

**OECD Global Forum
on Sustainable Development**

**EMERGING
ECONOMIES
TRANSITION**

FINANCING WATER AND ENVIRONMENTAL INFRASTRUCTURE FOR ALL

Some Key Issues



**OECD GLOBAL FORUM ON SUSTAINABLE
DEVELOPMENT:
FINANCING WATER AND ENVIRONMENTAL
INFRASTRUCTURE FOR ALL**

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**OECD GLOBAL FORUM ON SUSTAINABLE DEVELOPMENT:
FINANCING WATER AND ENVIRONMENTAL INFRASTRUCTURE FOR ALL**

SOME KEY ISSUES¹

¹ This report is largely but not exclusively based on material presented and discussed at a meeting organised within the framework of the OECD Global Forum on Sustainable Development, Paris, 18-19th December, 2003. It has been substantially drafted by the rapporteur of the meeting, Mr. James Winpenny, with additions provided by the OECD Secretariat. The cooperation of the World Bank and the US Environmental Protection Agency in organising the meeting is gratefully acknowledged. The report does not necessarily reflect the views of OECD, its members or participants to the meeting. More information on the GFSD can be found at http://www.oecd.org/document/36/0,2340,en_2649_34623_20434980_1_1_1_37425,00.html

TABLE OF CONTENTS

Highlights of the Report.....	7
Finance Strategies.....	7
Improving the Management of Domestic Public Expenditure	7
Water and Sanitation for the Poor	8
Stimulating Local Capital and Financial Markets	8
I. Aims of the Global Forum on Sustainable Development: Financing Water and Environmental Infrastructure for All	9
II. The Challenge of Financing Water and Environmental Infrastructure.....	11
The Camdessus Report	11
The Momentum Continues	12
Setbacks and Disappointments	12
The Problems of Financing Water	14
III. Addressing The Challenges.....	17
Finance Strategies.....	17
Improving Management of Domestic Public Spending.....	19
Water and Sanitation for the Poor.....	21
Stimulating Local Capital Markets and Financing Urban Environmental Infrastructure	23

HIGHLIGHTS OF THE REPORT

As part of a more focused effort to alleviate poverty, the international community has agreed targets for water supply and sanitation; namely, by 2015, to reduce by half the numbers of people without access to safe water and adequate sanitation. Some estimates suggest that achieving these targets will require finance from all sources to roughly double. Fundamental reforms of water governance are also needed. The OECD Global Forum on Sustainable Development met 18-19th December, 2003 to discuss the financing dimension of this issue.

Financing urban water infrastructure is not easy: typically investments involve a high capital outlay and long pay-back periods, as well as greater risks and lower rates of return than other forms of infrastructure. The monopolistic nature of the sector, and its social sensitivity, have fostered extensive government intervention that has not always been conducive to financial sustainability. Financing sanitation is more difficult than water supply, largely because downstream communities often benefit more than those financing such investments.

The Millennium and Johannesburg Summits, and the publication of the “Camdessus Report”, have helped to raise the profile of the sector. However, other political and economic trends have worked in the opposite direction. Continued low incomes have impeded many developing countries from increasing investment in the water sector. Official Development Assistance flows have continued to decline, and are now at their lowest level in recent years. Commercial lending and private investment have also been scaled back significantly as the private sector has become more risk averse vis-à-vis the water sector.

The internationally agreed water targets will not be met on a business-as-usual scenario. Concerted action, backed by real political support, will be needed for this. Even though achieving the targets globally will be difficult, there are still many things that can be done to mobilise and allocate financial resources that can lead to real progress on the ground. From this perspective, the Conference focused on several practical measures that developing and transition economies might take in facing up to the difficult challenge of meeting the internationally agreed targets for water:

(I) Finance Strategies

There are various mechanisms for financing water infrastructure; many have the effect of stretching payments over the long lifetime of the assets. However, ultimately it is users or taxpayers (domestic or foreign), present or future, who foot the bill. There is no “magic bullet” to solve the financing problem. There is scope to innovate with the various mechanisms, especially to mitigate the risks of water projects, but the main task is to blend the different sources together in smart ways; to enhance synergies, to avoid crowding out different sources, and to maximise leverage on total flows. There is evidence that tools such as the FEASIBLE model, developed by Denmark and OECD, can facilitate a dialogue among stakeholders and the development of more realistic, affordable finance strategies. They can also help to identify some of the key policy and institutional issues that need to be addressed.

(II) Improving the Management of Domestic Public Expenditure

National governments are likely to remain the major source of finance, particularly capital investments: in the mid 1990s, they accounted for about two-thirds of such investments in the water

sector. However this has a number of perverse effects, and shifting the financing burden from taxpayers to users would have several advantages: it would reduce demand and hence investment needs; it would help put the sector on a more financially sustainable basis; and it would promote better governance by enhancing accountability. Devolution of responsibility, as well as the (financial) means to fulfil that responsibility, is also crucial. This is complex, but successful devolution is associated with transparent local government budgets and financial statements by water utilities, a multi year framework for annual budgets of local governments, a mid-term rolling investment plan, project selection based on clear rules, good creditworthiness that facilitates access to local capital and financial markets, and the ability to manage debt. Independent assessments of public investment programmes can help to enhance their credibility, and help attract additional finance.

(III) Water and Sanitation for the Poor

The substantial subsidies that the state provides for the water sector are often justified because of the need to ensure that poor groups have access to water and sanitation. However, there is much evidence to suggest that it is richer groups who could afford to pay for water services that benefit most from such subsidies. Water services often fail to reach the poor, who bear the main burden of inadequate access, service deficits, poor water quality, unreliable supplies and unsanitary disposal of wastewater. It is essential that the needs of the poor be adequately addressed as part of a sector reform strategy, and there are at least two different types of challenges: (i) low connection rates and low ability to pay (the situation in many developing countries), and (ii) high connection rates to centralised water systems, but low ability to pay (many transition economies and, to an increasing extent, in OECD countries). In the first situation, solutions lie in empowering the poor to determine their own needs, and in strengthening incentives to provide water to them. In the second case, targeted measures (via income support or tariff structures) are more effective than maintaining low tariff levels.

(IV) Stimulating Local Capital and Financial Markets

For the foreseeable future, private sector operators are more likely to be a source of managerial and technical know-how rather than investment in the water sector in developing countries. However, more could be done to engage the private sector in other ways, particularly by improving municipalities' access to capital and financial markets. This was the approach followed in many OECD countries where borrowing from commercial banks (Europe) or issuing municipal bonds (North America) were important mechanisms for developing municipal infrastructure, including water and sanitation. Some interesting experience is developing with the use of municipal development funds in developing countries that blend capital from domestic and external sources for on-lending, thereby contributing to the deepening of local credit markets. Such approaches facilitate the transition to municipalities borrowing from banks directly or issuing bonds. The lessons learned from the US Development Credit Agency, for example, should be reviewed with a view to replicating successes more widely.

I. AIMS OF THE GLOBAL FORUM ON SUSTAINABLE DEVELOPMENT: FINANCING WATER AND ENVIRONMENTAL INFRASTRUCTURE FOR ALL

The UN's Millennium Summit in 2000 and the Johannesburg World Summit on Sustainable Development in 2002 established internationally agreed targets for water supply and sanitation; namely, by 2015, to reduce by half the numbers of people without access to safe water or adequate sanitation. Since then, a number of meetings have been devoted to water supply and sanitation and many reports and analyses have been conducted. From a finance perspective, the Report of the World Panel on Financing Water Infrastructure, "Financing Water for All" (the "Camdessus Report"), is especially noteworthy. The meeting of the UN Commission on Sustainable Development (CSD) in April 2004 is the next major international milestone at which progress can be assessed.

OECD's Global Forum on Sustainable Development (GFSD), held in December 2003, had the aim of building on previous meetings, reports and recent experience in order to add value to the debate on achieving the internationally-agreed water targets. It focused on the role that public authorities could play in financing water supply and sanitation. The urban sector was the main focus of discussion, though it was recognized that, in some countries and regions, problems in the rural sector posed a greater challenge in meeting the water targets.

Four issues formed the core of the Conference agenda:

- financing strategies for water and environmental infrastructure
- optimising the role of national and local public budgets
- ensuring access of poor and vulnerable groups to water and sanitation services
- mobilising local capital and financial markets

Private sector participation was not a major focus for discussion: it has been discussed extensively in various other forums².

The Conference, organized in cooperation with the World Bank and USEPA, was intended to provide a forum for dialogue among OECD Members, partner countries and other stakeholders. It brought together senior government officials, representatives of international and other financial institutions, business people, academics, researchers and NGOs, both from OECD Member and non-Member countries, attending in their personal capacities.

² See for example, World Bank/OECD, "Facing a crisis of confidence in private sector participation in the water sector: measures to overcome obstacles to more effective PSP", Proceedings of conference held 2-3 July, 2003, Vienna. www.oecd.org/env/eap.

II. THE CHALLENGE OF FINANCING WATER AND ENVIRONMENTAL INFRASTRUCTURE

The Camdessus Report

As an initiative of the Global Water Partnership and the World Water Council, and with the support of the 3rd World Water Forum, M. Michel Camdessus was invited to lead a Panel of high-level personalities representing international finance, development agencies and other realms. Its task was to propose ways of increasing the flow of finance into the global water sector, in its broadest sense.

Camdessus Report: some key findings

- Attainment of the internationally-agreed water targets should be the main focus of national and international efforts.
- Financial flows into the water sector from all sources would need to roughly double in order to achieve these targets.
- While mobilising much larger volumes of finance will be a pre-requisite for achieving the targets, fundamental problems in the governance of the sector will also need to be addressed if it is to generate and to attract this finance.
- Better cost recovery from users is vital. However, full cost recovery is unlikely to be achieved easily or quickly. The Panel endorsed the concept of “sustainable cost recovery”, consisting of improved efforts to raise revenues from users, with residual subsidies applied in a predictable, transparent and targeted manner.
- National public funding is, and for the foreseeable future will remain, the main source of investment finance for this sector in many countries. National governments should raise the priority of the water sector in their national investment strategies and make their funding of it more reliable.
- National governments should also establish the policy and institutional framework to enable sub-national entities, such as municipalities, regional water boards and water utilities, to generate and attract finance for investment.
- The choice of organisational model for the water sector (e.g. public, private, or the various permutations involving both) is a matter for local decision. The key issue is how to establish the conditions for the effective and efficient delivery of water services.
- More could be done to promote local capital and financial markets as sources of finance for investments in the water sector. This would avoid foreign exchange risk which is one of the main deterrents to the use of external finance.
- Donor governments and external agencies should aim to make substantial increases in the share of water in their total commitments, improve the coordination of their activities and use their funds as catalysts to mobilise other flows.
- International Financial Institutions (IFIs) could provide more support to mitigate the risks of investment in the water sector and take steps to remove obstacles to their lending to sub-sovereign entities.
- Governments, agencies and other key players should be held to account for their commitments and performance against the internationally agreed water targets.

This was the first time international water finance had been addressed in a comprehensive fashion. The Panel's Report contains a coherent philosophy and set of principles, and many detailed proposals for improvements, in two broad domains: water governance, and financial instruments and facilities. The Report has been widely recognised as an authoritative statement of the "state of the art" and has become a reference point and yardstick against which all parties can measure themselves.³

The Momentum Continues

In the short time since the Report was presented at the Kyoto Third World Water Forum, the world water landscape has already changed. Amongst the landmark events, the World Bank/IMF Development Committee produced a key policy paper addressed specifically to the World Panel Report.⁴ The World Bank, IFC and MIGA⁵ have formed a new Municipal Department to promote sub-sovereign lending. At its meeting in Evian, France, in June 2003, the G8 produced a Water Action Plan addressed to the international community, including a request to the World Bank to review the policies and practices of IFIs in the light of the Panel's Report. This was duly done at a consultative meeting for IFIs convened by the World Bank in September.⁶ In November 2003 the Inter-American Development Bank started a series of regional workshops on water financing, and steps are being taken to form an Advisory Board on Water and Sanitation reporting to the UN Secretary-General. The OECD's GFSD meeting in December was the culmination of an eventful year for world water.

Setbacks and Disappointments

In certain respects, however, the water landscape has changed for the worse. Despite the optimism generated at the 2002 Monterrey Conference on Financing Development and at the 2002 Johannesburg World Summit on Sustainable Development there has been a slackening of donors' commitment to support the water sector (Figure 1). The start of the Iraq War during the very week of the Kyoto Forum heralded a shift of political interest and budgets to other things. ODA for the water sector continues to decline, and external funding for this sector is at its lowest level in recent years. The public sector deficits that some of the major donor countries are currently facing does not encourage optimism that this situation will change quickly.

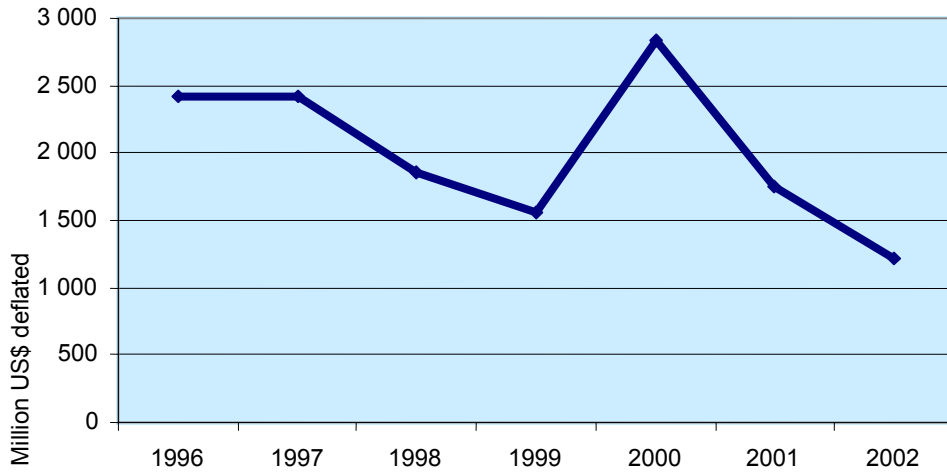
³ E.g. the World Bank's Consultative Meeting with other IFIs, September 2003.

⁴ "Implementing the World Bank Group Infrastructure Action Plan", April, 2003.

⁵ The Multilateral Investment Guarantee Agency.

⁶ Consultative meeting to follow up on the G8 request to the World Bank regarding the IFI recommendations in the Report of the World Panel on Financing Water Infrastructure, Sept 8, 2003.

Figure 1. Official Development Assistance and Official Assistance for water sector



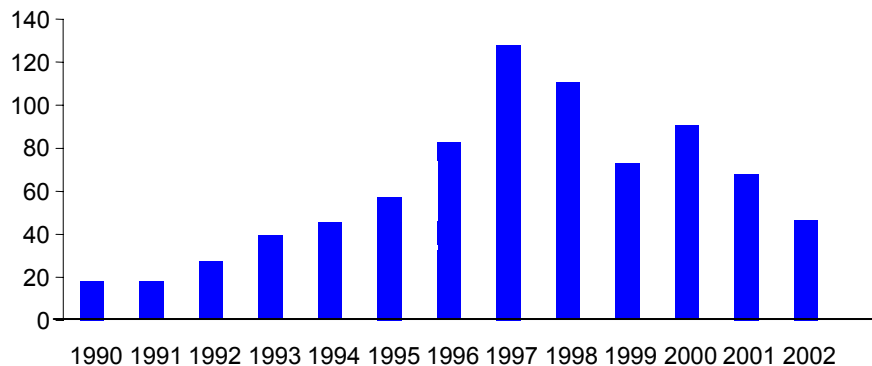
Notes:

- Data present commitments of official development assistance (ODA) / official assistance (OA) to developing countries and countries in transition for the water sector (excl. waste management and river development).
- Data refer to aid loans and grants and equity investments from DAC donors, including EC.
- Other official flows and aid from non-DAC donors and multilateral agencies are excluded.
- In comparing data across years it should be noted that coverage has improved over time.

Source: Presentation by Grzegorz Peszko, OECD (OECD CRS Aid Activity Database extracted by Carla Bertuzzi).

Commercial lending and private investment are also in the doldrums. Commercial banks are highly risk-averse in the wake of a series of setbacks after the Asian debt crisis in the late 1990s, including “September 11”, devaluations in Argentina and elsewhere, nervousness about the solvency of a number of banks, and the impact of the Basel II Accord. Lending to emerging markets, and for water projects in particular, is currently at a low ebb. Investment by foreign private operators is also dwindling (Figures 2 and 3). The pool of companies with the capacity and the will to invest overseas has shrunk, and many of those who entered overseas ventures in the 1990s are now licking their wounds.

Figure 2. Annual Foreign Private Investment in Infrastructure in Developing Countries 1990-2002, in US\$ billion



Source: Presentation by Jamal Saghir The World Bank

The Problems of Financing Water

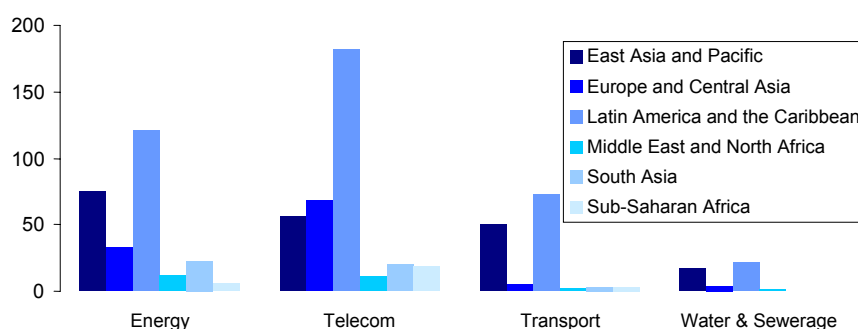
While the immediate outlook is unpromising, there are more intractable problems of financing *water* infrastructure. A view is gaining ground amongst lenders, donor agencies and other observers that there is a low level of investment in the sector, and as a result little demand for finance, other than for grants or “soft” loans.

The lack of demand for finance could have various possible explanations. Water utilities find it difficult to generate sufficient internal revenues to ensure basic financial sustainability. There are conflicting priorities for national government investment, and it is easy to postpone water investments. The sector has a high level of indebtedness, and its institutions have poor creditworthiness. It is also true that the supply of finance influences the level of investments – project sponsors would make greater efforts if they knew that funds were available on acceptable terms.

The profile of urban water investment projects typically involves a high initial capital outlay, followed by a very long payback period from long-lived assets. As a result, the risk of repayment default is high relative to many other projects. In many developing countries, borrowing in local currency is only available at short maturities that do not match the long-term financing needs of water projects. When countries borrow in foreign currency, they must repay the debt using revenues generated in the local currency. There are a number of examples where an unfavourable movement in the exchange rate has triggered payment default in water projects.

Given the complexity and risks associated with water projects it is not surprising that they have a relatively low rate of return. Figure 3 illustrates the fact that the private sector has been more reluctant to invest in water compared with other forms of infrastructure.

**Figure 3. Total (international) private investment in infrastructure in 1990-2002
by sector and region, US\$ billion**



Source: Jamal Saghir, World Bank

To some degree, water shares the general problem of financing infrastructure in developing countries and emerging markets. Country risk affects all projects, and few emerging markets have investment ratings that enable them to raise funds on attractive terms. In addition, water projects tend to be unattractive for project finance because they are often relatively small, and fall foul of the high threshold costs that are typically entailed.

However, the fundamental root of the finance problem in the water sector is poor governance. Providers of centralised water and wastewater services are monopolists by nature, and therefore require careful regulation. The information asymmetry between governments and water utilities, and the political sensitivity of water pricing, leaves the sector vulnerable to ad-hoc politics and social criticism. As a result, the sector often suffers from a high level of political interference, and a confusion of its social, environmental and commercial aims.

Decentralisation, which is a worthy aim in a sector of this kind, has led to a devolution of responsibilities for service to sub-sovereign levels of government, but without a commensurate allocation of the required financial means. Water utilities often lack operational autonomy, and their relationship with their political masters is unclear and ambiguous. They often have a poor management structure and find it difficult to attract the best staff. They are frequently in a poor financial condition because they are unable or unwilling to charge customers the economic rate for their services. Politicians often burden the sector with financial arrangements that are ad hoc, unpredictable and not sustainable. This makes it impossible for water utilities to properly maintain their assets, attract necessary finance, and leaves them dependent on the fickleness of governments to fund their new investments. To add to the problem, a lack of clarity about ownership of assets is often an additional obstacle to investment.

It is true that the water sector may present opportunities for low-cost investments with a quick return. For example, the countries of Central, Eastern and Southern Europe and Central Asia have an extensive infrastructure, though one which was inefficiently designed and expensive to operate. After a number of years of neglect and under-funding it is running below capacity or actually ceasing to function. Even modest, but well targeted investments in rehabilitation and repairs can improve the level and quality of services, while yielding significant savings in energy use and in water leakages – thus improving the cash flow of water utilities.

As this experience shows, financing water infrastructure is not restricted to one-off capital investments: sizeable recurrent spending is also required to operate and maintain the assets. If these outlays are not made, the infrastructure may deteriorate and even collapse, as is happening now in some parts of the former Soviet Union.

Financing wastewater collection and treatment is even more problematic. Users' willingness to pay for treating wastewater is much lower than for fresh water, since the benefits accrue to downstream communities ("externality"). As a result, it is often more difficult to finance the major outlays involved in wastewater treatment, especially after drinking water is supplied. For this reason and others, there are advantages in developing and managing water supply and waste water infrastructure in an integrated way - the separation of these functions is generally less efficient.

If there are many polluters and many victims of effluent discharge, externality has a "public bad" character and abatement is even more difficult to finance. In such instances public intervention in the wastewater sector is a necessary condition for achieving the internationally agreed sanitation targets. Ideally government intervention should make polluters pay. If this is not possible (e.g. when polluters are difficult to identify), public financing of treatment facilities will be required.

III. ADDRESSING THE CHALLENGES

Having reviewed some of the key challenges, participants discussed four issues that could help accelerate progress in achieving the internationally agreed targets for water and sanitation.

Financing Strategies

The Camdessus Report estimated that financial resources from all sources would need to roughly double in order to achieve the internationally agreed targets for water and sanitation. Doubling investments, and making the rapid improvements in cost recovery that this entails would in many cases imply increasing household water and wastewater bill several times. Grasping this nettle helps to focus attention on the scale of the problem and the urgent need for action, but carries the risk of producing a sense of fatalism and hopelessness at the size of the task, and encouraging a mentality of “subsidy dependence” It is therefore important for implementation programs and finance strategies to be realistic, to form part of sector reform strategies, and take account of the willingness to pay and affordability constraints faced by public budgets and households.

Speakers at the Conference presented examples of programs that were realistic and affordable for local communities in countries as different as Armenia and China. Some cities and regions may have to move faster than others. Sequencing of actions is essential, and should start with measures that yield large benefits and/or cash savings with low capital costs. Sophisticated and expensive solutions, especially if they yield small incremental benefits, should be postponed until a time when they are affordable.

There is no “magic bullet” to solve the problem of financing water. Although reform and innovation is needed in financial architecture, a “paradigm shift” is unlikely. All existing financial sources will need to increase if the internationally agreed targets are to be realised. Different sources of finance will, however, need to be blended in “smart” ways to enhance synergies, avoid crowding out other sources, and to maximise leverage on the total flows

Useful tools to facilitate smart blending of potential financial sources and instruments have recently been developed and applied with positive results. The FEASIBLE model developed jointly by the OECD/EAP Task Force and Denmark is a tool to help rationalise financing strategies of the water sector in several regions and countries in Central and Eastern Europe, Central Asia and China. At a project level, USAID has experience in financing water infrastructure using partial loan guarantees and technical assistance for pooled projects, which has helped these projects tap debt markets in local currency.

In discussion, participants in the Forum expressed the following points, among others:

- Capital investments do not always lead to effective provision of services. Even if they can be financed, a high investment rate may place unbearable pressure on a weak institution, and outstrip the growth in income necessary to generate revenue for sustainable operation and maintenance. There are examples in China and in Eastern Europe where relatively new facilities, in particular wastewater treatment plants, have been operated less and less regularly, with frequent shut downs and, in some cases, abandonment. Donors and IFIs sometimes add to these pressures by encouraging and financing capital investments in overly ambitious and expensive technological solutions, leaving local communities unable to operate and repair them.

- The gradual increase of user fees to cost recovery levels is essential for financial sustainability, but the increases should be at a realistic pace and with explicit measures to deal with social issues. A first target should be for user fees to cover operation and maintenance costs, gradually increasing to recover capital investments, and ultimately reflecting environmental costs too
- Sizeable cash flow can often be generated from users without increasing user fees, for example by increasing collection rates and making billing systems more reliable and user friendly. Improvements in billing and collection, e.g. through metering, should be introduced carefully, especially in utilities that have a high proportion of unaccounted-for- water (e.g. in Lesotho 96% and in Armenia 80%). In such cases moving from block rates to individual metering of consumption can decrease utility revenues in the short term, although in the longer term it is a necessary incentive to reduce water losses and overall utility costs.
- National governments are, and will remain, a major source of finance, particularly for capital investments. Public subsidies from domestic and foreign assistance need to be applied more strategically in order to galvanise more flows from other sources. Public funds would be more effective if they were disbursed on achieved results (output-based), used in “smart blending” with other sources, and used in risk-sharing through guarantees and insurance instruments. Care must be taken to avoid potentially adverse effects of soft financing: “crowding out” other financial sources; inducing subsidy dependence; or impeding essential reforms.
- Although domestic resources will be the dominant source of finance, overseas aid will also continue to play an important catalytic and demonstration role, especially in the poorest countries. More attention is being given to using foreign assistance for creating local, sustainable financial mechanisms rather than for direct financing of investment projects.
- The private operators are more likely to be a source of managerial and technical know-how than finance in developing countries for the foreseeable future. Projects that involve the private sector without undertaking sectoral reform have often not been successful. The limited experience available from central and Eastern Europe has not clearly demonstrated the superiority of either private or public operators from the viewpoint of efficiency and quality of service, though this picture may change with time. The private sector is not confined to international operators; domestic companies also have a role to play and a level playing field should be established for all potential private operators.
- Access to debt financing, both from international financing institutions and from domestic financial and capital markets, is critical to bridge the financing gap for capital investments. In addition, exposure to debt financing is an indication of effectively functioning water sector.

The elaboration of financing strategies should not be regarded as a one-off exercise; nor is it a purely an analytical exercise. It should be treated as an iterative process, refined and modified in the light of data and experience, enabling decision-makers to make more informed trade-offs. All the main stakeholders should be involved in the process, and there should be regular feedback between policy makers and those involved in implementation and financing, especially if specific policy changes are needed.

It is important to bear in mind that although there are many mechanisms and instruments for financing water investments with the exception of grants they have the effect of spreading the payments over time. Ultimately it is users and/or taxpayers (domestic or foreign), present and future, who must foot the bill. There are limits on what these groups are willing and able to afford.

Improving Management of Domestic Public Spending

In the mid 1990s, it was estimated that the domestic public sector provided 65-70% of finance for capital investments in the water and sanitation sectors⁷. This reliance on taxes rather than user charges has a number of perverse effects; it inflates demand for water and sanitation services and hence investment needs; it creates vested interests and subsidy dependence; it undermines efforts to put the sector on a more financially sustainable basis; and more generally it impedes reform of the sector.

It is widely accepted that the gradual introduction of full cost recovery, with appropriate provision to ensure access to water services for poor and vulnerable groups, would be a more efficient and effective policy. In view of affordability constraints and political sensitivity, user charges should be increased progressively – and public support progressively withdrawn - to eventually recover full costs, including environmental costs. An important first step in supporting the financial sustainability of water utilities is for user charges to cover operational and maintenance costs.

Certain categories of spending in the water sector may justify continuing public support. These include subsidising the provision of minimum amounts of drinking water required for health and well-being, or providing basic sanitation to prevent public health epidemics. There may also be a case for facilitating market access through risk sharing, credit enhancement, or subsidies to lower the cost of borrowing for poor communities, or other forms of support to improve access of the poor to water services.

At the most general level, government has the responsibility to establish the policy and institutional framework needed to mobilise and allocate resources for the water sector and to ensure the delivery of water services in an efficient and effective manner. Governments need to establish the legal and institutional framework for making polluters pay (“internalising externalities”) for treatment of their wastewater through permits, taxes and fees. Where there are no markets for trading water or pollution rights governments can encourage the creation of market institutions and devices such as transferable water use rights or tradable pollution permits.

Creating accountability is fundamental to good water governance⁸. Policy making, regulation and service provision need to be separated: the first sets the policies and targets, the second monitors and regulates, and the third delivers water and sanitation services. Service providers must be accountable both to customers and to regulators. Relations between regulators and service providers should be based on transparent and stable rules, preferably written into a performance contract. Private participation in one of its various forms can improve accountability by creating a clear separation of the roles of providers and regulation/policy-making.

Achieving the internationally agreed water targets will require action by governments at all levels. Where they are involved in allocating financial resources they will need to ensure that their actions do not increase distortions and that they leverage other resources to the maximum extent.

Central governments, particularly in developing countries, could do more to develop explicit water policies to achieve the internationally agreed water targets. Such policies should be integrated into national development strategies and Poverty Reduction Strategy Papers, as appropriate. They should also be reflected in budgetary allocations. Finance strategies are one tool that can help in this regard.

⁷ Quoted p.6, Camdessus Report

⁸ World Bank, “World Development Report 2004”

Central governments should establish predictable revenue frameworks for water and sanitation providers. The rules for setting and adjusting tariffs are central to this task. Similarly, clear arrangements for intra-governmental transfers need to be created. In countries such as South Africa and the Czech Republic, this has involved rewarding those municipalities that are effective in raising their own resources. Municipalities should be able to finance water investments *by* such means as raising debt within fiscally prudent limits, subject to sanctions if those limits were exceeded. Faults in fiscal policy cannot be rectified by financial markets, or *vice versa*.

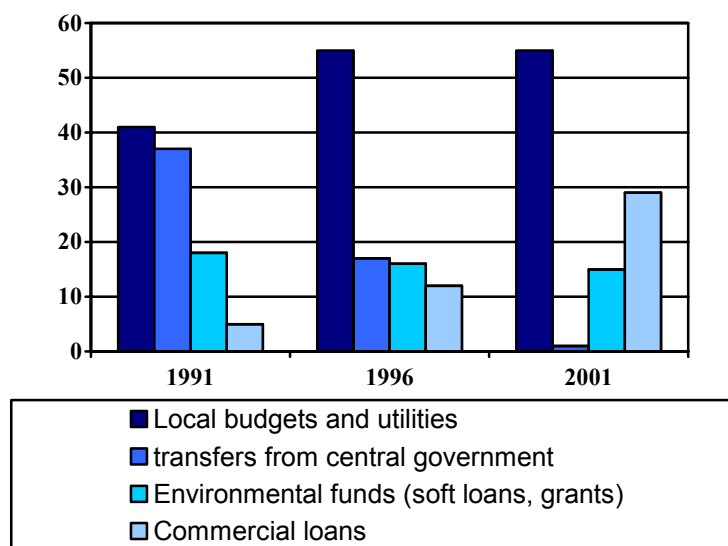
The trend in most countries is to decentralise responsibility for water and sanitation to local bodies. However there can be a danger of excessive fragmentation if the process goes too far. Economies of scale can be safeguarded by encouraging for municipalities to cooperate in financing water services.

According to the benefit principle, revenue raising should be most closely linked with expenditures at a local scale. On the other hand, if expenditures are to be most closely linked to national priorities, this would require a greater role for the central authorities. This is particularly relevant for wastewater treatment, because of the externalities involved.

The main obstacle to devolution of responsibilities to the right level of government in the water sector is sub-sovereign governments' lack of access to capital and poor management skills. The experience of central and eastern European countries in overcoming these obstacles is instructive. The successful cases tend to involve transparent local budgets and financial statements by water utilities, a multi-year rather than annual framework for local government budgeting, a mid-term rolling investment plan, project selection based on clear rules, and an ability to manage debt, amongst other factors.

Figure 4 shows how in Poland, central government declined as a source of support for investments in the water sector during the 1990s, while support from local governments, some of which was through bank loans, increased.

Figure 4. Financial Sources for Investment in the Water Sector in Poland



Source: Presentation by Andrzej Porawski, Executive Director, Association of Polish Cities, Poland

Experience from central and Eastern Europe also raised the question of the extent to which public environmental funds or other specialised government agencies could be used to finance water investments. This question is often linked to the issue of earmarking charges or taxes to raise revenue for such institutions. There is a long history of debate on these issues. Experience reviewed at the meeting suggested that whilst such approaches are very much “second-best” solutions, they may nevertheless be effective in the context of emerging and transition economies. The critical caveat is that such institutions need to be well designed to prevent inefficiency and creation of vested interests. They need to have a due degree of operational autonomy from ad hoc politics, but must operate under clear rules and strict accountability for performance. They need to employ staff with skills in environmental and financial appraisal, and work with project proponents that can submit proposals using established standards and reliable data. Environmental funds also need to be prevented from monopolising municipal lending and from crowding out other market players.

Such institutions can be effective if they follow, for example, Good Practices for Public Environmental Expenditure Management such as those developed within the EAP Task Force. Moreover, there is encouraging experience with independent performance assessments of financing programmes and institutions. While OECD, the World Bank and independent credit rating agencies have developed different approaches in this regard, the outcome can be the same: more effective use of resources by specialised public financing institutions, and hence greater credibility and ability to attract additional resources.

Water and Sanitation for the Poor

Water services often fail to reach the poor, who bear the main burden of inadequate access, service deficits, poor water quality, unreliable supplies and unsanitary disposal of wastewater and solid waste. This is despite state subsidies to the water sector that are widespread and often substantial. Subsidies take a variety of forms, including capital subsidies, operating transfers (which serve to keep average tariffs below the full economic costs of provision), and cross-subsidies (which involve differentiating tariffs between customer groups).

Subsidies are often justified in terms of keeping services affordable to poor households, but there is mounting evidence that they are often not well targeted and not very effective. Instead of benefiting the poor (who are often not connected to water distribution and sanitation networks), such subsidies often benefit richer people who are capable of paying the full costs of water services. The effectiveness of public spending on water infrastructure could be much increased if subsidies were restructured and better targeted.

The experience reviewed at the meeting suggests that there is not a “one-size-fits-all” approach in providing effective protection for the poor. In fact at least two different contexts need to be considered: high connection rates to centralised water and wastewater systems, but low levels of ability to pay, and, on the other hand, low connection rates and low ability to pay. While the latter typically refers to developing countries, the former situation can frequently be found in transition economies⁹, and to a lesser, but increasing extent in OECD countries.

These different situations call for radically different approaches in order to ensure affordable access to safe water and basic sanitation to the poorest groups of society. In the OECD and transition

⁹ Water prices in OECD countries are expected to continue increasing at levels well above inflation, which will accentuate problems of affordability. Already many poor households pay more than 4% of their income for water, which is the conventional threshold of concern for affordability. OECD (2003), “Social issues in the provision and pricing of water services in the OECD”, Paris.

economies, ensuring access to water and sanitation to all is mainly a managerial problem that requires measures to improve the quality of service (especially in transition economies) while maintaining access of the poor through targeted subsidies. This is usually achieved using income support or tariff-related measures.

In Armenia, for instance, more than 95% of the urban population is connected to the public water system, but the poorest 20% of the population have to spend more than 5% of their income on water. It is therefore crucial that adequate, targeted support is provided to these people in order to ensure that they can continue to afford the water that they need. OECD countries face a similar test, though a more manageable one, due to continuing increases of water charges resulting from higher wastewater treatment standards

In many developing countries levels of access to safe drinking water are low and many live in severe poverty. Here, reforms will require profound structural, institutional, and social changes. In this group of countries, low levels of income may prevent households from paying for large scale infrastructure development, and solutions lie in empowering the poor to define their own needs, and in strengthening incentives to provide water services to them.

Subsidies to connect poor consumers and support to small independent providers (generally water vendors) that offer choice and competition in poor local communities, could help to avoid alienating the most vulnerable from the benefits of reform. Targets for the extension of service coverage in poor areas can be an important performance criterion for utilities, whether public or private. There are a number of private concessions including such provisions in their performance contracts.¹⁰

With proper safeguards for the poor, a system of user charges helps to increase the power of users relative to providers, and introduces pressure to improve service quality and coverage. Consumers' "willingness to pay (more)" for safe drinking water can be demonstrated, but in many cases it is the politicians' "unwillingness to charge" that is the real obstacle to tariff increases.

A different approach is called for in rural areas, where there is a larger role for community action and NGOs. In rural situations it is common to resort to subsidies as a way of promoting new programmes, such as household sanitation in areas where open defecation is the custom. However, the most successful programmes are those¹¹ that respond to local demand, with heavy local participation, using low-cost local technology, and without any public subsidy. Sometimes donors might do better to stay away from rural sanitation ("killing with kindness").

Where subsidies are unavoidable they should be used efficiently, to produce an outcome at least social cost, encouraging the rational use of water and of wastewater services and applied in a targeted and transparent manner. Examples include subsidy for the capital costs of rural water (India), social security support for poor water users (Chile) and lump sum grants to municipalities to provide basic quantities of water (South Africa). In an OECD context, a mixture of tariff differentiation and social security payments can mitigate the impact of tariffs on poor and deserving consumers, without conceding the principle of cost recovery¹². There has been a trend in the OECD to the more

¹⁰ As in Manila and El Alto (La Paz, Bolivia).

¹¹ E.g. the Community-Led Total Sanitation movement in Bangladesh, India, Cambodia, Mongolia, Uganda and Zambia.

¹² OECD (2003), "Social issues in the provision and pricing of water services in the OECD", Paris.

widespread use of increasing block tariffs¹³ with the price of the first increment fixed to meet social objectives.

Stimulating Local Capital Markets and Financing Urban Environmental Infrastructure

The Camdessus Report recommended that more attention should be given to the use of local capital and financial markets for municipal water and environmental infrastructure. Such approaches can relieve the burden on public budgets, help improve project quality and avoid a miss-match between the local currency revenue of water utilities and debt expressed in foreign currency. In the OECD the two basic approaches have been commercial bank lending, which has been the dominant approach for financing municipal investments in Western Europe, and municipal bonds, which have been widely used in North America.

Bank loans, bonds or mixed systems have comparative advantages at different stages of market development, and in different policy contexts. An efficient credit market will support competition between different types of lending (e.g. bank lending and bond issuance) on a level playing field, so that municipalities and utilities can select the most cost-efficient lending instrument.

Municipal borrowing is not an end in itself; it should be considered as one option to fund increased investment in high-priority infrastructure. From the municipal or utility perspective, borrowing may be an option if citizens demand better communal services, and if they are able and willing to pay for them. Borrowing is appropriate when a local government is planning to increase its level of investment, because of growth, more stringent environmental requirements or other government policies. Municipalities and utilities would not borrow if alternative, lower-cost sources of investment capital (e.g. grants) were available.

Developing new financial products or providing guarantees will not help if municipalities and water utilities are unwilling or unable to borrow. Removing barriers on the demand side is a prerequisite to developing active and efficient municipal credit systems.

Municipal investment can be financed by credit, from general revenues (operating budget surpluses), project revenues, or property sales. Borrowing does not substitute for these revenue sources; it enables the investment to be made sooner than otherwise would be the case, and will have to be repaid from the abovementioned sources. Borrowing is prudent only when the future revenue flows to service debt are assured.

Not all governments promote the growth of municipal debt: on the contrary, in Brazil municipal bonds and in Chile municipal borrowings are prohibited. However, in many other countries, municipalities have issued bonds or have taken loans for urban environmental infrastructure, backed by guarantees provided by national governments or international agencies.

The legal framework for municipal credit must specify the central government's role in ensuring responsible municipal borrowing: a country's fiscal policy and credit rating can be jeopardized by excessive local debt. The central government can manage this risk either by rules-based restrictions on local debt issuance, local debt service, and the forms of local debt obligations, or by case-by-case review and approval of proposed local debt. Rules-based limits have the advantages of providing transparency, predictability and quicker transaction time.

¹³ Increasing Block Tariffs involve step-wise (or block-wise) increase of tariffs as water consumption levels increase. The first block is usually priced with a social objective, at a very low cost and designed to be sufficient to cover basic needs. OECD, 2003.

Governments are also cautious about issuing guarantees, which may distort local capital markets as well as representing a contingent liability which pre-empts other spending. Limited-recourse finance for municipal infrastructure, which does not require a formal government guarantee, is one way to avoid this problem. For example, EBRD has been successful in using Municipal Support Agreements to facilitate corporate lending. Such Agreements involve loans that are secured on the cash flow of the enterprise or utility, but with a contractual agreement with the municipality to ensure that all tariff conditions are met, thereby ensuring that the loans will be repaid.

Many governments have created Municipal or Urban Development Funds to channel credit to local governments for infrastructure investment. In the majority of cases, these Funds have been established in cooperation with international organizations like the World Bank, regional development banks, or bilateral donors. The Funds typically try to prepare the way for a local municipal credit market, while at the same time assisting municipalities in capital investment planning and project preparation.

Earlier versions of these effectively monopolised municipal lending, which limited opportunities for other market players. The funds were financed primarily from hard-currency borrowing from international institutions, which introduced currency risk into municipal credit. More recent Municipal Development Funds have sought to correct these problems by raising capital from domestic sources for on-lending and deepening the local credit market. Suitably qualified municipalities are encouraged to borrow directly from banks or to issue municipal bonds, rather than to borrow exclusively from the Municipal Development Fund.

The Development Credit Agency of USAID is one example of such an approach. It draws on US experience of creating revolving funds for infrastructure investment. It uses initial injections of grant funding, sustained by 50% risk sharing with local financial institutions. This model has been used to back municipal bond issues for water and sanitation in Tamil Nadu and Karnataka, and appears to have the potential to be applied in other developing countries.

The Camdessus Report recommended greater use of risk mitigation instruments, and the major IFIs are responding to this recommendation. Such instruments are most effective for countries or sub-sovereign borrowers that are close to, or on course for, creditworthiness. This applies to a number of larger countries in the vanguard of emerging economies, but not to all. For instance, in Mexico Tlalnepantla has issued a local currency bond to finance water infrastructure, with the help of an IFC partial credit guarantee (IFC's first venture into sub-sovereign risk).

Transparency and disclosure are the cornerstones of successful credit market development. One of the most effective ways to support self-sustaining market development is through high standards for disclosure of local budgets, balance sheets and debt characteristics and making explicit all guarantees and collateral arrangements. Municipal utilities can do much to make their status and operations more transparent through the quality of their financial statements.