

# Water, sanitation and drainage: ensuring better provision with limited resources

THE PAPERS IN this issue address a range of topics, including:

- initiatives that have improved provision for water or sanitation, or both, for low-income groups, and initiatives that have failed to do so;
- the scale and nature of need for water and sanitation, and the tendency for international statistics to overstate the proportion of urban dwellers with provision;
- explanations of water stress in large cities, and the possibilities for resolving this problem;
- rural–urban perspectives on water use and waste water management, and the importance of urban wastewater for food production and rural livelihoods; and
- the importance of “housing finance” initiatives for water and sanitation.

## I. MEETING NEEDS

THIS EDITORIAL BEGINS by highlighting papers that describe how people’s needs for water and sanitation were met, before summarizing points made in papers that reflect on the scale of unmet needs. This may seem the wrong way round but, before reviewing how little progress has been made in improving provision for urban populations over the last 10–15 years, it is good to be reminded of what is possible.

Two papers in this issue describe large, ambitious and relatively cheap programmes that demonstrate how needs can be met. One is on community-designed, built and managed toilet blocks in various Indian cities, and one on community-managed water points and sanitation blocks in Bangladesh’s two largest cities. Both are unusual in their focus on community management and on public toilets, which most international agencies have been reluctant to support. They are also unusual in that they were able to reach hundreds of thousands of people, despite being implemented by NGOs. In India, the programme was implemented by the Indian NGO SPARC, working with

two groups of community organizations, namely, Mahila Milan (cooperatives formed by women “slum” and pavement dwellers) and the National Slum Dwellers Federation (and its member federations). In Bangladesh, the programme was implemented by an international NGO (WaterAid) working with seven local NGOs.

Both programmes are also unusual in their drive to reduce the gap between the cost of achieving adequate provision and what can be afforded locally – a gap that is always present in any effort to improve provision of water and sanitation among very low-income groups. Both these initiatives, which dealt with large numbers of very low-income people, sought to provide good quality facilities, to keep unit costs as low as possible and to charge users a fee, so that maintenance costs could be covered and, in the case of Bangladesh, most of the capital costs recovered.

In one sense, such programmes seem unfair. Why should lower-income groups settle for community toilets and public standpipes when middle- and upper-income groups have piped water and sewer connections to their home, often provided at less than their real cost? But the reality is that governments and international agencies have been unwilling to allocate large sums to improved provision for low-income groups in urban areas. Nor has the rush of private sector funding for water and sanitation materialized, despite the hopes and anticipation of so many international agencies – as described in the paper by Jessica Budds and Gordon McGranahan.

The Indian and Bangladeshi programmes both show the potential for providing, improving and maintaining facilities on a large scale, drawing on very modest external funding. Both required the support of local governments – but demanded little from them in terms of practical involvement. In Bangladesh, much of the capital cost was recovered from user charges. And in India, where little external funding was required, the community-designed and built toilet blocks cost municipal authorities less than the contractor-built blocks

they had previously paid for; the quality was better and there were systems in place to ensure maintenance and to cover running costs. Yet, the cities and communities where these large-scale programmes were implemented (Dhaka, Chittagong, Mumbai, Pune and others) have some of the lowest-income urban populations. In Dhaka, for instance, many households earn less than 300 tk (US\$ 5) a month.

While neither of these programmes has been problem free, they do show how locally driven solutions can deliver significant improvements for large numbers, without the need for large-scale external funding. The Indian example, in particular, demonstrates unusual levels of community control in design, construction and management. The Bangladesh example shows how much the gap between costs and the capacity of low-income households to pay can be narrowed. In both cases, the programmes, by being community-managed, can make allowances for those individuals or households who cannot afford to pay.

These programmes also demonstrate that implementation on a large scale requires cooperation with government agencies and organizations responsible for building and managing trunk infrastructure – even if this is only to get permission. SPARC, in India, and WaterAid, in Bangladesh, could have built a few community water points, or one or two public sanitation schemes; this is generally what NGOs do. Instead, they chose to manage programmes on a much larger scale – a far more complex task, calling for a change in the attitude of local authorities to this kind of provision and a change in the relationship between these authorities and the organizations of “slum” residents and pavement dwellers.

The paper by Noman Ahmed and Muhammad Sohail describes another community-based initiative to improve provision for low-income groups – in this instance, provision for water – that required little external funding. The extent of the improvements was modest in this case – community water tanks that helped ensure more regular supplies – but, again, it showed how partnerships between community organizations and local government, along with better use of local resources, made improved provision possible.

What is the relevance of these three very different examples? Given the lack of progress in improving provision for water and sanitation in urban areas for most low-income and many middle-income nations over the last 30 years, whether through conventional private sector provision or public sector provision, these examples have wide

relevance. Their importance lies not so much in what they actually did as in the space they negotiated to allow for community-driven innovation. Community provision cannot deliver the trunk infrastructure; community facilities most often need water mains to draw from; and community toilets in high-density urban settings are easier to manage and cheaper to build if they can connect to sewer systems. But if governments are willing to ensure that the trunk infrastructure is there, there are many local possibilities for improved provision – whether through community-designed and managed public facilities (as in the toilet blocks in the Indian cities), NGO–community organization partnerships (as in Dhaka and Chittagong), or other models described in papers in previous issues (including the community-financed local sewers that connect to individual houses as in the Orangi Pilot Project model in Karachi and various other cities in Pakistan).<sup>(1)</sup>

This issue of *Environment and Urbanization* would be incomplete without a consideration of the current and potential role of the private sector. The increased involvement of the private sector has been vigorously promoted as the solution to improved provision by many international agencies for more than a decade. Yet, as the paper by Jessica Budds and Gordon McGranahan shows, this has achieved neither the scale nor the benefits anticipated. Other papers in previous issues of the journal have also shown the limitations of privatization for low-income groups.<sup>(2)</sup> Given the limited achievements of the United Nations International Drinking Water Supply and Sanitation Decade of the 1980s in improving provision, and the low priority for virtually all international agencies of urban water and sanitation,<sup>(3)</sup> there was a recognition that new sources of capital were needed. But it was always a puzzle how international profit-seeking enterprises would provide new capital to deliver (often expensive) trunk infrastructure and maintain it, for households with very limited capacities to pay either capital or running costs. And many of those in greatest need of improved provision lived in informal or illegal settlements where land tenure was uncertain or illegal, and where the costs to any external agency for installing pipes was often high because of difficult terrain, complex and cramped plot layouts and large distances from existing water mains and trunk sewers or drains. The fact that many case studies showed the urban poor paying high prices for water (and sometimes for access to toilets) encouraged an assumption that “the poor could pay” for conventional public or private sector provision. But if low-income house-

holds have to resort to paying a water vendor or water kiosk very high prices for a few litres per day, it does not mean that they will pay this same amount if connected to a piped water supply. The examples from India, Bangladesh and Pakistan mentioned above, and other water supply schemes described in earlier issues, show that self-financing, or close to self-financing, schemes can serve low-income groups, but only when community-driven solutions drive down capital costs (including contractor profits) and help to moderate management costs, or when small-scale private water (and sometimes sanitation) providers operate in competitive markets.<sup>(4)</sup> The international water companies could not build and run the toilet blocks in Mumbai and Pune and deliver the quality of service and the low price achieved by community provision, and still make the profit they required; and nor could the municipal authorities. As the review by Jessica Budds and Gordon McGranahan emphasizes, the barriers to high quality provision for water and sanitation in low-income settlements persist, whether utilities are publicly or privately operated.

## II. THE SCALE AND NATURE OF NEED

THREE PAPERS FOCUS on the scale and nature of need. The paper by Sheridan Bartlett describes the disproportionate burden of ill-health suffered by children as a consequence of inadequate provision for water, sanitation and drainage. A million or more infants and children die each year from diseases directly related to inadequate provision for water and sanitation, and hundreds of millions are debilitated by illness, pain and discomfort. Their nutritional status is often compromised by water-related diseases (especially diarrhoea and intestinal worms), and this has impacts not only on physical development but also on social and mental development. The paper describes how high mortality rates and disease burdens among children in low-income areas can be hidden by aggregate statistics for urban areas.

The paper by Meera Bapat and Indu Agarwal reports on interviews with low-income households in Pune and Mumbai with regard to their difficulty in meeting their needs for water and sanitation. Most of the paper consists of verbatim explanations by low-income women of the challenges they cope with: high prices, long lines, irregular supplies, dirty water, and the need to wait until dark to defecate in public spaces. Their statements provide an aware-

ness of the sheer amount of time and ingenuity required every day just to meet these basic needs.

The paper by Jonathan Parkinson describes the inadequacies in provision for storm and surface drainage in urban areas, and the impacts of floods on urban populations, especially low-income households. This paper also discusses the ways these inadequacies can be addressed, including the necessary integration of structural and non-structural strategies for flood control and the mitigation of environmental health problems.

The scale and depth of the inadequacies in provision for water and sanitation for much of the urban population in Africa, Asia and Latin America and the Caribbean needs particular emphasis. A book produced by our research programme in 2001 assembled data from many major cities and smaller urban centres to demonstrate how most official statistics understated the inadequacies in provision.<sup>(5)</sup> This was followed by a larger, more detailed, UN-Habitat study published earlier this year, entitled *Water and Sanitation in the World's Cities*.<sup>(6)</sup> Table 1 is drawn from this study, and shows two different sets of estimates for the number of urban dwellers lacking provision for water and sanitation in 2000. The first comes from the most widely used and quoted international source, the 2000 WHO/UNICEF assessment, and is based on who has "improved" provision. As this assessment explains, the available data do not allow an estimation of the proportion of people with good quality provision or "adequate" provision. This is because the data available from most governments are only available with regard to what this assessment defines as "improved" provision. For water supply, "improved" provision is "reasonable access" to water supply from a household connection, public standpipe, borehole, protected dug well, protected spring and rainwater connection – with at least 20 litres per person per day available from a source within one kilometre of the user's dwelling; piped systems are considered acceptable if they operate at 50 per cent of capacity; hand pumps if they operate for 70 per cent of the time. For sanitation, "improved" provision is access to a private or shared toilet with connection to a public sewer or a septic tank, or access to a private or shared pour-flush latrine, simple pit latrine or ventilated improved pit latrine. As staff from the WHO stress, "improved" provision does not greatly reduce the risk of faecal-oral diseases.<sup>(7)</sup> On the basis of these definitions, most of the urban population in Africa, Asia and Latin America have "improved" provi-

sion for water and sanitation, and it is possible to claim that there were significant improvements in the number of people gaining access to improved water and sanitation during the 1990s.<sup>(8)</sup>

The second set of estimates, drawn from UN-Habitat study, uses definitions for “adequate” provision for water and sanitation, which demand better quality and more convenient provision – levels of provision that do greatly reduce the risk of infection from faecal–oral diseases. This includes continuous, good quality piped water supplies into the house or house yard, hygienic, well-maintained, easily accessed toilets that are used by all family members, and safe and convenient disposal of waste water. As the paper by Sheridan Bartlett explains, this includes levels of provision that meet the needs of children, which are often not met with “improved” provision. If the criteria by which provision is judged are changed from “improved” to “adequate”, a much larger urban population is found to lack provision. For instance, 50–60 per cent of the urban population in Africa lack adequate provision for sanitation, more than three times the number lacking “improved” provision (Table 1). In addition, trends over time look much less impressive, as the growth in the number of urban dwellers reached with “adequate” provision during the 1990s is much less than the number reached with “improved” provision.

Estimates of the “scale of need”, and of the funding required to address this, depend heavily on which of these definitions is used. The task of halving the number of people lacking provision for water and sanitation between 1990 and 2015 (as called for by the Millennium Development Goals)

is far greater and more complex if it is based on the number lacking “adequate” provision rather than the number lacking “improved” provision.

### III. WATER STRESS FOR CITIES

BETWEEN THE 1980s and 1990s there was a switch from a concern with improving water provision for human use to a concern with water scarcity. The now considerable literature on water scarcity generally assumes that this is at the root of people’s problems with obtaining better provision of water. Indeed, much of this literature seeks to legitimate a concern for water scarcity by making this claim. But our research found no association between nations facing water stress and nations with the largest inadequacies in provision for water for rural and urban populations.<sup>(9)</sup> It is also clear that in many large cities where provision for water (and sanitation) is seriously inadequate, there is little or no overall shortage of freshwater resources.<sup>(10)</sup> But how can this be reconciled with the fact that so many large cities do face serious shortages? Large sections of the population, for instance, may only receive water in the pipes for one or two hours a day, or even once every two or three days.<sup>(11)</sup>

Two case studies in this issue help illustrate this. The first, by Etienne von Bertrab, describes the water crisis faced by Guadalajara, Mexico’s second largest city, as the vast lake on which it draws, Lake Chapala, is drying up. The paper explains the dire economic and environmental consequences that this will bring to the city and the wider region, if unchecked. It also clarifies that this is a problem

<b>Table 1: Different estimates of the number of urban dwellers lacking provision for water and sanitation in 2000</b>				
Region	Number and proportion of urban dwellers without “improved” provision for:		Indicative estimates for the number (and proportion) of urban dwellers without “adequate” provision for:	
	Water	Sanitation	Water	Sanitation
Africa	44 million (15%)	46 million (16%)	100–150 million (35–50%)	150–180 million (50–60%)
Asia	98 million (7%)	297 million (22%)	500–700 million (35–50%)	600–800 million (45–60%)
Latin America and the Caribbean	29 million (7%)	51 million (13%)	80–120 million (20–30%)	100–150 million (25–40%)
	SOURCE: WHO and UNICEF (2000), <i>Global Water Supply and Sanitation Assessment, 2000 Report</i> , World Health Organization, UNICEF and Water Supply and Sanitation Collaborative Council, 80 pages.		SOURCE: UN-Habitat (2003), <i>Water and Sanitation in the World’s Cities; Local Action for Global Goals</i> , Earthscan, London, 274 pages.	

caused by inadequate water management “upstream” of Guadalajara – and that inadequate management of the wastewater generated in Guadalajara produces serious problems for users “downstream”. The paper also discusses the innovations in Mexico on multi-stakeholder waterbasin management, which are meant to address problems like these, but also the difficulties in developing solutions that involve so many state governments (the River Lerma that feeds Lake Chapala runs through five different states), the federal government, lots of farmers and industries. The problem is less one of freshwater supply than of difficulties in developing institutions that can manage its use and allocation in ways that are fair to the poor.

The second case study, by a team of Dutch and Chinese researchers, describes the growing concern for freshwater supplies in Beijing, China’s capital. Groundwater levels are dropping, as water withdrawals exceed aquifer recharge rates, and there are serious problems with groundwater contamination. This paper looks at how changes in agricultural production around the city affect water use and water quality. In Beijing, as in most Chinese cities, the municipal boundaries encompass large agricultural areas as well as the city’s built-up area; this is why most Chinese cities appear to have such a high production of agricultural goods and so many farmers within their boundaries. Within Beijing Municipality, agriculture still has a major role in supplying the population with food products, and the paper documents the shift in agriculture towards more intensive and higher-value products. But agriculture is also a major water user and a major contributor to water pollution. Here, as in Guadalajara, addressing water stress requires a regional perspective in which agriculture, as well as industry, the power sector, and residential and commercial areas, must improve the efficiency with which they use freshwater and reduce water pollution. However, in neither of these cities does a move to “integrated water resource management” necessarily mean better provision for city dwellers of water and of wastewater removal, or adequate water supplies for poor farmers.

#### IV. RURAL-URBAN PERSPECTIVES IN WATER USE AND WASTEWATER MANAGEMENT

THE APRIL 2003 issue of *Environment and Urbanization* on “rural-urban transformations” had

many papers that focused on the tendency of urban and rural specialists to miss the importance of the multiple interconnections between rural and urban households and enterprises. Four papers in this current issue point to the need for water and wastewater management that addresses both rural and urban concerns, emphasizing that secure city water supplies often depend on better watershed management “upstream”, and that wastewaters flowing out of cities are usually important for farming “downstream”. These include the two papers noted above on Guadalajara and Beijing. The Beijing paper is a reminder of the importance of agriculture around the city to food supplies, and the extent to which new opportunities have opened up for farmers as city-based demand has grown for higher-value agricultural products (including fruit, vegetables and meat and dairy products). This was also explored in a paper on Hanoi in the April 2003 issue of *Environment and Urbanization*.<sup>(12)</sup>

Two papers in this issue examine the use of urban wastewater streams in agriculture: one in Hubli-Dharwad in India, the other in Kumasi, Ghana. In Hubli-Dharwad, the wastewater streams from the city flow untreated via sewers and wastewater drains into natural water courses that flow into the hinterlands – and there are large areas of crop production that depend on these wastewater flows for irrigation. The paper by Andrew Bradford, Robert Brook and C S Hunshal documents the different cropping systems that draw on these wastewater flows (vegetables, vegetables mixed with field crops, and agro-forestry) and both the positive and negative aspects of this practice. Again, better management is needed to reduce the environmental and public health risks faced by farmers and food consumers, without threatening the farmers’ livelihoods and food production. The paper by Bernard Keraita, P Drechsel and P Amoah on Kumasi also describes the positive aspects to the use of wastewater streams coming from the city for agricultural production and farmers’ livelihoods, as well as the health risks to farmers and consumers and the measures that can be implemented locally to address these.

#### V. THE MILLENNIUM DEVELOPMENT GOALS

WHATEVER ONE MAY think of the validity or utility of the Millennium Development Goals (MDGs) that are currently influencing the policies

and priorities of most international agencies and many governments, they include goals that have huge importance for low-income urban dwellers. These goals include, for 2015, universal primary education, much-reduced infant, child and maternal mortality, halving the number of people without safe drinking water, adequate incomes and food intakes (in comparison to 1990), and halting and reversing the spread of AIDs, malaria and other major diseases. If these objectives are achieved in urban as well as rural areas, it would mean significant benefits for low-income urban populations. The MDGs also include the need to improve significantly the lives of at least 100 million “slum” dwellers by 2020 (which includes increasing the proportion of people with “improved” sanitation and access to secure tenure).

Most of the 450 or so papers that have been published in *Environment and Urbanization* since 1989 are, directly or indirectly, focused on understanding and addressing such needs. But there are legitimate fears that this focus on the MDGs will mean that other important priorities will be marginalized, or that the approaches used to try to achieve these goals will be inappropriate. A strong focus on reducing infant mortality may mean less attention to ensuring that the children who survive their first birthday have healthy homes, neighbourhoods, day care centres and schools within which to develop.<sup>(13)</sup> A strong focus on “universal education” may give far too little attention to

ensuring good quality education. There is also the worry that governments and international agencies will ignore urban populations.

The MDGs are unusual in that they include some specifically urban components. But, as discussed in one of the papers in the section of this issue on the MDGs, this does not mean that governments and international agencies will address these components. Much of the literature on the MDGs has focused exclusively on rural areas. The potential importance of the MDGs for urban populations, combined with the tendency for urban poor populations to be ignored by international agencies or responded to in inappropriate ways, encourages us to give these goals particular attention. *Environment and Urbanization* will include a special section on the MDGs in the next few issues, and the April 2005 issue will discuss what is required to “significantly improve the lives of slum dwellers”. Thus, we welcome papers submitted on the MDGs and their implications for urban populations. We are also keen to solicit your views on the utility and the potential dangers of the MDGs – see Box 1 for details of a questionnaire on this topic, which we hope you will have time to fill in.

With regard to water and sanitation, the MDGs are relatively clear: namely, to halve the proportion of people without sustainable access to safe drinking water and the proportion of people who do not have access to basic sanitation<sup>(14)</sup> between 1990 and 2015. (Sanitation had been left out of the original

<b>Box 1:</b>	<b>Will the Millennium Development Goals deliver improved conditions for the urban (or rural) poor?</b>
<p>A questionnaire has been developed to gauge your opinion on the usefulness of the Millennium Development Goals (MDGs) and get your suggestions as to how they should be applied. It is available on the web, or can be sent to you by post or by e-mail. This questionnaire is being widely circulated to civil society organizations and staff of governments and international agencies. The next issue of <i>Environment and Urbanization</i> will report on its findings.</p> <p>Answering this questionnaire and returning it to us should take only a few minutes. You can do it in one of three ways:</p> <ul style="list-style-type: none"> <li>• If you have a computer with internet access, this questionnaire can be accessed and completed on-line at <a href="http://www.iied.org/mdg/">http://www.iied.org/mdg/</a>.</li> <li>• You can download the questionnaire from this same site and, as it is in “rich text format”, almost all word-processing software can open it. You can then fill it in on your computer and return it to us electronically (as an attachment to an e-mail), or by post or fax.</li> <li>• You can print out the questionnaire, fill it in by hand and return it to us by mail.</li> </ul> <p>Write, fax or e-mail us if you would like us to send you a printed version of the questionnaire.</p> <p>Contact: Sarah Henson, IIED, 3 Endsleigh Street, London WC1H ODD, UK; e-mail: <a href="mailto:sarah.henson@iied.org">sarah.henson@iied.org</a>; fax + 44 207 388 2826</p>	

MDGs but was added by The World Summit on Sustainable Development, in 2002).

It is a puzzle why these goals for improved provision come under Goal 7 (“Ensure environmental sustainability”), as they are about improvements in basic service provision, not about environmental sustainability. This reflects the confusion evident in much of the literature on sustainable development between “environmental health” and “environmental sustainability”. This confusion helps to explain why many people assume that measures to address water scarcity will necessarily improve provision for those who lack it. It is also puzzling to have the goal of achieving by 2020 “a significant improvement in the lives of at least 100 million slum dwellers” under the category of environmental sustainability, when it is primarily about meeting human needs. Some “significant improvements” in the lives of slum dwellers could actually reduce environmental sustainability – as “slum” dwellers’ real incomes rise, for instance, allowing them to move out of “slums”, their consumption of non-renewable natural resources and their generation of wastes is likely to increase.

There is also the issue of what the MDGs mean by “sustainable access to safe drinking water” and “access to basic sanitation”. This is not a minor issue since, as discussed above, the number of people served or not served, and the extent of progress in increasing the number served, is hugely influenced by how these terms are interpreted. Will the MDGs measure the extent of provision for “sustainable access to safe drinking water” and “basic sanitation” according to the definitions used by WHO/UNICEF for “improved” provision or the definitions used by UN-Habitat for “adequate” provision?

There are four papers in this issue, grouped within a special section on the Millennium Development Goals, which are not specifically about water and sanitation, yet have great relevance to the improvement of water and sanitation provision. This is because they focus on how to support improved housing and living conditions for low-income groups, and this inevitably includes better provision for water and sanitation. Indeed, the levels of support for better provision for water and sanitation coming from households, communities and external agencies is constantly underestimated, because no account is taken of the contribution to better provision provided by upgrading programmes or programmes to increase the supply and reduce the cost of new homes.

The paper by Bruce Ferguson and Jesus Navarrete discusses how large-scale land development for housing can allow more low-income households to afford their own legal home – and in doing so acquire housing with better provision for water and sanitation than they had before. The paper gives examples of government programmes that have successfully increased the supply and reduced the cost of land for housing and, in so doing, effectively avoided the increase in “slums”. It also discusses how microfinance programmes can help to fund upgrading programmes, which also generally include better provision for water and sanitation. The paper by Mohini Malhotra describes the growing trend for microfinance institutions to provide loans for home improvements – which often include connection charges to piped water and sewer systems, or better provision within the home through better internal plumbing and/or toilets. Drawing on examples in many nations, this paper also suggests how to increase the scale and impact of such programmes. Just as the Millennium Development Goals target of significantly improving the lives of at least 100 million slum dwellers by 2020 will depend in part on improved provision for water and sanitation, so halving the proportion of people without “sustainable access to safe drinking water” and “basic” sanitation by 2015 will depend in part on urban households that are able to move to new homes with better provision or able to invest in better provision within their existing home.

This new section in the journal on the MDGs includes a paper on an ambitious programme in São Paulo, Brazil for land tenure legalization on public land. This, too, is highly relevant to water and sanitation because it is difficult for conventional utilities to provide high quality provision in settlements where the land is occupied illegally (and they are often not permitted to do so). This paper is also unusual in that it includes extracts from a speech by President Lula, the first time that we have printed any extract from the head of state of any nation. Lula’s speech includes his memories of living in areas of São Paulo that were often flooded, and of cockroaches and rats competing for dry space as the flood waters rose. The speech is also special in that it was made at a ceremony where legal title was being given to many low-income communities. Both his speech and others that are drawn from in this paper describe how this programme developed, and the institutional and legal innovations that it required.

## VI. FEEDBACK

THE PAPER BY Jonathan Baker and Hege Walleik contains much that is relevant to the theme of the April 2003 issue on rural–urban transformations, as it documents the diverse links between town and countryside, the diverse reasons for the wealth and poverty of different rural and urban households and the extent to which households' wealth accumulation and poverty avoidance draws on rural and urban factors. The paper by Jihad Makhoul, Dana Abi Ghanem and Mary Ghanem documents the effects of wider social, political and economic context on conditions in two poor communities in Beirut, Lebanon, and explores the implications for children. Although both communities experience unemployment, poor living conditions and limited access to social services, the Palestinian refugee camp community enjoys a high level of social solidarity which contributes to children's resilience. The well-being of children in the other more transient and ethnically diverse community has been more seriously challenged by the weak social ties that result, however indirectly, from various harmful restrictions and "personal status" regulations.

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