

DEBATING SUPPLY AND DEMAND CHARACTERISTICS OF BULK INFRASTRUCTURE:

Lesotho-Johannesburg Water Transfer

DAVID LETSIE AND PATRICK BOND

ABSTRACT

Relating bulk infrastructure requirements to basic household needs is not merely matching a supply-side response to aggregate demand curves. Both the supply and demand sides must be evaluated extremely critically during periods of scarcity (both fiscal/financial and ecological) when, as in the case of water for the Gauteng region, the society must contend with poor historical planning, inordinately unequal access to and use of resources, uncertain intergovernmental fiscal relations and municipal fiscal strain, ecological fragility, waste in consumption, lack of affordability for basic service consumption, ineffective subsidy systems and vigorous contestation of township politics. These are general problems common to South African infrastructure planning. In the case of the Lesotho Highlands Water Project, these problems catalysed a community challenge -- by leading activists of Alexandra township, later endorsed by the Alexandra Civic Organisation itself -- to not only the municipal and national government departments responsible, but to the World Bank team which did much of the bulk infrastructure design work. The failure of that challenge, in legal terms, does not undermine the technical and moral truths which were raised by Alexandra residents in 1997-98, which in turn may lay the basis for a more rational linkage of bulk and basic infrastructure systems in future. This chapter includes the five core documents provided by the Alexandra residents, the World Bank, the South African government and the Bank Inspection Panel, as well as concluding remarks.

I. Introduction

The Lesotho Highlands Water Project (LHWP) has many controversial features. When in September 1998 South African National Defence Force troops invaded Lesotho to restore a government which had been effectively toppled in a coup, it was no accident that its top priority -- ahead of preventing Maseru from being largely burned out and looted -- was to gain control of the Katse Dam, hundreds of km up the mountains from the main population centres. The importance of the LHWP for the water-scarce Gauteng metropolis has often been asserted, but an implicit assumption of bulk water infrastructure policy has been that the *demand* for water could not be affected; the only infrastructure policy option worth pursuing was to dramatically increase *supply*.

In 1998, this assumption became the basis for a quite fruitful (if politically charged) public debate. The key documents from that debate are included in the following pages. Following the lead argument against the expansion of the LHWP by three (then-anonymous)¹ residents of Alexandra township (Section II), the World Bank explains why the costs of delay outweigh the benefits (Section III). The Minister and Director-General of Water Affairs and Forestry add, based on a newspaper article, the issue of potential economic damage from drought (Section IV). The official World Bank response to the Request follows (Section V), along with the Inspection Panel findings (Section VI). A conclusion reviews the main lines of argument (Section VII).

II. The Alexandra Residents' Request²

DATE: 23 April 1998

TO: The World Bank Inspection Panel, 1818 H Street, N.W., Washington, D.C. 20433

FROM: Three Alexandra residents

1. Introduction: Background

1.1 Introduction. We urgently request the Inspection Panel to investigate the World Bank's role in the Lesotho Highlands Water Project (LHWP)...

1.2 The LHWP. By way of background to the LHWP itself, concerns have often been expressed about design flaws associated with the first (completed) dam (Katse, Phase 1A). This Request is based on the argument that both Phase 1A and the next dam to be built -- Mohale (along with a diversion weir and tunnel to the Katse Reservoir), known as "Phase 1B" -- cause harm to the claimants and others similarly situated. Indeed we believe that a \$50 million World Bank loan for Phase 1B now being considered by the Executive Directors should be delayed until our concerns are addressed.

1.3 Original LHWP consultation with affected parties. The LHWP is the result of a 1986 treaty between the apartheid South Africa regime and a military regime in Lesotho that took power in a coup. By definition, hence, there was improper Bank consultation about the LHWP with these two states' citizens, many of whom in the mid-1980s were suffering imprisonment, torture and state-sanctioned murder for speaking out on behalf of democracy and development. This is not a theoretical issue, for during the 1980s the African National Congress formally opposed the LHWP. Under these circumstances, there was apparently no attention given by the World Bank design team to the concerns we have always had, in South Africa's impoverished urban townships, about the elimination of poverty, equity in resource allocation, universal access to water and water conservation. The result of not consulting was construction of a megaproject with many serious defects.

1.4 Recognition of flawed design process. The LHWP's legitimacy and the Bank's consultative process in project design have been called into question many times, and are beyond dispute. At an NGO conference on the LHWP in August 1996, for example, an official (Michael Potts) of the Development Bank of Southern Africa (DBSA) conceded, "Given the limited access to foreign funds by the South African government and the limitations on contractors' funding proposals -- export credit was not available to South Africa -- a very complex treaty was negotiated to bypass [anti-apartheid financial] sanctions. In Lesotho the credibility of the treaty was also questioned because the military government ruling Lesotho at the time did not permit open debate on the treaty." In short, according to even the DBSA official, "The planning of the social aspects of the LHWP was subordinate to the technical planning. The environment within which the environmental action plan had to be implemented was not conducive to sustainable development."

1.5 Other social and ecological issues raised previously. Concerns about the LHWP are not limited to consumer issues. At 185 meters, Katse is the highest concrete dam in Africa and one of the largest infrastructure projects in the world. Phase 1A directly affected 2 000 people --approximately 300 households -- and indirectly affected at least 20 000 more who lost the use of common resources or income through the submersion of 925ha of arable and 3000ha of grazing land. This has had enormous social, environmental, and economic impacts on the people of Lesotho. Recent surveys indicate dissatisfaction on the part of Lesotho residents with resettlement schemes and provisions for reimbursement. Phase 1B will inundate 550ha of extremely good cropland and will force resettlement of 400 families. Following erosion of much of Lesotho's arable land over the past three decades, only 9% of the country's soil is presently available for cultivation. The proposed Phase 1B will exacerbate this situation, and in addition will destroy the habitat of the Maluti Minnow (an endangered species), bearded vulture and four other species considered "globally threatened."

1.6 Other implementation issues raised previously. Numerous complaints have arisen about the LHWP's implementation to date, including the lack of an

initial Environmental Impact Assessment; a woefully inadequate social plan; flooding of ancestral burial grounds; an upsurge of social problems (including sexually-transmitted disease and increased stock theft); poor labour relations that led to the murder of several workers by Lesotho police in September 1996; cost overruns due to an unanticipated need to line the Katse tunnels with cement; corruption on the Muela hydropower component of the project and funds established to devolve LHWP financial benefits to Lesotho's citizens; failure to account for soil erosion and sedimentation of the reservoir; and reservoir-induced seismicity that in the village of Mapeleng generated a crack 1,5 km long that damaged nearly 70 houses. According to the leader of the Highlands Church Action Group, "The project shows no sensitivity to the impact on gender issues and roles of women." In addition, according to a leading academic at the University of the Free State, the effects on the Orange River catchment include a "considerable shortfall of water at the mouth... This will result in a river mouth that is either dry for years on end apart from exceptional floods or will be inundated by seawater intrusion." NGOs in Lesotho, South Africa and internationally have repeatedly brought these issues to the attention of World Bank staff (for example, at the 1996 conference and in continual correspondence between NGOs and the Bank LHWP taskmanager since).

1.7 World Bank role. The responsibility of the World Bank for social and ecological design problems, as well as the economic miscalculations described in more detail below, is also beyond dispute. The LHWP was initially funded by the World Bank with a US\$110 million loan on condition that South Africa stood surety. The Bank has repeatedly stated that its work on this project is small (just 5% of total project costs), thereby somehow implying that it is less liable for project problems. However, the following description from the Lesotho Highlands Development Authority implies a much more critical role: "The World Bank acted as a catalyst to bring all the financing together... It is also working to ensure that World Bank guidelines on resettlement and social impacts are met. The World Bank has the capacity to advise on ensuring that adequate attention is given to sensitive environmental issues. The World Bank's involvement assures lenders that the Project is a worthwhile investment

opportunity." Thus the World Bank's role in this project extends beyond its role as a financial partner. The presence of the Bank provides the catalyst that allows the project to exist, and is supposed to provide guarantees of technical assistance and leadership on mitigation of social and environmental impacts. By rushing this project and requesting approval for financing from Bank Executive Directors before necessary studies and public participation have taken place, Bank staff are undermining the credibility of the institution and the LHWP, and, we argue, are causing material harm to the people of South Africa and Lesotho.

1.8 South Africans' financial obligations. Part of that harm can be measured in rands and cents. According to the Bank, "In terms of the Treaty, South Africa bears the full costs of the project as well as the associated debt, except for a hydroelectric component which will supply all of Lesotho's power requirements and which is being financed 100% by Lesotho with donor assistance. Lesotho bears none of the costs linked to the water transfer component of the project." As Water Affairs and Forestry Minister Kader Asmal put it in a speech to the 1996 Group for Environmental Monitoring Workshop on the LHWP, "The debt related to the water transfer part of this project will be redeemed by South Africa through income generated by the project. In other words, the end users will pay for the project, at tariffs well within the capabilities of the beneficiaries, making it economically viable." This is the crucial point of debate, and we want to assert that, in hindsight, Minister Asmal -- and World Bank staff who have advised him on water pricing, at retail level, for low-income residents of Gauteng townships -- are incorrect in this statement.

1.9 Relative water access by low-income consumers. Gauteng consumers bear the bulk of the LHWP costs, both for capital and recurrent expenditures. But millions of the province's low-income citizens are already beset by severe problems of poverty, disease, environmental decay, geographical segregation and women's oppression due to the inadequate levels and high costs of water and sanitation services. South Africa's inequality in access to water is striking. According to a recent Central Statistical Services Household Survey, only 27% of African households have running tap water inside their residences and only

34% have access to flush toilets. By consuming less than 2% of all South Africa's water, the country's black township residents together use less than a third of the amount used in middle- and upper-income swimming pools and gardens, not to mention white domestic (in-house) consumption or massive water wastage by white farmers who have had enormous irrigation subsidies over the years and who use 50% of South Africa's water. Moreover, out of every 100 drops that flow through Gauteng pipes, 24 quickly leak into the ground through faulty bulk infrastructure. Still more waste occurs in leaky communal, yard and house taps. In the higher elevations of Alexandra township, these problems are witnessed in the perpetual lack of water pressure. Hundreds of thousands of low-income people in Alexandra and other townships have no immediate house or yard access to reticulated water supplied by our Johannesburg municipality, and instead receive at best only communal access, with all the public health problems that this implies. Indeed, the lack of available water on a universal basis means that public health conditions are worse; geographical segregation of low-income Gauteng residents (from wealthier residents) is more extreme; women are particularly inconvenienced, and their income-generation and caregiving capacities are reduced; and the environment is threatened (in part because of the shortage of water-borne sanitation). For reasons established below, we believe that the LHWP expansion will exacerbate rather than ameliorate our access, equity and quality problems. This could not come at a worse time, as Gauteng municipalities -- including Johannesburg -- are suffering extremely serious financial difficulties that are forcing them to dramatically increase the pace of water cut-offs to low-income consumers, as well as the retail price of water.

1.10 Alternatives not explored sufficiently. Are there alternatives to Phase 1B? Bank staff do not know, for as far as we can determine, the desire by communities to address our townships' own water-infrastructure shortcomings -- especially leaky connector pipes, but also leaky water taps that together cost Sowetans approximately 40% of our water -- has never been fully explored or supported by Bank staff. The possibility for changing water usage patterns through progressive block tariffs has not been factored in (in part because Bank staff explicitly oppose differential pricing of water). The impact of water

conservation education has not been considered. The possibilities for regulations prohibiting excessive watering of suburban gardens has not been addressed by Bank staff. The potential for saving water through clearing invasive alien trees has not been calculated. The physical replacement or installation of low-flow showerheads, dual-flush toilets, and similar mechanical interventions have not been addressed. These are crucial alternatives which could ameliorate the need for the remaining phases of the Lesotho project. These alternative options have not been taken seriously, as far as we can tell from analysing Bank-supplied information.

2. The Inspection Panel Request

2.1 Requestors as affected parties. As residents of Alexandra township, we are part of the low-income consumer population who must pay a disproportionate bill for the LHWP. As "affected parties," the claimants and others similarly situated have suffered and will suffer harm because of violations of Bank policies associated with LHWP Phases 1A and 1B, as outlined below. We live within the country or an area immediately affected by the Bank-financed project. Finally, through the contacts of our technical advisors, Non-Governmental Organisations here and abroad, community organisations in Alexandra with which we are allied, and more general public pressure and publicity, our concerns have been repeatedly raised with Bank management. We are not satisfied with the response, particularly in relation to the possibilities of combining demand-side management with universal access to water.

2.2 Summary of Request. To briefly summarise our concerns, the LHWP represents an expensive, ecologically unsound water supply project whose expansion is not needed for many years (by some estimates, two decades) and that has resulted and will result in a variety of problems that represent material harm to the claimants and our allies:

2.2.1 rising water prices (thus adversely affecting the ability of low-income people to gain access to water, and in the process lowering public health status and environmental conditions, with particular

costs borne by women, children and the elderly);

2.2.2 less incentive to instigate demand-side management measures (hence leaving townships with failing infrastructure and limiting the ability of service providers to cross-subsidise);

2.2.3 increased fiscal stress on municipalities (which in turn will cost workers their jobs and/or income, and will lead to greater pressure to reduce subsidies to low-income people and to cut off water in the event of nonpayment); and

2.2.4 fewer resources for the capital and recurrent subsidies required to improve and construct water supply infrastructure appropriate for low-income communities.

2.3 Phase 1B delay is feasible. Over the past six months, information has been presented publicly and privately by South African authorities as well as Bank staff, that lead us to conclude that a significant delay in further LHWP construction is not only possible but would save hundreds of millions of Rand per year (even considering the continuation of payments to Lesotho for water that would have been delivered with Phase 1B, and the economic loss to Lesotho if 1B was delayed). As stated by an official of Rand Water and reported in Johannesburg newspapers on 13 March 1998, "we could drop supply by 40%" and in the process delay the LHWP "by years," hence "conservatively" saving R800 million per annum. That money could be spent on demand-side management alternatives that would conserve water and assure equity.

2.4 Demand-side alternatives not yet investigated. We understand that Bank staff still have not required a full study of demand-side management alternatives before recommending a new LHWP loan, despite its own policies on Alternatives, Economic Evaluation of Investment Options and Water Resources Management, among others. Communications from Bank staff concede that demand-side management should have been studied in much

greater detail at the outset, but the concluding argument is that the project is "too far along" to make a delay economically viable. Despite requests and extensive publicity about the issue in the South African press, information or studies that would clarify the economic consequences of enhanced demand-side management have not been made available to us.

2.5 Shortcomings in Bank study on economics of a delay. The Bank's March 1998 study on the economics of a delay in the LHWP downplays the possibility of substantial demand-side management interventions. The new report assumes a 3,3% annual water demand increase in Gauteng, and therefore clearly does not take demand-side management arguments seriously. Specifically, the new study makes the following comments about demand-side management, which indicate a lack of serious consideration of the issues under debate: "It is not clear what the scope is for further demand management... Demand management capabilities and their impact in South Africa are theoretical and have not yet been tried and tested... The last thorough analysis of water demand in the Vaal system was done in the mid-1980s."

2.6 Implications of proceeding too rapidly with Phase 1B. Thus we are concerned that the decision to proceed based largely on sunk costs ignores the significant economic benefit of demand-side management (thereby failing to seriously consider a viable and important alternative, in violation of several Bank policies). Bank staff seem intent on moving this forward despite clear and obvious problems and policy violations, and we question the incentive structure that appears to encourage Bank staff to throw good money after bad. Bank staff appear to be motivated to move money for the sake of moving money, rather than carefully considering the implications of moving forward with the project or the cost savings, social and environmental benefits inherent in a delay. We question the wisdom of throwing more money at a project when important questions about the need for the project exist. We also note that, as discussed more fully below, continuing with this project will have an enormous effect on South Africa's future water management planning.

2.7 Implications of delaying Phase 1B loan decision. A reconsideration of this project in accordance with the Bank's policies on environmental

assessment, consultation, and consideration of investment alternatives would allow the parties concerned to save money and would give further incentive to South African state agencies -- at national, catchment-area and municipal levels -- to focus on steps that are consistent with the objectives of poverty alleviation and access to water for the poor. The authorities could take steps to fix the region's badly leaking delivery system, install water-conserving appurtenances, and implement measures such as tariff reform to reduce use by the biggest and most wasteful users. Otherwise, we believe this very costly project will force Rand Water -- responsible for 18% of debt-service costs of the project -- to sell greater amounts of higher cost water. The requirement that Rand Water pays for the unneeded water will generate a strong disincentive for conservation. We believe that the Bank has failed to adequately consider the impacts that the project will have on South African consumers and the environment.

2.8 Delay of approximately ten months required. A delay in a funding decision is necessary until a demand-side management report is prepared, which is anticipated in early 1999. We understand there have been no public studies that document the economic impact on Rand Water of bringing this water on-line before it is needed. Given the inaccuracy of earlier Bank demand estimates (which were overoptimistic by a factor of 40%), the project's economic analysis could be profoundly affected by new information on demand. Moving ahead before the information is complete violates policies on Economic Evaluation. To wait ten months for more scientific demand-side management studies would not, Bank staff concede in the study on the economics of delay, result in the withdrawal of favourable bids by construction companies.

2.9 Implications for retail water pricing and investment. Finally, the claimants are also concerned that the high cost of LHWP water will worsen the impact that follows directly from other Bank advice to the South African government regarding fiscal management, water pricing and infrastructure investment. The Bank's policy advice and the Bank's promotion of LHWP are integrally linked, as was demonstrated during an October 1995 presentation by Bank staff to a Department of Water Affairs and Forestry (DWAF) conference. At that conference, detailed water pricing principles contrary to those

advocated by civic associations and even the main purchaser of LHWP water, Rand Water, were promoted during a Bank slide presentation on the LHWP, notwithstanding explicit suggestions to the contrary by civic movement representatives and Rand Water in consultations prior to the conference. Indeed the Bank's South African policy advice -- in the water sector for both urban consumers and low-income rural farmers (during the October 1995 conference and in subsequent communications with DWAF) and regarding infrastructure investment (the *Urban Infrastructure Investment Framework* of March 1995) -- has consistently contradicted the traditional civic movement demand, and constitutional guarantee, that water is considered a human right, and that a universal entitlement be provided. The Bank staff's advice is also opposite to that found in the 1994 *World Development Report: Infrastructure for Development*, and is fundamentally incompatible with the Bank's mission of poverty reduction, as discussed below.

2.10 Implications for municipal fiscal stress. Municipalities have borne the costs of rising water prices and limited retail affordability in recent months, and are passing them on to workers, who are increasingly suffering wage and retrenchment pressure, and to communities, in the form of increased levels of water cut-offs. This reflects both overall municipal fiscal stress (as central to local grants declined by 85% in real terms from 1991/92 to 1997/98) as well as higher priced bulk water costs. Debts by Gauteng municipalities for bulk sewerage and bulk water supplies that are more than 60 days overdue amounted to R69 million at the end of 1997, and another R20 million in water-related debts were between 30 and 60 days overdue. The 24 Gauteng municipalities raised total income of R968 million from water bills to all classes of consumers in 1997 and spent R1 019 million on water services (a deficit of R51 million). In contrast, of the 236 municipalities that report across South Africa, water bills raised R2 414 million in 1997, and expenditures were just R2 388 million (a surplus of R26 million). This is surprising given that Gauteng is South Africa's wealthiest province. The fiscal stress caused by deficits on the water account are part of the reason that the following Gauteng municipalities were declared, in December 1997, to be in default of government "viability" criteria (sufficient cash and investments to meet one month's personnel bill): Johannesburg, Pretoria, Alberton, Brakpan, Randfontein, Bronkhorstpruit, Walkerville and

Vereeniging Koponong.

2.11 Implications for low-income residents. The direct consequence of rising indebtedness has been intensified municipal "credit control" against those households who can not afford to pay for increasingly costly water. Rand Water price increases announced in February 1998 -- which were more than 50% above the inflation rate, because 75% of the increase is from the LHWP -- will affect the claimants at a time that unemployment is increasing, overall municipal bills are being increased and some wealthy ratepayers are offering stiff resistance to paying their fair share. The implications of rising water prices and the lack of a "lifeline tariff" -- a basic water service available to even to the very poor -- include not only switching of funds in household budgets away from other necessities, but also a dramatic increase in residential water cut-offs in Gauteng since early 1997. According to the Department of Constitutional Development's "Project Viability," 24 out of the 30 Gauteng local authorities (representing a population of more than 12 million people) that replied to an official questionnaire, engaged in water cut-offs. These cut-offs affected 512 households in the first quarter of 1997, 932 households in the second quarter, 1 210 households in the third quarter and 5 472 households in the fourth quarter. The ability of many of these households to afford their bills was limited, as witnessed by the fact that only 252, 449, 613 and 1 064 Gauteng households were reconnected in those four quarters of 1997, respectively. There are many other potential indicators of the costs of increasing water tariffs associated with the LHWP, including public health costs and ecological problems (as excessive water-borne sanitation costs lead to informal sanitation arrangements), most of which generate a bias against low-income women, which should also be researched and factored into the water pricing and access policies. However, these are at present not being adequately considered, due to the intensive pressure municipalities face to balance their books in the very short term...

[Sections 3 and 4 are omitted as they merely deal with contact between the claimants, the World Bank and the South African government.]

5. Applicable World Bank Policies and Operational Directives

5.1 Relevant policies. The World Bank abides by numerous policies and procedures that may have been violated by the LHWP. These policies are applicable (though not universally) to Phase 1A as well as (universally) to the next phase of the project, Phase 1B, now under consideration by the Bank. The following are relevant policies which we believe were violated by Phase 1A (though some did not apply at the time 1A was constructed) and that will be violated by Phase 1B.

5.2 OD 4.00, Environmental Policy for Dam and Reservoir Projects (Consultation). Para 19. Consultation with Nongovernmental Organizations (NGOs) and Affected Groups, states: "Community organizations, research centers, environmental advocates, and other NGOs can often provide valuable perspectives on improving both project design and implementation. To tap these perspectives, the Bank encourages consultations by project authorities (including consultants preparing the project) with appropriate NGOs, particularly local NGOs... In addition, the Bank encourages consultation between project executing agencies and the population affected by the project, as part of the project design process."

5.2.1 As consumers and citizens who will have to pay for the LHWP, we have not had a truly adequate consultation with the Bank at any stage of this project, but the failure to consult more widely, notwithstanding opportunities presented to World Bank staff, is especially evident and problematic in light of the questions raised about demand-side management and project costs.

5.2.2 We believe it essential that civil society be brought into a public debate about the expansion of the LHWP, in part through a project delay. Because low-income water consumers have not been adequately consulted, we will suffer adverse consequences, including less access to Government officials and lower consciousness of our conditions than would have otherwise been the case had Bank staff taken seriously their mandate in the area of consultation.

5.3 OD 4.00, Environmental Policy for Dam and Reservoir Projects (Design Alternatives). Para. 5, Design Alternatives, states: "Design of investment programs for supplying water or energy should consider demand management as well as supply options (e.g., conservation of water and energy, efficiency improvements, system integration, cogeneration, and fuel substitution)."

5.3.1 The Bank has not fully investigated demand-side management options during the planning of either phase of the LHWP. As noted above, Bank staff have inadequately responded to findings relating to demand-side management, by failing to conduct rigorous evaluations prior to seeking further funding for 1B. It is possible that effective demand-side management could delay for many years the need for this massive project, and Bank staff's failure to consider this possibility seriously is a fundamental violation of Bank policy with considerable economic, social and environmental impacts. Moreover, the Bank's initial 1A demand calculations were terribly inaccurate -- 40% higher than actually occurred -- and it is worrying that scientific analysis associated with 1B-related water demand will not be available for some time.

5.3.2 Demand-side management in the townships has not been taken seriously by officials, for it is only now that attempts to address faulty, apartheid-era infrastructure are being made, and even now only in a tentative way without sufficient financial commitment. It is true that there are (very minor) financial commitments now being made in these areas, but in the context of municipal fiscal stress discussed above these are not likely to make a substantial difference. We are aware that the Bank has made its own contributions to South African debates over demand-side management, but in these contributions, Bank staff have overstressed financial (not economic) efficiency measures (through a proposed pricing system) and downplayed -- often even arguing explicitly against -- entitlement access through the kind of lifeline tariff and progressive block tariff measures supported widely in South African townships, and endorsed in the *World Development Report 1994* and the *Reconstruction and Development Programme*. The latter document clearly

specified the need for tariff restructuring, cross-subsidies and lifeline services to the poor:

To ensure that every person has an adequate water supply, the national tariff structure must include the following:

- a lifeline tariff to ensure that all South Africans are able to afford water services sufficient for health and hygiene requirements;
- in urban areas, a progressive block tariff to ensure that the long-term costs of supplying large-volume users are met and that there is a cross-subsidy to promote affordability for the poor, and
- in rural areas, a tariff that covers operating and maintenance costs of services, and recovery of capital costs from users on the basis of a cross-subsidy from urban areas in cases of limited rural affordability (section 2.6.10).

5.3.3 Similar points were also made repeatedly in the *World Development Report 1994*, though they were rejected by Bank staff operating in South Africa (both in the water pricing advice and in the *Urban Infrastructure Investment Framework*):

There are, however, ways in which infrastructure subsidies can be structured to improve their effectiveness in reaching the poor. For example, for water, increasing-block tariffs can be used -- charging a particularly low "lifeline" rate for the first part of consumption (for example, 25 to 50 liters per person per day) and higher rates for additional

"blocks" of water. This block tariff links price to volume, and it is more efficient at reaching the poor than a general subsidy because it limits subsidized consumption. Increasing-block tariffs also encourage water conservation and efficient use by increasing charges at higher use. These tariffs are most effective when access is universal. When the poor lack access, as is frequently the case, they do not receive the lifeline rate and typically end up paying much higher prices for infrastructure services or their substitutes (pp.80-81).

5.3.4 The Bank staff's acts of omission are having and will continue to have serious material, adverse consequences for low-income residents -- such as water cut-offs, water wastage and unhygienic conditions associated with leaky township water systems -- and will in the process exacerbate the dramatic inequalities between races and income groups inherited from the apartheid era.

5.3.5 As mentioned above, many design alternatives to the LHWP are now being seriously explored within DWAF. Yet various demand-side techniques have apparently not been factored into demand schedules or demand curves for the Vaal basin. They include repairing our townships' leaky connector pipes and leaky water taps, modernising and fixing meters, changing water usage patterns through progressive block tariffs, promoting water-sensitive gardening and food production, intensifying water conservation education, regulating or prohibiting excessive watering of suburban gardens, implementing other water use regulation, clearing invasive alien trees, promoting school water audits, billing consumer with more informative material, and installing low-flow showerheads, dual-flush toilets and similar mechanical interventions. The Bank has the resources to -- and should as a matter of policy -- evaluate such options, but in the case of both phases of LHWP, did not. In violation of Bank policies, alternative options have not been considered seriously.

5.4 OD 10.04, Economic Evaluation of Investment Options. Para. 3, Alternatives, states: "Consideration of alternatives is one of the most important features of proper project analysis throughout the project cycle. To ensure that the project maximizes expected net present value, subject to financial, institutional, and other constraints, the Bank and the borrower explore alternative, mutually exclusive, designs. The project design is compared with other designs involving differences in such important aspects as choice of beneficiaries, types of outputs and services, production technology, location, starting date, and sequencing of components. The project is also compared with the alternative of not doing it at all." Moreover, Para 5, Sustainability, states: "To obtain a reasonable assurance that the project's benefits will materialize as expected and will be sustained throughout the life of the project, the Bank assesses the robustness of the project with respect to economic, financial, institutional, and environmental risks. Bank staff check, among other things, (a) implementation to ensure that the project functions as designed, and 9b) whether critical private and institutional stakeholders have or will have the incentives to implement the project successfully."

5.4.1 There has been little or no analysis of how building either 1A from 1986-97, or building the proposed 1B now, before the water is needed, has affected and will affect Rand Water and its end-users, especially low-income users with inadequate access to water or who suffer the effects of failing infrastructure. Analysis conducted to date does not sufficiently evaluate alternatives to 1B, by fully considering the costs and benefits -- including social and environmental benefits -- of not building the project. In short, Bank analysis regarding 1A was innocent of any of the economic and sustainability concerns we raise now, and analysis of 1B's optimum starting date has not seriously incorporated demand-side management possibilities, and hence is weighted toward funding and completing the project at the earliest opportunity. A more thorough analysis of 1B may reveal that a major delay is not only cost-effective but also desirable.

5.4.2 One important economic justification for building the project now is the possibility of a major drought. The detailed economic analysis of drought, and possible scenarios for dealing with it other than building this

dam, have not been shared with affected communities. Whether demand-side management that could reduce the supply need by 40% would mitigate the drought costs has not been considered by the Bank. Moreover, the expansion of water storage (through Phase 1B's construction) beyond that presently required will have the effect of hindering conservation efforts, compared to the option of dam delay, thus exacerbating problems in the event of a drought.

5.4.3 The sustainability of Phase 1B has not been securely established, since a thorough study on its impacts on the downstream environment is not yet complete and will not be for a few years. The Orange River is already suffering from over-allocation problems downstream, and this project will add to that problem. Again, the Bank is proceeding with a project without considering the important social and environmental impacts of its actions, in violation of its policies.

5.4.4 This project is also not sustainable economically, due to the burden it will place on Rand Water and its end-users. To illustrate, according to 1995 Bank reports, a cubic meter of water from the Vaal Dam costs (in SA currency) 8 cents (US\$0,016), from Bloemhof 10 cents, from Tugela Vaal 21 cents, and from the combination of Lesotho's Katse (complete) and Mohale (proposed), a staggering R1,50 (US\$0,30). Bank staff have told Minister Asmal that it would be "economically appropriate" to raise the price of Vaal water from 30 cents to R1,50 per cubic meter. To put this in perspective, the three other projects provide Gauteng with 2,3 billion cubic meters a year, while the two Lesotho dams together would add just another billion. There has been no published information on whether the economy of Gauteng can absorb such price increases.

5.5 **OD 4.07, Water Resources Management.** Para. 1 states: "Bank involvement in water resources management entails support for providing portable water, sanitation facilities, flood control, and water for productive activities in a manner that is economically viable, environmentally sustainable, and socially equitable." Moreover, Para. 2 states: "The Bank assists borrowers

in the following priority areas: (a) Developing a comprehensive framework for designing water resource investments, policies and institutions. Within this framework, when the borrower develops and allocates water resources, it considers cross-sectoral impacts in a regional setting (i.e. a river basin). (b) Adopting pricing and incentive policies that achieve cost recovery, water conservation, and better allocation of water resources. (c) Decentralizing water service delivery, involving users in planning and managing water projects, and encouraging stakeholders to contribute to policy formulation. The Bank recognizes that a variety of organizations – private firms, financially autonomous entities, and community organizations – may contribute to decentralizing water delivery functions. Thus it supports projects that introduce different forms of decentralized management, focusing on the division of responsibilities among the public and private entities involved. (d) Restoring and preserving aquatic eco-systems and guarding against overexploitation of groundwater resources, giving priority to the provision of adequate water and sanitation services for the poor."

5.5.1 Because the LHWP will result in water cost increases (9% this year, following a 30% increase last year) of above the inflation rate (last year below 8% and presently below 6%) for poor users (according to Standard and Poors analysis of Rand Water, and in a press conference on 27 February, according to Rand Water itself), and because it will add supply that is not needed at this time, the LHWP does not meet the standard of social equity described in this directive, and fundamentally contradicts the terms of Op 4.07. It will likely reduce the incentive to force the biggest users to practice water-conservation and will not encourage better allocation of resources -- in fact, more likely Phase 1B will have the opposite effect.

5.6 OD 4.15 Poverty Reduction. Para. 28 states: "The Bank's role in supporting poverty reduction through individual investment operations goes beyond financing. The Bank supports sustainable, high return projects and project components that benefit the poor and that would not be done, or would be done differently, without the Bank. Since an improved policy framework can increase the returns to individual projects, Bank project support should also encourage the authorities to eliminate policy and institutional biases

against the poor." Moreover, Para. 39. states: "Popular Participation and NGOs Effective implementation and operation of most poverty-reduction projects require the active involvement of the beneficiaries. Active beneficiary participation also should be built into earlier stages of the project cycle. Participation is most critical to the success of projects designed to help specific groups of people. It is important, for example, in family planning, community health, food security, urban upgrading, nutrition, and community water supply projects."

5.6.1 In contradiction of the terms of OD 5.16, this project will create undue burdens on low-income people, not only on project-affected people in Lesotho, but in Gauteng Province, where as noted, water rates have already risen dramatically due to the LHWP and are expected to rise further as the LHWP bills begin to rise. Bank staff have in fact helped to undermine attempts to serve the needs of low-income people and rather than eliminating, are encouraging "policy and institutional biases against the poor." To undertake such a costly infrastructure project well before it is needed shows, we believe, a bias against low-income people (in favour of those associated with the very profitable construction of the LHWP), who would be better served by changes in water allocation, repair of leaky infrastructure, a daily lifeline amount of water (50-60 liters per capita per day is the *Reconstruction and Development Programme* medium-term objective) and other approaches.

5.6.2 As noted above, affected people have not been fully consulted, not at early stages nor more recently, about the impact of the water pricing implications of the LHWP on poverty. Within the past six months, hundreds of thousands of low-income South Africans have had their personal water supplies cut off as municipal authorities have had to come to grips with persistently lower Intergovernmental Grants (in 1997-98, 85% below the real 1991-92 levels, according to the Financial and Fiscal Commission). These diminished transfers, which explicitly harm low-income consumers, are apparently required because of the ambitious deficit reduction targets in the *Growth, Employment and Redistribution* strategy adopted

in June 1996, following extensive World Bank staff inputs and Bank modelling, but without an adequate safety net for those in default on municipal water accounts.

6. Conclusion

6.1 Summary information. We state the above concerns as summary information. There is a great deal of backup documentation available to justify all of our concerns, including detailed e-mail discussions with World Bank staff that record the Bank's failure to adequately carry out conservation and equity measures, and Bank acknowledgement that a long delay in the next phase of the project is not unreasonable. The claimants will provide the panel with this information, much of which needs to be kept confidential to protect claimants' identity, in a supplemental package.

6.2 Wide support for demand-side management approach. There is, in fact, little controversy over the need for South Africa to focus more on demand-side management. The case for a delay in the LHWP's expansion is strongly supported in South Africa, and indeed the environmental reporter for *Business Day* newspaper recently (on 19 March) concluded that "calls for delay [in Phase 1B]... may be justified in order to allow SA to clean up its own backyard concerning water wastage." As the Bank's LHWP task manager himself expressed the shortcomings of previous Bank studies (in an October 1997 memo), "All of this shows that if demand management had been on the table in 1986 at the time of the treaty negotiation, and if the commitment to 1B had not been made on the terms that it was -- then the whole story would be different. Lesson: push the demand management stuff."

6.3 Conclusion. It is therefore logical both for the Bank Inspection Panel to initiate an investigation, and for the Executive Directors of the Bank to delay any funding approval until a clearer picture emerges of whether the Lesotho Highlands Water Project should go ahead as is currently envisaged, or whether viable alternatives should not, perhaps, first be given a chance...

III. The World Bank Response (1): "The Economics of Phase 1B"³

DATE: April 24, 1998

FROM: World Bank (Africa Region), Washington, DC

1. Introduction and summary⁴

One of the critical questions in assessing Phase 1B is its economic viability, i.e. whether the benefits of the project outweigh its costs by a sufficient margin to justify the investment and the associated environmental and social costs. This note summarizes this economic assessment for Phase 1B. It concludes that the project has a rate of return of nearly 16%, is more economical and feasible than alternative supply restrictions or demand management efforts (which nevertheless are being pursued to curb the demand for water in coming decades), and is the least cost option among available alternatives.

In addition, the benefits far outweigh the costs for both partners in the project, South Africa and Lesotho. For South Africa, it is the least cost option to supply water to the Gauteng region and for Lesotho, it generates considerable additional revenue and economic activity that will play a critical role in Lesotho's economic development. There are environmental and social costs associated with the project, principally due to resettlement, loss of economic resources, possible adverse health and social impacts of the construction activities on the remote mountain area, and some impacts on the natural environment. The plans for mitigation of these impacts are included in the project costs and the rate of return calculations, and amount to 8% of the total project costs. If implemented fully, they are likely to mitigate most of the losses and will generate some additional benefits to people affected by the project. Even drastic changes in the assessment of the environmental and social costs will have a small impact on the economic viability of the project (even if they necessitate larger, more extensive and costly mitigation measures).

2. Methodology

This assessment only considers the incremental benefits of costs of Phase 1B and for most of the analysis, all benefits and costs incurred under Phase 1A that may have an impact on Phase 1B will be considered sunk and will not be included in the assessment. In the cost-effectiveness analysis, however, the cost-effectiveness of 1B alone as well as 1A and 1B together will also be assessed. Based on most recent assessments of water demand in South Africa, it was determined that Phase 1B reduction in demand could possibly have enabled a delay of up to 7 years. Such a delay is not cost-effective at this stage and very damaging to Lesotho (see separate document). The very conservative assumption used for the cost-benefit analysis is, however, to assume that the water will not generate any benefits to South African water users until 2010 (seven years after the completion of Phase 1B).

For the project to make economic sense, the benefits must exceed the costs for the project as a whole, from South Africa's point of view, and from Lesotho's point of view. The project must therefore be analyzed from these three points of view. Table 1 summarizes the benefits and costs of the project from the three points of view. The major costs of the project are the investment costs, the environmental and social losses associated with the project, and the costs associated with mitigating these losses. In addition, there may be costs borne by downstream agricultural users in the lower Orange River in South Africa, where after a string of exceptionally dry years, there may be less water available for irrigation use in the lower Orange.⁵ The most important benefits are the benefits to consumers in South Africa of more water (in the face of rising industrial and household demand for water in the Gauteng area), the revenues to the South African government of selling bulk water, additional hydropower benefits of 1B water flowing through the Muela hydropower station (at no additional cost), the benefits of environmental and social mitigation expenditures, and the economic activity and infrastructure (roads, powerlines, buildings, etc.) generated by the project. For South Africa and Lesotho, the assessment is slightly different as the costs and benefits are apportioned asymmetrically between the two countries. South Africa bears the project costs, most of the environmental and social mitigation expenditures, pays royalties to Lesotho for the water transfer, may suffer some losses to

Debating Supply and Demand Characteristics of Bulk Infrastructure

irrigated agriculture in the lower Orange, but gets all the consumer and bulk sale benefits of the water and some of the economic spin-offs. Lesotho bears the environmental and social losses and pays a small share of the rural development program (those elements going beyond the direct compensation), gets none of the water use benefits, but receives the royalties, the hydropower benefits, the benefits of all of the environmental and social mitigation measures, most of the economic activity generated by the project, and the benefits of all the infrastructure.

All costs and benefits are expressed in 1995 prices. The 1995 exchange rate was \$1=3.65 Rand or Maloti. Discounted values are discounted back to 1995.

In order to estimate the benefits to South African consumers of the additional water supplied by Phase 1B, the situation with Phase 1B has to be compared to a situation without Phase 1B. In other words, what are the costs to South African water users to make do without the additional water provided by Phase 1B? Three methods of obviating the need for Phase 1B water are considered. The first is to simply use the price mechanism to restrict demand to a point that Phase 1B water is no longer needed. The loss of consumer surplus as a result of the price rise needed to make do without Phase 1B is then the benefit of the project (alongside the bulk water revenues and the hydropower benefits)⁶ which is compared to the costs of the investment (project costs plus environmental and social mitigation expenditures). A second way to examine the alternatives to Phase 1B is to look at ways to restrict the demand either through selective water restriction to specific water users (e.g. agriculture, new industry in the Gauteng area, power stations) or by generalized demand management policies.⁷ The costs, benefits, timing, and feasibility of these strategies are then compared to Phase 1B. While a high rate of return using these analyses would suggest that increased water supply through Phase 1B is superior to using the water price or selective water restrictions or other demand reduction policies to obviate the need for Phase 1B, it does not necessarily prove that Phase 1B is the best method to increase water supply to the Gauteng area. Therefore, a third way to look at the alternatives to Phase 1B is to examine the costs, benefits, timing, and feasibility of other supply alternatives to Phase 1B. In particular, supplying the same amount of water through an alternative Orange River transfer scheme (wholly within South Africa called the OVTS which would use the same water transferred by Phase 1B and is thereby a direct competitor to Phase 1B) or a transfer scheme from the Tugela River (called the TVTS which would use different water but, if found cheaper, should be implemented before Phase 1B) will be considered.

3. Results

a) From the Project's and South Africa's point of view

Based on the consumer surplus analysis, water prices will have to rise dramatically (by about 8% in real terms every year) to restrict growing demand to available supply.⁸ This is true even if Phase 1B is implemented. The needed price increase is, however, much less than in the case without Phase 1B leading to a gain of consumer surplus to South African water users. This surplus, combined with the revenues of bulk water sales and the hydropower benefits ensure that the real rate of return of Phase 1B is about 15.9%, far above the 10% cut-off usually applied for projects of this nature. Table 2 shows that only inconceivably large escalations in costs and reductions or delays in benefits would reduce the rate of return to below 10%. Moreover, even if demand changes were so dramatic that they would allow a theoretical delay of Phase 1B by 10 years, it would still carry a 14% rate of return. If the water was needed after 2025 (allowing for a 22 year delay), the rate of return would fall below 10%. (This however implicitly assumes that such a delay could be attained at no extra cost. If a 22 year delay were to require significant other investments then this "switching value" is no longer valid.) This calculation also includes a worst-case assumption about the magnitude of losses to downstream agricultural users in the lower Orange. Without these worst case assumptions, the rate of return would be 18%.⁹

Debating Supply and Demand Characteristics of Bulk Infrastructure

From South Africa's point of view, the rate of return is only slightly less at 15.7% since the benefits of increased consumer surplus and bulk water sales are much larger than the hydropower benefits (not considered from RSA's point of view) and the royalties (added as additional costs from RSA's point of view).¹⁰ The sensitivity analysis shows very similar results to those in Table 2.

It has to be investigated whether other supply augmentation schemes would be more economical than Phase 1B. The best way to compare different schemes using the same measuring rod is to use unit reference values which is the price per cubic meter of water which would yield a present value of revenues equal to the present values of the project costs, i.e. how much one would need to charge for a cubic meter of water to recover all costs. Table 3 shows the URVs for Phase 1B, the OVTS scheme using the same water, and the TVTS scheme using different water. From the project's point of view, Phase 1B is considerably cheaper than the two alternative schemes to supply water to the Gauteng area. Even when the royalties are considered (which only fall due in the case of Phase 1B since the other schemes are wholly within South Africa), Phase 1B is cheaper than competing schemes. Thus also from South Africa's point of view, Phase 1B is the most economical and timely project to be implemented.

Table 3 also investigates whether Phase 1A+1B combined are the most economical way of supplying water to the Gauteng region. Since Phase 1B benefits from some sunk expenditures made under Phase 1A (esp. the transfer and delivery tunnels from Katse Dam to RSA), the combined URV costs for Phase 1 as a whole is larger than for Phase 1B alone. At the same time, the table shows that both combined are still much cheaper than the alternative way of transferring the same water, the OVTS. However, it al

tallation of low-flow showerheads, dual-flush toilets, and similar mechanical interventions have not been addressed. These are
c

Debating Supply and Demand Characteristics of Bulk Infrastructure

ó ó ó ó
ó ó
đ eme is derived from spare pumping capacity in the
Drakensberg, which was not anticipated at the time LHWP and TVTS were
initially compared.

The analyses from the Vaal Augmentation Planning Study also allow a comparison of Phase 1B with four alternatives to meet the demand in the Gauteng area. The first is to allow no further development of manufacturing enterprises in the Gauteng area, thereby reducing the demand for water from industry (and the households employed by these industries). The study concluded that Gauteng's locational advantage including market access, infrastructure, availability of skilled and unskilled labor is so large that Phase 1B would have more than a 22% rate of return over imposing the costs of restricting industrial development in Gauteng. The second option is to outlaw all remaining irrigation in the Vaal catchment area (beyond the moratorium on new irrigation in place since the early 1970s). A comparison of the benefits and costs of such a policy would yield a rate of return of Phase 1B of about 8%. Additional difficulties of such a policy would include the need to upgrade water quality of the water currently used for irrigation and the need to transfer water from the lower Vaal to the upper Vaal where the most of the non-agricultural use takes place as well as the social ramifications of such a policy. Nevertheless, changes in the water law and water policies are aimed at reducing the use of water in the Vaal catchment area for relatively low value irrigation and will further reduce the share of water used for irrigation.

The third alternative considered was to force ESKOM to change its power stations in the Vaal catchment area from wet to dry cooling. Compared with implementing this change, Phase 1B yields a rate of return of approximately 14% making supply augmentation cheaper than this demand restriction.

The fourth alternative are demand management measures to reduce the demand for water. Measures include metering, raising water tariffs, loss and leakage control, and the like. The VAPS concluded that effective implementation of these policies could reduce water demand by 9-12% so that the next scheme (after Phase 1B) could be delayed by up to 8 years. The costs of such measures (esp. universal metering and effective loss and leakage control) were not considered and are likely to be considerable. As far as water pricing measures to reduce demand are concerned, they will carry costs to consumers of the magnitude described above in the consumer surplus analysis. DWAF and the Water Boards have implemented a range of measures to reduce

water demand by DWAF and the Water Boards (including two consecutive water tariff hikes of 30% in 1995 and 48.5% in 1997 and aggressive water conservation campaigns and regulations to restrict water use and promote the use of water-saving devices), which are likely to have already contributed to some reduction in water demand. The imposition of water restrictions in 1995 (during the last drought) have also served to reduce levels of demand. The total reductions of demand already achieved could have possibly allowed for a delay of Phase 1B by between 4-7 years (the precise magnitude is currently being investigated and will not be available for another 1-2 years), had these reductions taken place before the implementation of Phase 1B began. As shown in a separate analysis, it is not cost-effective to delay the project at this stage. Instead, DWAF is delaying any decision on a future project until further demand management initiatives have had time to have an effect.

b) From Lesotho's point of view

As Lesotho bears none of the costs related to the water transfer (including all environmental and social expenditures directly associated with mitigation and compensation) and does not benefit from the transferred water, it is not possible to calculate a rate of return from Lesotho's point of view. Nor does Lesotho currently use any of the water to be transferred to Gauteng (with the possible exception of very small amounts of water immediate downstream of the dam for which users will be compensated at South Africa's expense). Instead, the question to be examined is whether Lesotho derives sufficient benefits from transferring one of its few and most precious resources to South Africa.

Lesotho will derive a range of permanent and temporary benefits from the project. The most important benefits are the royalties associated with the additional water to be delivered from Phase 1B. The incremental royalties associated with Phase 1B will amount to M 30m per year in 1995 prices, equivalent to about 1% of Lesotho's 1995 GDP. These royalties are payable in perpetuity, as long as the water is delivered, and are payable regardless of the decision to proceed with further phases of LHWP. With Phase 1B fully implemented, Lesotho is then expected to earn a total of about M130m in

royalties per year (in 1995 prices) for Phase 1A and Phase 1B combined. This is equivalent to about 4% of Lesotho's 1995 GDP. A second permanent benefit will be the hydropower generated by Phase 1B which will generate about M 12m (1995 prices) of revenue per year at no additional costs (installed hydropower capacity under Phase 1A is designed to include Phase 1B water). Third, the increased tourism potential and the permanent infrastructure created by the project (including a paved road into the highlands to be built and upgraded as part of Phase 1B as well as powerlines, telecommunications facilities, and housing and services in the project area) provide further permanent benefits to Lesotho.

At the same time, Lesotho will bear most of the environmental and social losses of the project, including the loss of land and livelihood for several hundred households, possible adverse health and safety in the project area, and some environmental problem including the threat to two rare species. The environmental impact assessment identifies all of the expected losses and the environmental action plan is designed to minimize all the losses and fully compensate those that are suffering them. The plan is designed to more than compensate for the losses incurred and to provide additional benefits (such as improved infrastructure, public health and health care, development of tourism potential, etc.) to surrounding communities (and host communities of resettled households). The economic analysis estimates that the losses incurred will be amount to an economic loss of about M300m. Compensation, mitigation, and additional development measures going beyond direct financial compensation to restore livelihoods in affected communities are expected to cost M370m. and, if implemented successfully, should therefore yield about M70m in additional benefits to affected communities.

In addition to the permanent benefits generated by the project, Lesotho will benefit considerably from the construction activities of Phase 1B. The project is expected to generate about 3000 jobs for Basotho, yielding a total of about M275m in wages. This will be augmented by another M200m of wages paid to about 300 Basotho employees of LHDA over the construction phase of the project. In addition, sub-contracting and supply opportunities are expected to generate M140m in revenues for Basotho companies. SACU revenues associated with the project and related economic activity are expected to amount to another M300m. Finally, project-related tax revenues (income,

sales, and company taxes from direct project-related activities as well as spin-off activities) are expected to bring in about M100m to the government over the coming years. In total, the direct and indirect effects of Phase 1B are expected to account for 6.5% of GDP in 1998 (3.9% of GDP in 2002), 21.4% (12.3%) of value-added in the building and construction sectors, and about 7.4% (9.3%) of government revenues. These benefits will all accrue before most of the permanent benefits, including the royalties and hydropower benefits (as well as the tourism benefits) start materializing in 2003.

4. Conclusion

If implemented as projected, Phase 1B will generate considerable benefits to all parties of the project. It carries a very high rate of return that is not sensitive to large changes in costs or delays in implementation. It provides huge benefits to South African consumers that cannot be generated using alternative water supply schemes or means to restrict water demand. For Lesotho, it will assist Lesotho in developing one of its very few assets, and generate considerable permanent benefits in the form of royalties, hydropower, tourism, and infrastructure. The economic activity generated by the project will help Lesotho sustain its unprecedented growth boom of the past five years where, with substantial assistance from the construction activities of Phase 1A, GDP growth averaged more than 8% per year, making it one of the fastest-growing economies in the world.¹² The SACU and tax revenues generated will also help sustain sound government finances which helped GoL turn a deficit of 17% of GDP in 1987 into a surplus of 3% in 1994.

IV. The Ministry of Water Affairs and Forestry Response: "Watering Down the Facts"

7 May 1998, *Mail and Guardian*

The content and the cloak-and-dagger presentation of the article "Damn dams, look in your own backyard" (*Mail and Guardian*, April 30 to May 6), alleging powerful opposition to the Lesotho Highlands Project by unnamed Alexandra individuals, need to be tested and placed in context.

Much of what is said in the name of "residents of Alexandra township" reflects the line, indeed the phrasing, of international groups opposed to the World Bank, its policies in general, its policies in the water-resource sector and its funding of dams. To be effective, and to gain formal audience, they must have local allies.

Yet almost all Lesotho NGOs have withdrawn their criticisms of the Lesotho project. So did the South African civics, including Alexandra, after visiting and discussing with the people affected, and not "intimidation", which is claimed in the article.

We have sympathy for the difficulty some international critics face, particularly now as World Bank executive directors were about to visit South Africa to review, among other things, the Lesotho project.

We suggest the real authors stand up and put their case in person. Your readers may as well escape being given the impression -- complete with editor's note that "identities are known to the Mail & Guardian" -- that we live in the Stoffel Botha days, when blank spaces and withheld names were the only way to tell the story.

There are, of course, substantive matters of debate around the Lesotho Highlands Project and its possible future phases. These large dam projects are essentially insurance against the risk of drought. Had the predicted El Nino-induced drought materialised as it did elsewhere, Gauteng and surrounding provinces would have faced a choice between severe water restrictions and the dam.

At current levels of development, our experience is that, in a severe drought, the restrictions go beyond what is achievable through domestic

conservation, however well-run our national conservation programme is - and we appreciate the back-handed compliment for this programme in the anonymous article.

The hardship of drought falls on economic activity as well as on householders and imposes huge costs on the economy. So we believe the majority of residents would have opted for the first dam, Katse, and the assurance it provides. Phase 1A was ready just in time to avert the risk of economic shutdown. We face similar choices over Phase 1B, which is now under way and is not reversible without massive cost.

Planning is an imprecise science, particularly during the sort of political and economic transition South Africa is traversing. We would be irresponsible to plan for a stagnant economy, with no growth in incomes and jobs. We have rather chosen to plan for a better South Africa, specifically for a growing and prosperous regional economy.

We accept the responsibility to help to ensure that unacceptable environmental degradation and social disruption do not result from this project, which is constantly under review. It has been made more environment-friendly and people-friendly. Although the treaty ensures people should not be worse off after construction, we are committed to ensuring they are better off.

We agree the Phase 1B project could have been delayed for a year or two. That would have lost the effective "continuity bonus" (worth at least R600-million) that we have gained by using capacity established for Phase 1A. In taking this decision, we are also guided by the policy consensus that it is helpful to the regional economy during the present phase to maintain current levels of domestic fixed investment.

Water tariffs to consumers and management of distribution networks in Alexandra and in the Johannesburg area generally are the responsibility of Johannesburg's local government. So we hope the critics will take the debate into the forums that have the power to act. Specifically, we would like to know whether they are using the opportunities opened to them by the Water Services Act to intervene at local level.

To our knowledge, this is not happening in any structured way. In terms, for instance, of our policy of promoting block tariffs, Alexandra residents without full household services or making relatively low use of water

should not have to pay the marginal cost of new water supplies. If they are being asked to do so, it is at local government level that inquiries should be directed, and we would be happy to help them to do this.

Neither the national department nor Rand Water has the power to compel any local authority to use water made available by the Lesotho scheme. What we expect is that the high cost of "new water" will provide new incentives for local government to reduce "unaccounted-for water". The department and Rand Water have initiated schemes to help them do this.

We invite your readers to join us in the difficult but exciting task of implementing a new water policy that will build a fair society and allow South Africa to thrive in the coming century.

V. The World Bank Response (2): "Response to the Alleged Violations"

DATE: June 17, 1998

FROM: James D. Wolfensohn, President

1. ... The Chairman of the Inspection Panel requested the Bank Management to provide the Panel with written evidence that it has complied, or intends to comply, with the relevant policies and procedures in the implementation of the Project referenced above...

I. Violation of consultation process as required under OD 4.00 Annex B, paragraph 19

4. The Requesters have alleged that "as consumers and citizens who will have to pay for the Project" they have not been "adequately consulted at any stage of this project"...

5. In the Management's opinion, this allegation has no merit... The residents of Alexandra and Soweto townships represent only a small fraction of consumers who will benefit from the water purchased by South Africa for use in its territory... the Project does not impose directly any disproportionate burden to the residents of Alexandra and Soweto townships...

6. Management is of the opinion that the requirements ... could not reasonably require the Borrower under the Project to consider that all the ultimate consumers of a commodity (i.e. water) harnessed under the Project (including those residing in a third country) should be treated as affected by the Project...

7. ... it is Management's view that OD 4.00 does not require as a matter of policy or of procedure that all consumers of a commodity to be produced as a result of a Bank-financed project, and particularly those residing in a third country, be included in the consultation process...

II. Violation of consideration of project design alternatives as required under OD 4.00 Annex B, paragraph 5

9. The Requesters allege in paragraph 5.3 that "the Bank has not fully investigated demand-side management options during the planning of either phase of the LHWP"...

12. Demand-side management is a technique which has been developed over time. It should be noted that when the Treaty was concluded in 1986, demand-side management techniques were not yet fully developed anywhere in the world...

13. In this connection, the Borrower and the South African water authorities have analyzed the Vaal River Augmentation Planning Studies which consider demand management as an alternative to the subsequent phases of LHWP beyond Phases 1A and 1B... These analyses have concluded that it would be more beneficial for Lesotho and South Africa to proceed with the implementation of the Phase 1B Project as currently scheduled. The Bank has reviewed these studies and has found them satisfactory...

III. Failure to carry out economic evaluation of alternatives as required under OD 10.04

16. The Requesters' assertions that "there has been little or no analysis of how Phase 1A and Phase 1B will affect Rand Water and its end users" ... Regarding the Phase 1B Project, it should be noted that a comprehensive economic assessment of the Project economics (including the alternative of demand management and an analysis of the economics of delaying Phase 1B) was carried out by the Borrower and the South African authorities; this study was updated in April 1998. The Bank has evaluated this assessment as part of its appraisal of the Project and has found the analysis and its conclusions satisfactory...

17. The Requesters also assert that the sustainability of the Phase 1B Project has not been established due to the potential impact that the Project may have

Debating Supply and Demand Characteristics of Bulk Infrastructure

on the Orange River. The Bank has reviewed and discussed with the South African authorities their "Orange

promote affordability for the poor, and in rural areas, a tariff that covers operating and maintenance costs of services, and re

tion 2.6.10).

World Development Report 1994, though they were rejected by Project, "water costs will increase by 9% this year, following a 30% increase last year; this will hurt the poor particularly since the additional supply is not needed at his time." They further claim that the Project will create a disincentive for water conservation. In Management's view, this assertion has no merit. The bulk water price increases experienced to date result from water shortages suffered by the Gauteng region in the 1980s. According to the law of supply and demand, water price increases could have been even higher if Phase 1A of LHWP had not been constructed.

19. Also, it should be noted that since Rand Water pays a variable rate (i.e. a set rate per cubic meter consumed and not a fixed annual "take or pay" rate) for the water they consume, and since they pass these costs on to consumers in the same form, the project will not create a substantial disincentive for demand management... if Phase 1B is pursued on schedule and demand management is implemented -- then bulk water prices will not be further increased as a result of the execution of the Phase 1B Project...

20. ... Management is of the opinion that the bulk water pricing policy employed by South Africa provides for an acceptable combination of cost recovery and better allocation of resources (falling just under the long run marginal cost)...

V. Failure to promote poverty reduction measures as required under OD 4.15

21. The Requesters are asserting that the Phase 1B Project "will create under burdens on low-income people, not only on project-affected people in Lesotho, but in Gauteng Province because of increases in water prices." In Management's view, this claim is without merit. This is because Management is satisfied that a central aspect of the Project is its poverty related dimension which is anchored in the Lesotho Country Assistance Strategy...

VI. The World Bank**Inspection Panel Findings:****"Panel Report and Recommendation"**

DATE: August 18, 1998

FROM: Ernst-Guenther Groeder, Chairman, Inspection Panel

13. This report is based on the Request, the Response, additional information provided by the Requesters and Bank Management, the RSA, and individual Bank Executive Directors who recently visited South Africa and Lesotho...

The Question of Demand-Side Management

61. Based on the field visit, it is evident why Bank Management in its Response states that it was satisfied that the Government of South Africa has adequately considered demand-side management alternatives in relation to the decision to proceed with Phase 1B...

63. During the field visit, the Inspector found general agreement that these policies and programs have enjoyed a considerable initial success. Estimates of the potential of these programs to reduce water demand in the Vaal River System Supply Area vary greatly but they are all significant...

65. The Requesters also claim that officials in the townships have failed to take demand-side management seriously, arguing that it is only now that attempts to address faulty, apartheid-era infrastructure are being made. The Panel did not consider this because it does not relate to Bank Management acts or omissions in compliance or non-compliance with the OD.

66. However, during the field visit it became apparent that Gauteng municipalities are not yet in the forefront of demand-side management efforts but the need and potential are recognized. As the Requesters claim, it was evident that the poorer townships, including Alexandra and Soweto, suffer huge water losses through broken mains, ruptured pipes, leaky communal, yard and house taps, and otherwise inadequate water infrastructure. Officials from

Rand Water and the municipal utilities stated that the financial implications of these losses are huge and disturbing.

67. In October 1995, the Department of Water Affairs and Forestry published a "Vaal Augmentation Planning Study" in which it assessed water demand management in the Vaal Rivers System Supply Area. The Bank reviewed this study and found it satisfactory. One may legitimately argue about the merits of the report, but its existence clearly demonstrates that demand-side management was "considered" as required by the OD.

68. During the field visit, the reports that the Department of Water Affairs and Forestry is working with Rand Water on a comprehensive demand-side management study for the Vaal River System Supply Area were confirmed. The study is expected to be completed in 1999. It will be used to assess options for the future, including whether and when future phases of LHWP may be needed.

69. In light of the above, the Panel is satisfied that Bank Management appears to have "considered" demand management as required by the OD...

The Cost Recovery and Price Link

74. In discussions with senior officials from TransCaledon Tunnel Authority (TCTA), DWAF, Rand Water and the municipalities of Alexandra and Soweto, the Inspector was informed that water prices have risen at all levels. These increases are a consequence of a number of factors, one of which is the LHWP. The relationships and linkages between these factors, however, are anything but direct; in fact, they are long, complex and tenuous.

75. Prices are levied at various points in a chain leading from the source to the end user. Thus DWAF collects raw water from various sources in the Vaal System, one of which is LHWP... It sells water to Rand Water at a bulk tariff. It also sells water to other large consumers at the same bulk tariff. Rand Water in turn wholesales water to the municipalities in Gauteng at a bulk price. And the

municipalities in their turn retail water to end users at a variable price.

76. Water from the LHWP enters this complex system upstream, at the point where the Ash River discharges into the Vaal. At that point, the TCTA, which is responsible for bearing all project costs and servicing the project debt, sells project water to DWAF at a bulk rate set to enable it to discharge the debt over a period of years (cost recovery). It is true, as Management states, that Rand Water pays a set rate per cubic meter consumed (i.e. if it doesn't take it doesn't pay). But this may not have any significance in practice. The fact is that TCTA and DWAF must recover the full costs of the project. If Rand Water does not take the volume of water on which the rates are calculated for a period of time, the rates will be adjusted upwards to produce the necessary revenue for full cost recovery. Or, alternatively, the debt repayment period may be extended.

77. Since April 1994, the bulk water tariff that TCTA charges DWAF has slightly more than tripled, rising from R0.242/Kl to R0.751/Kl. During the same period, April 1994 to April 1998, the tariff that DWAF charges its large consumers, including Rand Water, has slightly more than doubled, rising from R0.457/Kl to R0.945/Kl. This of course includes the amount that DWAF pays to TCTA for LHWP water.

78. The last increase levied by TCTA occurred in April 1998 and, contrary to the concerns reflected in the claim, both TCTA and DWAF stated that they foresee no further increases as a result of 1B. In other words, TCTA anticipates that the prices now in place at the point where it sells to DWAF should enable it to fully retire the debt for Phase 1, including both 1A and 1B.

79. Rand Water's charges to the municipalities have also increased during this period. From April 1994 to April 1998, the bulk water tariff that Rand Water charges the municipalities increased by slightly less than half, rising from R1.201/Kl to R1.685/Kl.

80. How have the municipalities responded? At this point the linkages back to LHWP become very tenuous. At the municipal retail level in Gauteng, a host of factors impact on water charges, and on their collection, and it is simply not

possible to isolate one factor against the others.

81. In July 1995, the Inspector was informed that progressive block rates were introduced for meter use, with charges rising in four steps according to use. In the cases, for example, of Sandton, which is the richest community in Gauteng, and Alexandra, which includes some of the poorest in the province, the first step charge for the smallest users (up to 10 Kl) is R1.85/Kl; the fourth step charge for the largest users (above 40Kl) is R4.80/Kl.

82. Obviously, block rates can only apply where there is the capacity to meter use. Only 20% of poor people have metered water and they are not the poorest of the poor. The other 80% access communal facilities.

83. In Alexandra and Soweto, the poor are largely dependent on communal standpipes, not metered facilities. In these cases, there is a lower rate. It is a flat rate which is applied to each house in the environs of a standpipe. This flat rate is currently R18.15 (about \$3.00) per month. It too has increased somewhat. In July, 1996, it stood at R16.26 per month. This is viewed as a lifeline rate, even by some of the NGOs. Again, this is contrary to assertions made in the claim concerning the "lack of lifeline tariffs."

84. Indeed, the Government of South Africa and the DWAF actively support the adoption of lifeline tariff systems to ensure that every person has at least a basic level of service. Rand Water made it clear that they too support lifeline tariff systems, as do the municipalities.

85. During a field visit, the Inspector encountered a wide range of views concerning lifeline rates amongst NGOs and the poor users he spoke to at the standpipes. Some NGO leaders favor a lifeline rate of zero for the first 25-50 liters per day. Some are prepared to accept a real charge but would like to see it kept as low as possible. This is local debate. Whatever the level, in principle the effect of these lifeline rates are to shield the very poor from most if not all of any extra burden imposed by the LHWP.

86. The Requesters assert that many hundreds of poor people simply cannot pay even these low lifeline rates and are being cut off for non-payment. Officials from Rand Water and the municipalities stated that, indeed, many people are being cut off for non-payment. They also stated that non-payment is a widespread phenomenon in South Africa. It is not limited to water services and it is not necessarily tied to income or ability to pay. Non-payment for services began as a strategy in the struggle against apartheid. It has continued as a habit of non-payment if not a culture of entitlement. It is found not only in the poorer parts of Alexandra, Soweto and other townships, but also in the more well-to-do parts of those communities. It also affects residents of other communities, some of them very well-to-do, and even elected leaders and government agencies. Non-payment may result from other factors, including the costs of payment (time of travel to collection offices) and other institutional barriers. The Inspector was informed that the Government of South Africa, DWAF, Rand Water and the municipalities have taken a firm position on payment for services, including water and sanitation services. Failure to pay is resulting in cut-offs. Given the many factors at play, however, it is clearly difficult, perhaps impossible, to determine the extent to which non-payment and hence cut-offs stem from this habit of non-payment or from a simple inability to pay.

Conservation

87. As noted, Rand Water pays a set rate per cubic meter consumed (i.e. if it doesn't take it doesn't pay). Since TCTA and DWAF must recover the full costs of the project, if Rand Water does not take for a period of time, TCTA and DWAF stated that the rates may be adjusted upwards to produce the necessary revenue for full cost recovery. Or, alternatively, the debt repayment period could be extended. If the former, the higher rates would normally be passed on to consumers. In principal, higher water rates should encourage conservation. At the same time, if the lifeline rates are undisturbed, this should not place an extra burden on the poor.

88. On the basis of the foregoing preliminary assessment, Bank Management appears to have supported the RSA's approach to provide water in a manner

that is socially equitable while assisting it in aiming for both cost recovery and conservation. In light of this, the Panel finds that the Bank appears to have complied with this OD...

Poverty Reduction

90. The Requesters claim that Phase 1B "will create undue burdens on low-income people... in Gauteng province, where ... water rates have already risen dramatically due to LHWP and are expected to rise further as the LHWP bills begin to rise." They further believe that rather than undertake a costly infrastructure project before actually needed, the poor would be better served "by changes in water allocation, repair of leaky infrastructure, a daily lifeline amount of water... and other approaches."

91. The Management Response addresses compliance with this policy only in terms of Lesotho, not South Africa. However, with respect to meeting the needs of poor water consumers in South Africa, it states that: "any postponement of the Phase B Project would carry net economic and financial costs to South Africa and hence would more likely harm than help poor water consumers"... While insisting that these challenges "are not related to the LHWP," Management states that it "remains committed to pursuing a constructive policy dialogue with the relevant South African authorities with regard to South Africa's policies applicable to its retail water sector"...

93. At the same time, there is an increasingly severe lack of funding for addressing retail water delivery problems at the municipal level... In spite of this, South Africa is making impressive strides. For example, during the field visit it was learned that since 1995 nearly 3 million standpipes have been installed...

95. As noted, paragraph 28 requires the Bank to "encourage the authorities to eliminate policy and institutional biases against the poor." This is hardly needed in the context of the unique case of post-apartheid South Africa obviously committed to redressing past biases...

97. Since the RSA Country Assistance Strategy is not yet available, the Panel is unable to comment on whether the overall investment portfolio would compliment this particular project in terms of poverty reduction. Staff have indicated that the Bank is ready to consider a request from South Africa for financial assistance targeted at addressing the challenge of catching up on the huge inequitable legacy of the apartheid era: providing universal access to water, fixing the existing lack of infrastructure, etc. This is the harm the Requesters complain of. It is well recognized. However, it neither stems from, nor should it be aggravated by, the decision to proceed with 1B.

98. On the basis of this preliminary assessment, it would not therefore appear that the Bank has violated the letter of OD 4.15.

Findings on Harm and Bank's Observance of its Policies

99. There is no doubt, as the Requesters claim, that for reasons of historical neglect poor communities suffer widespread inequities in terms of lack of or limited access to water. This imposes enormous hardships, especially on people dependent on communal access, who have to carry water in buckets and makeshift containers, often for great distances. Water prices have increased and some are unable to afford water sufficient for basic health and hygiene. Leaky infrastructure is causing severe wastage and health problems. Conditions are harsh and unsanitary for millions of people in Alexandra, Soweto and other poorer townships. But the Panel is not satisfied that there is prima facie evidence linking this situation to the Project, nor with the Bank's decision to proceed with financing 1B.

100. The Requesters' concerns about the conditions on the ground are valid but there does not appear to be a connection between these conditions and any observance or not by the Bank of its own policies and procedures. Rather, they appear to be a part of the enormous legacy and odious burden of apartheid.

Recommendation

101. In this context, the Panel recommends that the Executive Directors do not authorize an investigation into this Request for inspection.

VII. Conclusion

The documents above -- about half of which represent critical citizen advocacy, the other half official consideration (and ameliorative rebuttal) of that advocacy -- provide fertile ground for case study, in several respects: the socio-economic, ecological and political context for an extremely expensive water transfer scheme; technical aspects of cost-benefit analysis; and the discursive tactics of the different roleplayers. This conclusion addresses all three aspects simultaneously, for together they compel us to raise concerns about the scope of reforms that can be made to the existing system, versus how urgently a more comprehensive, indeed revolutionary, transformation is required.

We don't purport to be able to offer a decisive, systematic conclusion, because much of the argumentation laid out in the preceding pages is based on hypothetical aspects of public policy -- whether TCTA and DWAF will increase bulk prices, whether lifeline and block tariffs will be applied, whether demand-side management will be intensified -- and on the weather (the drought factor), which are yet to play themselves out. Only after a few years should it be possible to look back upon this case study in order to determine which arguments had merit, and whether or not Alexandra residents' fears of socio-economic and ecological harm from Phase 1B and *status quo* delivery policies were indeed warranted.

Before considering a summary of the arguments, however, there were, in these documents (particularly the Panel findings), a few areas where matters of fact came under dispute. But these were relatively minor, and need not detain us inordinately.

In

policy framework can increase the returns to individual projects, Bank project support should also encourage the authorities to

Debating Supply and Demand Characteristics of Bulk Infrastructure

ó ó ζ ζ ð
ζ ζ ζ ζ ζ
ζ ζ ζ ζ ζ

Debating Supply and Demand Characteristics of Bulk Infrastructure

Should the perennial shortages of water in South Africa and the threat of drought, *should demand-side management be given much higher priority than at present by DWAF, water boards and municipalities -- both on redistributive and conservation grounds?*

- given not only that township infrastructure is continually plagued by systemic physical failure -- and given, too, the fact that of three million (mainly rural) households who have benefitted from taps installed within 1/2 km of their residence since 1994 an estimated 90% now no longer have access to water due to systemic breakdown based often on lack of affordability -- *should DWAF, water boards and municipalities use their resources to improve installation and maintenance on a more generously subsidised basis?*
- given that "lifeline" rates may be unaffordable for the poorest urban and rural residents, *should both national, water board and municipal government policy shift to more decisively commit to defining lifeline as "free"?*
- given that from 1994 to 1998, LHWP bulk water prices trebled due to dam construction costs, DWAF bulk prices to Rand Water likewise doubled, and Rand Water prices to Gauteng municipalities rose by 40% (with low-income Johannesburg residents facing a 55% increase in the price of the first block of water from July 1995 to July 1998), and given that many municipalities continue to suffer severe fiscal crisis, *should urgent steps be taken to ensure that bulk water prices are frozen (as is promised, probably unreliably, by the TCTA and DWAF) and, most importantly, that Rand Water desists from cutting off water services to entire towns and that municipalities desist from engaging in mass water cut-offs to large sections of townships (as often happens even when individual households pay their bills)?*

All the above questions can be addressed along a spectrum ranging from relative comfort with existing progress (as Bank, Inspection Panel and South African Government officials all recorded) to impatience that change and social justice are not happening faster. Thabo Mbeki has addressed this problem in the following terms:

Our answer to the question whether we are making that requisite progress towards achieving the objective of nation-building, as we defined it, would be: No!

A major component part of the issue of reconciliation and nation-building is defined by and derives from the material conditions in our society which have divided our country into two nations, the one black and the other white...

What this throws up, inevitably, is the question: Are the relatively rich who as a result of an apartheid definition are white, prepared to help underwrite the upliftment of the poor, who as a result of an apartheid definition are black?

It could be argued, of course, that with requisite political will along these lines, reforms to South Africa's water sector are possible within the framework of existing arrangements, through redistributive payment mechanisms and more aggressive demand-side management. But the balance of social forces within South Africa (and indeed, ultimately, in relation to the international financial community) illustrated in the relative comfort the various officials report with *status quo* processes, gives pause for concern.

An even greater set of challenges remains, however. Beyond those features of the LHWP debate that could potentially be resolved by firmer political will and more rigorous technical support (rather than the existing bureaucratic acquiescence or even occasional sabotage of redistributive measures), are more serious obstacles to progress that must also be raised. Here we encounter the most important discursive problem, namely how to inject larger issues of *socio-economic and environmental justice* into what, above, are reduced, again and again, to essentially technical debates over the pace of what David Harvey has termed "ecological modernisation."

Instead, argues Harvey, what is vitally needed to augment and indeed supersede such technicist discourse is "the articulation of ideas about a moral economy of collective provision and collective responsibility as opposed to a set of distributive relations within the political economy of profit." At first this

is startling, but the very inability of the Bank Inspection Panel's technocrats to look beyond the parameters of orthodox "sustainable development" -- i.e., sustainable for capital accumulation (in this case a 16% return on investment) -- suggests some merits to posing the issue of bulk water for Gauteng much more in terms of collective provision and collective responsibility, which would be at the very least consistent with South Africa's Bill of Rights. At least four more questions now arise (in no particular order of importance):

- Given that, as Bank Management posit, Lesotho would be substantially hurt in the short-term by any delay in Phase 1B, *should a democratic South Africa face up to its historic responsibilities for righting socio-economic and environmental wrongs associated with having taken advantage of Lesotho's neo-colonial, dependent status for so long?*
- Given the (predictable) potential for periodic droughts and the intrinsic problem of water scarcity in Gauteng -- which after all exists in its present form as the country's key metropolis not only because of the 1910 decision to locate the Union of South Africa's capital in Pretoria, but mainly because in 1886 extremely rich gold seams were discovered in what is now Johannesburg -- *should further industrial, commercial and residential growth, requiring large increases in water supply in the absence of more serious demand-side management, be encouraged or indeed be allowed?*
- At a more technical but nevertheless radical level, given the many failings of World Bank staff (as documented above), and given the declining value of the rand and the low import-content in basic infrastructure provision (especially water pipes and taps, which are locally produced), *should the Bank be in the business of financing with hard currency, water projects (such as the suggested "request from South Africa for financial assistance targeted at addressing the challenge of catching up on the huge inequitable legacy of the apartheid era") when such projects can be financed through local currency credits and tax revenues?*
- Perhaps most tellingly, given not only the hard currency issue but the

fact that the Inspection Panel simply failed to address the issues of inappropriate Bank policy-advisory interventions and, too, ultimately unveiled the strictly delimited (and merely credibility-enhancing) role of "consultation" about the consumption of LHWP water, *should social movements, NGOs and other progressives consider adopting a formal boycott position against the Bank?*

With the \$45 million Phase 1B loan approved by the Bank Executive Directors in June (well before the Panel made its finding), let us remain, in conclusion, at the level of progressive grassroots resistance to the ideas, projects and funding of the World Bank and its allies. For Alexandra residents and other advocates of social change, there are a variety of other lessons to consider from tangential issues associated with contesting the World Bank's role in the LHWP expansion.

Some lessons are political, such as how to contend with South African government intimidation (see footnote 1). Some lessons potentially relate to strengthening civil society internationalism, particularly so that grassroots organisations and NGOs can work better across borders (as Lesotho's Highlands Church Action Group and some Johannesburg NGOs nearly achieved before Lesotho's NGOs endorsed Phase 1B in early 1998). Some lessons relate to the merits (questionable, it seems) of taking the Bank's equivalent of an "auditor-general" seriously, given its various problematic findings, as discussed above. And some are associated with the construction of a hegemonic discourse, which to illustrate from the pages of *Business Day*, entailed, on the one hand, that paper's endorsement of the anti-expansion position by the environment reporter, but on the other hand was countered by a series of pro-Bank, explicitly anti-community articles by its eloquent Washington correspondent.

It may be worth drawing out, as a denouement, the challenges for not just the Alexandra Civic Organisation -- which in December 1998 publicly recommitted itself to opposing the financial and service delivery implications of LHWP expansion -- but more generally for community residents who will, as the Alexandra residents predict, pay the bills for yet another unnecessary megaproject. Recall that the Alexandra residents identified the following four

problems which they associated, to at least some extent, with LHWP Phase 1B: rising water prices; less incentive to instigate demand-side management measures; increased fiscal stress on municipalities and hence faster water cut-offs; and fewer resources for the capital and recurrent subsidies required to improve and construct water supply infrastructure appropriate for low-income communities.

If the democratically-elected African National Congress government cannot address these very real problems in a manner more convincingly than have Minister Asmal, Director-General Muller, Bank President Wolfensohn, LHWP Taskmanager Roome and Panel Investigator MacNeill, they may encounter -- if not in 1999 then in 2004 -- a serious electoral challenge, or earlier still, intensified water-related social protest and even riots.

ENDNOTES

. Anonymity was requested by the three Alexandra residents for the reason that in the wake of filing an initial draft Inspection Panel Request (on 3 March 1998) on behalf of the Soweto and Alexandra Civic Organisations, intense pressure was brought to bear by the government to withdraw the initial claim, which leaders of the two civics did on 20 April. Three residents -- including Letsie -- disagreed and pursued the claim (with voluntary technical support from Bond and several other researchers). By December 1998 the Alexandra Civic Organisation had formally reversed its position and reestablished its support for the arguments contained in the April 23 document.

. This first section was a joint product of work done by the two lead authors, two additional residents of Alexandra, and several technical experts associated with the Development Research Institute (Johannesburg), Alternative Information and Development Centre (Cape Town, <http://www.aidc.org>), Group for Environmental Monitoring (Johannesburg), International Rivers Network (<http://www.irn.org>), and Center for International Environmental Law (<http://www.ciel.org>). The document has been edited for brevity, leaving out several aspects of the process of public participation in the LHWP project, as well as the request for anonymity. The only change is the replacement, for the sake of consistency, of the word "Request" for the original "Claim."

. By John Roome, LHWP Task Manager; original version referred to in the Request above was dated March 1998; all footnotes and tables below are as in the 24 April document. Much of the documentation associated with the \$54 million World Bank loan for Phase 1B can be found in World Bank (1998), *Lesotho: Lesotho Highlands Water Project -- Phase 1B: Project Appraisal Document*, (17727-LSO), R98-106(PAD), Water and Urban 1, Africa Region, Washington, DC, April 30. (Notably, "This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.")

. This note summarizes a more extensive discussion of the economic assessment of Phase 1B which was produced by LHDA with inputs provided by the World Bank and the South African Department of Water Affairs. The updated April, 1998 version of the full document ("The Economics of Phase 1B") is available in the project file.

. The extent of these possible restrictions is being investigated by RSA in the context of the Orange River Replanning Study. While most of the losses of the transferred water may

be made up by releases from reservoir in the lower Orange, this may not be possible in a string of exceptionally dry years. It should also be pointed out that using water for irrigation has the lowest economic value and may in any case be reduced as South Africa is amending its water laws and water tariffs that will likely reallocate water away from irrigation to more productive household, commercial, and industrial uses. See also footnote 6.

. For most of the analysis, the environmental and social costs and benefits are not considered as they are assumed to balance each other. It is argued here and elsewhere that this assumption biases the analysis against Phase 1B since the benefits of the spending are expected to be larger than the losses incurred. The benefits of increased economic activity and the permanent infrastructure is also not included in the assessment. It presents additional benefits that are enumerated in the context of the benefits to Lesotho (see below).

. Raising the water price is one important (of several) elements of a demand management strategy so that the assessment of demand management policies and the price-based consumer surplus analysis are not entirely independent.

. As the analysis assumes that the water will not be needed until 2010, price increases in the without Phase 1B scenario will only start in that year. In the with Phase 1B scenario, they will not start until 2014 when demand is expected to outstrip available supply including Phase 1B.

. The worst-case assumption used was to assume that every m³ of water diverted to Gauteng will lead to the same reduction of water available for irrigation in the lower Orange (which is only likely to be partially true in exceptionally dry years). The calculations, based on the Vaal Augmentation Planning Study, show that every m³ of water used for irrigation generates about R 0.61 in agricultural surplus. This is much less than the value generated by the water for urban, industrial, commercial, and household use so that it has only a modest impact on the rate of return (reducing it by about 1.5%).

. In this context, it should be noted that the royalties are not determined based on the absolute benefits of the project. Instead, they are based on the cost difference between implemented the project in Lesotho and implementing the project in South Africa (via the Orange Vaal Transfer Scheme, OVTS). Under the treaty, Lesotho is entitled to 56% of the cost savings of implementing the project in Lesotho (compared to the OVTS). Due to the

Debating Supply and Demand Characteristics of Bulk Infrastructure

scarcity and high economic value of water in the Gauteng region, however, South Africa will realize very high absolute benefits from the water transfer (regardless of whether it the project is implemented in Lesotho or via the OVTS).

. The TVTS calculation are based on a pre-feasibility study. Between pre-feasibility and implementation, costs often increase considerably. In the 1970s, a small transfer scheme from the Tugela to the Vaal was developed as a complement to a pump storage scheme in the Drakensberg, when 11m³/s water was transferred whenever energy demand was low. In 1985, low energy demand allowed the transfer to be increased to 20m³/s. In 1994, it was determined that up to 35m³/s could be transferred without increasing the capacity at the pump storage scheme which therefore drastically reduces the costs of the TVTS alternative.

. In addition, attempts to restrict the movement of people and industries (or worse, attempts to move people to other regions) are unlikely to be politically acceptable in South Africa where forced removals of people were common during the apartheid era.

. If South Africa cancels Phase 2 and beyond unilaterally, then it will still have to pay the full fixed royalties plus the variable royalties associated with Phase 1A and Phase 1B. If Phase 2 and beyond are canceled by mutual consent, then South Africa only has to pay the portion of the fixed royalties associated with the investment cost savings of implementing Phase 1 in Lesotho, plus the variable royalties associated with Phase 1A and Phase 1B.

. Water Affairs and Forestry Minister Kader Asmal and his Director-General, Mike Muller, here reply to an article by the Alexandra residents in the *Mail and Guardian*, which, in summarising the Inspection Panel Request, began with an oblique reference to what was then considered the necessary step of safeguarding the three residents' identities, in view of documented intimidation against an earlier group of Phase 1B opponents from Soweto and Alexandra. This was the longest South African government public document responding to community concerns about Phase 1B.

. This document, though under Bank President Wolfensohn's signature, was reportedly drafted by Roome. The document begins (sections 2 through 9) by questioning the eligibility of the Alexandra residents in part upon grounds -- or rather, in the Inspection Panel's words, a "most odd conclusion" -- that South African water consumption issues were not

relevant (paragraph 30 of Inspection Panel Findings). The eligibility challenge was firmly rejected by the Panel and is hence dispensed with here. The edited document below includes all salient rebuttals taken from the 5 1/2 page

Debating Supply and Demand Characteristics of Bulk Infrastructure

this assessment as part of its appraisal of the Project and has found the analysis and its conclusions satisfactory...

17.

The

t the Project may have on the Orange River. The Bank has reviewed and discussed with the South African authorities their "Orangeank's Pretoria staff and Washington, DC management. The Bank's Pretoria office displayed "an unprecedented disregard" for procedures by revealing the claimants' names in public documentation. Later, management "discussed and dismissed the allegations in the Request in presentations to the Executive Directors, and it did so on three separate occasions" (30 April in the *Project Appraisal Document* and at Board meetings on 21 May and 4 June, i.e., before the 18 August Inspection Panel report)... "apart from ignoring the Panel's procedures, this would also appear to amount to a serious abuse of reasonable due process in any context" (paragraphs 23-26). Moreover, regarding Wolfensohn's 16 June letter, "The Response does not provide the substantive information required by the Resolution... The Panel, of course, rejected Management's refusal to respond in the proper way, and so informed the President of the Bank... the Panel had decided nevertheless to go ahead and treat the information provided in the Annex as the substantive Management Response" (paragraphs 28-31). On the matter of consultation between Bank staff and affected groups, the Panel found it "odd that Management should argue that the Operational Directive does not require them to undertake such consultations and they did not respond to request to meet with local community residents... The NGOs appear to have brought their concerns to the Bank's attention. By its own admission, the Bank Management failed to observe the policy on consultation until shortly before April 30, 1998" (paragraphs 52-57).

. More analysis which supports this conclusion can be found in Bond, P. (1999), "The Economics of Dam Building and the Brown Agenda: Contesting the Impact of the Lesotho Highlands Water Project on Johannesburg," in D.MacDonald (Ed), *Environmental Justice in South Africa*, Cape Town, Oxford University Press.

. Questionable technical aspects of the Bank's cost-benefit analysis can be dealt with

Debating Supply and Demand Characteristics of Bulk Infrastructure

briefly. For example, the opportunity cost of funds is crucial to the argument about whether or not it makes sense to delay Phase 1B, and while the Bank consistently based its argument on a 5% or 6% discount rate, it could easily be argued (and in another 1997 LHWP cost assessment it was indeed argued) that consistent with World Bank practice, a 10% discount rate should be used, which in turn would have led more easily to a decision to delay Phase 1B (the real rate of interest on South African and Lesotho government bonds in mid-1998 was far higher than 10%). Moreover, the difference between the April 1998 Bank Phase 1B economic analysis, in the wake of the Alexandra residents' critique, and the Bank's earlier, probably more honest November 1997 analysis (when the Bank did not expect a formal Inspection Challenge), is telling. Most importantly, the net cost of delaying Phase 1B has gone up by a factor of three for the period 1997-2000 and by a factor of 18 for beyond 2004. (This is partly a result of added capital and administrative costs associated with the delay, but these costs are not clarified and appear excessively high.) The cost-benefit analysis does not include *benefits* of delay, such as retaining the Phase 1B land that will be submerged as agricultural land; retaining water in the Orange River catchment for use downstream; and applying demand-side management techniques such as fixing broken infrastructure in Gauteng. This latter point is especially important in that the Bank (inappropriately) compares LHWP Phases 1A and 1B with the costs of imposing *supply* alternatives, namely the Tugela Vaal Transfer Scheme and the Orange Vaal Transfer Scheme (Table 3), which again begs the question of savings (of an estimated 40%) potentially achievable through demand-side management. Moreover, the Bank economic analysis suffered from inconsistency in its treatment of the one-year delay, the addition of administrative and maintenance costs to Phase 1B work, and the exclusion of hydropower and TVTS costs.

- . Matters of disputed fact (or semantics) with the Panel include the following:
 - in relation to Gauteng municipalities' failure to implement demand-side management measures, "The Panel did not consider this because it does not relate to Bank Management acts or omissions in compliance or non-compliance with the OD" (paragraph 65), when in fact a reasonable interpretation of OD 4.00 (paragraph 5) ("Design of investment programs for supplying water or energy should consider demand management...") should justify an investigation of municipal use of (and conservation strategies related to) Bank-financed water, particularly given the well-documented bias in consumption patterns;
 - the Panel insists that "At the municipal retail level in Gauteng, a host of factors impact on

water charges, and on their collection, and it is simply not possible to isolate one factor against the others" (paragraph 80), when in fact even a moderately scientific (factor-analysis) disaggregation of the effects of the vast increases in LHWP bulk water costs to downstream consumers is entirely feasible;

- the Panel's finding that there are (very small) graduations in Johannesburg's block tariffs (rising by a factor of just four from lowest to highest consumption block) -- which "does not appear to bear out the assertions made by the Requesters concerning block rates" (paragraph 81) -- does not in the least contradict the Alexandra residents' insistence that if far greater progressivity in block rates were imposed (as the "Working for Water" programme has unsuccessfully proposed elsewhere, with 11-step rising tariffs) there would be far greater success in water conservation and redistribution;
- the Panel calculated, inaccurately, that between 1995 and 1998, "the levy for the first step [in a Johannesburg water block tariff] increased from R1.20 to R1.85, or 35%" (paragraph 81, footnote 20), when in fact (using R1.20 as the denominator) the increase was 55%, indicating that, relatively speaking, first-block consumers paid a higher proportion of the increase than did consumers who used more water;
- the Panel's finding that "contrary to assertions made in the claim concerning the `lack of lifeline tariffs'" (paragraph 83) such tariffs do exist, implies a definition of "lifeline" adopted by the Panel that is *not* free of charge (a value judgment addressed below), rather than an incorrect assertion;
- the Panel's concern over non-payment for services (paragraph 86) could be easily addressed by applying a universal (free) lifeline policy that would allow cut-offs (or trickle flow) after consumption of the first block, entirely consistent with a "culture of entitlement" (disparaged by the Panel) that in turn is entirely consistent with the South African Constitution's granting of rights to water in its Bill of Rights; and
- DWAF oversaw the installation, from 1994-98, of (communal) rural water taps for approximately three million *households* (not three million taps, as the Inspection Panel had it, in paragraph 93), but reliable estimates from within DWAF suggest that 90% of the new taps no longer worked by the end of 1998.

However, the Panel is to be commended for correcting Bank Management on the implications of Rand Water's variable pricing of water, arguing that "this may not have any significance in practice" given the need for full cost-recovery on the LHWP (paragraph 76).

. In short, in a context in which South Africa remains one of the most unequal societies on earth (as measured by the Gini Coefficient, which is lower than only Brazil's), are the "Working for Water" and other demand-side management techniques sufficient to rapidly

Debating Supply and Demand Characteristics of Bulk Infrastructure

change the distribution of water consumption? Those arguing for change point out the broader tendency in South Africa towards intensified wealth inequality and the rapid increase, since 1994, of water cut-offs against low-income households who have trouble paying rapidly-increasing municipal bills. The South African government has sent very mixed messages in this respect, belying the Panel's confidence in its redistributive intentions. Consider this comment from the Water Research Commission: "Preliminary findings indicate a preference for prepayment and huge reductions in consumption of water and electricity (average 70%)" (*Report to Parliament, 1997*, p.18). Since the only prepayment experiments being conducted are in relation to low-income domestic users, this represents redistribution of water resources in the opposite direction desired, and a 70% reduction from very low existing levels could be a dangerous threat to public health.

. Those arguing for a far more aggressive approach to demand-side management (including greater credibility for wider-ranging conservation measures in LHWP feasibility studies) point to the existing lethargy in this area shown by powerful municipal officials (many inherited from the past and unwilling to radically alter consumption patterns of businesses or white residents); to the fragility of the "Working for Water" programme (e.g., its perennial struggle for funding from within DWAF, requiring outside funding sources); and to hostility against block tariffs regularly demonstrated not only by World Bank staff (as documented in the Request) but also by resistant municipal officials. For a telling example, see Bond, P. and S. Hosking (1999), "Infrastructure for Spatial Development Initiatives or for Basic Needs? Port Elizabeth's Prioritisation of the Coega Port/IDZ over Municipal Services," in M.Khosa and Y.Muthien (Eds), *Infrastructure for Reconstruction in South Africa*, Pretoria, Human Sciences Research Council and London, Asgate Press.

In contrast, in a private email memo on 23 April, 1998, the Bank's John Roome offered one rationale for not calculating demand-side management water (and economic) savings:

And what do we gain from the demand studies? First, they will give an idea of what could be achieved -- they will NOT fully address the uncertainty of the ability of the local authorities to implement such programs, the speed with which SA consumption behavior will change and the political acceptability of more radical proposals eg. in agriculture. Second, even if the demand studies showed that a 20 year delay was technically viable -- the economics suggests that it would still not be a sensible thing to do.

. The relative savings would be enormous if leaks were repaired. But in addition, most pricing for water (even for the rural poor) is now based, as various post-1994 policy

documents insist, upon a cost-recovery system in which "lifeline" is defined as the "operating and maintenance" (or "recurrent") cost of running the system. Advocates for change argue that this is inappropriate given affordability constraints and past tariff systems for business and white residential consumers that entailed below-marginal cost pricing.

. This dispute has many features, including the easy documentation of greater public health, ecological, economic and gender-equalising characteristics of free water. See Bond, P. (1999), "Basic Infrastructure for Socio-Economic Development, Ecological Sustainability and Geographical Desegregation: South Africa's Unmet Challenge," *Geoforum*, 30, 1.

. The shocking case of Leandra township, Mpumalanga, in which 70 000 residents served by Rand Water were cut off for several months, is illustrative of the dangers (see *Sunday Independent's Reconstruct*, 20 December 1998).

. Mbeki, T. (1998), *Africa: The Time has Come*, Cape Town, Tafelberg Publishers and Johannesburg, Mafube Publishing, pp.71-74.

. Harvey, D. (1996), *Justice, Nature and the Geography of Difference*, Oxford, Basil Blackwell, p.389.

. This is a matter the three Alexandra residents did not factor in to their advocacy, but as a first point of rebuttal, it is arguable that it is not in Lesotho's interests to have such an extraordinary boom-bust ingredient featuring so strongly in its GDP, based on what is acknowledged to be a temporary construction fillip and a sudden decline after the dams are built. The economic contribution of the LHWP is a particularly thorny issue because many of the beneficiaries of LHWP-related spending are Maseru-based elites, and because the well-publicised corruption in the Rural Development Fund forced the scaling back of water-royalty flows to impoverished people due, ironically, to lack of "absorptive capacity."

Moreover, there were and are any number of development alternatives in Lesotho that could generate far better backward-forward linkages, job creation rates and other investment multipliers, as a former planning minister (Evaristus Sekhonyana) argued at the time of the original treaty (when he switched from supporting the LHWP to opposition): "We could achieve more if we irrigated agriculture and cut food imports" via schemes such as a \$75 million power generation and irrigation project at Oxbow (Hanlon, J. [1987], *Beggar Your Neighbours: Apartheid Power in Southern Africa*, London, Catholic Institute for International Relations, London, James Currey and Indiana University Press, p.127). For

Debating Supply and Demand Characteristics of Bulk Infrastructure

numerous examples of such alternatives, see van Rensburg, P. (Ed)(1987), *Another Development for Lesotho? Alternative Development Strategies for the Mountain Kingdom*, Gaborone, Foundation for Education with Production.

But facing up to South Africa's deeper responsibility to Lesotho is nevertheless crucial. This should not only follow the spirit of the 1998 Truth and Reconciliation Commission, which recommended that beneficiaries of apartheid should pay some form of reparation. More importantly, it would require a metamorphosis in terms of migrant labour, commercial and financial circuits of capital, geopolitics, widescale Free State province land restitution to displaced Basotho, and other aspects of long-overdue structural transformation in relations between South Africa and Lesotho. For more on this legacy, as well as on the World Bank's 1970s-80s contributions to Lesotho's underdevelopment, see Ferguson, J. (1991), *The Anti-Politics Machine*, Cambridge, Cambridge University Press and Cape Town, David Philip.

. Again, the Alexandra residents did not explicitly address drought. But the first issue is whether the LHWP is an appropriate response, compared to planning for emergency water reductions. Capacity expansion should be based on accurate demand curves, rather than the myth that societies can always build themselves out of environmental contingencies, a philosophy that justifies unending supply-side increases. If a drought was extremely serious, Phase 1B would only save a few years from the inevitable reapplication of 1980s- and early-1990s-type water restrictions.

Yet this does not absolve South Africa's government from more proactive spatial planning, and from asking hard questions about whether Gauteng should continue to grow (especially as a water consumer). The most rigorous analysis of South Africa's economy, by Ben Fine and Zav Rustomjee, implies that Gauteng's and the country's early reliance on gold and upon a subsequent "Minerals-Energy Complex" is a version of "Dutch disease." In short, the large, export-oriented (to declining global markets) and highly capital-intensive projects associated with the Witwatersrand have done enormous damage to South Africa's development prospects. Since consumption of water by the Gauteng mining industry and ESKOM is central to the supply-side driven logic of the LHWP, the expenditure of further resources on the project should be seen from the standpoint of macroeconomic transformation, something entirely lacking thus far in official analysis. See Fine, B. and Z. Rustomjee (1996), *The Political Economy of South Africa*, Johannesburg, Wits University Press. The alternative, in the *Reconstruction and Development Programme*, was this mandate for regional, decentralised planning: "Macro-economic policies must take into

consideration their effect upon the geographic distribution of economic activity. Additional strategies must address the excessive growth of the largest urban centres, the skewed distribution of population within rural areas, the role of small and medium-sized towns, and the future of declining towns and regions, and the apartheid dumping grounds" (African National Congress/Alliance [1994], *Reconstruction and Development Programme*, Johannesburg, Umanyamo Publications, Section 4.3.4).

. In early 1994, the *Reconstruction and Development Programme* offered this mandate:

The RDP must use foreign debt financing only for those elements of the programme that can potentially increase our capacity for earning foreign exchange. Relationships with international financial institutions such as the World Bank and International Monetary Fund must be conducted in such a way as to protect the integrity of domestic policy formulation and promote the interests of the South African population and the economy. Above all, we must pursue policies that enhance national self-sufficiency and enable us to reduce dependence on international financial institutions (Section 6.5.2).

This promise was one of the first casualties of the post-apartheid era.

. The radical position here would be that, aside from gathering information, talking to the Bank is a distraction from the need to wage more vigorous, effective kinds of socio-ecological struggle. The consultation issue is emblematic, for as the Panel put it, "consultation" means just that: it does not necessarily mean that the parties must agree on the issues in question, nor that the decision-makers must adopt any particular NGO's "perspective" (paragraph 50). By way of contrast, South African civic associations once had a very clear response: they insisted on rapidly moving from "consultation" to "participation" to "control." See Mayekiso, M. (1996), *Township Politics: Civic Struggles for a New South Africa*, New York, Monthly Review (e.g., p.262). In their South Africa work, Bank officials rarely allowed matters to move beyond consultation. For a description of the failure of these two discourses to find common ground, see the article by Mark Swilling and Tshepiso Mashinini in *BankCheck* (January 1994), reporting on an early 1990s "consultation" session on Johannesburg township development:

The discussion began with the Bank asking the civics the same set of technical questions that were posed to white local government officials, but obviously in a simpler form: population, level and standard of services, what is expected and what are the priorities. The answers, however, were

Debating Supply and Demand Characteristics of Bulk Infrastructure

not forthcoming. Instead, every civic representative emphasized the need for capacity building.

The problem lay in the way Bank staff asked the questions. As technical experts who deal in hard quantitative data every day, they related to the leaders of social movements as if they were local government officials whose every-day activity is the manipulation of organized data captured through established research methods. This is *not* what civic leaders do every day.

No one with community organizing experience would sit down at a first meeting with local leaders and ask: What are your needs? Instead, the questions would be: Comrades, what organizational structures do you have here? What struggles have you embarked upon? What were your demands when you went on the rent boycott? What were the demands in the petition you handed to the administration when you marched? What were your short-, medium- and long-term demands at the negotiations? What compromises did you accept, and why? What research are you doing to back up your demands?

Questions are asked in this way in order to tap *organic* knowledge about socio-economic conditions. Knowledge is inseparable from the rhythms of the daily struggle to transform local and regional conditions. However, civics do not have the resources to transform this practical and usable knowledge into quantitative data which really applies mainly to policy formulation. Even negotiation forums, where civics do have a use for hard data, are structured in a way that conventional quantitative information becomes a site of struggle.

For a discussion of the weaknesses associated with the Inspection Panel in 1997-98, at a time sharp anti-Panel antagonism had emerged from (Southern) Bank Executive Directors who felt it was investigating aspects of governance that were causing discomfort in many (corrupt) governments, see Udall, L. (1997), *The World Bank Inspection Panel: A Three Year Review*, Washington, DC, Bank Information Center; and Treacle, K. (1998), *Accountability at the World Bank: What Does It Take? Lessons from the Yacyreta Hydroelectric Project Argentina/Paraguay*, Washington, DC, Bank Information Center. For background on the Inspection Panel's limits as an agent of change, covering the 1994-96 period, see Udall, L. (1998), "The World Bank and Public Accountability: Has Anything Changed?," in J.Fox and L.D. Brown (Eds), *The Struggle for Accountability: The World*

Bank, NGOs and Grassroots Movements, Cambridge, MIT Press.

The position that the Bank should quit South Africa, in the wake of policy advice in macroeconomics, land reform, housing, infrastructure, welfare, public works, health policy, education and other fields, was not controversial. Sixty leading social movement activists signed a request to this effect in late 1996, as part of a "Campaign Against Neoliberalism in South Africa." See, e.g., Bond, P. (1997), "Against Neoliberalism in South Africa," *Lokayan Bulletin*, 14, 2; and Bond, P. (1999), *Elite Transition*, London, Pluto Press.

. These political lessons may resonate loudly, given Asmal's role as chair of the World Commission on Dams, a point Roome made very clear to the Bank Executive Directors in the April 30, 1998 *Project Appraisal Document* (p. 18).

. See, for examples of the former, Ballenger, J. (1998a), "Lesotho Water Project Falls Foul of Environmental Lobby Groups," *Business Day*, 22 January; and (1998b), "Social, Environmental Impact of Second Phase of Highlands Project Questioned," *Business Day*, 19 March. For condescending reporting on the Phase 1B controversy, there was no better example than Barber, S. (1998), "Vote Asmal's Gov't out of Power, But Please, No Whining," *Business Day*, 9 September.