially autonomous or sustainable. Rather, the municipalities are still largely dependant on fiscal transfers from central or regional budgets. For that reason, they often have to coordinate their infrastructure development plans and capital expenditure budgets with national/regional plans and budgets. This makes the strategic planning and investments at local level dependant on the policies at the national/regional level, and generates a risk that local investment plans will not be implemented due to budgetary constraints.

In this context, local authorities can rely on a limited number of sources of finance:

- **Tariff.** Tariff levels must provide sufficient incentives for the efficient use of water and discourage excessive use. They must also enable the development of sustainable financing systems so that water services can be provided on a commercially viable basis (taking into account affordability considerations). The price people pay for water supply and sanitation services is a criterion that directly impacts on the creditworthiness of local authorities; indeed, financial institutions confirm that the general attitude of a municipality towards tariffs and their reform is the most important criterion to assess the reliability of the municipality to re-pay any debt that it incurs.
- **Local taxes.** Exploiting the local tax base may conflict with national objectives and raise serious distributive concerns. Generally, there is only limited scope for fiscal autonomy, and EECCA is no exception. Moreover, this issue relates to the wider agenda of fiscal reform, which is beyond the scope of this paper;
- **Intergovernmental transfers.** National public funding is expected to remain a major source of finance for the water and sanitation sector in most EECCA countries for the foreseeable future. This is even more so in the context of the MDGs which requires investment which cannot be financed exclusively by user charges or other sources of finance;
- **Debt** is a means to cover up-front investment costs, but the capital and interest payments have to be repaid based using the sources of revenues mentioned above.

Since 2000, an effort has been made to move tariffs in line with the cost-recovery principle (see the progress report for further discussion). Now, while tariffs have generally increased in recent years (they doubled in Russia and Moldova), production costs have done the same. It follows that, in many countries, the ratio between the average tariff charged to consumers and the unit operational cost remains well below 1; that is tariffs fall far short of covering even operational costs. In other countries, while it comes close to, or above 1, maintenance and capital costs are not included. As a result, investment has remained at very low levels (2 to 4 USD per capita in recent years), well below the estimated need for the maintenance and renewal of the infrastructure (24 USD per capita in Kazakhstan, 16 in Georgia).

Organisation of the paper

Thus tariffs have to be complemented by other sources of finance, if local authorities are to assume their responsibilities as regards WSS reform and modernisation. This paper focuses on the related issues of intergovernmental transfers and debt, and on the part which central governments should play to facilitate access to these resources.

The next section provides an overview of the reform implemented in EECCA as regards devolution of responsibilities for WSS to the local authorities. It addresses some of the advantages as well as the risks associated with devolution, and discusses how they can be mitigated.

The following section - section four - introduces the various approaches for organising financial transfers from central to local governments. The ways in which the transfers are made can affect the performance of the service, and should be given particular attention. Although the design of such schemes is closely related to the broader issue of the fiscal relationships between levels of government, the provision of WSS services has to be taken into account when considering the various alternative options. Reference is made to experience in central and eastern European countries to provide a benchmark.

In section five, the focus is on the opportunities to raise additional finance at the local level by accessing local capital and financial markets; that is taking out loans with commercial banks or issuing bonds. The discussion is based on a limited number of country case studies. It shows that countries may follow alternative paths to harness local capital and financial markets, as long as these paths are consistent with the global picture of local public finance in this country.

The concluding section draws the threads together. It emphasises the need for a coherent approach to the financial dimension of decentralisation, and suggests actions that should be taken at the local level (and supported by central authorities), to make sure that devolution of responsibilities for environmental infrastructure and services produces the expected results. Indeed, devolution is a complex process, which can only deliver expected outcomes when its financial component is properly planned and managed at both central and local levels of government.

3. THE RELEVANCE OF DEVOLUTION OF WATER SERVICES TO SUB NATIONAL LEVELS OF GOVERNMENT IN EECCA

Worldwide experience suggests that decentralising responsibility for infrastructure to sub national levels of government, and actively involving local beneficiaries can improve infrastructure performance.

However, devolution is not a panacea. In the related field of poverty reduction, country case studies in developing and emerging economies show that the impact of decentralisation on poverty is not straightforward. In countries where the state lacks the capacity to fulfil its basic functions, there is a definite risk that decentralisation will increase poverty rather than reduce it.

Thus, the way devolution has been implemented in EECCA since Almaty has to be evaluated, while the risks associated with decentralisation are considered. The key issue is how to implement decentralization so that its benefits are realized and the risks avoided. This will depend on the specific circumstances of each country. The experience of CEE countries in the transition process provides some idea of the financial dimension of decentralisation.

3.1 Institutional devolution of water services in EECCA

The progress paper which is published as a companion to this paper, reports on the progress made in the devolution of responsibility for WSS in EECCA since 2000. The table below synthesises the current organisation of the sector and pinpoints the relative part played by the various levels of government.

It highlights the heterogeneity of EECCA countries as regards devolution of WSS services. This heterogeneity partly derives from national features which have to be taken into account when devising the institutional organisation of the WSS sector. Such features include:

- Geography. The size of the country, the nature of the land (mountainous regions, for instance), the abundance of resource, in part determine the level of aggregation which is most relevant for the organisation of water related services;
- The urban infrastructure, and the urban/rural split. Relevant technologies, and the capacity to raise revenue depend on this organisation;
- Institutions. The number and configuration of local governments are often determined by history. They are unlikely to correspond with the optimal size of units for efficiently providing various public goods and services. It is generally not feasible to re-organise the structure of local government in order to provide water services more efficiently;
- The condition of the equipment and its stage in the lifecycle of the infrastructure. This may have important implications for the level of investment required, especially in countries where maintenance has been low for decades;
- The capacity to raise revenue (fiscal potential), and the share of the population which is unable to pay for user charges;
- Experience of central and local governments in the management of services. This feature involves, *inter alia*, links with accountability at central and local levels, the ability to take into account the demand from the local beneficiaries and to address their needs, and the capacity to manage the infrastructure and the services associated to it.

The formal assignment of responsibility is not the same as the capacity to carry out responsibilities. Moreover, experience shows that the effective power of sub-national governments to manage the programme under their responsibility is often quite limited, with the central government increasingly engaged in setting standards and/or micro-managing sub-national government implementation of various sectoral policies.

Table 1. Institutional devolution of water services in EECCA

	Governance	Ownership of the fixed assets	Tariff setting/approval	Investment planning	Capital and operational subsidies	Private sector involvement
Azerbaijan	Gostroy (State committee for construction)	Municipalities?	Central Gov., unified tariff for the country		Central government?	
Armenia	State Committee of water Economy (SCWE), Regulator of Public services, MoFE (MTEF), Water utilities (vodocanal) – joint stock companies (JSC)	Central government (100% shares in Yerevan and Armenina vodocanal), 3 JSC with regional participation (49%) in Armavir, Lori, Shirak	Regulator at country level, wholesale tariffs for JSC Armvodocanal, Tariffs for JSCs	Invest. plans are developed by SCWE and WU, approved by the Central government in MTEF process	Central government	Private operators at Yerevan (Management contract then lease) and Armenian vodocanal, JSCs (Central Gov. 51% + regional Gov. 49%) in 3 regions
Belarus		Municipalities (prevail)				
Georgia	Dept. of Infrastructure at the MoED	Municipalities	Municipalities	Municipalities	Municipalities	
Kazakhstan	Anti-Monopoly Agency (AMA), MoE and MoF	Municipalities (prevail), regions	Municipalities after review and approval by Territorial bodies of the AMA	Municipalities and Regions	Operat. -Mun, Reg, Capital – central, Reg, Mun	Almaty
Kyrgyzstan		Municipalities	Municipalities		Municipalities	NO
Moldova	Dept. of Construction and Territory Development	Municipalities	Municipalities after review by DCTD	Municipalities and central government		Few private investors and operators in rural WSS
Russia	(recently dissolved) Dept. of Construction and Housing and Communal services at the Ministry of Reg. development	Municipalities (prevail), regions	Municipalities (prevail), regions (for private operator and for the WU owned by regions)	Municipalities and regions	Operation: Mun, Reg Capital: Reg, Mun, (rare) Central	3 BOT projects in Moscow, private operators serve some 8% of urban population
Tajikistan						
Turkmenistan			Central gov., unified tariff for the country		Central government	
Uzbekistan						
Ukraine	State Committee of Housing and Communal services	Municipalities (prevail), regions	Municipalities and regions	Municipalities and regions	Municipalities and regions	Odessa City (lease), JSC in Kiev (but 100% owned by Mun.)

3.2 The risks associated with devolution

Decentralisation can strengthen the democratic process, allow governments to tailor the supply of public goods to local preferences, and introduce some competition across jurisdictions, thus raising public sector efficiency. It can however entail efficiency losses, and make it difficult to implement redistributive policies, and complicate macro-economic management. On the spending side, local provision may fail to exploit economies of scale and internalise territorial spillovers. The latter risks are particularly acute for water supply and sanitation infrastructure.

In poor countries, or poor areas of middle income countries, decentralisation can generate a poverty trap. The key here is to raise the capital stock in infrastructure to the point where self-sustaining development takes over.

There is an environmental risk associated with devolution, in the WSS. Unless provision is made for integrated management of water resources at the level of river basins, devolution may undermine efforts to achieve national water goals. Although water is abundant in large parts of the region (Russia, Belarus, Ukraine), pollution of surface and groundwater is a serious problem in many countries; it results from discharge of untreated or insufficiently treated sewerage from urban settlements and industrial plants, industrial accidents, fertilizers and pesticides. Water scarcity is increasing in part of the region (see the stock taking report, 2005).

Decentralised fiscal policy settings also raise the macroeconomic issue. A number of OECD countries have experienced difficulties in achieving fiscal objectives because of inconsistent policies pursued at the sub-national government level.

The lessons learnt from accession countries concerning the consequences of decentralisation on local public finance and its relationship with the national economy may be instructive for EECCA countries (see Box 1).

Box 1. Decentralisation and local public finance. Lessons learnt from accession countries

A recent survey² shows the great variability of the structure of expenditure of central governments, and the relative importance of revenues from grants from central government. In the 10 accession countries, decentralisation occurred along two successive stages, which have changed the institutional organisation of the territories, widened the responsibilities of local governments, and expanded their spending needs. This triggered financial difficulties. In these countries, in 2002, local public spending accounted for 9% of the GDP, and 21% of total public spending. Such ratios remain slightly below EU-15 averages.

Operating expenditures account for 60% of local public expenditure. The share of capital expenditure is increasing and is now higher than the EU-15 average (2% of GDP for CEE countries, compared to 1.5% in the EU); however, investment needs are still more important, and the share of local capital expenditure in total public capital expenditure (43% on average) still lags behind EU level (63%).

Revenues of local governments depend to a large extent on transfers from central governments. Intergovernmental transfers account for a significant part of the revenues of local governments (25% in CEE). Fiscal revenues of local governments in CEE (53% of the total revenues of local governments) mainly stem from taxes which are shared with the central governments (income tax, VAT, essentially).

² *Finances publiques locales dans la zone Elargissement : état des lieux*, French Embassy in Poland, 2004, based on a survey by DEXIA, on the finance of local governments in 10 accession countries

Grants received from central governments are usually for general use, although this is not the case in the Czech Republic, Lithuania, and Latvia.

In the CEE, local authorities incur debt. The average level of debt amounted to 1.5% of GDP in 2001; it was 5.6% in the EU. In Lithuania and the Slovak Republic, debt can only be incurred to finance capital expenditure.

4. THE MECHANISMS OF INTERGOVERNMENTAL TRANSFERS

Intergovernmental transfers are means the central government can use to improve the performance and control of sub-national public expenditures, and to create incentives for better coherence between national and local public policies. EECCA countries mostly rely on such mechanisms to bridge the financial gap that arises between the costs of local policies and services and the revenues to which local authorities have access. Lessons learnt from accession countries confirm that, in the transition process, intergovernmental transfers are a key dimension of relations between levels of government and a major source of finance.

In EECCA, the Ukraine and Kazakhstan have set in place central budget funds to subsidize investment at the local level, with the objective of providing utilities and municipalities with financial support for investment, for the prevention of accidents, or to improve the efficiency of water systems. In the Ukraine, the amount of money allocated for this purpose was €80 million in 2004. In addition, central governments are also making efforts to honour their financial commitments vis-à-vis utilities, most notably by resuming payments of compensation for social services provided through utilities (such as privileges that involve reduced tariffs for certain categories of the population).

Intergovernmental transfers come in a variety of forms (from earmarked to general purpose grants), with different types of conditions which respond to various policy objectives. Beyond the expenditures they finance, these transfers have important implications for efficiency and equity of public service provision in view of their implications for the incentives and the accountability frameworks of the recipient local governments. In many cases, there is a risk that intergovernmental transfers could weaken accountability by providing a weaker incentive for sub-national governments to carefully manage local spending policy through efficient use of local financial sources.

Thus, they are a critical component of the accompanying measures of devolution of responsibility to local authorities. Indeed, there are often political tensions when the jurisdiction which spends the money is not the one which generates the revenue, since the redistribution mechanism is not neutral.

Here, the key issue is: how should financing schemes for sub-national governments be designed so that they are responsive to local preferences without creating efficiency concerns and compromising distributional objectives nationwide?

4.1 Taxonomy of intergovernmental transfers

Intergovernmental transfers come in a variety of forms, unconditional or conditional:

- Unconditional transfers come simply as a budget support with no strings attached;
- Conditional transfers typically specify the type of expenditures that can be financed. In addition, they also specify matching requirements, as the recipient may be required to finance a specified percentage of expenditures using its own resources. Matching requirements can be open ended (implying that the central budget will match recipient resources without any limit) or closed (the grantor undertakes to match recipient funds up to a pre-specified limit). Matching requirements may generate a greater burden for jurisdictions with deficient fiscal capacities; thus it may be desirable to vary matching requirements inversely with per capita fiscal capacity of the recipient.

The design of these transfers is of critical importance for the efficiency and equity of local service provision and fiscal health of sub-national governments. The table below sets general principles for grants design.

General purpose and block grants from central government are often used for financing, because it is more efficient to use the central government tax system rather than sub-national government to collect revenue. General purpose grants are also used for equity reasons, because the redistribution of tax revenue between sub-national governments is deemed fair and efficient. They may also be used in a way that leaves room for local autonomy. Block grants are used for funding local public agencies in charge of delivering public services consistent with central government policy; compared to general purpose grants, they are slightly more specific in the goal that the transfer is supposed to achieve, although they still respect local autonomy.

Some grants are “earmarked” for specific policy areas. They are usually provided when the sub-national authority acts as an agent for the central government in implementing central government policies. They are used for three purposes:

- For funding local public agencies responsible for the implementation of central government policies;
- For compensation of positive external effects of sub-national policies (including spillovers to neighbouring jurisdictions);
- For equity purposes.

Table 2. Principles and good practices in grant design

<i>Grant objective</i>	<i>Grant design</i>	<i>Practices to avoid</i>
To bridge financial gap	Reassign responsibilities Tax abatement Tax base sharing	Deficit grants Tax by tax sharing
To reduce regional fiscal disparities	GENERAL NON MATCHING FISCAL CAPACITY EQUALISATION TRANSFERS	General revenue sharing with multiple factors
To compensate for benefit spillovers	Open ended matching transfers with matching rate consistent with spill over of benefits	
Setting national minimum standards	Conditional non-matching block transfers with conditions on standards of service and access	Conditional transfers with conditions on spending alone <i>Ad hoc</i> grants
Influencing local priorities in areas of high national but low local priority	Open-ended matching transfers (with preferably matching rate to vary inversely with fiscal capacity)	<i>AD HOC</i> GRANTS
Stabilisation	Capital grants, provided maintenance is possible	Stabilisation grants with no future upkeep requirements

Source: Shah (1994, 2004)

4.2 Tentative guidelines, based on OECD experience

In addition to the CEE experience referred to above, it is noteworthy that OECD countries have witnessed larger fiscal gaps (defined as the difference between sub national spending responsibilities and their revenue raising powers) over the last 15 years. This may reflect an unavoidable tension between proliferating local spending demands and the scarcity of tax instruments with the correct characteristics for being levied locally. Hence the lasting reliance on transfers and debt to finance local spending programmes.

The grant system has a number of roles to play, and its design is of paramount importance to avoid conflict between various objectives. In OECD, country surveys suggest that the impact of intergovernmental grants on efficiency, fiscal discipline, and equity, largely depends on their design. The design varies significantly from one country to another. However, two broad categories can be distinguished, as they have a different impact on sub-national fiscal autonomy and incentives:

- Earmarked grants have been defended on the ground that they could serve to internalise externalities. On the other hand, by providing strong incentives to spend in specific domains, they may result in overspending. Conditions attached to these resources effectively require that they be used to provide particular services. When they are set without reference to objective performance criteria, or when defining minimum spending levels to reach a given quality of public services is very difficult, earmarked grants have resulted in excessive spending and/or poor cost-effectiveness; this is also the case when they are based on *ex post* actual costs, instead of *a priori* standard costs (as in the Czech republic, or in Poland), dulling incentives to contain costs;
- Block grants leave sub-national government with discretion to organise local provision in the most effective way. They are often seen to be most appropriate for equity purposes, though earmarked grants often contain a redistributive element.

Earmarked grants have been used extensively to minimise the risk of suboptimal spending in domains characterised by significant spillover effects or to secure minimum standards for specific services. However, co financing rates above levels which effectively account for spillover effects have often resulted in excessive spending, accompanied by poor cost effectiveness. Given these problems, there has been a move towards general purpose (block) grants, which allow greater local autonomy and should, in principle, generate greater cost-efficiency.

Fiscal equalisation schemes – often an intrinsic characteristic of the grant system – can promote economic efficiency by avoiding that regional disparities become self-perpetuating and by creating the ground for a fair and effective fiscal competition. However, they may also impede changes in cost differentials and hinder regional adjustment by creating poverty traps. Although options to reduce the potential disincentive effects associated with the grant system exist, they often imply some compromise with equity objectives.

Likewise, using the grant system to smooth cyclical shocks may be desirable but care must be taken to maintain appropriate incentives to secure fiscal discipline. A heavy reliance on discretionary grants may be counterproductive in this regard.

5. THE DEVELOPMENT OF LOCAL CAPITAL AND FINANCIAL MARKETS

If one considers seriously that increased use of market-oriented credit is both necessary and desirable in the financing of water and sanitation infrastructures, it will be critical to tap the private savings market to help in investment financing; There is increased recognition that developing and transition countries need to find ways of accessing local capital and financial markets in order to achieve their water and sanitation objectives (see, for instance, the Camdessus Report). These mechanisms are widely used in OECD countries, in contrast to the situation in EECCA countries.

The urgent needs for investment in drinking water supply and distribution, wastewater collection and treatment (along with solid waste collection and disposal) exceed the capacity of governments to finance on their own. If investment levels are to accelerate, it will be critical to tap the private savings market to help in investment financing. Some of this financing will come in the form of direct private investment in municipal environmental facilities like water distribution systems or wastewater treatment plants. However, the recent record of private investment in the water supply and sanitation sector has been disappointing (see the companion publication on the costs of the MGDs in EECCA need to provide more precise refs here and elsewhere). The most important mechanism for accessing private savings is likely to be borrowing by public authorities, either directly from the capital market or through intermediary financing institutions like banks or special infrastructure funds.

Devolution is shifting the principal investment burden from the State budget to local budgets. The credit systems required to finance urban environmental investment therefore will be local credit markets, in which the borrowers are sub-national governmental units or municipal utilities. The task of a well-functioning local credit market is to access domestic (and, sometimes, international) savings on a sustainable basis, then lend these funds to creditworthy local institutions to invest in urban environmental infrastructure. Given that many urban environmental services, like wastewater treatment or water supply, are highly capital intensive and involve long-lived assets, the ability to generate longer-term credit is one requirement of a successful local credit market.

Borrowing by local governments or municipal utilities, of course, is not an end in itself. The IMF among other international organizations has repeatedly warned against excessive sub-national borrowing as a potentially de-stabilizing influence on fiscal management.³ Some EECCA countries experienced sub-national debt crises in the 1990s, resulting from excessive, unregulated local borrowing, frequently to cover current account deficits unrelated to capital spending. The debt crises serve as potent reminder that the purpose of a local credit system is to generate financing for capital investment that can prudently be repaid from recurring revenues. The creditworthiness of borrowers provides the basic underpinning of a sustainable credit market.

So the adequate question is how to create markets that generate finance of long-term credits, from the perspective of local authorities? And what part can be played by central states to support the development of such markets?

³ For example, "Public Debt in Emerging Markets: Is It Too High?" Chapter 3 in *World Economic Outlook* (IMF: September 2003).

5.1 Recent opportunities

A few years back, the mismanagement of debt by local authorities, and its consequences for the national economies in EECCA seemed to have disqualified the issue of subsovereign debt. National *and* sub national debts have played a major role in the financial crisis in EECCA in the 1990s. As a consequence, central authorities in most EECCA countries have banned sub sovereign debt, or put heavy administrative burden on it, so as to discourage potential borrowers.

The slow recovery of the financial sector, impaired by modest bank restructuring, limited sophistication in local credit markets, and the lack of municipal credit infrastructure, has failed to provide new opportunities, until recently. The situation is even more acute in rural areas, plagued with the difficulty to raise users finance, with the financial/fiscal weakness of municipalities, and with relatively higher transaction costs.

In recent years, this ban on municipal debt seems to have been relaxed. Local credit markets were recently revitalised in Ukraine (in the case of Odessa). The situation of the financial sector has evolved, with the recent growth of the bank assets, the expansion of accumulators of long term savings (pension funds, insurance companies), and the increasing orientation of banks towards servicing business.

In this context, the development of local capital and financial markets accessible to municipalities in the context of decentralisation rely on a limited number of prerequisites. We shall focus on the following two:

- The borrower has to have control over a predictable stream of revenues;
- Some collateral has to be collectable.

5.2 Institutional clarity: who is the borrower? who bears contingent liability?

The need for clear identification of the borrower, and of the nature and bearer of any contingent liabilities, particularly the public sector, are essential for debt financing and to credit market development.

The World Bank's Atyrau Pilot Water Supply and Sanitation Project in Kazakhstan illustrates the magnitude of potential municipal liability (World Bank, March 2005). The project financed rehabilitation and replacement of water mains and sewer pipelines. The loan was to be repaid by the Vodokanal from tariffs that would be adjusted to recover operating costs and debt service costs. However, as the evaluation report states, "the lack of management and financial autonomy on the part of the vodokanal" made it impossible to implement the planned cost recovery. Tariff decisions were "highly political." The national Anti-Monopoly Agency, in fact, did not approve any tariff adjustments over the lifetime of the project (2000-2004), necessitating large transfers from the Atyrau oblast to cover operating expenses. Debt service on the US\$12.0 million loan did not become effective until February 2005. These costs will have to be absorbed by the oblast, as well.

The experience of the Atyrau project actually is more favourable than most similar projects, in the sense that a specific level of government, in this case the regional oblast, stepped forward to cover the operating shortfall. More typical of on-lending experience for environmental projects, as the World Bank evaluation report points out, have been unresolved disputes between municipal utility, municipality, regional government, national government and regulatory agency, about who should absorb the utilities' debt service costs and operating deficits. International financing institutions have the advantage of a fallback sovereign guarantee to protect them from the financial repercussions of these disputes. Domestic and private-sector lenders do not have such protection.

The ambiguities of implicit guarantees and contingent liabilities can be addressed in either or both of two ways. One option involves preparing a mutually consistent set of laws that more clearly defines the financial and legal interrelationships between institutions, and either expressly identifies or prohibits what are now implicit liabilities subject to different interpretations. Russia through a series of laws has moved in this direction, as has Ukraine, which for the past two years has been drafting and exposing for comment a broad legal framework that would establish clearer rules for borrowing and institutional relationships. Meanwhile, in the absence of a revamped comprehensive framework, a practical option is to incorporate in individual loan contracts, or bond covenants, explicit statements regarding the income streams, collateral, and guarantees that protect a credit, while also making explicit that no other back-up guarantees of any kind, not expressly identified, are available to the lender. Recent country case studies in the Ukraine, the Russian federation and Kazakhstan⁴ show that these countries have made clear that there are no implicit guarantees on the part of national government. Parallel clarity regarding implicit guarantees from municipalities and other levels of government is conspicuously lacking.

5.3 Revenue streams and collateral

Underlying a successful local credit market is the creditworthiness of borrowers. Creditworthiness, in turn, depends upon access to adequate and predictable revenue sources that can be used to cover debt service, and the availability of collateral or other types of guarantees to protect the lender in the event of revenue shortfalls.

In building a local credit market for environmental infrastructure investment, the initial foundation block is the revenue stream that a municipal utility generates from user charges or tariffs. It is well recognized that, with a few conspicuous exceptions, the revenue streams of municipal environmental utilities currently are insufficient to support intermediate- or longer-term loans on their own. Local credit market development for the urban environmental sector therefore requires a twofold strategy: strengthening tariff flows and making the improved revenue streams available as pledged security for borrowing, while also identifying ways within the current legal and regulatory structure to support borrowing by supplementing tariff revenues with specified budgetary transfers or back-up collateral that reduces lender risk. Some progress is being made on both fronts.

Strengthening Revenue Streams as Debt Service Support

In a revenue bond model of credit financing, the sole source of debt service support is a project's or institution's revenue stream from operations. At an early stage of credit market development, it may be unrealistic to rely solely on pledged revenue streams as support for debt service. However, the revenue stream remains a basic building block of debt repayment capacity.

The ability to convert a municipal utility's future revenue stream into up-front borrowing for capital investment may be broken down to three essential elements. Each of these is the subject of reform debate:

- Definition of costs to be included in tariff rate; most EECCA countries have inherited an historical legacy, in which debt service and capital costs were not recognized as costs to be recovered through service charges for water supply, wastewater discharge and treatment. A first step toward commercialization and revenue-based borrowing involves formal recognition of these costs in tariff-setting formulas
- Pledging revenue streams in support of debt service. The legal ability to pledge future revenue streams in support of debt service is central to the revenue financing approach. In the absence of specific legislation stating that revenue streams can be offered as collateral for debt, the legal status of such pledges remains in doubt.

⁴ *Local Credit Systems for Municipal Environmental Infrastructure in Russia, Ukraine, Kazakhstan and China*, George E. Peterson, paper prepared for OECD, 2005

- Explicit blending of budgetary support and tariffs. Countries in all parts of the world blend general budgetary support with tariffs to produce combined revenue streams that can support market-based borrowing. Blending of this kind is most appropriate for environmental services, like waste collection and treatment that have externalities that benefit the population at large. Contributions to environmental utilities from municipal or oblast (provincial) governments cannot serve as adequate security for loan repayment in a successful local credit market, if the commitment to provide supplementary budget support to the municipal utility is not formalized in a legal contract, with provisions that guarantee that the combined income stream will be sufficient to repay debt service;

Physical collateral

The first line of defence for a lender to the sub-national sector is to secure marketable collateral for its loan. One practical impediment to development of a local environmental credit market has been the difficulty of identifying appropriate collateral to secure loans for investment in the water, wastewater, or solid waste sectors. Borrowers and lenders have found ways around this limitation to finance specific investment opportunities, where the capital element in question can be functionally and economically separated from the network. In Russia, for example, a local vodokanal may form a special purpose company with a joint venture partner, typically a commercial bank, to carry out a specific investment project, such as a wastewater treatment plant, or a water purification plant. The newly formed company then receives credits from the sponsoring bank to help finance construction. The physical infrastructure serves as collateral for the loan, and the bank's participation as equity partner makes it easier for it to foreclose on the collateral should that be necessary.

The experience with international donors' risk mitigation instruments suggests that primary emphasis in building local credit markets should be placed on the policy and legal reforms necessary to reduce underlying risk. Once true risk has been lowered, the role of risk mitigation instruments becomes clearer. They are most effectively used to demonstrate to the market that true risk is lower than commonly perceived, and to accelerate lenders' willingness to lend under new arrangements.

6. A COHERENT APPROACH TO THE FINANCIAL DIMENSION OF DECENTRALISATION

The preceding sections have argued that decentralisation, and in particular the devolution of responsibilities for WSS to local authorities, should be accompanied by a thorough reflection of its financial consequences. In order to make sure that local jurisdictions have access to the resources they need to assume their new responsibilities and to mitigate the risks associated with decentralisation, intergovernmental transfers and the development of local capital and financial markets should be considered in a proactive way.

In this concluding section, the focus is on the key stages related to the definition and implementation of sound policies that regard the financial dimension of decentralisation for environmental infrastructure and services. These stages require that a particular framework be established for the development of local financial markets, which should be consistent with the overall picture of local finance, as some examples will illustrate. The role of the central authorities is key to defining and implementing this framework, but it should be supplemented by actions taken at the local level.

6.1 A particular framework...

Local capital and financial markets cannot develop without the appropriate legal framework. This framework should clearly state:

- Who can borrow: local authorities, utilities (note that for the same service, public authorities will generate municipal debt, while private operators generate corporate debt; how do these two categories cohere?), special asset companies?

- For what purpose; long-term debt should be made available for investment only (and not current account deficit);
- Subject to what limitations (annual amount of borrowing, stock of accumulated debt)
- Which debt instruments are allowed (commercial banks, bonds issuance, access to foreign currency debt?)
- What collateral can be pledged by the local borrowers: revenue streams (this has to be legally accepted), real property. In addition procedures have to be defined for enforcing revenue pledges in the event of default.

This framework should be made compatible with the related system of regulations for banks, pension funds, and insurance companies. In particular, such regulations should state how much these institutions can invest in municipal debt, creating incentive (or disincentive) mechanisms for the market.

This legal framework has to be supplemented by mechanisms that reduce risk to lenders. Such mechanisms rely on:

- Strengthened operation and maintenance capacity at utility levels,
- Project preparation facilities (PPC) to develop projects on a financially viable basis,
- Guarantees, reserve accounts (which may be partially funded by donors),
- Ring fencing revenue flows, to ensure pay back,
- Establishing municipal banks and municipal development funds,
- Pooling debt of smaller municipalities,
- Secondary markets (securizing local loans, re-selling municipal bonds).

Again, the role of central government is key, as the steps have to be identified and planned on a country basis, depending on the current state of the infrastructure and the financial sector, the need for investments, and the political attitude towards future local credit markets. The main dimensions of the part played by central governments, both as direct implication and as facilitation, include:

- Effectively control sub-national borrowing, to mitigate the risk of bankruptcy of local governments, and the macroeconomic consequences of the decisions made at the local level;
- Support long term savings, for long term credit; this involves support the development of pension funds, and the insurance industry;
- Encourage the establishment of rating agencies, for sub-sovereigns, in order to disseminate reliable information on the financial situation of the borrowers;
- Support competition between types of lending (banks and bonds);
- Support market creation for environmental services;
- Facilitate market access, via such means as risk sharing, credit enhancement, subsidies.

6.2 ... consistent with the broader context...

The strategy that regards the development of local capital and financial markets has to be considered in the context of a global policy package, which should be compatible with the existing system on which other sources of finance are based picture, in particular intergovernmental transfers and fiscal autonomy.

Kazakhstan is a case where the structure of intergovernmental transfers, restricted fiscal autonomy of local jurisdictions, and conditions of access to local credit market have to be considered in conjunction: reform of the intergovernmental finance system that redistributes local surpluses to deficit governments in a way that weakens local creditworthiness; modification of the national revenue system, which does not allow local authorities to introduce new taxes or differentiate local tax rates (except for a land tax); and relaxation of the very stringent controls over local debt and local borrowing. These reforms have been recommended by various donor agencies and IFIs. However, Kazakhstan has decided, for the time being, that it does not want to encourage development of a “municipal” credit market, and has chosen to implement a more centralized and unitary intergovernmental financing system with strict controls over local borrowing.

Significantly more latitude has been allowed for municipal utility borrowing under corporate laws. The principal impediment to expanded utility borrowing is the inadequacy of tariff revenues. The Kazakhstan Case Study estimates that, at present, tariff revenues cover 67%-75% of current expenditures. Detailed ex-post analysis of Atyrau water and wastewater utility’s financing reveals an even larger shortfall from tariff revenues. Development of the next stage of local credit market utility financing will require more formalized, more explicit, and more legally binding commitments as regards the source and magnitude of future revenues that will complement tariff income to pay for debt service. It will also require a more transparent and well-defined tariff regulation procedure than currently found in the national Anti-Monopoly Agency.

Russia is moving in a different direction. Russia’s future development of the local credit market raises interesting issues because of the policy path the country appears to have chosen. In a series of program statements and legislative initiatives in 2004, national authorities laid out the framework they foresee for investment in the water and wastewater sector. First, future investment by municipal governments in utility infrastructure is supposed to be minimized: such investment is to be financed by utilities/enterprises operating under corporate law. Second, the government has stated clearly that its priority is to attract private sector investment and management into municipal utilities. The job of obtaining credit financing for new sectoral investment might then become the joint responsibility of municipal utilities and private operators/investors. In fact, the responsibility for investment financing and credit under the private participation model that Russia is developing is still in the process of being clarified. There is a need to establish the legal and institutional framework for private sector participation in the WSS sector, including specifically the parties’ respective responsibilities for obtaining credits to finance investment and pay debt service.

Under any institutional model of future utility management, credit market development will require predictable implementation of tariff rules that allow for recovery of investment and debt service, and reduction in the political risk involved in tariff regulation. At present, municipal enterprise utilities are subject to tariff regulation at the local дума level while private enterprises are subject to tariff regulation at a higher level of government - an inconsistency that also needs to be normalized. Better regulation will require implementation of clear methodologies for calculating and approving tariffs.

Ukraine is farther along toward framing and adopting a comprehensive legal and institutional framework for borrowing in the local infrastructure sector. Draft legislation has been circulated, discussed, and revised for the last two years. Adoption of a single, coherent policy framework that applies both to local governments and local utilities, and to bond issues as well as to bank loans, will constitute a fundamental step forward in credit market development.

Ukraine has made the clearest statement of its intention to develop the local credit market as a sustainable financing tool for the water and sanitation sector. Credit market development has become a priority as a result of Ukraine’s commitment to reach EU environmental standards, and its recognition that the costs of doing so cannot possibly be financed from government budgets alone.

6.3 ... and with actions taken at the local level

As the progress report made clear, at this stage, action taken by central governments on the reform of the WSS sector in EECCA should be implemented in parallel with actions taken at the local level. Here, the focus is on the overall scheme of decentralisation, and on the institutional capacity of local authorities.

It has been established that excessive fragmentation can generate suboptimal provision of public goods, in particular in the water supply and sanitation sector:

- Local provision may fail to exploit economies of scale
- It can also prevent the internalisation of territorial spillovers.

In OECD countries, frequent solutions to these problems include:

- amalgamation of local authorities. Mergers lead to fewer authorities of larger size; the central government often contributes financially to improve the attractiveness of amalgamation, as it may benefit from lower costs at a local level through the grant system;
- a “two-speed” system, where spending responsibilities are assigned in an asymmetric way to jurisdictions with a critical mass and/or sufficient (human, technical) capacity;
- *ad hoc* cooperation agreements among levels of government. One approach relies on a purchaser/provider split: the supply of the service is concentrated in some jurisdictions, which receive some compensation from other jurisdictions benefiting from the service. Another approach is based on joint provision of public services, through jurisdiction associations. Financial incentives may be set out by the central government, as an additional percent of the central governments grants. Many countries have experienced the latter option to provide public utilities, including water supply and waste water treatment.

The impact of the policies envisioned in this paper would be very limited if the local authorities did not develop the capacities to accompany them. In particular, this relates to:

- Budgetary decision making at the local level; to make the best use of available resources, and to enhance creditworthiness and the capacity to attract more finance: appropriate planning, realistic strategies, competent management of financial resources, including debt;
- Capacity building. Local managers are often given new responsibilities without receiving appropriate training and without corresponding increases in their administrative budgets. Processes for ensuring the prompt flow of resources from the centre to the periphery need to be streamlined, as severe bottlenecks have impeded the local use of allocated funds.

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