

MAKING THE CASE FOR SANITATION

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Abstract

The purpose of this report is to lay out a strategy for raising awareness of sanitation issues in developing countries. The health benefits of sanitation investments are well documented. Estimates of the returns on sanitation investments, based on the health and time-savings aspects, are high. Yet developing countries seem to underinvest in the sector. The paper tries to understand why this is so, and what kinds of strategies an advocate for sanitation can employ to raise awareness among policy makers of the importance of sanitation.

The paper notes that advocates for the sector are competing with advocates for other sectors. Any argument that there has been underinvestment in sanitation has to prove that the returns on sanitation investments are higher than those currently on investments in other sectors. If sanitation is a “low priority” it must mean that decision makers see the returns on other investments as being higher, and/or they do not appreciate the high returns on sanitation investments. Additionally, decision makers may fail to adequately invest in sanitation because of other reasons, including a view that this is not a public sector activity, that it lacks sufficient short-term political benefits, or because it is a “dirty” and unpleasant subject,

A strategy for raising awareness can be built around five main pillars:

- *Identification of stakeholders and institutions.* There are many institutions involved in the sector who wish to see the sector adequately treated – these include government ministries and agencies, NGOs, donors and the private sector. A key to advocacy is the building of linkages among key stakeholders and the identification of strong advocates.
- *Identification of the benefits and the beneficiaries.* While the health aspects are fundamental, there are related economic and social benefits to sanitation that can be emphasized, and may be key to building support. For example, sanitation in schools can increase school attendance, especially for girls.
- *Assessing the demand for sanitation.* The demand for sanitation is often based on issues of privacy and convenience, rather than the health aspects. Institutional demand depends on whether the institutions involved will see some benefit, financial or otherwise, from their involvement.
- *Emphasizing low-cost solutions.* Resistance to sanitation investments may arise because advocates push for high-cost solutions. However, there are many low cost solutions involving community and household involvement that are available. Community-based condominial schemes are one example.
- *Building support or “political will”.* Building support for sanitation can mean using different approaches, including finding and organizing allies, building on existing institutions, lobbying, using examples and site visits, and linking to international movements.

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Acronyms

CBR – Cost Benefit Ratio
DFID – Dept for International Development (UK)
EIA – Environmental Impact Assessment
MDGs – Millennium Development Goals
MoE – Ministry of Environment
MoH – Ministry of Health
MoF – Ministry of Finance
PAHO – Pan-American Health Organization
PRSP – Poverty Reduction Strategy Paper
SIWI – Stockholm International Water Institute
UNICEF – U.N. Children’s Fund
USAID – United States Agency for International Development
SDC – Swiss Agency for Development and Cooperation
WEDC – Water, Engineering and Development Centre (UK)
WHO – World Health Organization
WSP – Water and Sanitation Program (World Bank, UNDP)
WSSCC – Water Supply and Sanitation Collaborative Council

Making the Case for Sanitation

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I. Foreword

The purpose of this report is to lay out a strategy for raising awareness of sanitation issues in developing countries. Sanitation is defined in this paper as infrastructure and service provision required for the safe management of human excreta and wastewater. Hygiene is related to sanitation, but focuses on behaviors related to good health, including the safe management of excreta. Solid waste management and drainage are areas that also relate to sanitation, but are not included within this definition.

The paper starts with a brief review of the evidence showing the importance of sanitation, and health and economic returns from investments in the sector. It then examines some of the reasons why countries seem under invest in the sector, and whether or not they make sense. It then develops a strategy for raising awareness among policy makers of the importance of sanitation, including building political will, identifying stakeholders and finding low-cost solutions. .

II. Why focus on Sanitation?

First, a quick quiz. Which causes more deaths per year: tuberculosis, malaria, or diarrhea? The correct answer is diarrhea. About 1.8 million people die every year from diarrheal diseases; 90% of these are children under 5, and most are in developing countries. Tuberculosis is a close second with 1.6 million, while malaria comes in third with 1.2 million². Tuberculosis and malaria receive a lot more attention nationally and internationally than diarrhea. Why is that? Is it because they are mainly children? Or is the subject of diarrhea a taboo?

Unlike AIDS and other afflictions, the cause and cure for diarrhea is relatively well known. Diarrhea is not a disease itself but a symptom of several different diseases. Most of these in turn derive from improper sanitation, in which the human body ingests human excreta in food, water or air. About 80% of the cases of diarrhea worldwide are the result of fecal-oral contamination (EHP 2004), which in turn is caused by a variety of variety of viruses and bacteria, including cholera, pathogenic *E coli* and salmonella. The resulting diarrhea in turn leads to dehydration, resulting in death for young children. Other important sanitation-related diseases include schistosomiasis and high-intensity helminth infections (ascariasis, trichuriasis, hookworm disease) which lead to cognitive impairment and anemia, as well as diarrhea.

² WHO, World Health Report, 2004, see: http://www.globalhealth.org/view_top.php3?id=228. Lower respiratory infections and AIDs are number 1 and 2 overall.

Clearly, these diseases can be mitigated with some simple interventions. A recent study³ noted that:

- improved water supply reduces diarrhea morbidity by between 6% and 25%, if severe outcomes (such as cholera) are included;
- improved sanitation reduces diarrhea morbidity by 32% on average;
- hygiene interventions, including hygiene education and promotion of hand washing can lead to a reduction of diarrhea by up to 45%;
- drinking water improvements in the household, such as chlorination, can reduce diarrhea by between 35 and 39%.

These conclusions are based on a careful summary of a large number of evaluations that have been done on sanitation projects. For one example, see box on study for Salvador, a city in Brazil.

Impact of drainage and sewerage on diarrhea in poor urban areas in Salvador, Brazil.

A longitudinal prospective study of the effect of drainage and sewerage systems on diarrhea in children under age 5 was conducted in 9 poor urban areas of the city of Salvador (population 2.44 million) in north-east Brazil in 1989-90. Due to complex political and administrative reasons, 3 areas had benefited from drainage improvements, 3 from both drainage and sewerage improvements, and 3 from neither. An extensive questionnaire was applied to collect information on each child and on the conditions of the household, and mothers recorded diarrhea episodes in their children daily for 1 year, using calendars. Twice weekly home visits were made to collect the data. The incidence of diarrhea in children in neighborhoods with drainage improvements alone was one-third lower, and in neighborhoods with drainage and sewerage more than two-thirds lower, than the incidence in neighborhoods with neither. The study provides evidence that community sanitation can have an impact on diarrheal disease, even without measures to promote hygiene behavior.

Source: Moraes et. al. 2003

The economic benefits from such interventions should be considerable, and would cover the foregone medical costs, plus the cost of time lost at school and work, plus the time savings from closer access, both for water and sanitation. Estimates by Hutton (Evans et. al, 2004) show economic benefits on the order of \$63 billion per year from reaching the MDG sanitation target (which calls for a 50% improvement in coverage; presumably reaching full coverage would have benefits equal to twice that). Most of the benefit comes in terms of time savings. Benefit cost ratios range from 29 to 3, with a world average of 6.6. (see Table 1).

³ Evans (2005) summarizing a study by Fewtrell et. al.(2005)

Table 1: Some economic benefits of meeting sanitation MDG, and cost-benefit ratios

World Region	Popula tion (m.)	Meeting sanitation MDG (annual figures, in US\$ million)			Total benefits*	Cost- benefit ratio*
		Health sector treatment costs avoided	Patient health seeking costs avoided	Annual value of time gain		
Sub-Saharan Africa	968	1,130	72	12,873	16,183	10.6
Latin America	624	514	16	5,695	7,325	11.9
East Mediterranean & North Africa	373	148	6	5,157	5,865	28.5
Central & Eastern Europe	460	60	2	2,381	2,508	12.7
South and SE Asia	2,162	1,378	84	8,112	11,104	3.0
West Pacific developing countries	1,673	1,645	64	8,905	11,619	3.8
All regions	7,183	4,955	244	51,525	63,269	6.6

Source: estimates made by G. Hutton in Evans et. al. (2004).

Any estimates of costs and benefits have to be viewed as rough estimates, since they depend heavily on the assumptions and circumstances. The estimates in Table 1 provide for basic, low technology, improvements to water and sanitation services. Improved sanitation generally involves better access and safer disposal of excreta via septic tank, pour-flush or simple pit latrine, small bore sewer or ventilated improved pit-latrine. On the benefit side, time savings are valued at the country's minimum wage, which assumes people can make productive use of the additional time. These cost-benefit ratios would be appreciably lower if more costly, higher level technologies, were employed. However, they would also be much higher if simple hygiene improvements (hand washing, chlorination in the home) were to be included. Finally, the great range of estimates should be noted. Conditions obviously vary by region and by country; sanitation investments may make more sense in certain economies than others. In looking at country estimates, Hutton (DFID, 2005) also finds a similar range of between 3 and 24 for the CBR.

High CBR imply very high rates of return for sanitation investments. A CBR of 3 implies an internal rate of return of 28%, while a CBR of 6.6 is equivalent to a return of 50%⁴. Clearly, these kinds of returns are higher than most public sector investments presently being made by governments, and are higher than those found on most World Bank projects.

III. The Low Status of Sanitation.

Sanitation seems to receive very low priority by country planners, and donors. Sanitation components are often attached to World Bank water supply projects, but the principal focus is on water. In 2005, the Bank made 16 loans in water and sanitation, of which 6 were for water only, two for sanitation, and the remainder for a mix of water and sanitation purposes. Total lending in the water supply/sanitation sector was about \$700

⁴ There is no exact equivalence between CBRs and internal rates of return. These calculations are done assuming a 14 year capital life, no benefits in the first year, and then roughly equal annual benefits thereafter. The CBR is based on a real interest rate of 3%. The IRR is then calculated from the stream that produces the target CBR.

million, or about 4% of total Bank/IDA lending. Of this \$700 million, about only 30% was for sanitation, the rest for water supply.

Most national plans and PRSPs do not discuss sanitation problems, and lump sanitation investments with water supply. The new draft National Strategic Development Plan 2006-2010 for Cambodia is a typical example. While 4.2% of the budget is allocated for water and sanitation, there is no discussion of the kinds of sanitation improvements that will be made. In spite of this, there is an extensive discussion of health problems and the need to improve curative health operations. In addition, the country is committed to meeting the MDGs, including those on water and sanitation. In Ouagadougou, Burkina Faso, the main water and sanitation utility, has a staff of 600, of which 85% work on water, and 3% work on sanitation (Ouedraogo and Kolsky, 2002).

Why?

Why does sanitation seem to be ignored by planners and budget decision makers? Some possible reasons include:

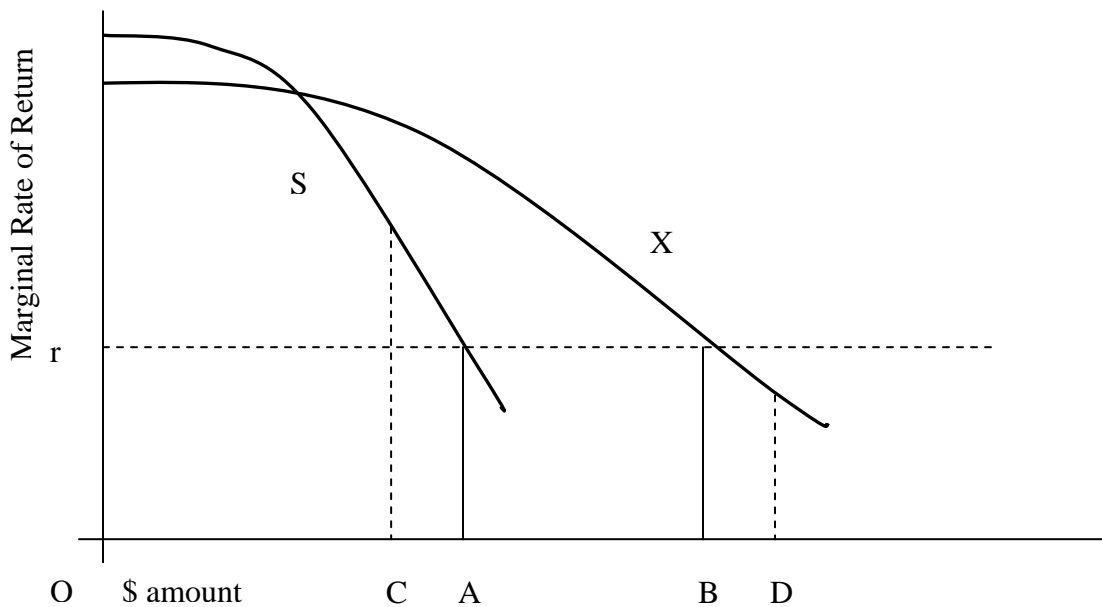
- the returns on other investments are higher than those on sanitation;
- the high returns on sanitation are not known or emphasized;
- the subject of sanitation is “dirty” and unpleasant (especially compared to water which is “clean”);
- sanitation solutions are seen extremely costly (hence the cost-benefit ratio is presumably low);
- provision of sanitation is not politically popular, there is no “political will” because the general populace want (or seem to want) water but not sanitation;
- stakeholders feel that water should be publicly provided but sanitation can be handled privately;
- governance problems – demand is high, but decision-makers do not respond to the demands of the people, particularly the poor, because they lack power and “voice”;
- decision makers want short-term gains, for political reasons, and are not interested in long term solutions;
- decision makers are aware of the problems, but lack the management or institutional skills necessary to effect solutions.

IV. The Basis of a Strategy to Make the Case: The Allocation Issue

Advocates for more sanitation have to make the case that not only are returns on sanitation investments high, they are higher on the margin than those of other sectors. Presumably, planners and budget chiefs allocate funds so that the marginal return on every sector is equal when the total budget envelope is allocated. Fig. 1 shows a hypothetical example, for two sectors S (think sanitation) and X (a proxy for all other sectors). Both sectors show diminishing returns to scale. These returns might be economic only, but they could include social and political returns as well, so they measure the marginal social welfare returns from marginal investments.

The budget is allocated between S and X so that the internal rate of return, r is equal, giving allocations OA for S and OB for X. Any other allocation, such as OC and OD produces a net loss of welfare and should be corrected. In other words, if a government has an investment program of OC (in sanitation) and OD for X, it makes sense to increase the investment in sanitation and decrease the investment in X, to maximize the total return on investment, as sanitation (in this example) yields a higher return than X at the initial levels of investment. This might arise if the rate of return for S or X is over or under estimated. However, even if X is a “priority” of the government, the correct allocation is still OA and OB.

Fig 1 Hypothetical Budget Allocation Between Two Sectors



This raises a question of what we mean by a government priority, or the often heard criticism that the government “has not clearly defined priorities”. Such statements only make sense if the government did not have the correct allocation initially. Sector S could be a “priority” because the government now realizes that there had been under-investment in that sector and now seeks to redress the balance. But the fact that one sector is a priority does not mean that all new investment goes into that sector. Thus, we do not seek a bias toward sanitation at the expense of some more deserving sector, only a rebalancing of the budget to give sanitation its proper share. Note also that a reduction in the budget does not imply equal cuts across sectors. Given the shapes of the marginal return curves, sector X would be cut more than S. Yet X might still be a priority over S in the sense it has an overall larger allocation.

In addition, the marginal rate of return in social welfare is not just economic returns, but includes political and social issues and benefits as well. It might favor short

term gains over long term gains, for political reasons, or returns to one social group over another. The government may be less concerned with the size of the benefits and more concerned with “who” benefits, in terms of region, ethnic group or political affiliation. Thus, the government’s motivation in making allocations is complex, and staff working with governments should attempt to understand first what drives existing allocations. While these may appear at first to be uneconomic or non-optimal, they may be optimal when total social or political benefits are added to the calculus.

Thus a strategy for approaching government planners must center on demonstrating that the economic, social and political returns to sanitation are higher than alternative investments in other sectors, and a reallocation in favor of sanitation is worth undertaking. It is important to focus on who are the critical decision makers, and what motivates them, and what language they understand. Government officials are often a mix of economists, politicians, engineers, etc. They do not all respond to the same arguments, or think the same way. A strategy must be built on understanding the institutional context and what motivates people at different levels, including NGOs and the private sector. What one needs to do is to identify linkages and pull together people and groups with common interests.

Advocates of sanitation also have to realize that no matter how cogent their arguments, they are in competition with advocates for expanded emphasis in other sectors, who also can marshal cogent arguments on behalf of their interests. Decision-makers are also likely to see any advocate for a specific sector as being engaged in “special pleading”. They are likely to discount arguments about benefits as likely to have been exaggerated and/or distorted since the source is not neutral. Hence, advocates have to take care to present arguments fairly and with balance, in order to avoid undercutting their own credibility.

Since the budget constraint represents a zero-sum game, any reallocation toward sanitation represents a necessary reduction in expenditures on some other sector, with a possible negative reaction by advocates of those sectors if these reallocations are large. Decision makers, therefore, have to weigh all of these factors before making reallocations. In the same vein, they are likely to be more receptive to schemes that have little or no budgetary impact. For instance, they are apt to prefer schemes that promise a high degree of self-financing, or for which foreign loans and grants are available or which involve a reallocation within the sector. Likewise, involvement of the private sector may be appealing from a budgetary stance, if it does not raise negative political reactions.

V. Elements of a Strategy for Making the Case

The rest of this report develops this strategy in more detail. It focuses on five main pillars:

- identification of stakeholders and institutions;
- identification of what are the benefits and who are the beneficiaries;
- assessing the demand for sanitation;

- emphasizing low-cost solutions ;
- working to build support or “political will”.

A. Stakeholders and Institutions

It is important to identify key stakeholders and institutions actors that are concerned with sanitation. Often there are several, some with different levels of engagement, and often with different roles and responsibilities, and with different motivations.

Public Sector. The power of decision making is very much depends on the local context, history and culture. In terms of overall decisions, key roles are often played by a ministry of planning or budget (or similar), or a ministry of finance. In other countries, a ministry of interior may be playing an important role⁵. Key institutions may also be directly linked with the Presidency⁶. Generally speaking – and apart of some exceptions – decentralization around the world is underway. While few decentralized authorities have gained total independence for deciding strategy or financial planning, many municipalities do have responsibility for sanitation, water, and solid waste removal.

Sanitation projects (either software or hardware) are often executed by national authorities, even in urban environment. These authorities may be involved in any water related issue (ministries of water resources or equivalent) or in health (ministry of health). In many countries, the ministry of public works (or equivalent) plays an active role, especially in terms of heavy sanitation hardware. In the urban environment, Municipalities will more often be playing the role of executor of sanitation projects, especially if they are linked with other municipal responsibilities (solid waste, drainage and so on). Government institutions (either at national or municipal level) often prefer to set up an independent authority to handle execution of projects, given their human and financial resources⁸.

In terms of regulation, the health ministries can be expected to play the role of regulation over hygiene and sanitation. Regulation can be done upstream (standards, methodologies) or downstream (monitoring). Although there is often agreement that the health ministry is responsible for these tasks, many lack resources (human and financial) to actually respond. Sanitation competes with curative care for allocation of funds and many decision-makers view the latter as a priority (WSSCC/WHO, 2005). Environmental health issues are typically cross-sectoral, and therefore often fall through institutional “cracks” and are not given the political commitment they need. Another important regulatory institution is the ministry of environment (MoE). In many countries, these ministries were recently created, and are widely and strongly supported by international cooperation. As far as sanitation is concerned, MoE is responsible for (i) environmental standards, and (ii) regulating Environmental Impact Assessments (EIA). Sanitation in

⁵ **Morocco:** Ministry of Interior (MoI) is coordinates all the municipalities. Mayors report to MoI, which plays a fundamental role in municipal budget distribution.

⁶ **El Salvador:** main decision-maker for financial planning is the “Secretaria Técnica de la Presidencia”, which is an institution “above ministries”, directly linked with the Presidency.

schools is an important issue that must involve the ministry of education. Often school attendance is a function of having adequate schools sanitation facilities, especially for girls.

In the interest of having a lead institution as a sanitation “champion”, some countries have created a national sanitation institution, usually acting as executor at national level⁷. Although very convenient for setting up a sanitation project (as the donors’ officially identified partner) and enjoying executive capacities, these utilities are (still) centralized structures, and focus on infrastructure projects, as opposed to sanitation and hygiene promotion. Many utilities have joint responsibility for water and sanitation at the national level in many countries. The existence of a water and/or sanitation utility does not preclude a sanitation project being run by another institution⁸. While sanitation can be a complementary intervention to water supply, for low income groups it is often better to delink the two.

Private Sector. Private sector stakeholders are numerous. The most obvious is the household itself. Decisions on sanitation, both in terms of hygiene and facilities, are often taken at the household level. The decision to construct low-level on-site facilities may reflect public sector regulation, but in most developing countries such regulation is weak. Other private sector actors include private utilities providing sanitation, most often combined with water supply – sanitation by itself is rarely a profitable enterprise. Such companies are normally engaged in developing a network of piped sewerage, and rarely engage in hygiene education or on-site sanitation solutions. Private companies may also be engaged in excreta removal from septic tanks. Soap and other manufacturers of products promoting hygiene also have an interest in hygiene promotion.

The number of actors in the sector can raise the need for sector coordination. In several countries there has been an effort to create a forum for sectoral coordination, on water supply and/or sanitation (see box on Uganda and Honduras). Members of these groups include representative of ministries, autonomous authorities, municipalities, donors, NGOs and the private sector.

Legal Framework

Decision makers willing to move on sanitation may be hampered by the absence of a proper legal framework, or the existence of a framework that inhibits their actions. Examination of the legal framework might be a good first step toward understanding why more is not being accomplished “on the ground”.

Good national water and sanitation laws can define the role of each entity, and set the framework for regulation, as well as the possible role of the private sector. Of course,

⁷ *Offices Nationaux de l'Assainissement* in Tunisia (www.onas.nat.tn), Senegal (www.onas.sn) and Algeria (www.semide.dz/FR/themes/structures/ONA.HTM).

⁸ **Burkina Faso:** The sewerage project for the city of Bobo-Dioulasso (second city in importance in the country) was designed by the Ministry of Agriculture, Hydraulic and Fisheries (MAHRH www.agriculture.gov.bf/journee/default.html), although formally responsible for regulation.

the existence of a law by itself is not sufficient to provide a legal framework for the sector if it is not enforced, or its purposes thwarted by a government bureaucracy

Another important issue for urban sanitation is the problem of land tenure/property rights. Urban poor without legal title to their land feel vulnerable to eviction, and are reluctant to invest in their properties in general, and in household sanitation facilities in particular. Land titling and registration may be an important first step to encourage household level investments in low-cost sanitation, such as latrines, soakaways and septic tanks.

Collaborative Groups in Uganda and Honduras

Uganda: The recently formed sanitation working group in Uganda gives focus to lobbying for increased sector funding and “making the case for sanitation”. With initial support of WSP, the sanitation sub-sector group aims at improving sector coordination. They convey consistent evidence based advocacy messages and facts to key sector decision makers mainly in the Health and Water sectors to mobilize government resources for sanitation. They try to systematically seize opportunities like the review of the Poverty Eradication Action Plan (PEAP) as well as the review of the Health Sector Strategic Plan to mainstream sanitation in key Government public expenditure strategies (Mehta and Knapp, 2004).

Honduras: In 1991, concerns shown by several actors of the Water Supply and Sanitation Sector (MSP, UNICEF, SDC, PAHO, CARE and *Agua para el Pueblo*) invited other organizations to take part in a conference series. The so-called “Collaborative Group” called upon meetings addressing topics such as Local Administrative Boards, Urban Sanitation and Latrination. The latter initiated the first out of several group works and concrete activities carried out by the Collaborative Group. Today, the “Collaborative Group” is recognized by the Water Law as a key stakeholder.

B. Assessing Demand

Household and institutional demand. While demand criteria are used extensively for urban water supply projects, they are often left out when dealing with urban sanitation, because the need for sanitation (especially wastewater management) is often considered a “consequence” of water supply. Advocates for sanitation have to recognize and deal with these demand issues. Demand criteria should be applied for sanitation on two different levels: “basic” (household), and institutional levels. In addition, it is important to address the sanitation needs of those not connected to the formal water supply network.

As with water supply projects, basic demand criteria are usually easily identified based on “what do beneficiaries expect from the project?” Demand at household level can be assessed through surveys. Household demand often depends primarily upon “convenience” factors (ease of access, lack of smell), and secondarily on health aspects. Thus, solutions have to build on these demands if the health benefits are to be achieved i.e. a solution that provided the health benefits without the convenience benefits would likely fail (such as public latrines).

Demand at the institutional level also had to be considered. Generally speaking, while sanitation investments might provide some benefits to the operator of a water supply system, they may be small. They might include the benefit from not having waste water intrude into the water supply system, or improved image from being seen as taking responsibility for waste water generated from the water supply operation. However, many of these operators are under pressure from either their own government or the donors for reaching financial balance as soon as possible. Therefore they may be reluctant to invest or operate in sanitation which they may see as not producing financial returns.

Advocates of sanitation attempting to work with an existing (water) authority have to ask themselves: *what are the benefits this authority will gain through the provision of sanitation?* If the commitment to sanitation is weak, it might be necessary to bolster it through regulation and some form of political commitment. Experience in many countries shows that institutions – although officially committed - are often too weak to enforce commitment within their own structure – or worse, onto other structures.

Public commitment for public benefit

In many places, political will to increase coverage is weak because sanitation is considered a private issue, and not a public good. However, improved access to sanitation and better hygienic practices have benefits that reach beyond the immediate household to the entire population. These health externalities are the reason why there is a public sector interest in sanitation and hygiene promotion. In highly dense urban areas, scale economies dictate some sort of piped sewerage solution, particularly in commercial areas. However, in lower density urban areas lower cost on-site sanitation (latrines, septic tanks) can achieve the public goals provided they operate efficiently.

Governments need to establish incentives that enable individual household choices to achieve public policy objectives and to uphold and regulate principles and policies for the public good. They may also continue to finance investments in shared infrastructure (such as trunk sewers and wastewater treatment facilities) and support interventions which raise household demand for sanitation, promote improved hygienic practices, and facilitate service providers to deliver appropriate services. In addition, the role of government is to balance the interests of different groups in society and redirect resources to those who are systematically excluded⁹.

⁹ **Latin America** (a region where many countries have already achieved impressive overall coverage) for example show a consistent bias against rural and poor populations. Where segments of the population consistently fail to access better sanitation facilities and improved hygienic practices, health benefits to the population as a whole are likely to be limited (Evans, 2005).

Bangladesh: Private Sector Approach to Latrine Promotion

A national social mobilization campaign combined with a market creation approach supported the emergence of more than 4000 private workshops producing, over one million latrines per year in response to demand promotion and gradual government withdrawal from direct subsidy and production. This led to an annual household investment of 10 Million USD in sanitation improvement. Some of the major lessons learnt are:

- Consumers (including the poor) are willing to pay for latrines because of prestige, comfort, privacy and health. Unprotected latrines near the village pond which were used earlier were socially ostracized by the communities
- The private sector was able to compete with government owned sanitation centers by providing standardized solutions at a subsidized price since it offered technical options tailored for households with different purchasing power. They also offered a “package solution” including transport and local assembly services.
- Surveys revealed that the local producers were appreciative of the external support provided for the development of marketing aids for their products

Source: Mehta, 2004

Pricing, Cost Recovery and Subsidies

In advocating sanitation solutions, advocates need to work out how the costs of sanitation will be divided between private households and the private sector. In theory, the household should be willing to pay for the value of sanitation services, but willingness-to-pay often does not extend to downstream or external costs. How are downstream costs to be covered if beneficiaries are unwilling to meet them? In general, how are the economic benefits of externalities to be sustained financially (Wegelin and de Jong, 2001)? Users with sewer connections generally pay a flat tax for the service, unrelated to their use of the system, or pay a surcharge on the basis of water usage. While such charges may ensure financial viability of the utility, they may not reflect external costs if sewerage is not being treated but being dumped in a river. Who pays then the “downstream” costs¹⁰?

If sanitation facilities are constructed by the household, such facilities will be built at a level to optimize household welfare, with no or little concern for external costs (on neighbors, community, etc.). While one might invoke the “polluter pays” principle, there is nothing here that can be taxed. Regulation is one possible route, but hard to enforce in developing countries. Rather, it might make more sense to subsidize the construction of appropriate on-site facilities, with the amount of the subsidy reflecting the

¹⁰ **Burkina Faso:** Funding for basic sanitation is practiced in Ouagadougou through sanitation promotion funded through a local sanitation surcharge. Sanitation access for the poor in urban areas is often linked to slum upgrading strategies where public finance needs to target poor and low-income communities, often residing in slum settlements. In this context, future work needs to review citywide approaches for urban sanitation that focus on basic sanitation for the poor. Case studies of existing programs can be seen in Ouagadougou, Burkina Faso and Pune, India. In Ouagadougou, the urban water utility uses a sanitation surcharge to fund sanitation promotion and partial subsidies for improving household pit latrines (Mehta and Knapp, 2004).

external benefit to the community.¹¹ Such subsidies might also reflect equity concerns. Sanitation can be viewed as a “basic need”, and like water, should be available to all, particularly the poor. Thus, any subsidy might have both an externality component and an equity component. However, the scale of the subsidy might be reduced over time (see box on Latrines in Bangladesh).

**Bangladesh:
Village Education and Resource Centre (VERC)**

This NGO has shown that communities acting together can take steps to significantly improve their sanitation situation. One of the tools of the approach is the use of participatory exercises which explicitly look at how and where people defecate. A public transect walk which sees the whole community walking through the village identifying where each household defecates, the so-called “walk of shame”, has become the most important motivating tool, and in almost every case results in the setting up of the first community meeting to discuss solutions

Source: WSSCC/WHO, 2005

Awareness

In reality, the major cause of health disease among poor communities is not the lack of hygiene education, but the lack of hygiene *practice*. Hygiene education is definitely necessary, but may not be sufficient to change behavior. An individual can be aware of the risk, without reducing it. Reasons for this “break-down” in application can be of different kind: low self-esteem, lack of initiative, gender issues, lack of resources (to buy soap), lack of infrastructure (no water, no latrine), tenure problems and so on. Achieving behavioral change is not straightforward and should not be undertaken lightly; it should be preceded by sufficient research to ensure the intervention is well design (Cairncross, 2003). This task – as any relevant of community work - should be left to highly skilled people, with knowledge of the local context (see box on VERC in Bangladesh).

C. Identifying all the Benefits

Besides health, there are many other benefits from sanitation, of an economic, social and environmental nature. It is important to identify to decision makers all of these benefits, for two reasons:

- First, the full range of benefits may not be fully appreciated; and
- Second, some of these may be more important to some decision makers than others.

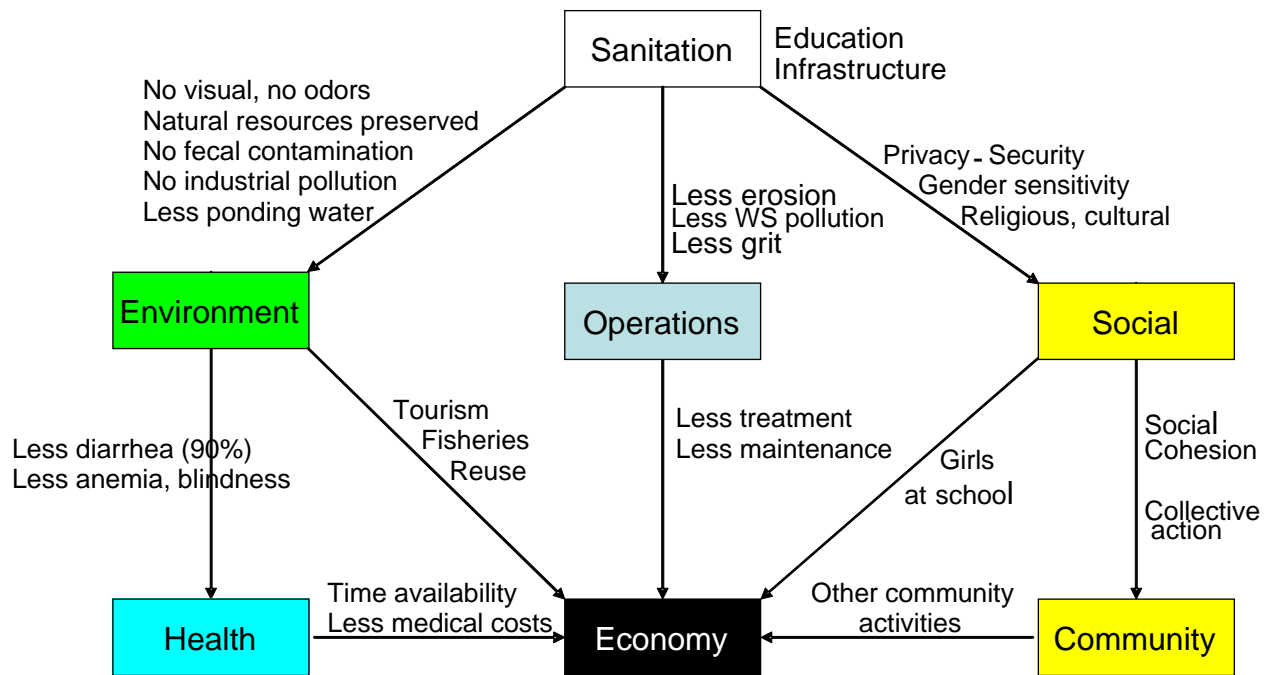
While the primary objective of sanitation investments is the removal of human excreta, secondary objectives linked with sanitation are also important. These include the gains from removal of wastewater of all types, including industrial and commercial effluents,

¹¹ **Morocco:** Environmental protection law (n°11-03) states that “polluter pays”, but also states that “a balance is necessary between the requirements of the national development and those of the environmental protection at the time of the development of the sectorial plans”. Although laws are not always put into application, it is almost impossible to act in contradiction to them. One way out is to *schedule* the application of the law: first priority: focus on household sanitation and health; second priority: make sure environmental conditions downstream are met.

as well as drainage. These activities are often inseparably linked to a “sanitation” improvement, and the benefits from these aspects often become merged with the gains from a pure sanitation perspective.

The graphic in Fig. 2 shows the benefits and their inter-linkages, without considering relative importance or priority of the benefits. One of the challenges is to distinguish benefits provided by sanitation that are separate from that provided by water supply.

Fig. 2 Some Possible Links Between Various Benefits from Sanitation



Health

Health benefits have been described above. These are provided by the reduced contamination of both households and the community, thus directly cutting the different routes of infection for sanitation-related diseases. Benefits provided by sanitation derive from the gains from avoided illnesses:

- Less medical costs for treatment (for the individual)¹²
- Less medical costs for treatment (for public sector hospital)¹³.
- Reduced loss of productive days from sick patients¹⁴.

¹² **Pakistan:** people living in areas without adequate sanitation who had no hygiene education spend six times more on medical treatments than those with sanitation facilities (Watson, 2003).

¹³ **Peru:** every case of diarrhoea costs the public health system 12 USD, and this is money that could be better spent in prevention (Mehta et al.,2004). At any one time it is estimated that half of the world’s hospital beds are occupied by patients suffering from water-borne diseases (Watson, 2003).

- Reduced loss of productive days from family members attending sick patients.
- Reduced cost for transportation of patients.
- Reduced cost for transportation of visiting family members.
- Reduced school days lost (future value)¹⁵.

Social Benefits

Convenience. From the perspective of development organizations (whether government, donors or NGOs), the purpose of sanitation is usually to improve health. From the perspective of users of the services, the answer is generally for non-health benefits such as privacy, convenience, safety, status and prestige, and cost savings. On total economy, time saved through more convenience is the most important benefit provided by sanitation (82% of the total benefits identified as being attributable to “improved sanitation”). This includes the time saved from having to go into the fields at night to defecate. The convenience benefit also relates to the ability to use the facilities at any time of day, and the privacy/safety aspects. Households often place greater emphasis on benefits related to social status¹⁶, dignity and security rather than health benefits. People also value the ability to offer improved amenities for guests.

Social cohesion. Urban poor communities are often made of heterogeneous groups, for instance coming from different rural areas. Unlike rural communities, urban poor communities may lack cohesion and solidarity at first. They find themselves “half-way” zone between rural community and urban facilities, without enjoying the latter. Through (water and) sanitation projects, it is possible to mobilize the community to develop shared facilities for the common good. If successful, a sanitation projects can help build “social capital” within the communities, and reinforce participatory modes of conduct. Once formed, these communities often move on to other problems (solid wastes, tenure problems, crime, microfinance, etc.).

Gender. Emphasis on the gender aspects of sanitation can help mobilize support from an important group of stakeholders, including women’s groups, NGOs and donors. The focus should be placed on the idea that better sanitation helps to improve the status of women because they suffer disproportionately when facilities are not available:

- having to travel further to avoid being overlooked when defecating;

¹⁴ **India:** The “why” of consumer behavior is more important than the “what”. For instance, although diarrhoea is the greatest cause of infant mortality, parents were more fearful of polio, because the resulting physical disabilities to children represented a greater burden than mortality, due to social stigmas and the burden of care (Budds et al, 2002).

¹⁵ **Brazil:** a study in Salvador de Bahia showed that among children in households without toilets the incidence of diarrhoea is twice that among those who have sanitation; whereas among children in communities without sanitation infrastructure, it is three times greater than in otherwise similar, but sewered communities (Moraes, et.al.,2002).

¹⁶ **Morocco:** urban and semi-urban poor often own a latrine which is kept clean and locked up so guests and visitors can use it. Household family members may not be using it at all during non-visiting times.

- In many cultures, the only time when women and girls can defecate, if they have no latrine, is after dark. Apart from the discomfort caused by the long wait until evening, this can cause serious illness
- Risk of sexual assaults;
- Missing out on education when adequate school sanitation facilities are not available for female students.

Furthermore, the social intermediation needed to carry out a good hygiene and sanitation program can be instrumental in empowering women within the community and the family (Evans, 2004). Social benefits as unexpected as improved marital relations were reported by the beneficiaries in many settings (Cairncross, 2005).

Economic Benefits

When advocating sanitation, stress should be placed on the wide variety of economic benefits, not just those related to health. While some of these benefits are not easy to quantify, they include:

- *Property values*: Sanitation facilities increase the property value of the housing based on the capitalized value of the facility and its useful life, which includes the capitalized value of convenience, lack of smell, privacy, and improved land use from elimination of wastes and water accumulation (ponding). Higher property values raises the possibility of higher revenues from property taxes, where municipalities can collect such taxes.
- *Tourism*: Improvement of the environment can translate into strong benefits for the tourism¹⁷. Sewerage contamination of beaches is a common problem in many resort areas where hotel and household wastes drain untreated into the nearby ocean.
- *Re-cycling* : Reuse of wastewater and manure can create significant benefits, the latter being a consequence of environmental improvement. Safe reuse of wastewater and excreta falls into three broad areas:
 - the large-scale “public” reuse of treated waste water (usually for irrigation or aquaculture);
 - the small-scale “private” reuse of treated waste water (usually for small-scale irrigation or watering);
 - “local” reuse of excreta for household or local agriculture.

Guatemala: Recycling of Waste Products

As part of its regional and rural development objectives, the EU Project for the sustainable development of the Lake Atitlán basin in Guatemala, included the design and construction of three wastewater treatment plants for the towns of Sololá and Panajachel: The sludge is dried in drying beds and taken away by local farmers, who queue up to use this product as soil fertilizer. The treated water is at the disposal of the neighboring farmers, 10 smallholders that have formed a cooperative. The biogas is distributed to neighboring houses for cooking purposes, in substitution of wood, which has become rarer and more expensive from year to year, as well as one of the biggest bills in the family budget ([/www.bio-tec.net/publicaciones/coni118.doc](http://www.bio-tec.net/publicaciones/coni118.doc)).

¹⁷ **Peru**: 1991 cholera epidemic is estimated to have cost the nation health costs, tourism and production losses (WSSCC/WHO, 2005)

Another opportunity for reuse is to take advantage of the biogas created through anaerobic digestion, for instance in public latrines or small wastewater treatment plants. If properly designed, built and operated, biogas reuse can be quite efficient. But experience worldwide shows that large-scale applications are not easy; real successes are limited to small-scale applications (see box on Guatemala).

Private Sector: Sanitation work creates job opportunities for suppliers (latrines, septic tanks, emptying pits)¹⁸. Private entrepreneurs should be encouraged to see the water, sanitation and hygiene sector as an opportunity for good business. Their support can be important for promotion of sanitation investments, and they can be a source of new ideas and technologies that can improve effectiveness and/or lower costs.

Operations

Bad sanitation impacts on operation of other services, such as water supply, drainage or flood-control. Drawing attention to these interactions can be important for enlisting the support of authorities presently providing these services. These negative impacts include:

- In dense areas, effluents can contaminate water sources, either subterranean¹⁹ or surface²⁰.
- Bad urban sanitation can impact on water quality in the water supply distribution network, for instance through leakage.
- When drainage is part of the scope of sanitation, the absence of facilities can increase erosion, e.g. of river banks where many urban poor live.
- Badly operated septic tanks create problems of grit and sludge retention, and this material may end up in existing drains.

D. Emphasize Low Cost Solutions

Governments (local or national) are often reluctant to invest in onsite household sanitation because they are more familiar with heavy investments in piped sewerage systems. Generally speaking, there is a wide range of technical solutions available to solve urban sanitation problems. New approaches use lower cost sewerage designs and tend to localize collection and treatment. These low cost solutions allow sanitation improvements to be affordable to the urban poor, and often rely heavily on community involvement (see box on Bolivia).

Advocates should be careful not to insist on inappropriate, high-cost standards. There is a body of evidence to suggest that rigid adherence to “higher” definitions of levels of service constrains access in many countries. However, in many cities, low-cost on-site solutions are limited by restrictive technical norms and standards. The key is

¹⁸ Of course, any public expenditure creates job opportunities somewhere, so this may not be a net gain.

¹⁹ **El Salvador:** main pollution source are the urban effluents discharged into the river (main one being the Río Lempa). Natural resources are in danger, and water supply sources (most of the country is supplied by wells) in particular.

²⁰ **Burundi:** main water source for the capital Bujumbura is the Lake Tanganyika, where all of wastewater are discharged. This situation was a strong motivation for the Municipality to upgrade the sewerage system and build a wastewater treatment plant.

municipal capacity to oversee a managed process of investment, one which links sanitation with housing and land-use planning. Advocates of low-cost solutions need to review the kinds of standards presently in force, and the municipality's capacity to enforce norms and standards. As one author put it, the idea is to "*Suit the pockets of the poor, rather than the ideals of the engineers*" (Cairncross, 2003).

Governments need to establish incentives that enable individual household choices to achieve public policy objectives and to uphold and regulate principles and policies for the public good. They will also want to continue to finance investments in shared infrastructure (such as trunk sewers and wastewater treatment facilities) and support interventions which raise household demand for sanitation, promote improved hygienic practices, and facilitate private sector²¹ to deliver appropriate services.

However, a heavy private sector involvement may mean less credit for government efforts. Therefore, sanitation should be well regulated, so the Government gets credit although the private sector does the job. Therefore, an effective advocacy job should approach the decision-makers with transparency: project leaders should make clear to politicians and decision-makers that they are aware of their constraints, and that they are ready to help them: "*We understand your need to receive the credit, so invest in sanitation: let the money and the work go to the private sector, and we'll help the government get the credit for it*".

Bolivia: A Condominial Approach to Sanitation

The efforts of the private operator of the water and sanitation network for the La Paz-El Alto urban center resulted in the development of the condominial approach to sewered sanitation in the poorest neighborhoods of the city. This approach relies on low-cost technology and a community-based approach with heavy community participation (an approach pioneered in Brazil). The El Alto experience enabled sanitation to be provided to indigenous groups who had been excluded from service provision, and resulted in adoption of low-cost technology as a standard for the utility for all income groups. Support from SIDA and the WSP in technical training and advocacy for the approach, resulted in a change in the national norms and standards, which have enabled condominial sanitation to be rolled out in other municipalities. However, it should be noted this result came about largely because the regulator (the state of Bolivia) added a clause in the operator's contract requiring increased coverage in benefit of urban poor. A favorable outcome for sanitation was achieved in El Alto through enlightened regulation, a sharp contrast with the contentious situation in water supply undertaken by the same operator.

Source: WSSCC/WHO, 2005 and author observations

²¹ **Public Private Partnership on Handwashing with Soap in Central America and Africa:** USAID funded EHP and BASICS projects in central America persuaded soap producers from Guatemala, Costa Rica, El Salvador, Honduras and Nicaragua to publicize health information by advertising how the use of soap prevents diarrhea. Similar initiatives have been started in Ghana, Senegal and Madagascar and are being tracked by action research to assess their effectiveness with accompanying action research to assess their effectiveness (Mehta and Knapp, 2004).

E. Creating Support or “Political Will”

Identify the target

In many countries, decision making power is diffused, and not always clearly visible: politicians (ministers, members of parliament, councilors), professional associations, educational institutions, donors, service organizations, business people, high profile personalities, NGOs, churches and the media. In order to identify the right decision-maker, it might be necessary to have a first idea about the probable technological choices to be made, because it will determine what types of organizations need to be most heavily involved: projects including urban drainage may need to approach Ministry of Public Works; projects including separate sewerage may need to approach the water supply utility; projects including on-site sanitation may need to approach the private sector or NGOs. In all urban cases, communities and the municipality should be playing a key role, either as decision-maker, as allies and/or as executors. It is important to find a “champion” who can lead the work, and has the resources and authority to do it.²²

Look for allies

Advocates need to identify allies and build coalitions of like-minded groups and individuals. Allies can be found in the various groups of stakeholders involved in sanitation (Watson, 2003). Working with allies is an opportunity to:

- share expertise, knowledge and lessons learned;
- gain access to other resources, such as funding; and
- Speak with one voice, which is likely to be taken far more seriously than if each group works separately.

For urban sanitation projects, allies can be (not in order of priority):

- Local leaders or religious personalities;
- NGOs working in the field (on other issues);
- Doctors or public health staff working in the field (most aware people of the problem);
- Universities;
- Private sector: companies or professional organizations, soap vendors;
- Associative social groups, women groups, farmers (for reuse); and/or
- Technical assistance resources working within Governmental agencies.

²² **Honduras:** The Center for Research and Control of Contaminants (CESCCO) is devoted to scientific research, education, environmental management and delivery of services. Its specialty includes surveys on pollution, environmental audits, educational events and involvement on events relating to problem-solving management. The founder and general manager of the institute – a strong personality – was considered as being a key factor for the success and presence of the institute in the sector.

Build on Existing Institutions

Advocates can make new programs more acceptable if they build on existing programs and institutions. This can also lower overall costs. The best approach is look hard at what currently exists and plan to build and improve from there:

a) *Respect existing regulation*

Any national strategy document has to be regarded as an installed capacity. Any action should – as much as possible – refer to this officially approved document.

b) *Value local customs and traditions*

Although not enough to prevent all diseases, many traditional hygiene habits do contribute to proper sanitation, and should be considered as installed capacity²³. Changing traditional practices totally will prove difficult; attempt should be made to modify or adapt.

c) *“Piggy-Back” on other demands*

Population (urban poor) may have different demands, which may or may not include sanitation. The strategy should take in account this situation and try to “surf” or “piggy-back” on the demand for other items in order to include sanitation projects.

d) *Ad-hoc opportunities should be used.*

If a drainage project is being undertaken, it may be worth using the opportunity and to “add” a sanitation component to the existing project. This “add-on” can be made in the same project, or by another project run in parallel²⁴. This often makes sense since drainage projects in urban areas often become *de facto* sanitation infrastructure when they operate.

Link with international movements

Politicians may feel more comfortable supporting radical change in sanitation and hygiene promotion if they feel that it is part of an internationally mandated movement. The Millennium Development Goals for example provide a useful “peg” to sanitation and hygiene promotion: efforts in sanitation are highly valued by the international community. Linking national programs to regional and international bodies may also provide models for national champions of what has worked and what has not worked in other countries.²⁵

²³ **South East Asia:** Joining hands for greetings is more hygienic than shaking hands.

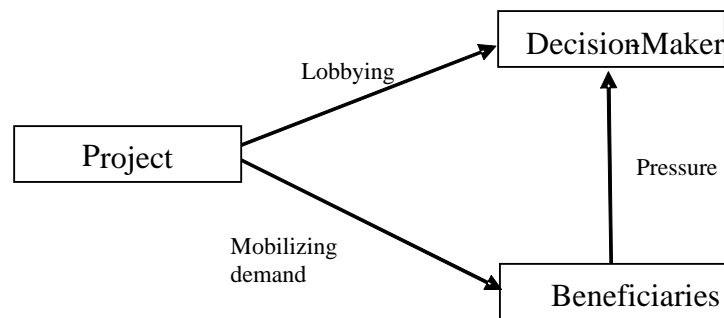
²⁴ **Cambodia:** an on-site and community-based sanitation project was run in parallel of a ADB project aiming to solve the flooding in some of Phnom Penh areas. Since the flooding affected mainly the channel and rivers shore, benefits were provided to urban poor leaving in these areas. However, the range of the “parallel” sanitation project was small compared to the needs.

²⁵ **Central America:** the Regional Network for Water and Sanitation in Central America provides an important space for information and knowledge sharing. Meetings are also an opportunity for country

Promote dialog between parties

Community members are often the most powerful advocates on issues that affect them because they can speak with direct experience with addressing the issue and its consequences. They can be involved as direct actors, lobbying their local government, for example, and in capacity building, encouraging other local communities to take action themselves. In parallel, sanitation projects aiming at raising political responsibility should work directly with decision-makers, pointing out their interest in responding to the community pressure and investing in sanitation (see Fig. 3).

Fig. 3. Beneficiaries as Advocates



By working at both the community and decision-maker level, project authorities can ensure that the conditions for success are met. Should only one axis be developed, there are risks that:

- the response from government is not calibrated to community needs, or
- one of the stakeholders is not ready to pay for sanitation improvements (household or public sector).

Lobbying. Lobbying can be defined as “trying to influence the policy process by working closely with the individuals in political and governmental structures” (Watson, 2003). Public sector decision-makers are lobbied by many different groups --“the bus is crowded”. It is therefore important :

- To chose the right moment for lobbying.
- contact like-minded organizations for potential collaboration and support

Other ways of lobbying include:

- Invite influential officers to visit the program (or examples to replicate) to familiarize themselves with the work;
- Use the media. Mass media are often owned and run by the government, therefore it is easier to use them for social marketing (Budds, 2002).

representatives to “compare” their achievements to the other regional countries, creating a positive and “competitive” atmosphere.

Meetings. Special meetings on key topics can attract higher level staff and give greater priority to sanitation. Sometimes the presence of a high profile national commentator, or “international expert”, may be useful at such a meeting to increase its profile.

Competition. Competition between among communities can be a motivation for project. This competition can be either part of a game²⁶, or part of the political game²⁷.

Demonstrative examples. Once identified, have decision-makers (or those who influence them) visit the problematic sites. These visits do not necessary have to be planned as such: there are opportunities to be used²⁸. Get officials into the habit of visiting households and asking questions about hygiene. This is vitally important because most officials are reluctant to talk about sanitation and hygiene practices, and often remain unaware of what is really happening on the ground.

VI. Conclusions

Sanitation seems to be an area that has been under-valued, and as a result, the level of investment has been less than optimal. Countless donor and government projects have promoted clean water, but far fewer have concentrated on the related problems of sanitation and hygiene. If the health targets of the MDGs are to be met, more attention has to be paid to these related subjects.

In advocating for more attention and resources in these areas, advocates have to have a strategy that will resonate with decision makers. Decision makers are being constantly lobbied by various groups for expanded resources for their areas – advocates of sanitation have to realize they are in competition with other sectors. Therefore, the argument has to be made that sanitation costs will yield returns greater than those in alternative investments. Advocates cannot focus only on economic returns – government decisions will be affected by political and social returns as well and good advocates will identify these issues and incorporate them into their arguments. And indeed, sanitation has more than health benefits. They provide benefits in terms of time savings, privacy, and convenience which, in fact, may rank higher for the user than the less obvious health aspects.

Typically, sanitation projects are seen as large and expensive sewer projects in urban areas. Emphasis and focus has to be placed on low-cost solutions that are appropriate and

²⁶ **India:** “Awards for Total Sanitation” in Maharashtra: In this innovative program, villages compete for a ‘clean village’ award, which carries a cash amount to be used for village development (Mehta, 2005).

²⁷ **El Salvador:** the political situation is very much polarized, with two main parties involved. While efforts are being made for increasing the good governance, competition can play a role in driving sanitation project. That was the case in a small city in the Northern region, where the municipality was keen to demonstrate its ability and turn it into political benefit. A water and sanitation project was successfully run, including one of the very few wastewater treatment plants working in the country.

²⁸ **Senegal:** the town of Rufisque is located on the road to the main tourist resorts. However, local pressure had not been enough to generate more investment in sanitation for the city. This situation changed dramatically when the President drove on the road and smelled the lack of sanitation. Government mobilization proceeded, and eventually a sewerage project was realized and is presently working.

affordable by poor people. Much of the costs of low-cost sanitation improvements can be borne by the household – the role of the government is promote sanitation, provide standards, and provide subsidies for poor families. Subsidies make sense when one considers the external or community benefits of these investments. Emphasizing low-cost solutions also makes it easier for the decision maker to accept a project, since it reduces its budgetary cost, and means less resources taken from some other sector.

In advocating for sanitation, it is important to build a coalition of “like-minded” allies. These can include NGOs, women’s groups, local governments, communities and beneficiaries. Sanitation projects can be linked with projects of other public authorities, such as water and drainage. However, support from these authorities will depend on whether or not they see some benefit to their own institution from incorporating sanitation components into their work, or expanding their purview.

The issue is often expressed as the need to “build political will”. However, politicians respond to what is popular and what makes them and their political party look good. Demonstrating that sanitation is something that provides various benefits that are desired by people, and helping people mobilize their concerns and their communities, is one of the best ways to build political will at the top.

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