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# New Institutional Models for Urban Environmental Management

Multi-stakeholder Partnerships for the Sustainable use of water in urban areas

Introduction

The new millennium may seem already a bit old for some, particularly as the list of long-term challenges --environmental problems, poverty, inequality, transparency-- continues to lengthen. In line with the targets set under objective 7 of the Millennium Development Goals, "*improve environmental sustainability*", the 2003 Call of the EMS´ Small Research Grants Program, will focus on *the sustainable use of water within urban contexts.*

The end of the 20th century in Latin America found 75% of its total population living in cities. While at the beginning of the century, one out of four people lived in urban centres, at the beginning of 21st century, the relation has tripled. The urbanization process is not only expressed through demographic growth but also shows an economic dimension, where cities generate 80% of regional economic growth (CEPAL, 2000). However, such dynamism comes together with an alarming growth of urban poverty. CEPAL measurements of the poverty line (ECLAC, 1999 and 2000) show that in late 1990s, six out of every ten poor people in Latin America lived in urban areas. Latin America is the developing region that provides the clearest example of the worldwide process known as the "urbanization of poverty". Although urban poverty levels vary from country to country, poverty is usually more widespread in secondary cities than in metropolitan areas (idem).

Figure 1
LATIN AMERICA: TRENDS IN THE URBAN AND RURAL POPULATIONS AND DEGREE OF URBANIZATION, 1970-2020
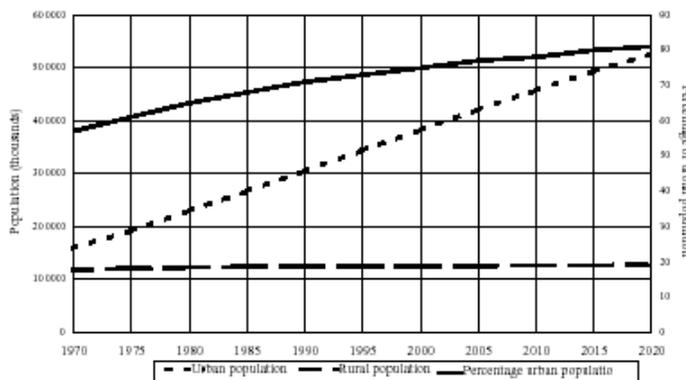
Source: ECLAC, Population Division - Latin American and Caribbean Demographi Centre (CELADE), *Latin America: Urban and Rural Population Projections, 1970-2025*, Demographic Bulletin, year 32, No. 63 (LC/G.2052; LC/DEM/G.183), Santiago, Chile, January 1999.

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The ongoing concentration of millions of poor people in urban centres throughout the region is more than just a demographic issue. It is a highly sensitive process that is resulting in a radical transformation of the structure of cities, accompanied by complex social, economic, cultural and environmental changes. One of the more visible processes that express current changes in urban structure is the displacement of low-income people from central areas to the outskirts of the city, as well as the continuing migration from rural to urban areas (see figure 1). This periphery location allows poor people to find cheaper land for housing or (as it is the current trend in Latin American cities) to carry out illegal occupations of land contributing to the growth of the already well-known illegal settlements.

Socio-spatial segregation is a very pronounced and negative feature of the region's cities: poor households continue to be pushed to periphery and/or high-risk areas, under inadequate housing conditions and a serious shortage of urban environmental services. This generates not only the abandonment of central areas that already have in place urban infrastructure and services, but also the need to provide or extend networks of infrastructure and services to these areas.

This pattern of urbanisation has placed an extraordinary strain on cities´ governments to meet their citizens' basic needs. Urban environmental problems such as insufficient and inadequate access to water supply and sanitation facilities, inadequate waste management, and unsustainable energy systems are particularly acute, demonstrating that although sustainability is acknowledged as a significant issue worldwide, urban development policies and practices, both in developed and developing countries, are still far from mainstreaming sustainability into its planning. In developed countries this is most evident in the continuing spread of cities, and the continuing growth in the use of private cars and demand for fossil fuels. The continuing lack of basic sanitary infrastructure, inadequate access to safe drinking water, and the worsening of poverty and social exclusion as evidenced by the continuing growth of informal settlements and urban slums, are the main indicators of an unsustainable urbanisation pattern in the developing world (Allen et al, 2002).

Within this context cities are increasingly recognised as part of the problem but rarely as part of the solution. An anti-urban bias still prevails in environmental thinking and policy-making. However, in a rapidly urbanising world, these debates become theoretical or irrelevant. The bulk of human activity and its resulting impact on the environment will increasingly depend on how cities, their public and private entrepreneurial sectors and civil society partners deal with social, economic, environmental and cultural issues. Sustainable urbanisation, as a dynamic and multidimensional process involves all those issues as well as the crucial political-institutional dimension of urban management. Furthermore, it highlights the importance of crosscutting issues such as poverty, gender inequality and social exclusion, stressing the argument that the management of the urban environment is a key and crucial issue of local governance.

Topics related to Local environmental governance have been debated analysed and debated in different Fora organised by the EMS. In 2001, conclusive notes of the International Forum on Managing Sustainable Urban Development in Latin America and

the Caribbean, expressed the urgent need for technical support to formulate sustainable development plans to combat urban poverty and environmental degradation, to conserve natural resources, to improve living conditions in urban areas, and to direct the provision of the most basic services to optimize human and economic resources.
(See http://www.ems-sema.org/forolac/)

On June 2002, Canadian, Italian and Latin-American Mayors discussed on the role of the private sector in water supply and sanitation during the "Re-thinking the City" session at the Montreal Conference 2002, in Montreal Canada.
(See http://www.ems-sema.org/eventos/montreal/)

On March 2003, the EMS participated in the Seminar: *Europe and Latin America: Management of Public Utility Services in the metropolitan areas of Latin America*, as part of the activities of the 2003 Annual Meeting of the IADB-CII in Milan, Italy.
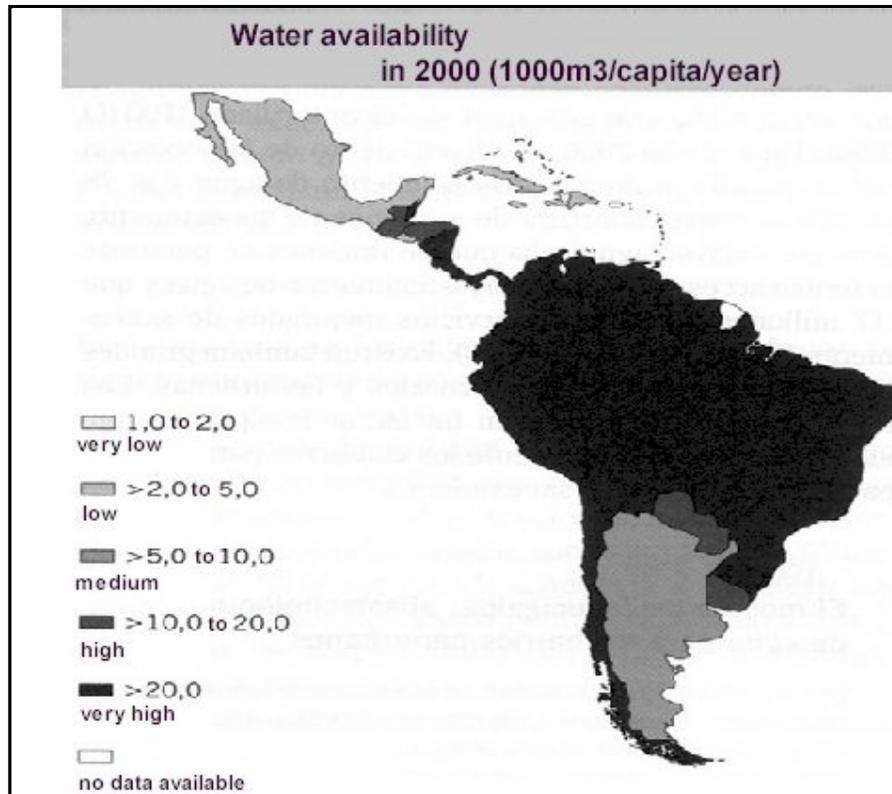(See http://www.ems-sema.org/eventos/0303bid/index.htm)

Water: Global and Local challenges in Latinamerican and Caribbean cities

The year 2003 has been designated, by the United Nations as the International Year of Freshwater, with the aims to raise global public awareness about freshwater issues and gain political commitment in implementing policies to ensure a more sustainable and equitable use of water.

As reported in 2001 by the United Nations Population Fund (UNFPA), the global population has tripled in 70 years while water use has grown six-fold. Within the next 25 years, one-third of the world's population will experience severe water scarcity. At present, more than 1 billion people lack access to safe drinking water; 3 billion people lack access to basic sewage systems. More than 90 percent of all the sewage produced in the developing countries returns to the land and water untreated (Brooks, 2002).

According to the 2003 UN World Water Development Report, Latin America and the Caribbean hold approximately 26% of the world's accessible freshwater resources and therefore have their share in the responsibility of implementing policies to safeguard an increasingly scarcer resource. In this sense, while the region shows relatively high percentages of households´ connections to networks of drinking water, (total average of 85%) and sanitation coverage (total average of 78%), the vast majority of the sewage collection systems discharge to water bodies without any form of treatment (WHO, 2000). The World Health Organization estimates that only 14% of wastewater is effectively treated prior to discharge.

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Water availability in 2000 (1000m3/capita/year)

1,0 to 2,0 very low
>2,0 to 5,0 low
>5,0 to 10,0 medium
>10,0 to 20,0 high
>20,0 very high
no data available

Source: United Nations Environment Programme - UNEP

Widespread water scarcity, gradual destruction and pollution of surface and groundwater resources are threatening the world's freshwater supplies. Meanwhile, current traditional sectoral approaches on fresh water management are under discussion, urging society to adopt a new approach that guarantees a sustainable use of water resources, through an integrated and multi-sectoral planning and management approach.

Significant reforms in the water sector will need to be in place if the UN Millennium Development Goals, in particular the targets set under objective number 7 are to be achieved:

- to halve by 2015 the proportion of people who are unable to reach, or to afford, safe drinking water; and
- to stop the unsustainable exploitation of water resources, by developing water management strategies at the regional, national and local levels, which promote both equitable access and adequate supplies.

Behind and beyond the statistics there is the crucial problem of the inequalities generated by disparities of availability. The management of these disparities is at the

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core of any sustainable strategy to address the challenges of water and it implies not only technical decisions, but fundamentally the answer to ethic and political questions, some of them summarized by D. Brooks (2002):

◈ **Who should get how much?**
◈ **At what cost and at what price, if any?**
◈ **How to approach the delivery of affordable service to poor people**
◈ **Who decides and through what procedures?**
◈ **What features of governance will most likely produce management decisions that are fair, effective, and environmentally sustainable?**

The best answers include, as often as not, the application of good technology, some of it embedded in traditional knowledge as inherited and practiced by women and men in their own communities over the generations, and some of it inspired by fresh science and new insight.

Particular attention must be paid to the role of women in the management of water. For example, UNICEF studies in Honduras, show that women and children are the ones who carry water home. This activity is performed between 3 and 12 times a day. Only rarely do men participate. Women are also the ones who boil water to prevent sickness and epidemics in their families. Furthermore, we need to consider what recent research studies say about women being more inclined to undertake environmental actions in their local communities.

Only in the processes of good governance will issues of fair, effective and environmentally sensitive management be resolved. In the end, managing scarce fresh water requires the development of institutions that are open, informed, participatory, and responsible (idem).

The Urban Water Question

When infrastructure and services are lacking, urban areas lacking water infrastructure are among the world's most life threatening environments".
United Nations World Water Development Report (2003)

The UN 2003 report recognises that rapid increase in water consumption and urban pollution (wastewater) are among the major threats to the integrity of surface and groundwater systems. Moreover, in illegal settlements, the lack of access to safe drinking water and improper sanitation is also posing serious threats to human health. Potable water supply and connection to sewage sanitation systems vary geographically, from country to country but also according to income levels. Estimates show high-income areas as having four times the coverage of low-income neighbourhoods meaning that marginal communities and poorer neighbourhoods are often exposed to greater water related health risks (World Bank, 1997).

According to the United Nation Environment Program, the estimated world investment needed for potable water and sanitation infrastructure is U$D 23 billion per year, while the current investment reaches U$D 16 billion. This places other questions that must also be addressed by a sustainable water management strategy:

◈ **How will societies bridge the gap?**
◈ **Through what mechanisms and arrangements?**
◈ **Where are the resources (financial, managerial, etc) going to come from?**

The World Health Organization assessment (2000) indicates that there has been an advance in the spread of distribution networks of drinking water in the last thirty years in the region: from 70% of households in the 1970s to approximately 85% in 2000. Nevertheless, water supply coverage in urban areas has diminished over the course of the last decade due to rapid urban population growth.

Regarding household connection to sewage systems, WHO report indicates that coverage has expanded from 36% in the 1970s to 78% in 2000. Despite the advance in coverage of sanitation, a crucial issue is that the vast majority of these sewage collection systems discharge to water bodies without any form of treatment. In fact, the WHO report estimates that an average of only 14% of wastewater is effectively treated prior to discharge. In most cases, the mainstream form of treatment is only primary treatment, i.e. the removal of suspended solids from settling tanks.

Local Governance Structures for the Sustainable Use of Urban Water
Multi-stakeholder Partnerships

Urban poverty, social exclusion, gender inequalities and environmental degradation, place additional challenges to city governments: besides the pressure to provide a response to the increasing demand for urban environmental services, local governments are also required to implement local policies that address the social and environmental vulnerability situation within which large sectors of the population live.

Experience demonstrates, however, that municipalities alone cannot meet the continuous and increasing citizens´ demands. The global trend toward political and economic decentralisation has placed municipalities on the front lines of the urban service crisis. Some municipalities, given their size or political importance, are well positioned to address the major challenges of delivering safe drinking water, sanitation, waste and energy services. Most, however, are not prepared to solve their growing problems.

During the last decades most countries of the region have put in place decentralization processes within the policy framework of structural adjustment, transferring political, administrative and planning authority away from central to local governments. While being empowered through such a move, municipalities often lack the necessary expertise and management capacities to tackle those problems. Neither they are in a

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position to draw on prevailing financial and monetary resources: decentralised authority has not come with decentralisation of national budgets, so municipalities end up with broader governance mandates, but fewer financial resources to allocate to them. (PPPUE, 2000).

During the same period and also as part of the adjustment policies and state reforms, many developing countries moved away from public sector provision of urban services. This shift has usually taken the form of full-scale privatization, whereby the government cedes ownership and control of the service and its underlying assets to a private organisation, either through outright sale or through long-term concession. However, it is important to stress that full-scale privatization is just one of various forms of private sector participation in provision of urban environmental services. Joint Ventures (Mixed-Capital Partnerships), Build-Operate-Transfer (BOT) Contracts, Concessions, and many others are different forms of private sector involvement.

Privatization has shown a number of limitations regarding the provision of environmental services in developing countries: one of the key issues is that governments usually do not remain directly involved in providing basic public services (PPPUE, 2000). This seems to be a crucial issue regarding the sustainability of a strategy of partnership: local governments should be able to acquire skills and knowledge during the process, therefore being in a position to operate the system at the end of the contract if this was the case, and not to have undermined the capacity of public authorities.

The enforcement of privatization as the unique and central reform policy might limit the options available to governments and civil society to innovate and try to put in practice better participatory arrangements. An example of participatory arrangements within the framework of private sector participation can be found in the case of Greater Buenos Aires, where the Government awarded a 30 year concession contract for water and sewerage services in Greater Buenos Aires to, Aguas Argentinas (AA), a private operator, with the requirement of providing services to low income areas and to meet an objective of 100% coverage (Hardoy A. et al., 2000). In 1996, AA created the Low-Income Settlements Programme within a new approach in which the community provided resources in the form of labour and participation; the local government provided authority and financial resources; AA provided financial resources, technical capacity and equipment; and NGOs facilitated linkages between the actors as well as organizational capacity.

Some Programme´s results show the positive impact of the multi stakeholders arrangement: by 1998, AA´s service coverage had increased to 7.9 million people, compared to 6.4 million in 1993, of whom 550.000 were residents in informal settlements, as opposed to 200.000 in 1993 (idem).

The participatory approach of the Programme faces constraints related to the differences between various partners´ interests: AA´s interest to control investment costs and community's interests in affordability; difference in time frames, for politicians the timing of elections and for residents their immediate needs. The lack of coordination generated by these differences can only partially be accommodated by NGO facilitation.

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Another difficulty is the replicability of experiences: projects have been carried out in various informal settlements with positive results, however, a working methodology for the expansion of services on a significant scale has not yet been implemented (idem). However, despite the constraints, the experience shows that within the approach of involving private sector in the delivery of water for the urban poor, there are opportunities to create networks and alliances between stakeholders, and furthermore, that these arrangements could lead to situations in which all sectors involved have something to gain.

Participatory management structures should ensure that in any reform process, access to water services will be available to all sectors of society, especially the urban poor, and the process itself will be transparent and involve all stakeholders. The private sector has a role that should not be denied. However, where there is lack of information, participation and democratic processes, the situation becomes open to opportunistic behavior from the private sector (Gutierrez et al, 2003).

A policy of promoting and institutionalizing multi stakeholder partnerships for a sustainable management of water services must encourage a participatory decision-making process and particularly, treat the poor as active participants rather than as mere recipients. This approach has been taken in the Municipality of Villa Maria del Triunfo, a poor settlement on the outskirts of Lima, as it is shown in a research supported by the Environmental Management Secretariat of IDRC (EMS/IDRC). The area was one of the recipients of the "Potable Water for Poor Settlements project" (Agua Potable para Pueblos Jóvenes, APPJ). The project consisted in the provision of potable water to families living in marginal settlements and entailed the installation of 50 m3 water reservoirs and a network of pipes to public deposits for every clusters of 8 to10 households, serving a total of 120 families. The components of the system are built with voluntary community labour. Communities are also strongly involved in the general management of the system, through their participation in the Potable Water Surveillance Committee (COVAAP), which is a mixed public-private micro-enterprise empowered to manage the whole system including purchase of water from cistern trucks, distribution, pricing of water, and maintenance of the system.

The APPJ project´s main results are: Implementation of 250 systems, supplying potable water to more than 53.000 households, accounting for more than 330,000 inhabitants of Lima; Provision of uninterrupted, quality water through the use of local labour and appropriate technology; Income from water sales are reinvested in water fund and in efforts to fight poverty; Increase awareness and positive change of behaviour of residents toward water conservation; Generation of local leadership and initiative (further information: http://www.ems-sema.org/castellano/proyectos/solidaria/ppp/index.html).

Most experiences and "best practices" highlighted in recent literature on management of urban environmental services, point to the need to provide more decision-making autonomy and flexibility to local authorities, to enable them to lead the institutionalization of multi stakeholder partnerships for the sustainable management of urban environmental services. The "institutional" dimension emerges as a crucial aspect to promote a cultural and institutional change in the praxis of planning and management of

local governments. Innovative spaces of social participation and decision-making must be institutionalized

In the establishment of these new "institutionalities", there is a new role for the research sector. Despite the widely accepted notion that research can increase the capacity of local authorities to plan, manage and anticipate emerging issues and problems - therefore preparing management approaches to meet them - there is no great culture in local authorities of using research constructively as a major dimension of policy-making activities, and often a degree of suspicion about its potential contribution (Kitchen, 1997). Often, local authorities have structures and professional specialists who are adept at defining problems and solutions according to their own expertise and capacity for making decisions. They may not be so adept at devolving responsibility for policy-making to their local communities, or establishing participatory frameworks for decision-making, nor co-ordinating the kinds of holistic policy responses required for "sustainable development".

However, as Kelly & Moles (2002) assert - based on a series of studies about Local Agenda 21 process in different cities - through building relationships and establishing trust between different sectors of society, tentative organizational structures can be established which allow multi-stakeholder collaboration on a definition of sustainable objectives in terms which could be understood by all. Successful governance and research each demand an alert sense of a community's social, cultural, and political structures - including most particularly its power structures (Brooks, 2002).

The challenge of urban environmental management is therefore moving towards the effective implementation of these new "institutionalities" that guarantee broad social participation in the medium and long term planning and management of urban environmental policies. It is within this framework that the EMS is calling for a new approach that enables the "institutionalization of a multi-sectoral culture" at the local level. We hope to promote research that institutionalizes practices and instruments that establish relations of rights and duties for all stakeholders involved. It is expected that findings of granted research projects, will enlighten new institutional approaches, perhaps providing new practical solutions and open genuine theoretical discussions.

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