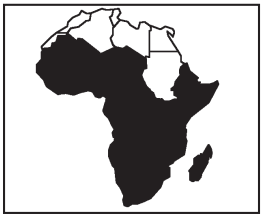

The right to water versus cost recovery: participation, urban water supply and the poor in sub-Saharan Africa

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SUMMARY: This paper reviews the reforms that have directly and indirectly affected water services in urban areas in sub-Saharan Africa over the last two decades and discusses the difficulties of reconciling a commitment to universal provision with a market-oriented approach where all those served must pay full costs. It then describes the measures that have been taken that seek to reconcile these, including different forms of "user participation" and greater reliance on informal reselling of water to improve provision to low-income households. This demonstrates how most "participation" is about transferring costs from water companies to low-income households. It also highlights how relying on informal resellers may constrain the extension of better-quality services to low-income neighbourhoods and how community-based schemes fail to raise the capital needed to extend water mains to unserved peripheries. Whilst many participatory schemes can, under certain conditions, help towards the aim of ensuring wider access to water, they are in no way a miracle solution and there is a considerable risk of institutionalizing two-tier services which lock low-income groups into more inconvenient, poor-quality services.

I. INTRODUCTION

THE REFORMS WHICH, over the last decade or so, have affected water services in sub-Saharan Africa are part of a wide-ranging process of economic liberalization and government reform. In contrast to the developmentalist theories of the 1950s-1970s, governments are now being urged to disengage from semi-public sectors undergoing restructuring.

Consequently, the management of water services has had to adapt to the penetration of market rules and to changes in the roles played by the public and private sectors. It has also had to take on board the principles of decentralization, combined with the development of local democratic governance, which is supposed to improve the accountability of local governments and the efficiency of their service provision. According to this view, water and sanitation can only be properly provided by offering "consumers" services for which they are prepared to pay and by favouring subsidiarity in service organization.[1] Although not mutually exclusive, these two rationales are not immediately compatible in efforts to make drinking water widely available.[2] How do democratic demands for accountability fit with the extension of market regulations into institutional arrangements for managing such services? What kind of mix is there?

1. World Bank (1993), *Water Resources Management Policy Paper*, The World Bank, Washington DC.

2. That is, according to international standards, service by private connection or communal system (e.g. fountain or pump) less than 200 metres from the home.

Moreover, within local reform processes, both approaches are associated with the participation of users with low incomes who receive little or no service. Although based on longstanding principles, participation has followed specific patterns in recent scenarios. Closely related to the process of building economically viable water services, participation is invoked above all to circumvent two major difficulties, namely assessing demand from the poor and managing systems intended for unprofitable customers. In urban areas where there is mass poverty, a substantial deficit in infrastructure and a largely informal economy, participation of the poor seems to reflect a compromise between the ambition to provide universal access to water and the principle of cost recovery. Although it undoubtedly helps to expand service provision and sometimes instigates technical or commercial innovation, participation is not a miracle solution: there is a considerable risk that the systems it produces, lacking stability and often resulting in inequalities, will lock particular districts or settlements within urban areas into sub-standard systems of service provision which will be very difficult to upgrade.

II. FROM REFORM TO LOCAL CHANGES, OR REDISCOVERING POVERTY

IN SUB-SAHARAN AFRICA, the ongoing redefinition of the role of the state is as much a response to failings in bureaucratic regulation and public decision-making processes as the pragmatic outcome of the failures of central planning and the mixed economy, amplified by increasing macro-economic constraints and diminishing sources of public sector financing.[3] The implementation of structural adjustment plans in the early 1980s was accompanied by explicit deregulation (although long preceded by informal deregulation) and enhancement of the role of the private sector. On the pretext of increasing competitiveness, such reforms were used to dismantle the historic construct of the state as developer.

a. The market offensive: forgetting the user?

Urban services hold a special place in this process. On top of ideological justification and pressure from donors, arguments in favour of reforming earlier management systems include a harsh assessment of their inefficiency and persistent imbalances, despite successive overhauls.[4] As urban services have also undeniably played a part in the appearance of macroeconomic imbalances,[5] their economic and financial rehabilitation is necessary to adjust economies,[6] which involves various forms of "privatization".[7]

Officially, such reforms have a series of declared objectives: increasing corporate productivity, reducing public spending deficits, restoring investors' confidence and improving delivery.[8] However, it must be acknowledged that the drive for greater economic efficiency takes precedence over the other aims. Seen as a lower priority, consumer protection is supposed to flow from progress made on other fronts and is rarely the subject of specific measures, when contracting-out water services for example.[9] Conversely, separation from the state is actively sought and is the subject of intense institutional engineering, while the main concern is to attract capital to finance extended provision and meet demand from consumers who can pay.

3. Hugon, Philippe (1999), *L'économie de l'Afrique*, La Découverte, Paris, 123 pages (coll. Repères).

4. Plane, Patrick (1998), "Les services publics africains à l'heure du désengagement de L'État" in *Problèmes économiques* No 2587, 21 October, pages 21-27.

5. Lesueur, Jean-Yves and Patrick Plane (1994), *Les services publics africains à l'épreuve de l'assainissement: une évaluation économique et sociale*, L'Harmattan, Paris, (coll. Bibliothèque du développement).

6. Although the example of Ghana shows that macro-economic adjustment can, in practice, precede public sector reform. See Amis, Philip (1997), *Urban Water Supply: Ghana Water and Sewerage Corporation*, IDD/SPP/University of Birmingham, Birmingham (Role of Government in Adjusting Economies Paper No 21), http://www.bham.ac.uk/IDD/rog21.htm).

7. The generic term "privatization" is used here in its broad American/English sense. This means that the main institutional outcomes of so-called "privatization" reforms refer to commercialization (transforming a public body into a private company with public capital), common in English-speaking Africa, and contracting-out (concessions – and forms such as BOO, BOT or BOTT [build, operate, train and transfer] – leasing and systems run by a manager), especially in French-speaking Africa, along with various forms of shared ownership (semi-public companies) and externalization of functions (commercial contracts), all based on shifting partnerships (public/private or public/associations). Privatization in the strict

Analysis of contracting-out in West Africa also shows that the reforms have, over a relatively short period and with a limited amount of effort, brought about improvements in the quality and reliability of services,[10] backing up what has been found elsewhere in the world.[11] More effective commercial policies and increased productivity have often made it possible to increase revenue and balance the books. Private contractors have been able to show that they could quite easily optimize the use of existing infrastructure and improve operating results, even though this assessment needs to be qualified and seen in context.[12]

In the first series of reforms, priority was given to building "markets"[13] rather than protecting users or taking into account urban residents not receiving services. In this way, although universal access to basic services is the cornerstone of the ANC's political platform,[14] the South African Department of Water's goal in the late 1990s was to ensure "...*full cost recovery from individual consumers, with no cross subsidies across regions or classes of consumers*."[15]

While such bias in favour of certain elements of reform can be attributed to schemes for regulating services, influenced by exogenous models, other distortions can arise quite simply from the weak governance capacity of the public authorities[16] and, above all, the absence of a clear definition of the place of public services in urban societies. As the dominant hypothesis is that efficiency gains will benefit all users, national reforms deal only indirectly with issues of poverty and social justice. However, there is nothing to suggest that, contrary to the historic European pattern for instance,[17] these reforms can help to realize the objective of universal service provision in the absence of adequate public subsidy systems. Other available analyses suggest that the opposite is true: against a background of rapid increases in demand for water from low-income urban communities whose tenure position is unevenly consolidated, enterprises under the sway of market rules are apparently unable either to provide facilities throughout urban areas or ensure universal service provision. This is the meaning of the "myth" of privatization as exposed by Daniel Rivera[18] and the conclusion of a well-argued analysis of the BOTT ("Build, Operate, Train and Transfer") schemes in South Africa.[19]

b. Reforms in the face of poverty and informality

Nevertheless, it would be wrong to leave it at that. On a local level, the technical content of reforms cannot outweigh the profoundly controversial and political nature of management choices, forcing all parties to come to terms with the depth and complexity of local societies, three components of which seem to be decisive.

Poverty. All available data suggests that there is worsening poverty and increasing inequality in Africa, even in countries where adjustment is acknowledged to have been successful.[20] Such poverty is accompanied by increased polarization of urban societies and growing disparities in the living conditions of deprived households.

Liberal reforms have a response to this situation: disconnect issues of social cohesion and solidarity from the industrial and commercial logic of service companies, leaving the tax system to deal with redistribution.[21] While such "externalization of the social issue" seems to be clearly established in philosophical terms, practice shows lesser certainty. Indeed, in most countries, however tentative the pace of privatization, it outstrips thinking about new solidarity mechanisms, while the public authorities, lacking adequate tools,

sense (sale of assets to the private sector), which is only rarely seen in low- and middle-income countries (e.g. Chile), is at present unknown on the African continent in the network supply sector.

8. Kerf, Michael and Warrick Smith (1996), *Privatizing Africa's Infrastructure: Promise and Challenge*, Technical Paper No 337, The World Bank, Washington DC, 99 pages.

9. Lyonnaise des Eaux (1999), *Solutions alternatives à l'approvisionnement en eau et à l'assainissement conventionnels dans les secteurs à faibles revenus*, Suez Lyonnaise des Eaux, Paris, 161 pages.

10. See reference 4.

11. Rivera, Daniel (1996), *Private Sector Participation in the Water Supply and Wastewater Sector*, The World Bank, Washington DC, 83 pages.

12. Nickson, Andrew (199-), "Urban water supply sector review" in *Role of Government in Adjusting Economies*, Paper 7, School of Public Policy, University of Birmingham, Birmingham; also Lavigne, Jean-Claude (1995), "Deux expériences africaines" in Lorrain, Dominique (editor), *Gestions urbaines de l'eau*, Economica, Paris, pages 135-158; and reference 4.

13. Lorrain, Dominique (1995), "Introduction: l'extension du marché" in Lorrain, Dominique and Gerry Stocker (editors), *La privatisation des services urbains en Europe*, Paris, La Découverte, pages 9-30; also Lorrain, Dominique (1999), "L'internationalisation de la gestion des réseaux urbains: retours d'expériences" in *Annales des Mines*, August, pages 1-8.

14. African National Congress: majority party in power in South Africa.

are far from prepared to take on the role of prime mover in social cohesion that is expected of them, as shown in the Namibian example.[22]

Moreover, sector-based approaches cannot provide a correct assessment of the combined results of the expansion of charging for water services at cost and the often concomitant adoption of charges for other basic services, especially health and education. Insofar as means-tested exemption systems, as recommended by poverty assessment programmes, have failed everywhere, the combination of these measures, however effective they may be in their respective sectors, can only increase pressures on the budgets of poor households and strongly influence the trade-offs they make.[23] Widespread poverty obstructs the strict enforcement of market principles and taking this on board has become a strategic element of successful reforms.

The challenges of informality. In increasingly informal contexts, reforms can only be applied in a fragmented and incomplete manner. In fact, in areas of recent urban expansion where tenure status is often precarious and illegal, as well as in the poorest neighbourhoods, official services are not in a position to meet urban demand in full. Many city dwellers, excluded from provision or unhappy with the service, have long resorted to other means of supply: free sources (wells, rivers, rainwater, etc.) and the many operators in local water markets involved in production (private boreholes), transport (by tanker) or distribution (local reselling, home delivery, street vending). These activities, which are tolerated, complement and sometimes compete with public provision, and are aimed at those who have paid for connection but are faced with intermittent supplies, those who have not paid for connection in areas with mains supply and residents of urban areas without such facilities.

However, this informal water economy, which is both cause and consequence of the weak managerial capacity of the public authorities, limits the scope of reform and places various obstacles in its way. As it is actually a matter of winning customers by extending the network supply, or winning them back by improving service quality (induced demand), the existence of a competitive environment means coming to terms with the existing economic and professional interests of small-scale water vendors, who are threatened by potential creaming-off of the market and are defying the territorial monopoly of the official operator. Moreover, such market organization has to happen against a background of "back-door" liberalization, which has resulted in the long-standing erosion of the legal monopolies held by the public services that has gathered pace over the last ten years, testifying to the weakness of public management in urban areas. This means that the new operators have to work in a poorly regulated environment, with unstable rules that cannot guarantee them even the legal territorial monopoly they are supposed to enjoy.

The influence of politics on reform and despite reform. In many countries, the water services, dominated by well-oiled systems of control through clientelism and neo-patrimonialism based on income from agriculture or mining, were important tools at the service of the former political fabric: by subsidizing the expansion of physical infrastructure and consumption, governments consolidated their social base despite the fact that the services only met their objectives of social redistribution to a very limited extent (although patronage and the practice of sharing out within families and lineages did secure indirect redistribution well beyond the small circle of the middle-income sectors). Since the crisis in this control system followed that of the rentier state, the institutional architectures

15. Bakker, Karen and David Hemson (2000), "Privatising water: BOTT and hydropolitics in the new South Africa" in *South African Geographical Journal* Vol 82, No 1, pages 3-12.

16. Batley, Richard (1994), "Privatization: can government manage it?" in *Urban Age* Vol 2, No 4, October, page 3.

17. Coing, Henri (1998), "L'eau pour tous: une conquête laborieuse et menacée", communication au colloque du GDR Réseaux *Demain les services urbains: efficacité, justice, régulation*, Paris, 19-20 March 1998, 16 pages.

18. See reference 11, page 57.

19. See reference 15.

20. Hanmer, Lucia, Graham Pyatt and Howard Graham (1999), "What do the World Bank's poverty assessments teach us about poverty in sub-Saharan Africa?" in *Development and Change* Vol 30, pages 795-823.

21. Stoffaës, Christian (1995), *Services publics: question d'avenir*, Paris, Odile Jacob/La Documentation française, page 66.

22. Jaglin, Sylvy (1997), "La commercialisation du service d'eau potable à Windhoek (Namibie): inégalités urbaines et logiques marchandes" in *Flux* No 30, October-December, pages 16-29.

23. See reference 20.

adopted over the last few years represent a response to disruptions that can only be stabilized by means of adjustment measures encompassing far more than simply the organizations directly concerned. After decades of pervasive government involvement in the economy, it is not just a matter of increasing the sectoral efficiency of services but also of striking a new balance between the aspirations of certain urban groups, the corporatist interests of the technical staff and those of the political class, deprived by reform of a tool for clientelist redistribution.[24]

In many urban areas and particularly in capital cities, bringing utility companies in line with market rules provides an opportunity to renegotiate alliances with the middle- and upper-income groups, with improved services meeting the demand from people who adhere to international living standards and consumption patterns and expect an urban environment consonant with their aspirations.[25] On the other hand, market-driven restructuring, often accompanied by increased charges, threatens the impoverished elements of the former middle-income groups who have lost their status. This means that market strategies have to be adapted to the terms of a new social contract which takes account of the fact that poverty is increasingly an urban phenomenon, both to maintain access to the service for the newly impoverished middle classes and to enable the service to be extended to the "structurally" poor.

In this way, a number of local factors have been responsible for the resurgence of the issue of providing services for the poor and, consequently, ensuring wider access to water services. The initial temptation was to deal with this issue separately and to focus efforts on improving services for customers who can pay, limiting reforms to the "easiest" market segments,[26] but various factors are also pulling in the opposite direction. As a result of forward-looking commercial strategies, because poor people represent an important potential market, and with an eye on their reputations, private companies ill-served by their image as "predators" are taking an interest in unmet demand. Moreover, lagging behind Latin America, but greatly influenced by the lessons from that experience regularly publicized in the international media, the rationale for contract-based systems is evolving to take on board the issue of universal service provision which, in a roundabout way, is increasingly influencing and determining the format of local arrangements. A good example is provided by the reform package inspired by the World Bank, in both Kenya and Tanzania, which lists three territorial components of privatization depending on the degree of integration of urban areas within the market economy: contracted-out management open to major international consortia in the capital cities; commercialization of municipal water services in minor cities; and "grassroots level" contracting-out to user committees in poor peri-urban neighbourhoods.[27]

c. Paying without having any money: the "miracle" of participation

When brought back into the hard core of reform processes, where there is no question of abandoning the principles of cost recovery and user-pays systems, the matter of the poor sparks a debate about universal service provision, and hinges on three ideas:

- abandoning the aim of comprehensive service provision ("a tap in every home") in favour of providing universal access to drinking water, which is compatible with differentiated service;

24. Batley, Richard (1998), *Urban Water in Zimbabwe: Performance and Capacity Analysis*, IDD/SPP/ University of Birmingham, Birmingham, (Role of Government in Adjusting Economies Paper No 33), http://www.bham.ac.uk/IDD/rog33.htm; also see reference 6, Amis (1997).

25. Cf. the Johannesburg example: Beall, Jo, Owen Crankshaw and Susan Parnell (2000), "Local government, poverty reduction and inequality in Johannesburg" in *Environment and Urbanization* Vol 12, No 1 April, pages 107-122.

26. Batley, Richard (1996), "Public-private relationships and performance in service provision?" in *Urban Studies* Vol 33, No 4-5, pages 723-751; also UNCHS-Habitat (1998), *Privatization of Municipal Services in East Africa: a Governance Approach to Human Settlements Management*, UNCHS/Ford Foundation, Nairobi.

27. Bousquet, Anne (2000), *La restructuration du secteur de l'eau potable au Kenya et en Tanzanie face au problème des quartiers pauvres (capitales et villes secondaires)*, Université de Paris 8/IFU, 140 pages plus annexes (postgraduate dissertation).

- systematizing the demand-oriented approach grounded in the use of tools allowing consumer preferences to be revealed (surveys of the ability/willingness to pay for a given level of service); and
- externalizing some of the infrastructural and management costs to user organizations.

It is this last component that we refer to here as user "participation". Far from being a one-off, its "rediscovery" reflects a more widespread renewal of interest in community-based institutions, which has given rise over the last few years to a substantial body of literature devoted to collective action, especially in the field of drinking-water management.[28] A substantial proportion of this literature, based on neo-liberal ideas, is given over to analysis of incentives and has been criticized for its ahistorical, static and often simplistic view of social relations and local reality.[29] Other work has also revealed the limits of participatory processes in delivery systems.[30]

On the other hand, few questions are raised about the origins of this renewed interest or the role allocated to these forms of participation in reforms extolling the superiority of market principles. In the next section, we shall show that this resurgence is in no way a random phenomenon: far from contradicting or tempering commercial principles, participation is a tool designed to regulate/stabilize new arrangements, and to conform them to the still rather vague notion of a right of access to drinking water for urban households. As in Europe,[31] but in a much less developed context of user protection, the idea is to reach a compromise between acknowledging the right to have a minimum quantity of drinking water available on acceptable terms (reflecting the international notion of access to drinking water) and the supposedly intangible principle of paying for a service. Particularly in developing cities, the point is both to foster access to infrastructure for the many households who still do not have private taps and to maintain the connection of those who have trouble paying their bills. In poor neighbourhoods, "participation" by the residents is the preferred expression of that compromise.

III. RIGHTS OF ACCESS TO WATER VERSUS THE PRINCIPLE OF COST RECOVERY: PARTICIPATION AS A LEARNING PROCESS FOR THE MARKET?

PARTICIPATION, A COMPONENT of many operational set-ups and often synonymous with "human investment", is not a new idea in low- and middle-income countries, where it appears at first sight as the ideologically acceptable element of a theory of economic efficiency meant for the poor. Without denying these primary characteristics, more recent approaches have taken up ideas of local democracy, pegging the moulding of urban territorial governance to the promotion of local government accountability and citizens' participation.[32]

Based on a doctrine of subsidiarity leading to the replacement of discredited centralized bodies by local delivery arrangements and expanded to cover all stakeholders in an urban policy, project or service, participation has three main aims:

- to better access demand of the population, particularly with the aid of "local experts";
- to promote a flexible doing and learning method,[33] with the aid of local mediators; and

28. Subramanian, Ashok et al. (1997), *User Organizations for Sustainable Water Services*, Technical Paper No 354, The World Bank, Washington DC, page 121.

29. Cleaver, Frances (2000), "Moral ecological rationality, institutions and the management of common property resources" in *Development and Change* Vol 31, pages 361-383.

30. Blair, Harry (2000), "Participation and accountability at the periphery: democratic local governance in six countries" in *World Development* Vol 28, No 1, pages 21-39; also Jaglin, Sylvy (1995), *Gestion urbaine partagée à Ouagadougou: pouvoirs et périphéries (1983-1991)*, Karthala, Paris, 659 pages.

31. Coutard, Olivier (2000), "La face cachée du service universel: différenciation technique et tarifaire dans le secteur de la distribution d'eau potable en Europe", communication at the international seminar "Faire parler les réseaux: l'eau (Europe-Amérique latine)", IHEAL, Paris, 20-21 January, 17 pages.

32. See reference 30, Blair (2000).

33. See reference 28, page 100.

- to secure the long-term commitment of stakeholders (particularly through having a financial stake) to local management systems, based on joint action, negotiation and sharing out costs between members of the interest group.

So the practices covered by the term "participation" in African water-supply projects and policies are both diverse and broad; they may be individual or collective, informal or supervised. In operational set-ups, they may aim at one or several objectives: improving sizing and design of technical networks, lowering infrastructural costs, reducing management costs, improving invoice payment rates, etc. They rely on very diverse forms of organization: from simple agreements with water-point committees (e.g. the management of public taps in Namibia) to formal lease contracts with associations of users responsible for standpipes (Mali).

Consequently, participation instigated in this way is defined less by its organizational methods than by its goal, namely a gradual consolidation of territorially organized supply systems aimed at universal access to water. The idea is both to control participatory dynamics and to peg them to the dominant system, with the overriding aim of expanding the commercial service. These principles are expressed in two main "models".

a. The La Paz-El Alto model: mobilization[34] of users and technical/commercial adaptation

In the concession contract signed by the Aguas del Illimani (Suez Lyonnaise des Eaux) Consortium in August 1997, the private utility committed itself to achieving 100 per cent water coverage in La Paz and to installing more than 71,000 connections in El Alto (a settlement that grew very rapidly and is the poorest in the metropolitan area). While the contract sets an objective – universal access by the year 2002 – and specifies the standard – in-house connection for everyone – it is largely silent on the inputs to be used by the concessionaire who is also restricted by the social tariff policy which imposed a unit charge that falls well below costs for the first 30 cubic metres of water per month and a uniform connection fee which does not vary with the true costs.[35] Caught in a pincer movement by these various obligations, in the end the contractor had limited room for manoeuvre, especially regarding ways of doing things. As a result, underpinning the transposal of the Brazilian cost-sharing system that allows 30 per cent savings to be made on installing water networks, the consortium developed a model of "institutionalized community participation", which provides for a direct contribution by households towards building the networks while mobilizing them to maintain the local technical facilities.[36]

This model, which combines technical and commercial adaptations with individual and community mobilization, can be seen in other geographical and institutional contexts, where a company obliged to respect the principle of payment for services finds itself facing two main difficulties in poor neighbourhoods: the costs involved in secondary networks and in managing an unprofitable customer base. Along with user mobilization, technical/commercial innovations – in relation to financing access to the network, controlling consumption and payment methods – are aimed at adapting conventional solutions by reducing costs. While various "innovations" have been found for connections (micro-credits, incorporating repayments into a mortgage or the water bill) and meters (e.g. a collective meter), it is mainly in respect of financ-

34. On the use of this term in preference to "participation", see Jaglin, Sylvy (1994), "Why mobilize town dwellers; joint management in Ouagadougou, 1983-1990," *Environment and Urbanization* Vol 6, No 2, October, pages 111-132.

35. Komives, Kristin and Penelope Brook Cowen (1998), *Expanding Water and Sanitation Services to Low-income Households: The Case of the La Paz-El Alto Concession*, Public Policy for the Private Sector Note No 178, April, 4 pages.

36. Chambolle, Thierry and Alain Mathys (1999), "Améliorer l'accès à l'eau et à l'assainissement des populations pauvres" in *PCM-Le pont*, November, pages 15-18.

ing secondary networks that the "virtues" of participation have been rediscovered. In fact, African city dwellers have long participated in installing networks. However, until now this has been organized through tacit or explicit agreements between public authorities, public management bodies and residential groups. In Ouagadougou (Burkina Faso), the 1980s "pact" was perfectly clear: the government promised tenure legalization and the incorporation of urban peripheries into the city provided that the population concerned would share the costs of that vast enterprise.[37] On the other hand, what view should be taken of the re-routing of these practices towards large private companies?[38]

In this model, some operators also seek to mobilize users by offering them tools to control their consumer spending. For example, in Durban, they provide personal storage tanks which enable strict control of individual consumption and, consequently, expenditure. Other innovations involve invoicing arrangements that attempt to reconcile the practice of poor households paying in mini-instalments with the accounting imperatives of the company, such as the prepayment meters used in South Africa and Namibia for both electricity and water. Offered for private connections, personal storage tanks or standpipes, the meters have the advantage of considerably simplifying the commercial management of small consumers and providing the latter with a tool to control their expenditure. It also has the disadvantage of passing on new costs to users (pre-paid electronic meters are sophisticated and more expensive to install and to rent) and depoliticizing self-rationing and self-disconnection by households in difficulty (the issue of water cutoffs becomes "invisible" and since no punitive cost-recovery measures need to be applied, there are fewer opportunities for organized collective action).

b. The "community" model and its recent developments[39]

In most African urban areas, water networks have a low coverage rate – below 50 per cent in the majority of West African capital cities in the early 1990s, with the exception of Dakar (60 per cent) and Abidjan (70 per cent)[40] – and the objective of universal connection in the short term is unlikely to be achieved. As a result, communal solutions (standpipes, self-managed water points and public boreholes) are being reconsidered. Standpipes, for example, used to be common in large areas of the African continent but started to be abandoned in the 1970s before being closed down in the 1980s in favour of domestic connections and the spread of different forms of small-scale reselling. Taking advantage of a broader challenge to the idea of free water, the standpipe has lately come back into favour, with the introduction of new management principles (paying for water, contracting-out). The vital question here relates to the management of communal facilities, where systems draw on two quite different reference models: the rural (community-based) model and the urban (contracting-out) model whose institutional architecture and operating principles are drawing closer together.

The community-based model, derived from rural water supply programmes, relies on a group of residents, represented by a committee that is responsible for providing the water service from facilities often financed as part of a project, and almost always belonging to the state. The sale of water is handled by a 'turncock' (person who controls the use of the water tap) who is paid either a wage or on the basis of a mark-up, whereas the committee is linked to a service provider for maintenance.

37. See reference 30, Jaglin (1995).

38. See reference 36; also Foster, Vivien (2001), *Economic and Financial Evaluation of El Alto Pilot Project: Condominial Water and Sewerage Systems and Related Innovations*, The World Bank Group (Water and Sanitation Programme, Andean Region), Washington DC.

39. The discussion here draws on a joint study conducted as part of the research programme on drinking water and sanitation in peri-urban neighbourhoods and small urban centres in Africa. A summary can be found in BURGÉAP (1998), *Modes de gestion partagés pour le service d'eau potable et participation des habitants: analyse comparative des performances de divers systèmes de gestion déléguée des points d'eau collectifs Vol 1*, BURGEAP, Paris.

40. Savina, Annie and Alain Mathys (1994), *L'alimentation en eau en milieu urbain dans les quartiers défavorisés: une question de partage?*, GREA/Afrique de l'Ouest, Abidjan, 22 pages.

The relationships between the various parties are rarely made explicit in a written document (contract). The theoretical advantage of this model is that it ensures empowerment and representation of local people as well as the sustainability of the system, by explicitly setting out methods of financing operation and maintenance (charging structure) as well as partial renewal of facilities (invested savings). However, these advantages are countered by various types of dysfunction incompatible with demands for transparency and accountability, namely: the very common practice of management responsibility within committees being confiscated by the elders; the spacing out or elimination of meetings; the absence of account books; and varying degrees of indifference on the part of users.

The urban model has always had two variants. The first, which was long in the majority but has now been discredited, is public management of communal facilities, which often led to a variation on the "tragedy of the commons".[41] In the second, favoured by many operators, a company incorporating production, transport and distribution functions licenses a private operator to distribute water at the standpipes. The responsibilities relating to the retail sale of water and the maintenance of the facility are usually put down in a written document: the contract, imposed on the manager by the licensor, is designed more to preserve the latter's interests than to ensure quality service for users. Moreover, this service is often performed by a turncock, who is recruited by and paid by the manager (using a flat fee or a mark-up) and, *de facto*, excluded from the formal contractual relationship.

41. Hardin, Garrett (1968), "The tragedy of the commons" in *Science* No 162, pages 1243-1248.

There are two main theoretical advantages to this system: improving local services by placing sales on a commercial basis, and reducing the management costs of the licensing authority by relocating the uncertainties of operation. In practice, outcomes are much less clear. Case studies show that the behaviour of licensees does not simply reflect the economic logic of the sector. For example, the quest for constant if not ever-increasing cash profits may be thwarted in various ways by other priorities, a common situation when individuals have income derived from multiple activities (meaning that the facility might be closed at market time or during certain periods of the rainy season). Distribution service quality standards, left out of the contractual arrangement, are not regulated; there is no body officially responsible for determining the level of services, writing out the specifications or supervising performance. On the other hand, the security gained by transferring operating risks is real, with a whole series of tools (guarantees, redemption of guarantees, shutting down meters), allowing the licensing authority to control the commercial activity of the licensee.

In other words, the operation of both systems is unsatisfactory. The suggested remedies favour bringing them closer together with a view to the standardization – as yet embryonic – of management. Drawing on the principles of leasing while retaining the idea of an organized group of users, this solution rests upon breaking up the management chain, placing functions on an increasingly contractual basis and investigating new regulatory systems relying on user participation.

These developments have contributed to the emergence of formal user associations, either as the main licensees of a facility or set of facilities (in the committee model), or as local regulatory bodies representing users (in the licensing model). Several West African states have altered their laws, or are planning to do so, to allow such associations to be organized and

made responsible for service provision and possibly to transfer ownership of facilities to them.[42] Elsewhere, in Kenya and Tanzania for example, hybrid formulae are also attempting to combine contracting-out the management of mini-water-supply networks with "community regulation".[43]

More generally, these user associations, defined as groups acting together to plan and provide a water service, are encouraged by international agencies which attribute various functions to them.[44] The aim is to build institutions on an appropriate scale that can manage the common assets of a group of users and provide them with a channel for expression and representation in urban areas where individual solutions have, temporarily or permanently, proved unsuitable. In a densely populated urban environment, where the market-based system of licensing a private individual is usually preferred, the debate centres on the role of the user association as regulator of the local service and intermediary between the principal operator and users. In so doing, some of the costs of regulation, together with the commercial risks, are relocated to the residential group and the manager who is usually a member of it.

On the other hand, this is still far removed from a system of cross-accountability creating a sense of citizenship.[45] Whilst increased involvement of users may improve the responsiveness of supply, their direct mobilization does not allow the establishment of localized control over the public authorities' and official suppliers' decisions. Aimed more at sustaining local service provision systems than at political accountability, participation generated in this way brings the poor into the market more surely than into democracy. It is, therefore, not the instigator of an "exception" to the dominant market system; on the contrary, it works within this system, allowing for a learning process of the user-pays system and giving the justification for abandoning the old, supposedly inefficient, "social" water supply policies.[46] While it may not always take poor urban communities into the regular technical networks, this participatory engineering does start to bring them into a market-oriented management (the licensing/user association model) by promoting representation and behaviour that closely link the notions of individual and collective responsibility with payment.

IV. PARTICIPATORY SYSTEMS: PROBLEMS AND CHANGES

IS THE DEMAND from disadvantaged communities better met by such participatory systems? Are the commitments they build sustainable? The quantitative results of these experiments are still not well known, but are probably not inconsiderable, as shown by many examples in West Africa.[47] On the other hand, empirical studies show that arrangements are diverse and unstable, while the mechanics involved are constantly changing through institutional *bricolage* (or informal ways of setting arrangements). Three examples can be given to illustrate how such institutional *bricolage*, in turn, influences modes of participation.

a. Building confidence: NGOs as intermediaries

Many case studies are now available which give an insight into the motivation for and constraints on collective action in the water sector.[48] In

42. Étienne, Janique (1998), *Formes de la demande et modes de gestion des services d'eau potable en Afrique subsaharienne: spécificité des "milieux semi-urbains"*, ENPC, Paris, 299 pages plus annexes (PhD thesis).

43. See reference 27.

44. See reference 28.

45. Jeannot, Gilles (1998), *Les usagers du service public*, Puf, Paris, 126 pages (coll. QSJ No 3359).

46. Morel à L'huissier, Alain (1999), "L'approvisionnement en eau des populations urbaines à faible revenu" in *L'Afrique municipale* No 12, September, pages 9-10.

47. See reference 39.

48. See reference 28; also reference 42.

justifying the relocation of certain responsibilities to residential groups, many repeat the argument that the physical and social closeness of the members of a relatively homogeneous group facilitates the formation of social capital and thereby the confidence and coordination needed to regulate participatory systems. Going beyond naive assumptions about the "solidarity" of African societies, others have demonstrated, however, that proximity does not naturally generate cooperation, which is often intermittent and context specific,[49] and that complicity is not enough to guarantee the operation of equitable, sustainable management and regulatory systems.[50]

In fact, for communities which, on the whole, are driven by the hope of catching up with urban standards, the legitimacy and credibility of a participatory, differentiated process of providing universal access to water depend partly on the operator's ability to convince them of the temporary, changing nature of systems labelled "community-based". Having had little experience of such dialogue with users, especially the most deprived amongst them, operators thought that NGOs, because of their increasing involvement in supplying water services,[51] would be vital mediators in helping to create such confidence and, consequently, a means of externalizing two functions, namely identifying demand and sizing supply upstream; and piloting coordinated learning mechanisms to sustain both use and management of the facilities downstream. The Lyonnaise des Eaux company has undertaken a degree of advertising for partnerships such as these, supported and given media coverage by Business Partners for Development.[52]

Asked to come up with alternative technical solutions, help with technical/commercial training and support user committees/associations, as well as institute and stabilize formal contractual relations between the latter and the licensing authority, NGOs are, above all, called upon to facilitate exchanges, rebuild confidence and legitimize new types of behaviour. Such contracts, involving "non-profit-making private enterprise" and referred to by some as "social privatization",[53] thereby endorse redistribution of the responsibilities and costs incurred in learning about payment.

By taking on the technical and social engineering involved in bringing poor neighbourhoods into the sphere of standard urban management, NGO activity certainly contributes towards integrating previously excluded neighbourhoods into the network. It also enables the dominant public and private operators to focus on solvent customers and territories on the basis of tried and tested technical and commercial principles. By taking part in increased differentiation of the service, and preserving "leftover" systems for the poor, NGOs help to validate the dominant model which passes on the entire cost to the final users, including the most vulnerable, by means of charges and/or participatory management. There is a great risk that they will thereby contribute towards territorial isolation of the poor, locked into "community-based" systems with little prospect of standardization or improvement and obliged to manage things themselves.

b. Creating stakeholders and consolidating roles: the boom in formal contractual arrangements

One of the consequences of participation is that regulating the water service becomes increasingly complex, as splitting up responsibilities

49. See reference 29.

50. See reference 30, Blair (2000); also reference 30, Jaglin (1995).

51. pS-Eau (1998), *Eau potable et assainissement dans les quartiers périurbains et les petits centres*, GRET, Paris, 158 pages.

52. A network of large companies, governments and civil society organizations.

53. Grondin, Pierre-Marie (1999), "La privatisation sociale de l'eau, une troisième voie" in *La lettre du pS-Eau* No 33, October, page 1.

brings a growing number of players onto the scene. In order to stabilize overall organization, formal contractual arrangements are preferred, having the dual advantage of encouraging a better identification of the contracting parties (i.e. stakeholders) – possibly helping them to emerge when they do not exist already – and a clarification of roles.

Amongst the striking features of African cities are the frailty of the players, the differing levels of legitimacy, the inadequate frameworks for action and the constantly shifting rules of the game.[54] What is often lacking is not so much an identification of the functions to be performed as a pragmatic process designed to build legitimacy for the distribution of these functions between players, while arbitrating between their frequently antagonistic positions. Formal contractual relations appear to be the new "obligatory" tool for organizing learning processes and producing both the activity and its implementation structure. However, the rapid spread of this tool cannot disguise its weakness in contexts where a contract cannot simply be used to express reciprocal commitments, let alone serve as a legal guarantee for a partnership whose operating methods have, on the whole, yet to be invented. In seeking to control dynamic, unstable situations, the contract itself is no more than a constantly evolving instrument in a process of gradual consolidation: "*...the challenge is not to maintain the balance of a system, but to create one. What is needed is the development and collective, gradual invention of a management structure and tools for urban services, with rules acknowledged by everyone. At the same time, this means creating stakeholders able to play their part.*"[55]

If formal contractual relations are to be more than a new resource at the service of the dominant players, a new way of defining rules unilaterally, they must be accompanied by a cumulative process of learning and social ownership of the underlying principles. In other words, if contracts are to be the new focus of hopes for rationalizing local community-based management, the latter must be disentangled from the reciprocal rights and duties resulting from bilateral agreements between parties and seen in a more general context, particularly as part of a national policy tracing the outline of the "right to water" and the means of securing it. The challenge here is to find tools to formalize contracts which can at the same time meet the operational constraints of immediate management, provide support in various learning processes (explaining the user-pays system, the meaning of contractual commitment and the notion of public service to the contracting parties, etc.) and incorporate principles of evaluation and reversibility to cope with fluctuating demand over time.

54. See reference 13, Lorrain (1999).

55. Coing, Henri (1998), "Contrat et régulation" in BURGÉAP, *Analyse comparative des performances de divers systèmes de gestion déléguée des points d'eau collectifs. Vol 1: Recueil des notes thématiques*, BURGÉAP/ALFA, Paris, 18 pages.

c. From participatory sub-contracting to formalizing the non-institutional sector: a two-tier service?

Participation assumes that the poor have both labour and time available. The same hypothesis underpins self-build programmes, despite the many studies showing that the poor are better able to mobilize savings than time, with work frequently being sub-contracted to jobbers on sites where houses[56] or communal facilities[57] are being built. Regarding water, many studies show that, to avoid fatigue and to save time, households will agree to pay more for quantities delivered to their homes.[58] Others, on the other hand, stress the disruption caused to households which are obliged, as a result of inconsistent service, to subordinate all their activities to the imperatives of water storage.[59] Three conclusions follow:

56. Canel, Patrick, Philippe Delis and Christian Girard (1990), *Construire la ville africaine: chroniques du citadin promoteur*, Karthala-ACCT, Paris, 197 pages.

57. See reference 30, Jaglin (1995).

58. See reference 40.

59. Zérah, Marie-Hélène (1999), *L'accès à l'eau dans les villes indiennes*, Anthropos, Paris, 192 pages (coll. Villes).

- the poor have few resources to devote to participation;
- the "informal" water markets have great vitality and are meeting genuine urban demand;[60]
- the poor have some cash available and will agree to pay artisans even where they dispute paying for "public" water.

Consequently, operators and funders are now taking an interest in these market activities,[61] as they consider that dynamizing local water markets and instituting genuine competition between delivery systems should facilitate access to water, regulate prices on the water market and create jobs. Legal changes in the water sector are reinforcing this trend and providing a strong incentive for operators to come to terms with this fragmented scenario. In fact, taking advantage of condemnation of the former public monopoly, several recent reforms have asserted the legitimacy of other players in water service delivery and are envisaging the transfer of prerogatives to new operators. This is the route being taken by water policy in Cameroon, where Law No 98/005 of 14 April 1998 plans to break the public monopoly, promotes concessions and lease contracts, and explicitly acknowledges alternative delivery systems in areas not receiving the public service.[62]

Legalization of local water markets and a recognition of private operators are not, however, sufficient measures in themselves, especially when they justify policy that does no more than organize competition between small entrepreneurs who are supposed to incarnate all the virtues of the market.[63] In the absence of adequate regulation, this "informal" economy is often accompanied by substantial health risks, seasonal inflationary spirals and speculative mechanisms which penalize particularly the most vulnerable households. It is common for customers in the resale circuit to pay much more for a cubic metre of water than those who pay for the public service: for example, an average of five to six times more in Ouagadougou but up to 20 times more in the event of seasonal or fortuitous shortages. Moreover, in view of its weak investment capacity and lack of a long-term strategy, the "informal" private sector does not, as it stands, provide an adequate response to the challenge of making water widely available.[64] As a result, consideration is being given to regulating some of its activities, especially neighbourhood vending (turning some of those who are mains-supplied into wholesalers/retailers) and peddling (making efforts to organize and supervise vendors, with registration, checking compliance with health rules on maintaining containers and water storage, setting and sticking to resale prices). For example, in the early 1990s, 60 per cent of the water sold at standpipes on the outskirts of Ouagadougou was subsequently sold on: as part of a project for communal management of water points, cooperation between a management committee (elected by the community) and the resellers was formalized by contract, as was partnership with a local company to service and maintain the facilities.[65]

However, the gamble has not yet paid off and there is no guarantee that the vitality of the "informal" networks, which link official private operators to participating users, can provide an answer to universal access to drinking water. On the contrary, studies of the informal waste-management and transport sectors[66] have shown that other practices, especially along corporatist lines, could obstruct expansion of the activity and result in private incomes inconsistent with safeguarding the general interest. In addition, enhancing the role of such micro-businesses also carries the risk of holding up the later "normalization" of delivery systems, in view of

60. Solo Tova, Maria (1999), "Small-scale entrepreneurs in the urban water and sanitation market" in *Environment and Urbanization* Vol 11, No 1, April, pages 117-131; also Collignon, Bernard and Bruno Valfrey (1998), "Au Sud, l'informel est en pleine forme" in *ISF-pS Eau*, June, pages 10-11.

61. See reference 9.

62. Tanawa, Émile (1998), "L'approvisionnement en eau dans les villes du Cameroun" in *La lettre du pS-Eau* No 30, September, pages 2-3.

63. See reference 60, Solo Tova (1999).

64. See reference 60, Collignon and Valfrey (1998).

65. Gbemade, Barthélémy (1999), "L'expérimentation d'un nouveau mode de gestion de la distribution d'eau" in *La lettre du pS-Eau* No 32, April, pages 5-6.

66. Mandon-Adolehoume, Béatrice (1994), "Secteur privé et service public: résultats et perspectives. Les expériences africaines et brésiliennes du transport collectif urbain" in Godard, Xavier (editor), *Les transports dans les villes du Sud. La recherche de solutions durables*, Karthala-CODATU, Paris, pages 127-147.

small-business owners' interest in maintaining arrangements that provide them with both income and power.

V. CONCLUSION

PARTICIPATION CAN, UNDER certain conditions, help towards the aim of ensuring wider access to water, by allowing an individual or communal service to expand into neighbourhoods that previously had none. However, it is in no way a miracle solution and the approach raises many questions. First, it cannot meet the objective of more equitable urban societies as proclaimed by many authorities, who consider that such equity can be achieved by universalizing basic services and reducing unequal access to the opportunities provided in town. In fact, mediating the user-pays principle, the source of growing inequality,[67] through direct user participation does not change its rationale: the best-endowed urban communities are more able than others to mobilize resources, tap into external opportunities and transform them. The poorer the neighbourhood, the more mediocre the participation mobilized – which must, nevertheless, cover a substantial part of the system – and, therefore, the more deficient the infrastructure or service.[68] Moreover, there are few empirical studies which show to what extent the participatory approach can improve the operation of a service in the medium term and on a significant scale for all users. Whilst the tactic of the pressure group has proved its localized effectiveness, particularly when it is backed up by reformist policies and places pressure on service providers from two sides, it is not enough to shore up participation as a monitoring mechanism or, more particularly, as a vector of institutional change.

In addition, by making individual or community cost recovery a general practice, participation as a technique directed solely at disadvantaged customers promotes a form of financial "sustainability" which is extremely likely to preserve a two-tier service. While it may seem inevitable that universal access to water in African towns and cities should be accompanied by differentiated service, it is still worthwhile to think of ways of preventing this from "setting in stone" the juxtaposition of standard services for some and palliative solutions for others. This approach implies jointly drawing up mechanisms for the gradual improvement and integration of the various modes of supply, something that is unlikely to be achieved by institutionalizing intermediate players and systems.

There may be a consensus about the need to have the service paid for, backed up by surveys showing that the poor are prepared to pay for improved services, as well as the need for cost recovery at the level of the service provider, but the distribution of these costs, along with the fit between expressed demand, ability to pay and service provided, is still controversial. We should note that participation, used as a substitute for a cash contribution in a cost recovery mechanism, is regressive by nature: in the case of private systems, it passes the cost of installing and managing facilities (pre-payment meters, tanks, etc.) on to deprived users, whereas in communal systems it places the same weight of contribution on all users in the "community", despite the fact that all studies have given the lie to the supposed socioeconomic uniformity of poor neighbourhoods. Moreover, in view of the current low level of professionalization of non-institutional operators (committees or private individual lessees), it is hardly likely that differentiated levels of service and charges

67. Jaglin, Sylvy (2000), "Water demand management in Windhoek (Namibia): "A holistic approach to sustainable urban management of water resources" in *Académie de l'eau Vol 1*, Colloque international "L'eau, l'aménagement du territoire et le développement durable", Paris, 10-11 February 2000, pages 111-120; also Azizi, Mohammad (2000), "The 'user pays' system in the provision of urban infrastucture: effectiveness and equity criteria" in *Urban Studies* Vol 37, No 8, pages 1345-1357.

68. Cf. outside Africa, the splendid demonstration by Rebecca Abers; see Abers, Rebecca (1998), "La participation populaire à Porto Alegre au Brésil" in *Annales de la recherche urbaine* No 80-81, December, pages 42-54.

at communal water points could be applied and take account of the actual social differentiation in those neighbourhoods. Of course, it could be that, as participatory systems become commonplace, skills will be generated that could promote more sophisticated charging structures, but developing genuine charging strategies will take time. For the moment, arbitrary decisions by community or individual managers are common, showing how out of step the seller's opportunistic tactics are with the supposed commercial logic of the service.

Moreover, there is still no agreement as to what charges and, in the case of the poor, participation are intended to cover: is it only operating and maintenance costs or capital costs as well? In OECD countries, where such reforms have been implemented, they relate to fully equipped areas where charges basically pay for operation and maintenance. In towns and cities in low- and middle-income nations, one of the main challenges is to build the infrastructure; and yet, as low-income citizens mainly live on the urban fringes, where the lack of infrastructure is most striking, they are precisely the ones who are now being asked, via participation and charges, to pay cash for the installation and use of delivery systems hitherto enjoyed by well-off communities at subsidized prices. That certainly gives food for thought on the matter of "equitable" participation.