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Follow-up to the World Summit on Sustainable Development: contribution of the United Nations Environment Programme to the forthcoming session of the Commission on Sustainable Development

Financing wastewater collection and treatment in relation to the Millennium Development Goals and World Summit on Sustainable Development targets on water and sanitation

Note by the Executive Director

The annex to this note is prepared with a view to supporting a policy discussion during the ministerial-level consultations at the eighth special session of the Governing Council/Global Ministerial Environment Forum on the financial challenges, constraints and opportunities associated with meeting international commitments within the global water supply and sanitation sector, with particular focus on the wastewater sector. The annex to this note has been issued without formal editing.

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1 INTRODUCTION

Adequate water supply and sanitation is of great importance in addressing public health, economy, and degradation of ecosystems, and plays an important role with respect to poverty alleviation.

In regions where a large proportion of the population is not served with adequate water supply and sanitation facilities, sewage flows directly into groundwater reservoirs, lakes, streams, and rivers and eventually reaches coastal and marine ecosystems. Such mechanisms not only cause negative effect on human health but also on livelihoods of people and the natural environment with its various uses and functions.

Given the current rate of the world population growth, the number of people without access to water supply and sanitation will remain the same or even increase, if financial commitment to these sectors is not improved. The current amount of resources spent on water supply and sanitation issues urgently needs to be more effectively allocated to ensure that countries can address the pressing issues of poverty eradication and public health in a sustainable manner.

There is a need for a paradigm shift, both in thinking and action, with respect to basic water supply and sanitation. We can no longer restrict this issue to "taps and toilets", but urgently must incorporate all components of the water management process.

This paper addresses the global financing challenge facing environmental water resource management with respect to the water supply and sanitation targets agreed upon as it relates to the Millennium Development Goal (MDG) and the World Summit on Sustainable Development (WSSD). The focus is on sanitation services, including wastewater collection, treatment, re-use and re-allocation to the environment. This holistic view on 'sanitation services' follows the WSSD Plan of Implementation, and has been adopted by the UNEP Governing Council in its 22nd session (GC22/2/II). Addressing the environmental dimensions mitigates direct and indirect impacts on human and ecosystem health.

The overall goal of this paper is to support a policy discussion on the financial challenges, constraints and opportunities in meeting the international commitments within the global water supply and sanitation sector, with particular focus on the wastewater sector. The numbers may seem staggering in financial terms but through targeted and coherent approaches, using more effectively current financial resources, the global community can deliver in a focused and an action oriented manner[1].

This paper does not contain original research. It builds upon and synthesises work on water resource management and investments undertaken by *inter alia* the Vision 21 process, the World Panel on Financing Water Investments, the United Nations Development Programme, the World Bank, the United Nations Environment Programme, the European Union Water Initiative, various government and non-government organisations as well as publications from independent authors and consultants working on financial aspects of wastewater within the water supply and sanitation sector. Special thanks are expressed to the UK Department for International Development (DFID) for their valuable inputs.

Section 2: Provides an overview of wastewater-environment issues and their associated financing needs;
Section 3: Provides an overview of the sources of existing funding and who is providing it; and
Section 4: Provides an overview of the main financial constraints to financing wastewater and sanitation services.
Section 5: Provides an overview of options available to help address the financial gaps between existing spending and needs for domestic wastewater treatment.

[1] These issues have been incorporated in the "10 KEYS" as prerequisite for successful municipal wastewater management (UNEP/GPA, 2002.) . Refer to Annex I for further detail.

2 *HISTORICAL OVERVIEW OF GLOBAL WASTEWATER COMMITMENTS AND FINANCING CHALLENGES*

2.1 GLOBAL COMMITMENTS TO WATER SUPPLY AND SANITATION

In developing countries approximately six children per minute still die from diseases caused by unsafe water and inadequate sanitation. An average of 250 million cases occur every year worldwide of gastroenteritis due to bathing in contaminated water and between 50 – 100,000 deaths occur every year from infectious hepatitis. The global burden of human disease caused by sewage pollution of coastal waters has been estimated at 4 million lost man-years very year.

Deterioration of the aquatic environment is visible around the globe. In most of the UNEP Regional Seas the discharge of untreated domestic wastewater has been identified as a major source of environmental pollution. Over 70% of coral reefs are affected by discharges of untreated sewage, precious habitats are disappearing and biodiversity is decreasing, fishing and agriculture possibilities are being lost and poor water quality is resulting in loss of income from tourism and loss of real estate value.

Although in western countries progress has been made in combating industrial point sources of chemical pollution, the impact of non-point diffuse sources is a major issue. At the beginning of 2000 more than 1.1 billion people (one-sixth of the world's population) were without adequate access to water, and at least 2.4 billion people (two-fifths, or 40 per cent, of the world's population) lacked access to basic sanitation. Because of global population growth and rapid urbanization, currently these numbers remain roughly the same or may even be increasing.[2]

Since the early 1980's such facts have been the driving force for major international initiatives on water and sanitation as summarized below.

- · 1981-1990 – the International Decade for Drinking Water and Sanitation
- ·1992 UN Conference on Environment and Development, Rio de Janeiro
- ·1992 International Conference on Water and the Environment, Dublin
- .1995 Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (UNEP/GPA)
- ·1996 Formation of the Global Water Partnership and World Water Council
- ·1997 First World Water Forum, Marrakech
- ·1997 Formation of World Commission for Water in the 21st Century
- ·2000 Second World Water Forum, The Hague
- ·2001 International Conference on Freshwater, Bonn
- ·2001 UN Millennium Declaration
- ·2001 New Partnership for African Development (NEPAD)
- ·2002 UN Conference on the Finance of Development, Monterrey
- ·2002 UN World Summit on Sustainable Development, Johannesburg
- ·2003 Third World Water Forum, Kyoto

These sustained concerns have helped push the international community to ensure that the targets of the 2000 Millennium Development Goals (MDG) and the 2002 World Summit on Sustainable Development (WSSD) do address, specifically, improved access to safe drinking water and adequate sanitation. Table 1 presents the relevant MDG and its targets for water supply and slum dwellers.

[2] Global Water Supply and Sanitation Assessment 2000 Report, WHO and UNICEF Joint Monitoring Programme for Water Supply and Sanitation.

Table 1. The MDG and related targets on water supply and slums

Millennium Development Goal 7: Ensure Environmental Sustainability	
Targets	**Indicators**
10.Halve, by 2015, the proportion of people without sustainable access to safe drinking water	Proportion of population with sustainable access to an improved water source
11.Have achieved, by 2020, a significant improvement in the lives of at least 100 million slum dwellers	Proportion of population with access to improved sanitation Proportion of population with access to secure tenure

The 2002 WSSD reconfirmed the MDG-targets for the water sector and extended it to explicitly include sanitation as follows:

The WSSD agreed target on water and sanitation:
To halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water and the proportion of people who do not have access to basic sanitation.

Population growth, rapid urbanisation, and increasing water supply and sanitary services to meet the target on water supply and sanitation will likely also generate wastewater pollution problems. Sanitation therefore requires public sewage collection and treatment systems, to prevent raw sewage from entering groundwater and surface waters, including coastal areas. Presently only about 10% of the domestic wastewater in developing countries is being collected and only about 10% of existing wastewater treatment plants operate reliably and efficiently.[3]

In overall terms, equivalent numbers of people in urban areas to those in rural areas will require improved sanitation by the target year of 2015 (1.085 and 1.089 billion respectively), which translates to service for 400,000 new people every day as presented in Table 2.

Table 2: Population coverage required by 2015 development targets[4].

	2000 population with access (m)	**2000 coverage (%)**	**2015 target coverage (%)**	**2015 target population to have access (m)**	**2015 target additional population to serve (m)**
Urban	2,442	86	92	3,528	1,085
Rural	1,210	38	69	2,294	1,089
Total	3,652	60	81	5,822	2,174

Increasing water supply and sanitation services without extra wastewater treatment capacity could actually exacerbate existing problems and create many new ones. To ignore wastewater pollution issues, especially in relation to inadequate wastewater treatment, can prove costly, both in human, ecological and financial terms as summarized below:

[3] Progress Report and Critical Next Steps in Scaling Up: Education for all, Health, HIV/ Aids, Water and Sanitation Addendum – Water Supply and Sanitation and the Millennium Development Goals, World Bank Development Committee, April 1, 2003.

[4] WHO/UNICEF/WSSCC, JMP, Global Water Supply and Sanitation Assessment 2000 Report.

Some examples of damages and associated costs of wastewater pollution[5]

Some of the damages associated with inadequate handling of wastewater are:

- Increased direct and indirect costs caused by increased illness and mortality.
- Higher costs for production of drinking and industrial water, resulting in higher tariffs.
- Loss of income from fisheries and aquaculture.
- Poor water quality deters tourists, immediately lowering income from tourism.
- Loss of valuable biodiversity.
- Loss in real estate values, when the quality of the surrounding deteriorates, especially important for slum dwellers where housing is the primary asset.

Some examples of the costs of inaction:

- The Global Burden of Human Disease, caused by sewage pollution of coastal waters is estimated at 4 million lost 'man-years' every year, which equals an economic loss of approximately 16 billion US$ a year.
- GESAMP[6] estimated the global impact of bathing in and eating shellfish from polluted seas at approx. US$12–24 bn per year.
- Lost income and additional health costs from the 1992 cholera spread in Peru were estimated at ten times the annual national budget on water supply and sanitation.
- The aggregate annual benefits of improving the water quality of East Lake, a recreational area in Wuhan, China, affected by daily discharges of effluents from industries and households, discounted at 8%, ranged from 230 to 340 million USD using the Travel Cost Method for valuation, and 42 to 112 million USD using Contingent Valuation.[7]
- The costs of water pollution along 20 beaches of the Estoril Coast in Portugal, used by approximately one million people a year, was around 68 million USD annually.[8]

In a recent publication the World Bank[9] states: "*Poor sanitation and the absence of minimal wastewater disposal facilities in many* areas *contribute to the degradation of groundwater, rivers and coastal resources on which the poor are heavily dependent for their livelihoods".*

However, most global water supply and sanitation initiatives currently focus on the shortage of "taps and toilets" and how to finance more of them, not incorporating integrated wastewater treatment issues.

2.2 *GLOBAL COST ESTIMATES FOR "SANITATION SERVICES"*

2.2.1 *Financial needs to meet the MDG and WSSD targets*

Most estimates on global water supply and sanitation financing needs ultimately refer back to Briscoe's[10] and the GWP's[11] estimates of projected wastewater needs up to 2025. These are based on the Vision 21 targets and assumptions[12] and suggest that, roughly, an additional USD 89-105[13] billion

[5] UNEP/GPA 2002. "Guidelines on municipal wastewater management. "UNEP/GPA Coordination Office. The Hague, Netherlands.
[6] Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP.
[7] Yaping, D. 1998. The Value of Improved Water Quality for Recreation in East Lake, Wuhan, China: Application of Contingent Valuation and Travel Cost Methods. Report for the Economy and Environment Program for Southeast Asia, International Development Research Centre (IDRD) 1998.
[8] Machado, F. and S. Mourato. 1998. Improving the assessment of water related health impacts: Evidence for Coastal Waters in Portugal. Paper presented at the First World Congress on Environmental and Resource Economics, Venice, June 25-27.
[9] World Bank. 2003. "Global Development Finance 2003 - Striving for Stability in Development Finance." Washington, D.C.
[10] Briscoe, John. 1999. "The Financing of Hydropower, Irrigation, and Water Supply Infrastructure in Developing Countries." International Journal of Water Resources Development 15(4).
[11] Global Water Partnership. 2000. "Towards Water Security: A Framework for Action" GWP. Stockholm. Sweden.
[12] For the estimates on wastewater treatment, Vision 21 assumed that 10% of effluent is treated before it is discharged to water bodies at present; the Vision scenario is based on 20% wastewater treatment as a target for 2025. There is even less data about industrial effluent, and the costs and coverage are assumed to be half that of municipal type wastewater. Costs on agricultural development were very tentative.
[13] Financing Water For All, Report of the World Panel on Financing Water Infrastructure, March 2003.

extra per year is required for all aspects of water resource management, of which estimated USD 72 billion extra annually is required for wastewater treatment, household sanitation and hygiene. Of the USD 72 billion, USD 56 billion extra annually is required for wastewater treatment alone. Usually, these estimates also include a 15% allowance for operation and maintenance. Although these estimates were made prior to the establishment of the MDG targets, they are generally accepted as being in the correct order of magnitude to reach them. The World Panel on Financing Water Investments also supported these estimates.

2.2.2 *Rural and urban costs of sanitation, wastewater collection and wastewater treatment technologies*

One approach is to consider how the use of different technologies can effect costs. Figure 1 illustrates tentative cost estimates for different levels of sanitation service and technology options as a "ladder of sanitation options" starting at a basic level and moving up to higher levels of service. This further illustrates that there is an important difference between the (mostly non-networked) rural sanitation component of the target on sanitation and the (mostly networked) urban improved wastewater treatment component. It should also be noted that some of the low cost options may have negative environmental consequences (e.g. sewerage connection without adequate treatment, or inadequate sludge disposal contaminating the environment). But decentralised eco-technologies should be considered as cost-effective alternatives to traditional centralised approaches, also in densely populated urban areas.

Figure 1. Tentative cost estimates for different levels of sanitation services and technology options (refer to Annex II for cost breakdowns)

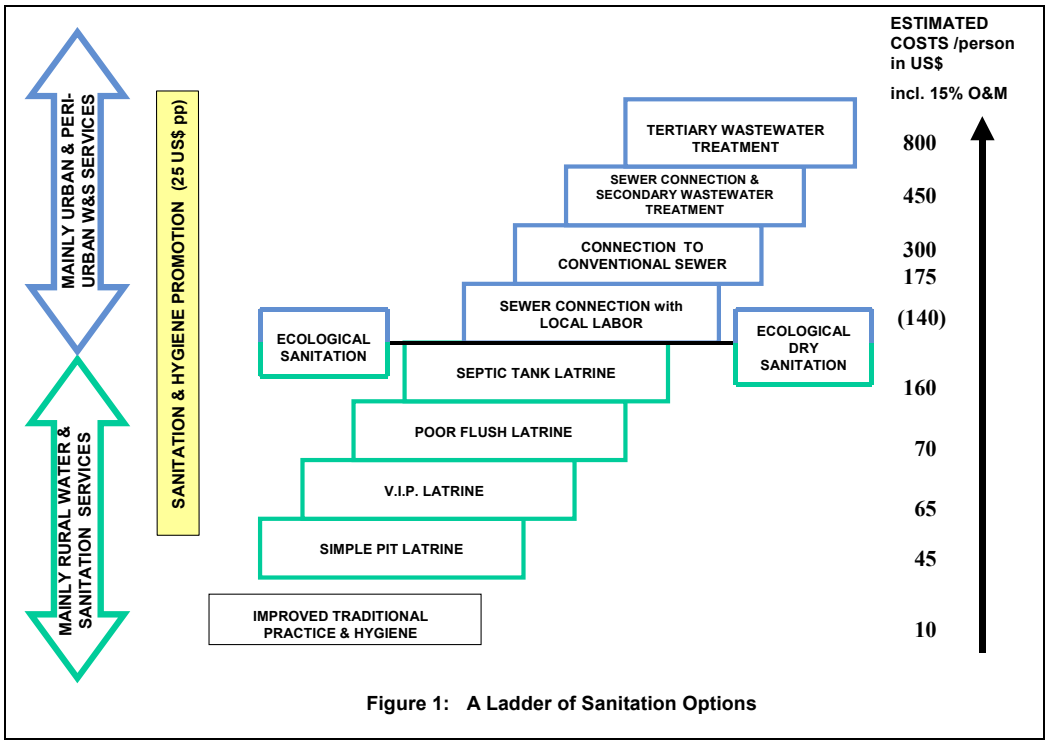

Figure 1: A Ladder of Sanitation Options

Understanding these different definitions is important, as most sanitation and MDG-related discussions and financing calculations do not differentiate clearly between "basic" non-networked sanitation systems and "improved" sanitation services. Furthermore most discussions and financial calculations do not address collection systems, wastewater treatment facilities, re-use options or re-allocation to the environment. This can cause confusion and result in wide variations in cost estimates. For example, depending on which definition of sanitation one works toward, this can affect the cost estimate significantly – up to a magnitude of 32 times.

Table 3 below shows the estimated annual and total costs for meeting the WSSD target on sanitation based on different levels of technology by applying the cost elements as presented in Annex II to the WHO population data summarised in Table 2.

TABLE 3. ANNUAL AND TOTAL costs FOR MEETING THE WSSD TARGET ON SANITATION BASED ON DIFFERENT SANITATION OPTIONS.

Service level	**Cost per annum (US$bn)**	**Total cost of meeting 2015 targets (US$bn)**
Rural sanitation options[14]		
(1). Improved traditional practice/sanitation & hygiene promotion	$0.8bn	$11bn
(2). Simple pit latrine	$4bn	$48bn
(3). Ventilated improved pit latrine	$5bn	$70bn
(4). Pour flush latrine	$6bn	$76bn
(5). Septic tank system	$13bn	$174bn
Urban/peri-urban sanitation options		
(6). Sanitation & hygiene promotion	$2bn	$27bn
(7). Sewer connection based on low-cost labour	$12bn	$150bn
(8). Connection to conventional sewer (Estimate 1)	$15bn	$190bn
(9). Connection to conventional sewer (Estimate 2)	$25bn	$325bn
(10). Connection to conventional sewer & associated wastewater treatment costs	$38bn	$490bn
(11). Tertiary wastewater treatment	$67bn	$870bn

One conclusion that could be reached is that the funding gap between the current level of investment in the water and sanitation sector and the level of investment required to reach the WSSD agreed target on sanitation could be substantially reduced if lower cost technology is used in certain situations.

This is particularly true in an urban context, where the traditional assumption has been that a full sewerage connection is the most appropriate level of service. For example, septic tank systems could also be suitable in densely populated areas, dramatically reducing the cost of providing improved sanitation. It should, however, be noted that a hidden environmental cost has been overlooked in the price estimates above. The estimates are frequently based on the cost of materials[15] and make little or no provision for the downstream treatment of wastewater.

[14] Unless stated, rural sanitation options are based on 1 (above) and the sanitation ladder referenced in Sanitation & Hygiene Promotion in Lao PDR (Dr. Khonethip Phouangphet, Dr. Soutsakhone Chanthaphone, Santanu Lahiri and Chander Badloe, World Bank Water & Sanitation Program – East Asia & the Pacific, March 2000). Available at: www.wsp.org/english/eap/sanitationladder/san_ladder.html

[15] Keith Moseley, Thames Water. Personal communication.

3 FINANCIAL FLOWS TO THE WASTEWATER AND SANITATION SECTOR

3.1 ESTIMATES OF CURRENT SPENDING AND THE FINANCIAL GAP IN THE WATER SUPPLY AND SANITATION SECTOR

Total spending within the water sector in developing and transition countries is currently estimated at about USD 80 billion annually[16], including USD 14 billion for drinking water, sanitation and hygiene; and USD 14 billion for municipal wastewater treatment.

Comparing the current spending on wastewater treatment of USD 14 billion annually, an additional USD 56 billion (Vision 21), or total of up to USD 70 billion annually is required to reach the WSSD target on sanitation within the wastewater sector, an increase of 4 – to 5-fold.[17] In addition, one should take into account the need to rehabilitate the existing, but sub-optimal functioning infrastructure. Those connected to non-functioning infrastructure are incorrectly counted as 'served'. It illustrates the importance to highlight actual service provision rather then access only.

3.2 EXISTING SOURCES OF FINANCING

There are three main sources of finance for water sector investments, including wastewater. These are:

- International Transfers (Official Development Assistance (ODA) and international lending from development banks and commercial banks)
- Private Sector Investments (International and domestic)[18]
- Other Domestic Sources (budgetary allocations, domestic lending and user finances)

It should be noted that private financing and borrowing can only provide a limited breathing space in providing financial resources. The medium and long term sustainable financing will have to be financed by either the users, general budgetary allocations, ODA-grants, or other grants.

A study of WaterAid (UK)[19] estimated that approximately 70 per cent of the current global spending on water and sanitation is provided by the domestic public sector, 20 per cent by ODA, and 10 per cent by private sector that comprises 7 per cent by international private flows while only 3 per cent comes from domestic private sector investments.

3.2.1 ODA flows to wastewater

The OECD DAC/Creditors Reporting System database was analysed for donor commitments to water resource issues.

Between 1999 and 2001 on average, USD 4.5 billion has been committed annually to water supply and sanitation in general. However, a rough estimate suggests that only 4 percent of this has been committed to wastewater treatment.

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[16] The estimates vary depending on the methodology used, the sources included and categorisation of type of projects / programmes they fund. Source: Winpenny, 2003, adapted from GWP, 2000 and Briscoe, 1999.

[17] However, it must be stressed that the lack of clarity on current funding makes it difficult to accurately relate these figures together. Both data on investment needs and on current spending are heavily weighted in favour of providing connections to an urban network and take much less account of the recurrent costs of providing the most basic standards of service. Given the lack of clarity on how much is actually spent in each area, therefore, the estimates presented here should be treated with considerable caution.

[18] For example, through concession or build operate transfer models private companies can assume the management and operation of waste waterworks, and also the responsibility for capital expenditures over a given period of time (generally 15-25 years), while the public sector retains ownership. Companies are able to finance these expansions via strong balance sheets, which provided access to favourable lending conditions in the major debt markets (through the issuing of bonds).

[19] Annamraju, S., B. Calaguas, and E. Gutierrez. 2001. "Financing Water and Sanitation: Key Issues in Increasing Resources to the Sector." WaterAid briefing paper." WaterAid. London.

Table 4. DAC registered ***donor commitments to Water Resource Issues (current USD billions) 1999-2001***

	2001	**2000**	**1999**
Specifically to wastewater treatment	0.31	0.07	0.17
Water Resource Protection & Large Water Supply & Sanitation Systems	2.61	3.03	2.71
Other (capacity building, dams, landfills, storage, etc.)	1.39	1.8	1.28
Total Water & Sanitation	***4.31***	***4.90***	***4.16***

The regional distribution of these figures is also of interest. The proportions of ODA committed specifically to wastewater treatment are at their lowest in the poorest regions.

Table 5. The Regional Distribution of DAC registered donor commitments to Water & Sanitation and proportion for wastewater treatment (current USD billions)

Region	**2001**		**2000**		**1999**	
	WSS General	% WW	WSS General	% WW	WSS General	% WW
Africa	1.37	0.14%	0.80	0.02%	0.67	1.37%
America	0.28	0.22%	1.21	0.19%	1.42	0.00%
Asia	1.98	11.67%	2.35	0.48%	1.71	9.13%
Europe	0.28	25.56%	0.13	9.36%	0.06	3.36%
Middle East	0.36	0.90%	0.37	10.77%	0.27	0.00%

It must be stressed that measuring current levels of donor financing in the wastewater sector is very difficult. For example, the World Bank, is thought to devote approximately USD 4 billion/yr to the water and sewerage sector[20], but it is unclear how much of this is directed to basic sanitation or to improved sanitation - municipal wastewater treatment. Other development banks also provide resources for wastewater and sanitation – these are not included

3.2.2 International Private Sector Flows to wastewater

The most comprehensive data on private sector flows into infrastructure projects are tracked by the PPI (Private Participation in Infrastructure) database managed by the World Bank. This database tracks the amount of investments committed by the private sector as part of infrastructure deals, but does not capture equity investments or other financial mechanisms used by the private sector, such as for risk mitigation. Nevertheless, this is the best publicly available reference source for international private sector infrastructure flows, including water.[21]

The private capital flows to infrastructure globally, based on data from the PPI database shows how the water sector has received historically just a fraction of total infrastructure investments worldwide (i.e. compared to telecoms, energy and transport) and this share has been stable or declining in recent years.[22] Levels of domestic private finance directed to the water supply and sanitation sector are even lower and often not focused directly enough on the poorest or on ensuring financial sustainability. Private capital flows to the water sector from 1997-2001 were directed in particular to Latin America and South-East Asia.

Importantly, the percentage of the private sector flows focusing on wastewater is very low indeed, irrespective of the regional bias to them. It is expected that over the coming decade the possible increase of the involvement of the private sector in water and sanitation and wastewater services will cover not more then about 5-10 % of the total investment needs in the water sector.

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[20] Noted in PricewaterhouseCoopers, *Water – A world financial issue*.

[21] This database captures contract and investment information for infrastructure projects, newly opened or managed by private companies.

[22] For example, in the water sector, between zero and USD 1 of private money is invested for USD 1 of public money, whereas the telecommunications sector has a leverage ratio of USD 2-6 of private money for every USD 1 of public money invested, and the electricity sector has an even ratio of around USD 1 of private money invested for each USD 1 of public money.

3.2.3 Domestic finance flows for wastewater

The importance of the domestic public sector in providing access to water supply and sanitation finance cannot be overstated (both for investment and for recurrent financing needs). In relation to the 2015 targets on water supply and sanitation, Governments in developing countries have been found to spend 1 – 3 percent of their annual budgets for water supply and sanitation services, although this percentage can vary significantly from one country or one region to another. Public spending on basic water and sanitation needs in Africa is particularly low.

A comprehensive study, undertaken by WHO and UNICEF[23] found that over the period 1990-2000, 58 percent of financing for water related investments came from national government agencies. In Africa, the role of national budget financing was lowest, at 32 percent. These figures do not include resources from sub-national level governments, user charges etc. which would also be available from domestic sources.

Even though the domestic public sector is the largest contributor, reliable official data does not exist. This is due to, among other reasons, water and sanitation investments are often financed through budget line items not identified with a specific sector (e.g. under "social infrastructure", "general services" etc)[24].

3.2.4 Signs of Progress in ODA commitments?

In the recent past there has been some progress toward both increasing ODA volumes and developing mechanisms to increase the leverage ratio of ODA. These good intentions have, however, to date not materialized into much additional ODA disbursement.

Signs of progress on raising aid effectiveness[26]

- The Monterrey Consensus[25] reaffirmed the international community's commitment to increasing aid and making progress toward the MDGs
- The EU Water Initiative has developed a finance component with a range of options for using ODA to leverage more private sector finance into the water sector, to help meet the MDGs. Related to the EU WI has been the concept of a 1 billion euro EC Water Fund.
- The UK has proposed an International Financing Facility designed to provide additional financing to help meet the MDGs.
- The Dutch have led the development of a multi donor Africa Water Facility, to be housed within the African Development Bank
- The Private Infrastructure Development Group (PIDG) aims to mobilise private investment for infrastructure for growth and for the elimination of poverty. Funds committed through PIDG will be used to support the Emerging Africa Infrastructure Fund (EAIF), Emerging Asia Infrastructure Fund, DevCo and GuarantCo.
- The US announced that it would propose increases in its annual contribution by USD 5 billion for the Millennium Challenge Account.
- The Public Private Infrastructure Advisory Facility (PPIAF) is a multi donor trust fund providing technical assistance grants to support private sector participation in the infrastructure sector

At the recent OECD Global Forum for Sustainable Development it was re-confirmed that despite the outcome of both the Monterrey Conference on the Finance of the Development and the World Summit on Sustainable Development, ODA for the water sector continues to decline, and external funding for this sector is probably at its lowest since the 1980s."[27]

It is within this context of progress that recommendations for increasing the volume of wastewater investments should be made.

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[23] WHO and UNICEF, "Global Water Supply and Sanitation Assessment 2000 Report." 2000.
[24] World Bank and IMF, 2003.
[25] International Conference on Financing for Development in Monterrey, March 2002.
[26] Refer to Annex 3 for further details.
[27] OECD Global Forum on Sustainable Development, Financing Water and Environmental infrastructure for All, Introductory Remarks-James Winpenny, Paris December 2003.

4 MAIN FINANCING CONSTRAINTS

There are several constraints, which could explain why the various sources of finance may not be attracted to the water sector as greatly as they could. The issue of political risk and poor governance seems to be the most important constraint that impedes the flow of finance into the water supply and sanitation sector investments. These risks reflect the fact that political interference and unstable regulatory regimes can alter the operating environment hugely, impacting on the ability to source finance for sustainable water projects.

In low and medium income countries environmentally-related expenditure as a share of national income may be comparable with the high-spending countries, though absolute levels are very low. This suggests that it is often the willingness, but sometimes also the ability to pay, linked to low income, that is the main constraint towards higher levels of domestic environmentally related expenditure, in particular within the water and sanitation sector.

Additional constraints are:

- Low priority of environment, in particular water supply and sanitation, in public sector spending (national and local) due to competing interests with other sectors such as health and education as a result of acute scarcity and accumulated external debt burden.
- Weak revenue generation from existing environmentally related charges, as the aggregated revenue-raising capacity is usually too small to create a critical mass of resources to support significant investments.
- Low levels of ODA/IFI[28] and FDI[29] to the water supply and sanitation sector, in particular to the least developing countries as a result of weak demand by countries for environmental assistance.
- Centralization of financing possibilities of environmental activities reflects the lack of financial autonomy at the local government/municipality level and offers weak incentives to sub-national levels of government for responsible, long-term environmental management.
- Lack of accounting for costs of externality from environmental degradation such as health costs, loss of ecosystem services, tourism etc.

[28] International Financial Institutions
[29] Foreign Direct Investment

5 FINDING THE FINANCE

Even though estimates of needs and current allocations vary greatly, the gap between what is spent and what is required for wastewater treatment, especially within many urban and peri-urban environments, is large by any order of magnitude – a best estimate is about additional US$56 billion dollars per year, or total of US$70 billion dollars per year. In the endeavour to reduce the current finance gap following steps are recommended:

- Raise the profile of wastewater treatment by showing how important it is, in addressing public health, economic losses and degradation of coastal ecosystems, and with respect to poverty alleviation.
- Increase domestic contributions to the wastewater sector dramatically ensuring long term sustainable domestic financing (general budget and user financing).
- Ensure continual and preferably increased international commitment to the wastewater and sanitation sector through ODA, IFI and FDI.
- Explore how the gap between what is committed and what is needed in the wastewater treatment sector could be reduced through the different use of current funds.

5.1 OPPORTUNITIES FOR BRIDGING THE GAP

5.1.1 Higher priority for water and sanitation issues

First and foremost, countries must assign a higher priority to financing the water supply and sanitation sector within public sector spending and within countries cooperation programmes with donors.

Since the consequences of neglecting water resources protection will primarily be borne by the poorest segments of society, it is important that provisions of water supply and sanitation be mainstreamed into Poverty Reduction Strategies processes, Country Assistance Strategies (CAS) and national development plans to ensure its long-term sustainability.

Accounting for costs of externalities arising from environmental degradation is likewise important in ensuring priority and justification for further increased resources spent on water supply and sanitation issues.

5.1.2 Costs of achieving the targets at national and sub-national levels

Knowing the costs of achieving the 2015 targets for the water and sanitation sector is important in order to assess the most effective mix of finance and technology alternatives. It is important to move away from discussing global financial gaps to national or sub-national financing gaps where implementation and financial resources need to be identified.

To be convincing, the water and environment community needs to come up with a narrower and more robust range of estimates and assumptions, especially in relation to definitions over the types of sanitation and wastewater service required, and in terms of the cost burden of water pollution, especially on the poor.

One way to monitor progress is to proceed through a stepwise approach, applying progress indicators that are sensitive to both regional and urban vs. rural variations in needs (regional and/or national Wastewater Emission Targets as an example).

5.1.3 Institutional reform and improved efficiency

Creating an effective demand for environmental financing will require the strengthening of policy and institutional framework that provide a more credible and stable framework for investment planning that are based on internationally-recognised principles (e.g. subsidiarity, efficiency and

polluter pays) supported by predictable and enforceable regulatory framework conditions that will attract the private sector and ODA financing.

The institutional and regulatory environment, and the fiscal relationship between the centre and sub-sovereign governments, has to be robust enough to ensure secure revenue flows and stable policy regimes over time.

To sustain investments and encourage better water resource use, tariffs structures have to be shaped such that prices in the longer term move towards reflecting the actual cost of water production and clean up. To avoid unacceptable social consequences, reforms have to be accompanied by regulations and subsidies ensuring that the poorest segments of society receive adequate services.

5.1.4 More efficiency and focus in the use of domestic financing

Domestic finance is the key to providing revenue flows in such a way that it can attract private finance and pave the way for leveraging of ODA through creation of new models for combining public, donor, NGO and private funding.

Leveraging additional financing for existing public sector operators or communities with an interest and capacity to self-manage their sanitation requirements is important. Within this context the issue of user finance becomes critical.

Domestic finance is the most importance finance source for wastewater treatment. Hence the development of supportive regulatory, tariff, (cross) subsidy and credit systems that can best encourage higher levels of sustainable user finance flows for wastewater treatment and sanitation will be vitally important and attract wider sources of private sector finance to help the investment plans of public sector utilities.

5.1.5 Attracting more ODA/IFI to the water and sanitation sector

To redirect current resources towards water and sanitation investments, both within a country where needs are greatest and through higher proportion of both domestic public sector resources and ODA, Governments need to assign a higher priority to the water and sanitation sector within their cooperation programmes with donors (connect with leverage of domestic environmental expenditures).

ODA could be used more effectively to help leverage domestic (user) and private sector sources in raising new and additional funding e.g. through tax reforms and realistic multi-budget planning in partnership with developing country governments.

As a way to increase the countries environmental expenditure the use of debt-for-nature/environment swaps[30] could be encouraged, in particular for countries that are currently in default on current sovereign borrowing. This can be integrated into a wider debt-restructuring package to enable bilateral debt swaps through e.g. an Inter-Ministerial Committee that would include e.g. Ministry of Finance, Ministry of Environment, Ministry of Economy and Ministry of Foreign Affairs.

5.1.6 Targeted use of ODA financing

Well targeted, grant-based ODA could be more effectively used to help users stimulate such better targeted schemes, by paying for the provision of targeted subsidies (especially for connections); starting up community-financing and credit schemes; helping to design and create more demand-focused projects; promoting output-based projects; and, importantly, developing the capacity within civil society to form wastewater management groups, community based organisations and other local civil society institutions and the skills they may need.

[30] debt-for-nature/environment swaps are transactions that reduce or convert external debt in exchange for the debtor country commitment to spend an agreed portion or the whole amount of the reduced foreign debt on domestic environmental improvements in local currency.

5.1.7 Involvement of the private sector and IFI financing

Water-environment professionals in development agencies and domestic governments need to work more closely with the private sector and IFIs in an effort to increase the leverage of ODA to create more tailored mechanisms for leveraging finance into the water and sanitation sector. This could be by creating international risk-pooling funds to enable investors to deal with these pools rather than individual municipalities. Similar intermediary mechanisms at national level have been widely used for financing by public authorities and public sector utilities, e.g. bond banks, bond pools, revolving loan funds, municipal development funds (MDFs), such as the INCA fund in South Africa, or USAID in Tamil Nadu, India. Regional versions of such a funds could play an important role in facilitating investments in public sector wastewater companies.

International Financial Institutions (IFIs) are important lenders themselves and, together with some bilateral donor mechanisms, can work to lever in more commercial finance. IFIs could equip themselves for lending to sub-sovereign bodies, without a sovereign guarantee. More use could also be made of existing insurance and guarantee schemes, such as political risk insurance, Partial Credit and Partial Risk Guarantees and the various infrastructure related or wider multi-donor financing initiatives. These can help either to prepare commercially viable projects (DevCo, the Project Preparation Committee in the EECCA region, the African Water Facility); to underwrite risk (GuarantCo); to provide concessional loans (*inter alia* the European Investment Bank, the Emerging Africa and Asia Infrastructure Funds, the Community-Led Infrastructure Financing Facility in India); or to reform public financing systems, accountancy procedures, policy frameworks or utility price regulations via multi-donor programmes and trust funds like FIRST (Financial Sector Reform and Strengthening) or PPIAFF (Public Private Infrastructure Advisory Facility). Refer to Annex III for further details.

5.1.8 Improved capacity

More effective and targeted use of financing means moving away from funding a proliferation of isolated and uncoordinated donor-lead projects to projects accompanied by programmes that provide support to building sustainable improvements in local capacity, through e.g. technical assistance, adequate training (maintenance and management skills) or help with integrated management. For example, practical workshops, skills transfers and centres of excellence for policy development (for example on decentralising operations, tariff and subsidy reform, applying the 10 Keys for local and national action on municipal wastewater management – refer to Annex 1) or the principles of Integrated Water Resources Management to underpin wastewater policy, and on issues of aggregation and pro-poor regulatory reform) could have a large impact on decision-making.

5.1.9 Selecting the appropriate technologies

The level of investment required to meet the 2015 goals could be reduced dramatically if low-cost sanitation is applied in an urban context, if a section of the target urban population requiring access to Water and Sanitation is given a choice of services(see figure 1: a ladder of options). Importantly, basic service does not mean lower quality, simply lower cost. Basic service can mean a range of design attributes being rethought, not just the technology, but also for example institutional/ management arrangements or billing and collection procedures. If there is a wider acceptance of low-cost, appropriately designed sanitation schemes, then the costs of achieving the 2015 targets will be considerably reduced, hence providing a possible future direction for (poorer) urban communities to match solutions to their limited cash resources.

Programmes should be developed that are based on sustainable, affordable, low-cost technology alternatives targeted at the poor to match solutions to their limited financial resources. Currently this type of intervention receives a very small proportion of domestic public sector investment, ranging from 1 per cent in Sub-Saharan Africa to 3 per cent in Latin America & the Caribbean[31].

[31] "A Better World for Us All – Progress Towards the International Development Targets". A joint publication by IMF, UN, OECD and World Bank Group, June 2000.

Going forward, it will be important to strike a balance in urban areas between the level of service offered by private companies (i.e. full water and sewerage connections) and the level of service required by the population, particularly poorer communities in peri-urban zones. Depending on the local physical and socio-economic situation, selection and mix of alternative technologies are appropriate and e.g. eco-technology is a valid alternative to traditional engineering and technical solutions.

ANNEX I – 10 KEYS FOR LOCAL AND NATIONAL ACTION ON MUNICIPAL WASTEWATER

10 KEYS

For Local and National Action on Municipal Wastewater

The 10 key issues listed below are prerequisite for successful municipal wastewater management. They cover policy issues, management approaches, technology selection and financing mechanisms. They have been developed in the framework of the UNEP/WHO/HABITAT/WSSCC Strategic Action Plan on Municipal Wastewater, adopted at the UNEP/GPA Intergovernmental Review meeting, Montreal, November 2001, and re-emphasized at the UNEP Governing Council, 22nd session, Nairobi, February 2003.

1 Secure political commitment and domestic financial resources.

A political climate has to be created in which high priority is assigned to all aspects of sustainable municipal wastewater management, including the allocation of sufficient domestic resources within the framework of Integrated Water Resources Management (IWRM).

2 Create an enabling environment at national AND local levels.

Public authorities remain responsible for overseeing the management of water and wastewater services. The 'subsidiarity principle', i.e. the delegation of responsibilities to the appropriate level of governance, applies to the entire water sector. National authorities should create the policy, legal, regulatory, institutional and financial frameworks to support the delivery of services at the appropriate level in a transparent, participatory and decentralized manner.

3 Water supply and sanitation is not restricted to taps and toilets.

A holistic approach to water supply and sanitation should be adopted. This incorporates not only the provision of household services, but various other components of water resource management, including protection of the resource that provides the water, wastewater collection, treatment, reuse and reallocation to the natural environment. Addressing the environmental dimensions mitigates direct and indirect impacts on human and ecosystem health.

4 Develop integrated urban water supply and sanitation management systems also addressing environmental impacts.

Municipal wastewater management is part of a wider set of urban water services. The wastewater component is usually positioned at the end of a water resource management chain. Integration of relevant institutional, technical, sectoral, and costing issues of all major components of the chain is required. Consideration should be given to the joint development, management, and/or delivery of drinking water supply and sanitation services.

5 Adopt a long-term perspective, taking action step-by-step, starting now.

The high costs of wastewater systems necessitate a long-term, step-by-step approach, minimizing current and future environmental and human health damage as much as possible within existing budgetary limits. Non-action imposes great costs on current and future generations and misses out on the potential of re-using valuable resources. A step-by-step approach allows for the implementation of feasible, tailor-made and cost-effective measures that will help to reach long-term management objectives.

6 Use well-defined time-lines, and time-bound targets and indicators.

Properly quantified thresholds, time-bound targets and indicators are indispensable instruments for priority setting, resource allocation, progress reporting and evaluation.

7 Select appropriate technologies for efficient and cost-effective use of water resources and consider eco-technology alternatives.

Sound water management relies on the preservation and efficient utilization of water resources. Pollution prevention at the source, efficient use and re-use of water, and application of appropriate low-cost treatment technologies will result in a reduction in wastewater quantity and in investment savings related to construction, operation and maintenance of sewerage systems and treatment facilities. Depending on the local physical and socio-economic situation, different technologies will be appropriate. Eco-technology is a valid alternative to traditional engineering and technical solutions.

8 Apply demand-driven approaches.

In selecting appropriate technology and management options attention must be given to users' preferences and their ability and willingness to pay. Comprehensive analyses of present and future societal demands are required, and strong support and acceptance from local communities should be secured. With such analyses realistic choices can be made from a wide range of technological, financial and management options. Different systems can be selected for different zones in urban areas.

9 Involve all stakeholders from the beginning and ensure transparency in management and decision-making processes.

Efforts and actions on domestic sewage issues must involve pro-active participation and contributions of both governmental and non-governmental stakeholders. Actors stem from household and neighborhood levels to regional, national and even international levels, and possibly the private sector. Early, continuous, targeted and transparent communication between all parties is required to establish

firm partnerships. The **private sector** can act as a partner in building and improving infrastructure, in operating and maintaining of facilities, or in providing administrative services.

10 Ensure financial stability and sustainability.

10.1 Link the municipal wastewater sector to other economic sectors.

Sound and appropriate wastewater management may require substantial construction and operational investments in wastewater infrastructure and treatment facilities. Relative to the water supply sector, cost recovery in the wastewater sector is traditionally a long process. Developments in other (socio-) economic sectors, for instance water supply or tourism, may create opportunities to address sanitation at the same time. Linking wastewater management with other sectors can ensure faster cost-recovery, risk-reduction, financial stability and sustainable implementation.

10.2 Introduce innovative financial mechanisms, including private sector involvement and public-public partnerships.

Traditionally, sanitation services have been provided by public authorities. Costs for investments, operation and maintenance, however, often outstrip their capacities, as do present and future requirements for serving the un-served. Therefore, innovative, more flexible and effective financial management mechanisms have to be considered, e.g. micro-financing, revolving funds, risk-sharing alternatives, municipal bonds. Public-private partnerships, and also public-public partnerships, are important tools to assist local governments in initial financing and operating the infrastructure for wastewater management.

10.3 Consider social equity and solidarity to reach cost-recovery.

The employment of approaches like 'the water user pays' and 'the polluter pays' is required to achieve stable and sustainable wastewater management with efficient cost-recovery systems. These approaches should be applied in a socially acceptable way, considering solidarity and equitable sharing of costs by all citizens and facilities. Various user groups should be made aware of - and be able to identify with - concepts such as "water-" and "catchment solidarity". All users will benefit from environmental improvement.

ANNEX II – ESTIMATES OF COSTS FOR DIFFERENT SANITATION OPTIONS

One approach is to consider how the use of different technologies can effect costs. The table below illustrates tentative cost estimates for different levels of sanitation service and technology options starting at a basic level and moving up to higher levels of service.

Table II-1. Estimates of costs for different sanitation options[1].

Service level:	**One-off construction/ connection cost (US$)[2]**	**O&M cost (US$)[3]**	**Total cost (US$)**
Rural sanitation options[4]			
(1) Improved traditional practice/sanitation & hygiene promotion	$10/person[5]	$0[6]	$10
(2) Simple pit latrine	$45	negligible	$45
(3) Ventilated improved pit latrine	$55	$10	$65
(4) Pour flush latrine	$70	negligible	$70
(5) Septic tank system	$140	$20	$160
Urban/peri-urban **sanitation options**			
(6) Sanitation & hygiene promotion	$25/person[7]	$0[8]	$25
(7) Sewer connection based on low-cost labour	$120/household [9]	$20	($140)
(8) Connection to conventional sewer (Estimate 1)	$150	$25	$175
(9) Connection to conventional sewer (Estimate 2)	$260/person[10]	$40	$300
(10) Connection to conventional sewer & associated wastewater treatment costs	$450/person[11]	assumed in original estimate	$450
(11) Tertiary wastewater treatment	$800/person	assumed in original estimate	$800

[1] It is often not clear whether costs published have been calculated on a per person basis or merely reflect the average cost of construction per person for the community/household as a whole. 2. Estimated costs for rehabilitation of non-functioning collection and treatment systems are not included. 3. Re-use and eco-technology options have not been considered.

[2] Adapted from Global Water Supply & Sanitation Assessment 2000 Report (www.who.int/docstore/water_sanitation_health/Globassessment/Global3.3.htm). Unless stated, figures are based on the average construction cost of sanitation facilities for Africa, Asia and Latin America & the Caribbean for the period 1990-2000 and include a small charge to account for inflation and currency fluctuations.

[3] Based on 15% of capital costs unless otherwise stated (author's estimate).

[4] Unless stated, rural sanitation options are based on 1 (above) and the sanitation ladder referenced in Sanitation & Hygiene Promotion in Lao PDR (Dr. Khonethip Phouangphet, Dr. Soutsakhone Chanthaphone, Santanu Lahiri and Chander Badloe, World Bank Water & Sanitation Program – East Asia & the Pacific, March 2000). Available at: www.wsp.org/english/eap/sanitationladder/san_ladder.html

[5] From Sustainable Local Solutions, Popular Participation and Hygiene Education (Richard Jolly) writing in Clean Water, Safe Sanitation: An Agenda for the Kyoto World Water Forum and Beyond (Institute of Public Policy Research, February 2003). Based on the Vision 21 estimate of average external costs per person for sanitation and hygiene promotion.

[6] Assumes no recurrent costs.

[7] See note 5 (above).

[8] See note 6 (above).

[9] This figure is quoted by Suez in the publication Bridging the Water Divide (Suez/Ondeo, March 2002) and is based on a one-off connection cost for households in poor neighbourhoods in the Aguas Argentinas concession area and assumes the bartering of local labour in exchange for connection to a network. However, no data is given for the number of persons per household.

[10] Taken from Water: A World Financial Issue (PricewaterhouseCoopers, March 2001). The figure is based on a per-head cost of $20/year multiplied by 13 years to reflect the timescale required for meeting the MDGs.

[11] The figure is based on estimates by the Global Water Partnership (GWP) and Briscoe referenced in the Report of the World Panel on Financing Water Infrastructure chaired by Michel Camdessus (Winpenny, March 2003).

The first part of this table shows some of the options that might be available in a rural situation, ranging from improvements in traditional practices up to septic tank systems for household use, but not including sewer network connections.

The second part shows tentative estimates for different levels of service that could be provided in an urban context. With the exception of the first option (sanitation & hygiene promotion), all are based on connection to some form of collection system. However, only the last two service levels make an allowance for the cost of treating wastewater at the end-of-pipe.

For rural sanitation, the highest-cost option (septic tank system) is almost 16 times greater than the lowest-cost option (sanitation & hygiene promotion). For urban sanitation, the highest-cost option (tertiary wastewater treatment) is 32 times greater than the lowest-cost option (sanitation & hygiene promotion).

ANNEX III – OVERVIEW OF WATER & SANITATION INITIATIVES

Name of initiative	*Acronym*	*Nature*	*Source*	*Regional Focus*	*Key outputs/Instruments*	*Relevance to the Financing of Wastewater Collection and Treatment*
1 Policy initiatives						
World Summit on Sustainable Development	WSSD	Policy setting	Global	Global	Agreed to mobilise international and domestic financial resources for WATSAN investments. Support for a "world solidarity fund" agreed upon in Johannesburg	Created global agreements upon which the case for water-environment promotion can be made
The EU/ACP Partnership Agreement	Cotonou	Aid agreement	European Union	ACP	Financial protocol for ACP countries and guidelines for aid provision	*Has increased the profile of financing water and wastewater within EU ODA.*
New Partnership for Africa Development	NEPAD	Policy setting	Africa	Africa	Policy principles: increase financial investments in infrastructure by lowering risks facing private investors, with respect to policy/regulatory frameworks. Clear emphasis on governance.	*Direct interlocutor in Africa*
African Ministers Conference on Water	AMCOW	Policy setting Under NEPAD	Africa	Global	Key objectives for reviewing the development of the water sector	*Direct interlocutor in Africa for water and wastewater issues*
Environment for Europe Process	EEP	Policy setting	Ministers	CEE and NIS	Policy process and set up the EAP Task Force and the Project Preparation Committee	*Led to the creation of initiatives, which provide a good basis for the promotion of financing environment and water/wastewater projects in the EECCA region*
2 Water specific policy initiatives						
EC Resolution on Water Management in Developing Countries		Resolution	European Union	Developing countries	Initiated the EU Water Initiative and stresses the need for good governance and to strengthen coordination within the European Union	*Key policy basis for river basin management and environmental-water related linkages in development*
Bonn Recommendations for Action		Policy declaration	Global	Global	Detailed analysis and statements about financing the water sector	*Conceptual basis for financing environment-water related issues*
EU Water Initiative		Policy Initiative for Action	European Commission and EU member states	Global	Objectives are to harmonise EC and EU member state ODA funding for the water sector; and to leverage in more private sector financing, within the context of the MDGs. River basin management a central concept to the initiative.	*A key policy initiative for action within the EC and EU, from which the promotion of the need for financing environment-water linkages can be made*
3 Non water- specific financial initiatives						

Name of initiative	*Acronym*	*Nature*	*Source*	*Regional Focus*	*Key outputs/Instruments*	*Relevance to the Financing of Wastewater Collection and Treatment*
Financial Sector Reform and Strengthening	FIRST	Technical Assistance Grants	Donors (UK largely involved)	Global	Technical Assistance support for reform of the financial sectors	Addresses the broader financial framework – *wastewater-financing initiatives could piggyback on some innovations or countries where reform successfully implemented.*
Public Private Infrastructure Advisory Facility	PPIAF	Technical Assistance Grants	Donors (UK, Japan, World Bank)	Global	Technical Assistance grants to support private sector participation in the infrastructure sector	Addresses institutional and regulatory issues –*could be used to develop the enabling environment for better wastewater regulations and financing*
Environmental Action Programme Task Force	EAP	Task force	Governments & OECD	CEE and NIS	Has identified urban water sector reform in the NIS as one of its key priorities.	*The knowledge and practical tools developed by the EAP task force could be used to enhance the policy case for improved wastewater financing*
Project Preparation Committee	PPC	Coordination of IFIs	IFIs (hosted by EBRD)	CEE and NIS	Innovative networking mechanism for coordinating assistance to CEE and NIS. Has allowed financing for the environmental sector to be allocated more effectively	*PPC could be used to help develop better project concepts for wastewater financing in the EECCA region*
Joint Environmental Programme	JEP	Financing Vehicle for Technical Assistance	Multilateral donors (WB/EC)	NIS and Mongolia	Mechanism for funding feasibility and preparation studies for selected investment projects	*The promotion of this type of mechanism could be considered for other regions in order to develop Project Preparation Facilities for environment-water related investments*
Private Infrastructure Donor Group	PIDG	Project financing	Donors (Neth, Sweden, Switz., UK)	Global	The group aims to mobilise private investment and controls a Trust, based in Mauritius, that can support initiatives such as EAIF and others under preparation (see below)	*Ensure that PIDG takes adequate account of environment- water issues in the design of its financial instrumens.*
Infrastructure Development Company (Planned)	DevCo	Project Preparation	Multi-donors, UK-led	Global	Creation and structuring of infrastructure opportunities and presentation of these opportunities to the private sector through a competitive and transparent process	*Focuses on the need to prepare good projects and could be influenced to ensure wastewater treatment projects form part of the portfolio*
Development Guarantee Company (Planned)	GuarantCo	Guarantees	Multi-donors, UK-led	Global	Partial risk guarantees for local currency bonds issued by municipalities and utilities for infrastructure work	*Could be encouraged to ensure wastewater treatment projects can also be eligible for GuarantCo support*
Emerging Africa Infrastructure Fund	EAIF	Long Term Loans	Multi-donors (UK, Sweden, Switz., Neth.)	Africa	Long-term lending to infrastructure companies (including water and sanitation) for the poorest countries, focusing on Africa. Coordinated	*Ensure EAIF considers wastewater investments within its portfolio*

Name of initiative	*Acronym*	*Nature*	*Source*	*Regional Focus*	*Key outputs/Instruments*	*Relevance to the Financing of Wastewater Collection and Treatment*
			and banks		approach between donor and banks, including commercial and development banks is an innovation.	
Public Private Partnerships for the Urban Environment	PPPUE	Grants	UNDP and Donors (UK, Switz, New Zealand)	Global	Innovative partnership grants for projects and activities establishing adequate policy, legal and institutional frameworks for PPP at local level particularly at the urban level	Grants for establishing conducive institutional environment: impact on risk reduction. *Could be developed to ensure institutional frameworks are attractive for promoting partnerships for wastewater treatment projects*
Community-Led Infrastructure Financing Facility	CLIFF	Project financing	UK and NGOs	India	Loans/credit guarantees to community-led slum upgrading initiatives	*Promote inclusion of wastewater treatment investments within its portfolio.*
4 Water specific financial initiatives						
EU Water Fund	EUWF	Sector specific finance	EU member states; EC	EC ACP	Proposed one billion euro fund to support the EUWI. Providing co-financing and capacity building	Potentially of interest for stimulating more wastewater investments, but some key issues need addressing: *The potential bypassing of the EDF investment facility* *How to make sure a sector-specific fund does not distort country-led, demand driven processes for wastewater aid requests.*
5 Global water initiatives						
Global Programme of Action for the Protection of the Marine Environment from Land-based Activities	GPA	Partners Programme, adopted by 105 countries and EU	UNEP	Global	Seeks to implement innovative approaches in the wastewater and sanitation sector, backed by global consensus Keys and Guidelines on Municipal Wastewater Management; Regional Capacity Building through Pilots and Training	*Ensure holistic approach to sanitation, including wastewater collection, treatment, re-use and re-allocation to the natural environment*
Global Water Partnership	GWP	Partners network		Global	Knowledge network – Ongoing initiative focusing on governance issues	Governance issues are crucial to ensure better performance of aid flows to the water sector – *ensure wastewater is not forgotten within the GWP process; encourage the GWP to disentangle the sanitation/ wastewater confusions over financing challenges*

Name of initiative	*Acronym*	*Nature*	*Source*	*Regional Focus*	*Key outputs/Instruments*	*Relevance to the Financing of Wastewater Collection and Treatment*
World Water Council	WWC	International think-tank and network	INGO	Global	Key influence on the agenda for the World Water Fora	*As above*
The World Panel on Financing Water Infrastructure	Camdessus	International Panel		Global	Camdessus paper presented at Kyoto.	*Build on the recommendations made in the report.*
Water Supply and Sanitation Collaborative Council	WSSCC	Cross between professional association and international NGO	Donors (UN)	Global	Knowledge network. Not a provider of finance but only seed money to influence organisations	*Interact to promote the case for wastewater financing*
Water and Sanitation Program	WSP	INGO	WB and UNDP	Global	Seeks to influence policy in the water sector with strong regional presence. Ongoing projects examining financing issues, at a relatively micro-scale but still focused on water services rather than IWRM.	*Build on experiences from WSP's ongoing projects, analysing financing and in particular examining the role of micro-finance in Africa for low cost urban sanitation solutions*
Business Partners for Development	BPD	Tri-sector Partnership	Donors	Global	Particular focus on exploring the merits of tri-sector partnerships for water and sanitation services	*BPD could help in the development of partnerships for wastewater investments*
Water Utility Partnerships	WUP	Professional organisation	UAWS	Africa	Created by professional organisation and training bodies in Africa. Prepared a toolkit for services to low-income communities.	*Build on this organisation to identify good wastewater treatment projects in Africa.*
IPWA Financial Tools Taskforce		Professional association and network	Voluntary	Global	*Aims to support aid agencies, project sponsors, and in country partners who are seeking to attract qualified operators to expand and update water and sanitation coverage. Explores potential for alternative techniques for financing projects with a strong focus on the use of partial guarantees and credit enhancement tools to enable municipalities and local water authorities to tap into local sources of finance they might not otherwise have access to (e.g. pension funds).*	*A network environment ministers could encourage wastewater professions to become part of*
World Bank Water Resource	WB	INGO + network	WB, Neth,	Global	World Bank is developing a Water Resources	*Ensure adequate attention is placed on the*

Name of initiative	*Acronym*	*Nature*	*Source*	*Regional Focus*	*Key outputs/Instruments*	*Relevance to the Financing of Wastewater Collection and Treatment*
			GEF, etc…		Strategy in coordination with other organisations	*wastewater and water-environment issue*
6 Country-specific water initiatives						
The African Water Facility	AWF	Investment Support		Africa	Promote innovative actions, assist to create an enabling environment, help to build governance and management capacity	*The AWF could be used to channel funds for wastewater projects in Africa.*
Tacis (water specific component)		Multilateral	European Union	NIS	Financing initiatives and programmes linked with the management of transboundary water bodies in the NIS	*Collaborate with Tacis for the management and treatment of wastewater in EECCA region to feature more strongly in Tacis projects*
Nile Basin Initiative	NBI	Direct investments	Donors	Nile	Providing finance to large projects in the Nile basin on the basis of an integrated river basin management approach	Innovative example of multi-donor facility. *Promote wastewater treatment issues as part of the NBI.*
Partners for Water and Sanitation		Professional partnerships	UK	Africa	Professional partnerships to develop access of poor communities to water and sanitation	*Could be used to help raise awareness of the environment-water problem in Africa*
Netherlands multilateral		Partnership donor and multilaterals	Neth.	Global	Also known as "the Dutch window". Partnerships with multi-laterals and in particular with the World Bank but also other regional banks.	*Partnerships between donors and multilateral has proved efficient for focusing on water. Ensure the Dutch window addresses wastewater issues*

Source: DFID/EU: European Water Initiative – Final report of the financial component, October 2003.