ACCESS TO WATER: WATER SUPPLY AS A PUBLIC GOOD AND AS A PRIVATE BUSINESS. SOME CONSIDERATIONS*

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Abstract. *In most developing countries, relative scarcity of water goes along with a continuous deterioration in its quality. This paper offers some considerations about the private sector involvement (Private Sector Participation, PSP) in the management of water services in developing countries. The analysis mainly focuses on verifying whether privatisation can contribute to expand water access. For this purpose a series of reference cases have been presented, which will constitute the basis for the observations of the last part of this paper.*

Introduction

The main externalities for development created by water resources have prompted international organizations to include the expansion of water access in developing countries among the objectives defined by the Millennium Development Goals (Table 1). The enormous amount of investments necessary for their achievement has contributed to the key role, at various levels, of the involvement of the private sector, as explained by the Private Sector Development Strategy of the World Bank. Therefore, in most developing countries, reform and modernization of the water sector have gone (or are going) through the phase of transferring to the private sector part of the responsibilities and functions previously performed by public utilities[1].

Water consumption is related to the fulfilment of the basic needs of individuals, and therefore a possible shortage of water (quantitative or qualitative) damages overall well-being. Water availability that is below the lifeline or the bad usage of water indeed influences health, education, social inclusion, with negative effects on income and consumption.

The interrelations between individual water withdrawal and disposal, on the one hand, and water availability for users, on the other hand, have entailed the need to establish a framework for the management of water resources capable of adapting the requirements of individuals to general objectives, and the introduction of social control mechanisms with the gradual transfer of property rights from individuals to the community. Traditionally included in the public sphere, water services are a typical example of natural monopoly with connotations of merit good and collective good. At the present time, most people in developing countries obtain water from public service. In particular, waterworks and sanitation services are usually managed by local or national monopolies or by private companies that operate under public concession. Responsibility for the service is entrusted to the public sector (generally at a municipal level, as in Sri Lanka, or at a regional level, as in Brazil and South Africa). From the second half of the eighties, public monopoly was called into question and the view prevailed that its replacement with regulated private monopolies would increase economic efficiency and improve social welfare.

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[1] Nowadays, about 1.3 billion people are deprived of safe drinking water and, without targeted interventions, in 2025/2035, when the world population will be over 8 billion, more than half will live in areas with water supply problems (World Bank, 2002,a; UNEP, 2002). Furthermore, in most developing countries, relative scarcity of water goes along with a continuous deterioration in its quality (WHO, 2003). With regard to consumption, every inhabitant of the planet uses, on average, twice as much water as at the beginning of the twentieth century, but in Africa, during the last fifty years, water availability has diminished by 75%, and currently only slightly more than 60% of the population has access to adequate water resources.

The Water Resources Management Policy Paper (WRMPP), published in 1993 by the World Bank, illustrates the strategy of this institution and the principles for intervention in dealing with water emergency in developing countries. In this document the institutional environment (legal, regulatory and organizational), the management instruments (financial and non financial) and development, conservation and utilization of infrastructure are all grouped under the heading "water resources management". This view reflects the position that emerged from the United Nations conference in Rio de Janeiro in 1992, which outlines the fundamental principles (the so-called Dublin Principles[2]) for water management: an ecological principle, which considers the river-basin area as the reference basis for analyzing the environmental impact; an institutional principle which takes into account the involvement of all stakeholders (public sector, private sector, civil society) in the management of resources according to the principle of subsidiarity; finally, an instrumental principle which defines water as an economic good[3], that is a scarce resource which necessitates economic instruments and incentives[4] for its allocation. International organizations assign a central role to water resources in promoting development. The Millennium Development Goals illustrate the objectives related to water access, and the World Bank World Bank (2002a) estimates that achieving these goals during the period 2000-2015 will necessitate investments of about 380 billion dollars (25 billion dollars per year), that is to say double of what is currently being spent at world level[5]. In parallel, the Private Sector Development Strategy document asserts the central role of the private sector in the supply of basic services and in the development of infrastructure.

Table 1 **ACCESS TO WATER IN THE MILLENNIUM DEVELOPMENT GOALS**
(percentage of population with access to adequate (1) water supply)

	1990	1998	2015
East Asia and Pacific	70	75	85
Europe and Central Asia	83	90	91
Latin America and the Caribbean	81	85	91
Middle East and North Africa	85	89	92
South Asia	79	87	90
Sub-Saharan Africa	49	55	74
High-income countries	100	100	100

Source: www.developmentgoals.org/Environment.htm
(1)- Water supply is considered adequate if its availability is at least 20 litres per person per day from a source within one kilometre from the place where water is used (WHO, 2003).

This chapter offers an evaluation of the private sector involvement (Private Sector Participation, PSP) in the management of water services in developing countries. The analysis mainly focuses on social implications and limits itself to verifying whether privatization can contribute to expand water access. For this purpose a series of reference cases which will constitute the basis for the observations of the last part of this chapter.

The first section, which is purely descriptive, offers an overview of both the availability and the access to water, subdivided by geographic regions and main users. In the second section, one

[2] "Integrated resource management is based on the perception of water as an integral part of the ecosystem, a natural resource and a social and economic good", International Conference on Water and Environment (1992).
[3] "Water has an economic value in all its competing uses and should be recognized as an economic good", International Conference on Water and Environment (1992). The privatization of goods, up till now considered non-vendible on the market, such as water supply, is currently under discussion within the General Agreement on Trade and Services (GATS). All goods that potentially belong to this group are described in detail in the Harmonized Tariff Schedule (HTS), which includes all kinds of water.
[4] In this view the notion of water as an inalienable right is missing, while it is considered both by non-governmental organizations and by the World Health Organization (WHO, 2003). For more details see Petrella (2001).
[5] Implementation of water infrastructure has a primary role in development programs promoted by the World Bank: in the period 1993-2001, in fact, about 17% of loans allocated by this international institution concerned the water sector (for supply, sanitation, irrigation, draining and management of its various components) (World Bank, 2002b).

may find some examples of privatization (as the concession of water services in Buenos Aires, the lease contract for water supply in Guinea and the privatization in the Philippines). Finally the impact of the private sector involvement in water supply on low-income households will be analyzed.

Access to water, an overview

The World Health Organization defines as the minimum quantity of water necessary for living ("basic access") the availability of at least 20 litres of water per person per day from a source within one kilometre from the user's dwelling (table 2). At present about 80 countries, covering 40% of world population, either have difficulties in accessing water or do not have adequate sources of water from a hygienic and sanitary point of view (UNDP, 2003).

In simple terms, one may trace water supply problems back to two factors: either the resource is scarce, and thus not sufficient to satisfy basic needs, or people are poor and cannot pay for obtaining a resource that is available. But water scarcity may also mean supply scarcity or service scarcity. In the first case, where water is limited in quantity, the existing infrastructure does not transport a sufficient quantity of the resource. In the second case, where the infrastructure is scarce (both in terms of capacity and from a technological point of view), available water cannot be adequately distributed (adequacy may be valued both from a quantitative and qualitative point of view). Generally in developing countries water crises comprise all these aspects together (infrastructural shortcomings, scarce water, poor quality) and the problem, therefore, is to try to balance all these elements for guaranteeing and assuring adequate supply and service in the long run (OECD, 2002).

Table 2 **THE DEFINITION OF WATER ACCESS**

	Distance/time for reaching water	Volume of collected water	Needs met	Priority for intervention and actions to undertake
No access	More than 1 Km /more than 30 minutes (round trip)	Very low (often below 5 litres)	Consumption cannot be satisfied, nor basic needs. Hygienic conditions are impaired	-Very high -Provision of basic service
Low access	Within 1 Km / within 30 minutes (round trip)	On average not higher than 20 litres per day per person	Consumption could be satisfied. Hygienic conditions are poor	-High -Improvement of hygienic conditions and provision of medium level service
Intermediate access	Tap water supplied in an area close to the dwelling (one tap)	On average about 50 litres per day per person	Consumption is assured. Hygienic-sanitary conditions could be adequate	-Low -Promoting adequate hygienic conditions and encouraging optimal access
Optimum access	Tap water supplied in an area close to the dwelling (more than one tap)	On average between 100 and 200 litres per day per person	Consumption and hygienic-sanitary conditions are assured	-Very low -Promoting better hygienic conditions for achieving heath goals

Source: World Health Organization (2003).

The breakdown by macro areas of the data of the United Nations agency for human development (UNDP) shows (table 3) that in Sub-Saharan Africa only slightly more than 60% of the population has access to water. Nevertheless, values lower than 50% can also be found in many countries belonging to other areas: with minimum values for Ethiopia (24%), Cambodia (30%),

Oman (39%) and Haiti (46%). For sewage and water sanitation systems, the percentages are lower: less than 60% of the populations of Sub-Saharan Africa and South Asia have access to sanitation services, with minimum values for Rwanda (8%) and Cambodia (17%) (table 4).

While at the world level water resources are fixed, the same cannot be said for water demand. The high demographic growth of developing countries (and in some of them, the rise in the living standard) contributes to increasing demand; further pressures also come from strong urbanization and the rise in population in the farthest reaches of towns, where it is always very complex to bring an adequate supply of safe drinking water[6]. Furthermore, since industrial and agricultural[7] uses compete with domestic use, pressures on the resource increase. Nevertheless, even countries or areas where water is relatively abundant (table 5) may not assure adequate access to water; thus water availability does not only depend on water supply (and on its dynamic), but also on its management.

Table 3 **ACCESS TO WATER BY GEOGRAPHIC MACRO AREAS** (1)

	Average	Maximum value	Country	Minimum value	Country
Middle East and North Africa	80	100	Lebanon	39	Oman
East Asia	71.1	100	Singapore	30	Cambogia
South Asia	86.2	100	Maldives	62	Buthan
Sub-Saharan Africa	61.8	99	Mauritius	24	Etiopia
Latin America and the Caribbean	88.3	100	Bahamas	46	Haiti
OECD	100	100	OECD	100	OECD

Source: ISAE elaboration based on UNDP (2003) data.
(1)- Water supply is considered adequate if its availability is at least 20 litres per person per day from a source within one kilometre from the place where water is used (WHO, 2003).

Table 4 **ACCESS TO SANITATION BY GEOGRAPHIC MACRO AREAS**

	Average	Maximum value	Country	Minimum value	Country
Middle East and North Africa	84.1	100	Saudi Arabia OECD	38	Oman
East Asia	61.4	100	Singapore/Vanuatu	17	Cambogia
South Asia	58.6	94	Sri Lanka	28	Buthan
Sub-Saharan Africa	54.1	99	Mauritius	8	Etiopia
Latin America and the Caribbean	84.4	100	Barbados/Bahamas	28	Haiti
OECD	100	100	OECD	100	OECD

Source: ISAE elaboration based on UNDP (2003) data .

UNDP data do not divide the coverage of water services into urban and rural areas. Nevertheless, in the period 1988-1997, the World Bank made detailed surveys for measuring living standards in 15 developing countries (Living Standard Measurement Study, LSMS[8]) which show (see table 7) that there are large gaps in the coverage rates of water infrastructure[9], and confirm that poorer people are those that suffer most from the lack of access to water and sanitation.

[6] Cfr. UNDP (2003).
[7] Agricultural use is the highest and absorbs most of the available freshwater supply in the world. Particularly, in developing countries the quantity of water per hectare used for irrigation is about twice as high as in industrialized countries, and often denotes a non-sound use of this resource.
[8] www.worldbank.org/lsms/
[9] These differences are larger than those of other infrastructure (Komives, Whittington and Wu, 2001).

The definition of access to water according to the UNDP is based on the notion of "scarcity", that is quantitative availability of the resource (scarcity or abundance in some areas), and of the infrastructure equipment which allows to bring water to a final destination. The notion of access, meant as the capacity to pay for the service[10], is neglected, while it is very important in poor areas[11] since it may represent a real obstacle (Komives, Whittington and Wu, 2001).

Table 6 **DISPOSABLE WATER RESOURCES AND WITHDAWALS**

Area	disposable water per-capita (cubic m)	water withdrawal per-capita (cubic m)	withdrawal in % of disposable water	access to water (average)	use of water withdrawals		
					agriculture	domestic	industry
Middle East and North Africa	939	543	58	80	81	15	5
East Asia	36,375	360	7	71.1	74	13.4	12.2
South Asia	9,658	752.4	8	86.2	88	9.1	3
Sub-Saharan Africa	18,737	99	52	61.8	68	25	8
Latin America and the Caribbean	54,330	657.2	1.2	88.3	69	28	11
OECD	47,850	481	1	100	29	23	49

Source: ISAE elaboration based on World Resources Institute (2003) and UNDP (2003) data.

The Involvement of the private sector and access to water supply

The expansion of the service

The term "privatization" refers to a vast number of contractual obligations for the supply of public services between the public sector and private operators (for details, see the box). These options include the so-called "substantial privatization", which is the transfer (physical) of assets from the public to the private sector at the moment of the contract, and the simple service contract. Therefore, as in the various forms of privatization, the level of asset transfer, responsibility and functions vary significantly; therefore the regulatory regimes associated with them also vary.
The following analysis of the involvement of the private sector in the supply of water services will be limited to the evaluation of the efficiency of the expansion of the access to services. The main difficulty is found in the lack of official data. International organizations supply aggregate data by country; homogeneous and detailed data on the number of people not connected to the network and on the number of informal sources of water are missing. This information would have allowed one to more precisely evaluate the impact of privatization on water access, carry out comparisons and detect possible effects on the poorest part of the population. The observations reported hereafter are, therefore, based only on the results of empirical work which examines in detail some PSP experiences:

The impact of water access may be analyzed under two aspects:

- the extension and expansion of the distribution network;
- the price charged for the service (accessibility to the service)[12].

[10] In an attempt to obviate to this lack, a water poverty index has been calculated (Water Poverty Index, WPI), which measures the position of each country combining five components: water availability, infrastructure equipment, capacity to pay, water use and the environment. The results are markedly lower than those deriving from the UNDP calculations: for example in Sub-Saharan Africa the access to water is lower than 50% (Lawrence, Meigh and Sullivan, 2002). For a methodological explanation see Sullivan (2002).

[11] In the literature one cannot find a clear relationship between access to network and per-capita income. Various empirical studies show that the rate of access to water and sanitary structures are not perfectly correlated to income, thus the differences in income among countries seem to explain only in part the differences in water access. For a review, see Brook and Irwin (2003).

[12] Most of the empirical studies on the subject generally refer to already connected users, concentrating mainly on the effects of the increase in tariffs. Relative to this subject, for the United Kingdom, for example, it was shown that the

From the literature it seems that on the one hand the implementation of PSP projects may in some cases contribute to the increase in the productive capacity[13] and to the improvement in the quality of the service offered, and on the other hand they may concur in creating barriers for the poorer population, which has to continue to rely on tankers, wells or other informal sources of water.

A study on six cities before and after privatization in the water industry reports statistics that show a clear increase in the access to water services due to the involvement of the private sector (Ménard and Shirley (2002). Nevertheless, in this study the enlargement of the coverage has been estimated using the expansion of infrastructure and the increase in the volume of water delivered (an increase in infrastructure that implies taps that serve more than one person is thus not indicatory). Such values take into account neither new connections nor the accessibility to the service.

Concession contracts often include clauses that provide for the so-called "expansion mandate" for the extension of the service to the non-connected part of the population. For example, the concession of La Paz-El Alto in Bolivia[14] provided explicitly that this aspect should be considered in evaluating the bidders to the tender, so did the concession of Manila[15]. Nevertheless, such a mandate is often spread on all the duration of the contract, which is generally longer than 20 years, and, thus, there is the risk that the poorer part of the population may be connected only at the end of the period[16], or not at all. One must also add that public authorities have often scant information on the number of non-connected areas, and this prevents them from preparing contracts with sufficiently detailed mandates for the expansion of the service (Komives, 1999). Furthermore, the existence of a clause is not by itself a guarantee of its application: in developing countries contracts are, in fact, often renegotiated within the first ten years, generally in favour of the private company[17]. A study carried out by Guasch, Laffont, Straub (2002) on concessions of water and transportation services in Latin America between 1989 and 2000 shows that, out of 307 contracts that were analyzed, 162 were renegotiated during the considered period (with modifications mainly on the tariff clauses and on the expansion mandate) (table 7). In Buenos Aires, frequent renegotiations have permitted the private company to significantly scale down, from the first year of activity, the targets initially decided.

Table 7 **RENEGOTIATIONS OF WATER AND TRANSPORTATION CONTRACTS IN SOUTH AMERICA**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Argentina	0	12	2	1	0	0	1	3	11	3	0	0	33
Chile	-	-	-	-	0	0	0	0	1	5	24	6	36
Brazil	-	-	-	0	0	0	0	0	0	1	0	0	1
Colombia	-	-	-	0	0	0	1	1	0	0	3	14	19
Mexico	0	1	1	8	12	14	21	11	3	2	0	0	73
Total	0	13	3	9	12	14	23	15	15	11	27	20	162

Source: Guach, Laffont, Straub (2002).

elimination of cross-subsidies between industrial and domestic consumption has increased the rate of non-payment by the poorer part of the population and has induced the company to change the ways and methods for paying bills.

[13] With regard to India see Mehta (1999).

[14] See Azpiazu and Forcinito (2002) and Ferro (2000 for details.

[15] Cfr. Rosenthal (2001), Montemayor (2003), Dumol (2000).

[16] The concession contract of La Paz-El Alto provided for the mandate to expand connections to water services and sewages (installation of 71,752 new connections within the end of 2001 and attainment of a 100% coverage). The concessionary company in the first five years of the contract made most of the new connections by substituting the old network, instead of expanding the network in areas lacking infrastructure (Komives, 1999).

[17] For a detailed theoretical analysis see Gulasch, Laffont, Straub (2002).

Some authors suggest that contracts should also include clauses giving options for alternative supplies (small independent suppliers, individual sources), that can be used until the regular contractor has completed the expansion of the service to the entire area (Komives, 1999). The contract should target the output (type of service, number of new connections, minimum quality standards) and allow, in order to reach the objective, flexible technical options.

The expansion of productive capacity

The type of contract chosen for water services depends on the various objectives of the government regarding supply, mainly with reference to the expansion of the distribution network and the reduction in operational inefficiencies (Silva *et al.,* 1998). Nevertheless, it seems that the selection of the type of contract often depends on the conditions prevailing in the country, rather than on the resolve of ensuring the service for all those who need it. In Guinea[18], for example, the choice of a lease contract, where the private contractor has no obligation of making investments, seems to be in contrast with the fact that the country has one of the most underdeveloped water systems of western Africa[19]. Similarly, in Burkina Faso, water operations have been entrusted to a private company with a five year service contract. It seems that in developing countries, that are perceived as high risk countries, local authorities tend to adopt PSP solutions that imply a minor role for the private sector (mainly management and service contracts), without imposing any obligation for the expansion of the network[20].

The problem of renegotiations has also a negative impact on projected investments, as shown by the Buenos Aires case (table 8).

Table 8 **NON-PERFORMANCE OF INVESMENTS OF AGUAS ARGENTINAS SA (1993-1998)**

(in millions of pesos/dollars, at supply value)

Investments	1993	1994	1995	1996	1997	1998	Total
Bidded investments	101.5	210.52	302.91	362.36	229.10	83.10	1289.46
Performed Investments	40.93	144.55	132.17	100.49	109.52	15.41	543.07
Non-performance	-60.57	-65.97	-170.74	-261.87	-119.58	-67.66	-746.36

Source: Azpiazu and Forcinito (2002).

The willingness of paying tariffs and access fees

As already seen, in the South of the World, the part of the population that does not have access to regular water services turns to alternative sources that most of the time are unsafe and inadequate (WHO, 2003). Nevertheless, in some cases even the less well off are ready to pay higher prices than those of the public operator for a better quality of the service (Garn, 1993) . In fact, in the more peripheral areas, water supply is often irregular and so households connected to the network have also turned to informal sources for supplementing water provisions, thus incurring further costs. In this situation, the amount of money people are ready to pay depends on the

[18] Cfr. Bayliss (2001). Clarke G., C. Menard, A. M. Zuluaga (2002)

[19] Similarly, Trinidad and Tobago has a management contract with no time limit, though the country suffers from inadequate water and sewage infrastructure capacity (Brook Cowen, 1999).

[20] Franceys (2000) estimates that, in the medium and low income countries, about 35% of the contracts for water supply and sanitation are service contracts, 22% BOT contracts, 19% concessions and 12% management contracts.

possibility of obtaining an improved service from another source, and thus on the quality of the current service and of that on offer. Nevertheless, the difference in prices between the informal sources and the official ones may come from the very low pricing of the official sector rather than from the high tariffs of the informal one[21]. In this case the willingness to pay for better quality would be decisively reduced. Furthermore, for the population in the lower income groups, water expenditure absorbs a high percentage of total disposable income UNDP (2003), and payments of tariffs and licence fees may be a true barrier to access (Lauria, Mu, Okun and Whittington (1989).

In most PSP contracts, tariffs and licence fees are the main source of revenues for the operator. The tariff scheme which has been selected affects financial results mainly in three ways: defining the potential cost recovery of the concession, conditioning the marginal incentive to serve one kind of user rather than another, affecting the demand for the service supplied. Furthermore, if this scheme is not structured in order to guarantee a return at least equal to a certain threshold, it may happen that no bidder may want to participate in a tender for assigning the concession or that during the life of the contract the company may ask for its renegotiation. To sum up, the price of the service and the accession licence fee determine for the private company which is the most profitable user to serve and constitute the financial incentive for expanding the service. Therefore, the private company may prefer to serve areas where investment costs are lower, or at least rapidly recoverable, and where tariffs allow to cover operating costs Johnstone and Wood (1999).
. Besides, the risk of non-payment for the service by poorer households is the main disincentive for the private company when expanding services to areas where poorer people live; they are generally considered risky users, with uncertain and non-regular incomes, and are situated in particularly unsafe and underdeveloped areas. One must also consider that regular operators do not have the adequate information on the possible characteristics of clients, on their demand and willingness to pay, and the costs for obtaining this information is very high.

Arriving to the creation of a tariff regime which satisfies all interests is very complicated. A PSP project would certainly not be interesting for a private investor if tariffs are not fixed at realistic levels; besides, if tariffs are too low, the quality of the service could be affected. If tariffs are too high, instead, this would result in lower access to water for the less well-off. In some cases, the methods of payment collection may be a limit for the poor. Usually, in the period preceding the privatization, there is an increase in tariffs in order to encourage private participation (Ménard and Shirley, 1999; Rivera, 1996), as happened in Buenos Aires in the months before the tender (table 9). Traditionally social tariffs (Budds (2000) and subsidies granted by the government to the public utility have constituted a system of protection and guarantee for the poorer part of the population. The implementation of a concession or of a lease contract has generally maintained the use of these instruments, and most contracts include subsidized prices for lower levels of consumption ("block tariffs") and cross-subsidies between industrial and domestic consumption. Nevertheless, social tariffs may help poorer consumers only if they are already connected to the network22, and in practice the main beneficiaries of the "block tariffs" are often the more well-off, if their consumption is low (Komives, 1999). A recent study on Cambodia (Garn, Isham and Kahkonen, 2000) shows that the payment of licence fees for accessing the network23 is, for the poorest, a real obstacle, unlike tariffs for the supply of the service. Furthermore, access licence fees charged by private companies are generally markedly higher than those charged by public ones, even considering the fact that the quality of the private service is better (the number of days to get a connection is lower).

[21] Furthermore, these studies are often based on surveys made on users already connected to a formal network.

[22] Boland and Whittington (2000) note, in fact, that this regime for tariffs has negative effects for the poorer people, especially when they are not connected to the network or if they share the connection. Furthermore, cross-subsidies between various users do not stimulate the operator to expand the service also to the poorest areas, since commercial, industrial and large private consumption is certainly more profitable (Brook Cowen and Komives, 1998).

[23] On this subject, Foster (1998) highlights the fact that the cost of the connection to the network, rather than the pricing of the service, is the main limit to water access in developing countries.

Table 9 **AVERAGE REVENUES BEFORE AND AFTER PRIVATIZATION IN SOME CITIES**

	Buenos Aires	Lima	Mexico City	Santiago	Conakry (Guinea)
Average price per m^3 (US$) using revenues billed:					
Before the reform	0.21	0.21	n.d.	0.09	0.30
After the reform (1996)	0.24	0.35	0.32	0.30	1.19
Average price per m^3 (US$) using revenues collected:					
Before the reform	0.18	0.15	0.22	0.08	0.13
After the reform (1996)	0.23	0.32	0.22	0.29	0.74
Average monthly bill per 30 m^3 for metered household consumption (1996)	n.a	7.87	5.79	7.69	23.66

Source: Ménard and Shirley (2002).

CONCLUSIONS

The main externalities for development created by water resources have prompted international organizations to include the expansion of water access in developing countries among the objectives defined by the Millennium Development Goals. The enormous amount of investments necessary for their achievement has contributed to the key role, at various levels, of the involvement of the private sector, as explained by the Private Sector Development Strategy of the World Bank. Therefore, in most developing countries, reform and modernization of the water sector have gone (or are going) through the phase of transferring to the private sector part of the responsibilities and functions previously performed by public utilities.

The attempt to evaluate the social impact of Private Sector Participation (PSP) in water services is hampered by the lack of homogenous and detailed official data on the number of individuals not connected to the network and on the informal sources of water. Therefore, the observations reported in this chapter are exclusively based on empirical studies which have analyzed in detail some cases of PSP. The literature shows that on the one hand privatization sometimes contributes to increase productive capacity and improve the quality of the service, but on the other hand it may concur in creating barriers to water access. Furthermore, even when contracts include an explicit mandate for expanding the service, it is most of the time only generically defined. Often the mandate does not adequately detail for which areas and groups of population the expansion is being targeted, nor what the methods are for carrying it out. The attainment of such objectives is often impaired by the lack of an institutional and regulatory framework adequate for the enforcement of the contracts signed by the public and the private sector. The creation of a credible regulatory framework in these countries is an objective highly supported by international organizations, which generally press for the definition of adequate policies and institutional solutions, in order to reduce local risks that may impair private investment. Nevertheless, because of the frequent political opposition of local communities to the privatization of public utilities[24], many multinational companies are withdrawing from developing countries (in particular through the sale of part of their assets) (la Motte, Lobina and Hall, 2003).

With regard to this issue, according to the Infrastructure Action Plan , published by the World Bank in January 2003, loans allocated to developing countries for water services decreased

[24] A strong opposition of local communities was seen in many countries (in Bolivia, Argentina). Private companies prefer more stable markets, such as Europe and North America.

by more than 50% in the period 1993-2002, and private investments also declined, falling from 128 million dollars in 1997 to 58 million dollars in 2002. Even though the strategy of international institutions is still oriented towards the involvement of the private sector25, it is nonetheless true that they are reconsidering their position with regard to the role of the private sector and the principle of full cost accounting for water services[26].

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[25] A new department is being set up (Department for Private Participation and Finance); it is responsible for the development of innovative approaches for PSP in support of the involvement of the private sector (de la Motte, Lobina and Hall, 2003).

[26] "*However, the recent decrease in private sector interest in infrastructure shows that reliance on the private sector alone will not be sufficient to guarantee a scaling-up of infrastructure service provision. Therefore, in the context of providing policy advice on sector reforms, the Bank will continue to lend in some cases to well-performing public utilities, and to subsidize connections and consumer charges for the use of infrastructure services. Additionally, although cost recovery will continue to be a goal for most projects, there will be greater flexibility in determining the period of time in which this goal must be reached" (World Bank, 2003).*

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