

## Abstract

*Because the HIV/AIDS epidemic in resource-poor countries is concentrated in the most productive age group, it affects all development sectors and threatens the protection and safeguarding of human rights. While access to safe water and sanitation is a human right, it is particularly important for people infected and affected by HIV/AIDS that these rights are respected, protected, and fulfilled. Yet, the impact of the epidemic jeopardizes the ability of the water and sanitation sectors to fulfill these duties. This article reviews the linkages between these sectors and HIV/AIDS from a rights perspective and gives suggestions for strategies to be undertaken by state and non-state actors to promote access to water and sanitation as a right in an HIV/AIDS context.*

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*Parce que l'épidémie du VIH/sida dans les pays faibles en ressources se concentre dans les groupes d'âges les plus productifs, elle affecte tous les secteurs du développement et menace la protection et la sauvegarde des droits de l'homme. Alors que le droit à l'eau potable et à des conditions sanitaires constitue un droit fondamental de l'être humain, il est particulièrement important pour les personnes infectées et affectées par le VIH/sida que ces droits soient respectés, protégés et satisfaits. Cependant, l'impact de l'épidémie elle-même met en danger la possibilité pour les instances en charge de l'eau et des conditions sanitaires de remplir ces devoirs. Cet article passe en revue les interactions entre ces instances et le VIH/sida en se plaçant du point de vue des droits de la personne. Il suggère des stratégies pouvant être adoptées par les acteurs étatiques et non-étatiques pour promouvoir l'accès à l'eau potable et à des conditions sanitaires, considéré comme un droit dans le contexte du VIH/SIDA.*

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*Debido a que la epidemia VIH/SIDA en los países de pocos recursos se concentra en el grupo de edad más productiva, afecta a todos los sectores del desarrollo y amenaza la protección y el cuidado de los derechos humanos. Mientras que el acceso al agua limpia y a la higiene son derechos humanos, para las personas infectadas y afectadas por VIH/SIDA es particularmente importante que esos derechos se respeten, protejan y cumplan satisfactoriamente. No obstante, el impacto de la epidemia pone en peligro la habilidad de cumplir satisfactoriamente esas tareas por parte de los sectores de distribución de agua y sanidad. En este artículo se estudia la relación entre esos sectores y el VIH/SIDA desde una perspectiva de derechos y se suministran sugerencias sobre estrategias a tomar por miembros gubernamentales y no gubernamentales para promover el acceso al agua y la sanidad dentro del contexto del VIH/SIDA.*

# WATER AND SANITATION IN THE CONTEXT OF HIV/AIDS: The Right of Access in Resource-Poor Countries

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**A**IDS has become the most devastating global epidemic the world has ever faced. By the end of 2005, over 25 million people had died and an estimated 40.3 million people globally were infected with HIV — of which about 38 million live in developing countries. Almost five million people were newly infected last year.<sup>1</sup> Because the epidemic is concentrated in the most productive age group regardless of economic or educational status, it has, in resource-poor countries, a systemic impact on economic development at all levels, affects all development sectors, and threatens the social fabric of society, including the protection and safeguarding of human rights.<sup>2</sup>

The full realization of human rights and fundamental freedoms for all is an essential element in a global response to the HIV/AIDS epidemic, including the areas of prevention, care, support, and treatment, to reduce vulnerability to HIV/AIDS and prevent stigma and related discrimination against people living with or at risk of contracting HIV.<sup>3</sup> A rights-based approach recognizes societal vulnerability to HIV/AIDS, not just individual risk behavior. It also recognizes the vulnerability of stigmatized or disempowered populations. Denial of human rights fuels the epidemic in at least three ways:

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- Discrimination, in particular gender-based discrimination, increases the impact of the epidemic on people living with HIV/AIDS (PLWHA) and their families;
- People are more vulnerable to infection when their economic, social, or cultural rights are not respected; and
- Where civil and political rights are not respected — for example when freedom of speech and association is curtailed — it is difficult for civil society to respond effectively to the epidemic.<sup>4</sup>

Public health and human rights thus have complementary goals. Since HIV/AIDS is strongly associated with poverty and social exclusion, both political and civic rights and economic, social, and cultural rights are relevant.<sup>5</sup> They are all universal, indivisible, interdependent, interrelated, and essential for protecting the inherent dignity of PLWHA — for achieving the public health goals of reducing vulnerability to HIV infection, for reducing the adverse impact of HIV/AIDS, and for empowering individuals and communities to respond to HIV/AIDS.<sup>6</sup>

For the water and sanitation sectors, the epidemic jeopardizes the Millennium Development Goal (MDG) to halve the proportion of people who are unable to reach or afford safe drinking water and the goal set in the World Summit on Sustainable Development in Johannesburg in 2002 to halve the number of people without access to improved sanitation.<sup>7,8</sup> In many affected resource-poor countries, there is or will be a negative impact on the quantity and quality of services provided. Not only will the budget be reduced because of a decreased tax base and reduced government budget, but sector staff performance will also decline as a result of diminishing productivity and capacity. At the same time, community capacity to operate and maintain the systems is reduced.<sup>9</sup> While access to safe water and adequate sanitation is a human right for all, it is of crucial importance for PLWHA.<sup>10</sup> A nearby and reliable supply of water, including for small-scale production, and sanitary latrines, help those infected in resource-poor settings stay healthy and continue to work longer. They reduce the workload for caregivers and help preserve human dignity.<sup>11</sup> Yet, the impact of the epidemic jeopardizes the ability of the water and

sanitation sectors to fulfill these rights. So far, the response of these sectors to the HIV/AIDS epidemic has been limited.<sup>12</sup> A major reason for the limited response is that the sectors consider HIV/AIDS to be the responsibility of the health sector, and, in general, have not been looking at the impact of AIDS on sector performance or at the impact of the sectors on individuals, households, and communities affected by the epidemic.

The aim of this article is to increase the understanding of readers from the water and sanitation sectors of the linkages between HIV/AIDS and these sectors and to motivate these sectors to take responsibility for realizing the right to water and sanitation for PLWHA. At the same time, the article aims to increase understanding of readers working in HIV and AIDS that much more attention needs to be given to safe water, sanitation, and hygiene to adequately fulfill their responsibility in the care and support of PLWHA.

### **The Existing Human Rights Framework for HIV/AIDS, Water Supply, and Sanitation**

As stressed in the historic Declaration of Commitment on HIV/AIDS by the UN General Assembly in 2001, human rights are at the center of HIV/AIDS response, and international human rights norms provide a coherent, normative framework for analysis of the HIV/AIDS problem and response.<sup>13</sup> HIV/AIDS concerns myriad fundamental human rights such as: the right to life; the right to non-discrimination, equal protection and equality before the law; the right to the highest attainable standard of physical and mental health; the right to equal access to education; the right to an adequate standard of living; the right to share in scientific advancement and its benefits; the right to participate in public and cultural life; and the right to freely receive and impart information.

This interdependence has been translated into the International Guidelines on HIV/AIDS and Human Rights.<sup>14</sup> These guidelines set the standard for upholding HIV/AIDS-related human rights at national and international levels and clarify the obligations contained in existing human rights instruments. Guideline 6 on access to prevention, treatment, care, and support has been revised in

light of current scientific progress, best practices at the country level, and international law and provides up-to-date policy guidance on access to treatment.<sup>15</sup>

Implementation by states of human rights in the context of HIV/AIDS is monitored by UN treaty monitoring bodies. In particular, the Committee on the Elimination of Discrimination against Women (CEDAW) and the Committee on the Rights of the Child (CRC) have respectively issued recommendations and General Comments aimed at promoting and protecting the human rights of children and women in the context of HIV/AIDS. General Comment 3 on HIV/AIDS and the rights of the child (2003) of the CRC stresses in particular the need for a holistic child rights-based approach.<sup>16</sup> General Recommendation 24 (1999) of CEDAW affirms that women's access to health care is a basic human right and recommends that states remove all obstacles to women's access to health services, education, and information.<sup>17</sup>

Access to safe water and sanitation is also recognized as a human right. Reference to water is made in CEDAW and CRC, and the right to water is widely interpreted as being implicit in other human rights, particularly the right to life, the right to an adequate standard of living, and the right to health.<sup>18</sup> An important step forward in the promotion of the right to water was the adoption of General Comment 15 on the Right to Water by the UN Committee on Economic, Social and Cultural Rights in November 2002 at its 29th session. The Comment states that the right to water is an independent right and imposes various related obligations on states:<sup>19</sup>

- Respect the right to water. This obligation requires governments to ensure that the activities of their institutions do not deny or limit equal access to adequate water supply.
- Protect the right to water. This requires preventing third parties from interfering in any way with the enjoyment of the right to water, including sufficiency, safety, affordability, and accessibility of water.
- Fulfill the right to water. This requires that governments take active steps to ensure that everyone can enjoy the right in the shortest possible time. General Comment 15 divides this obligation into: facilitation (taking positive measures to assist individuals and com-

munities to enjoy the right to water); promotion (adequate education on hygienic use, protection of water sources and methods to minimize waste); and provision (the state is to fulfill the right to water when individuals or groups are unable to realize the right themselves by the means at their disposal).<sup>20</sup>

These obligations provide the basis for working towards entitlements for people infected and affected by HIV/AIDS as rights-holders. While states are the ultimate duty-bearers, they can delegate responsibilities to private service providers (for example, water companies) and civil society organizations (for example, nongovernmental organizations [NGOs]). Rights-holders must be able to hold these organizations accountable for the implementation of the delegated responsibility.

## **The Links Between Water, Sanitation, Hygiene, and HIV/AIDS**

### ***The Right to the Highest Attainable Standard of Health***

The Committee on Economic, Social and Cultural Rights interprets the right to health as an inclusive right that includes factors that determine good health, such as access to safe drinking water and adequate sanitation, as well as access to health-related education.<sup>21</sup> Under this right, three topics related to water, sanitation, and hygiene are relevant: staying healthy, home-based care, and infant feeding. Each is discussed in turn below.

**Staying Healthy.** Duty-bearers (state and non-state actors) in the context of water are responsible for the improvement of people's health by providing access to safe water supply, sanitation, and hygiene. In an HIV/AIDS context, this responsibility becomes even more pertinent because water and sanitation-related diseases such as diarrhea and various types of skin diseases are some of the common infections from which PLWHA suffer. Gastrointestinal infections, some of which are attributable to unsafe water, inadequate sanitation, and poor hygiene, are predominant causes of diarrhea. This affects 90% of HIV-infected people, becoming more frequent and severe as

the immune system deteriorates.<sup>22</sup> Clean water is also needed for food preparation, and good nutrition can help to maintain and improve the nutritional status of a PLWHA and delay the progression from HIV to AIDS-related diseases. Nutritional care and support are important from the early stages of infection to prevent the development of nutritional deficiencies.<sup>23</sup> The following example illustrates this point:

Olive started a food garden in her yard when she realized she needed vegetables to boost her health. Her son helped her grow spinach and tomatoes, but the garden needs much water and attention, and her son is not always available to help.

Olive's health declined rapidly in February 2003. She is now so sick she can do little for herself. Her son fetches water when he comes back from school. He collects the water from a standpipe near their house. She should pay Rand 5 [US\$.72] each month for this water, but the community still allows her to collect water when she does not have the money.

When the water is available, her son fills every container he can find. When the standpipe is dry, she buys it from a private borehole for Rand 0.50 per 25-liter container. When she runs out of money, her neighbors support her. She does not have a toilet of her own but uses a clean toilet at her church.<sup>24</sup>

Finally, poor hygiene due to lack of water and sanitation as well as inadequate waste management attracts insects and vermin that carry diseases. Thus, ensuring an adequate water supply and sanitation are of utmost importance for PLWHA to remain healthy and to reduce their potential exposure to infection.

**Home-Based Care.** As the number of PLWHA increases, the gap continues to widen between demand and availability of health care services, and many patients and family caregivers are too poor to access health care services at all. Health systems face increasing challenges in providing care and support for PLWHA. HIV/AIDS also lays additional burdens on already over-stretched health services and reduces their capacity to adequately respond to other health challenges.

Demand for health services increases as the numbers of individuals who become ill as a result of HIV infection rises. This results in an increased workload and overcrowding of health facilities, as well as less service for those who need care most—the poor in rural areas.<sup>25</sup> Home-based care programs have been developed, however, in which community volunteers (mainly women) are trained as caregivers.<sup>26</sup> Many of the PLWHA are treated at home by these caregivers who provide basic nursing care, guidance on nutritional requirements, and palliative care.

Water duty-bearers (the state and organizations on its behalf) must ensure access to safe water and sanitation for such home-based care. Water is needed for bathing patients, washing soiled clothing and linen, and keeping the home clean. Safe drinking water is needed for taking medicines and to make food easier to eat for patients suffering from mouth ulcers or thrush. Water supply points and latrines have to be accessible and close to where they are needed. Sufficient water and sanitation, moreover, help patients and caregivers to maintain a sense of dignity.

Apart from the obligation to ensure the quality of water, the quantity of water is also very important. Improving the quantity of water available reduces common endemic diarrhea because plentiful supplies of water facilitate and encourage better hygiene in general and more hand-washing in particular.<sup>27</sup> Home-based care requires more water than the 20 liters per capita per day, which is considered “basic access” as the example below illustrates:<sup>28</sup>

A rural woman interviewed in Southern Africa estimated that it took 24 buckets of water a day, fetched by hand, to care for a family member who was dying of AIDS—water to wash the clothes, the sheets, and the patient after regular bouts of diarrhea.<sup>29</sup>

It is now widely accepted in the water and sanitation sectors that availability of safe water and sanitation does not automatically lead to improvements in health. Improved water handling and sanitation practices need to be combined with personal hygiene, domestic hygiene, food hygiene, and safe waste-water disposal and drainage to effectively reduce water- and sanitation-related diseases.<sup>30</sup>

For instance, even when the water at source is safe, contamination easily occurs when drawing water (bucket not clean), when transporting water (hands in the bucket), or when storing water (uncovered containers). Unhygienic practices such as not washing hands after using the toilet or before cooking or eating food increase the likelihood of fecal-oral routes of transmission. These issues are discussed at hygiene education sessions that ideally complement all water and sanitation interventions. Also, PLWHA and their caregivers (be they volunteers or family members) need adequate information on these aspects of hygiene, and this should be incorporated in training for home-based care. Most training manuals for home-based care do mention the need for hygiene and the use of safe water and latrines, but the manuals are based on an assumption that everyone has access to safe water and sanitation. They assume, moreover, that caregivers are informed about safe water-handling practices. The advice generally given to caregivers and households with PLWHA is to boil water for drinking. This is not always realistic as firewood may have to be fetched from far away, adding another burden:<sup>31</sup>

The households saw drinking river water as a potential risk for catching cholera, but there was little awareness of the importance of personal and domestic hygiene behavior for the patients' health. The local health educators focused on the prevention of HIV/AIDS but did not address secondary diseases stemming from poor quality or inadequate water supply, hygiene, and sanitation.<sup>32</sup>

**Infant Feeding.** If an HIV-positive woman becomes pregnant, there is a 35% chance that she will transmit the virus to her child if no preventive medication is taken. Of this, 33% of transmissions occur through breast-feeding.<sup>33</sup> Women have to be fully informed on the positive and negative aspects of different options available to them in order to make an informed decision that suits their circumstances best. The "obvious" solution would be not to breast-feed the child, but this may be very difficult because of social, cultural, and financial factors, including the cost and availability of powdered milk, stigma, and tradition. For HIV-positive mothers with limited access to clean water and sanitation, the choice

of whether to breast-feed or not can be a painful dilemma. New mothers must weigh the risk of passing on the infection to their infants against the risk of denying them breast milk. During the first two months, a bottle-fed baby is nearly six times more likely to die from diarrhea, respiratory, or other infections compared to a breast-fed child, mostly because contaminated water is used to mix the formula, and the bottles used are unclean.<sup>34</sup> UNICEF suggests that baby formula is an option only if a mother has access to clean drinking water and can afford enough baby formula for at least six months.<sup>35</sup> A study on the hazards and benefits of breast- and formula-feeding for babies of HIV-positive mothers also concluded that it is more appropriate to promote exclusive breast-feeding as a public health policy and to counsel individual women on infant-feeding choices rather than to offer free replacement formula.<sup>36</sup> Whether breast-feeding or not, clean water is crucial for infant feeding for all babies, but especially for HIV-positive babies, because unsafe water will increase the risk of diarrhea, weakening their resistance and shortening their lives.

### ***The Right to an Adequate Standard of Living***

Communities with a high HIV/AIDS prevalence are often characterized by poverty, unemployment or limited income-generating opportunities, high mobility, labor migration, social inequalities, and a weakening economic basis—all elements that increase their susceptibility to infection and vulnerability to the impact of the epidemic. Water is not only a basic need but also has strategic importance for poor people and especially PLWHA.<sup>37</sup> Even people who are severely weakened by AIDS can still be involved in growing vegetables in kitchen gardens, provided that they do not need to haul water from far away. The same applies to tending domestic animals and home-based businesses, such as beer brewing. Vegetable gardening also increases food security and nutrition levels and thus helps to increase the standard of living. People must be entitled to an affordable water supply to help meet their basic needs:

In Livingstone, Zambia, the home-based care volunteers are growing vegetables as an income-generating activity. Of the produce, part is used as a food supplement for their patients,

part is used by the women themselves for their own food security, and the rest is sold. One major problem they face is lack of a reliable water supply near their fields.<sup>38</sup>

### ***The Right to Share in Scientific Advancement and Its Benefits***

With regard to HIV/AIDS, this right is translated foremost into PLWHA being entitled to access to treatment, including drugs for opportunistic infections, highly active anti-retroviral treatment (HAART), and the drugs to prevent mother-to-child transmission (MTCT).<sup>39</sup> If we look at the water sector, this right implies access to appropriate and cheap technologies for safe water supply (for example, hand pumps, spring water protection, rainwater harvesting, home-based water treatment methods such as safe water systems, solar disinfection) and sanitation (for example, SANplat, VIP latrines, or pour-flush latrines):<sup>40-42</sup>

To address the need for safe water, the CDC developed the Safe Water System (SWS), which consists of 3 elements: water treatment with locally produced diluted bleach, safe water storage, and behavior change communications. In 2001-2002, the efficacy of the SWS in preventing diarrhea in PLWHA in rural Uganda was evaluated. The safe water intervention (SWS) was associated with 25% fewer diarrhea episodes and 33% fewer days with diarrhea. SWS and cotrimoxazole prophylaxis together reduced diarrhea episodes by 67%, days with diarrhea by 54%, and days of work or school lost due to diarrhea by 47%. Thus, simple, home-based water chlorination can reduce the frequency and severity of diarrhea among PLWHA.<sup>43</sup>

### ***Non-Discrimination, Equal Protection, Equality Before the Law, and the Right to Participate in Public and Cultural Life***

Applying the principle of participation has profound consequences for the design and implementation of all development activities, including the provision of water supply and sanitation. To achieve active, free, and meaningful participation of all stakeholders (those people, groups, or institutions who have specific rights and interest in the developmental issue/service), programs have to create the necessary channels of participation both at country and local implementation levels.<sup>44</sup> The water sector has a long

history of promoting such participation, with a special focus on women, and has developed many approaches and tools for this promotion. Even so, to this day, the level and degree of influence on decision-making remains an issue, and this applies even more so to PLWHA.

Stigma can prevent PLWHA from having a voice and from participating in public life. This may lead to exclusion from basic services and from participation in decision-making, affecting the possibility to ensure that their rights and needs are addressed. Stigma may also cause child-headed and grandparent-headed households to be excluded from decision-making and valuable operational and hygiene information transmission. Although we have found no documented evidence of stigma and discrimination in the water sector, individuals living with HIV/AIDS in Zambia told us that they were kept from sharing toilets or fetching water from a communal water source.<sup>45</sup>

Involving caregivers, who are mostly women, in all stages of planning and implementation of service provision is critical. Because often very young and very old women assume many of the water- and sanitation-related tasks, both hygiene education and technology selection may have to be adapted to suit their requirements:

Staff at a catchment management program in South West Tanzania noticed that HIV/AIDS caused an under-representation in decision-making of a) labor-poor households; b) children/youth-headed households; and c) elderly women. These categories were never represented on committees.<sup>46</sup>

### ***The Right to Seek, Receive, and Impart Information***

As was mentioned in the section on home-based care, PLWHA and their caregivers have the right to be informed of water- and sanitation-related diseases and their impact. They need information on: safe water-handling practices; the importance of safe drinking water, food, and domestic hygiene; and ways to develop kitchen gardens to increase food security and nutrition levels. Hygiene education sessions conducted as part of water supply and sanitation interventions can incorporate such information. Similarly, new HIV-positive mothers need to be given information to

make an informed decision on whether or not to breast-feed their babies:

None of the informants drew any direct linkages between the health of HIV-positive people or those with AIDS and the quality and availability of water and sanitation. Drinking raw river water is seen as a potential risk for cholera infection, but there was little awareness of the particular vulnerability of HIV positive people to infections and diseases stemming from poor quality or inadequate water and bad sanitation.

There was little evidence of awareness of the particular susceptibility of HIV positive people to tuberculosis (TB), and no attention to the importance of managing grey water around the house to minimise the damp conditions in which the TB bacillus thrives.

Even health education messages provided by clinic nurses neglected these linkages. Nurses provide general information on prevention and treatment of various diseases, such as TB, diarrhea, and HIV/AIDS, through discussion and materials such as posters in the different local languages. There is no integration, though, between the different information programs—between water, sanitation, and AIDS care, and between TB and AIDS, and so on.<sup>47</sup>

The right to information also applies to staff of water agencies. Not only should they be informed of the prevention and care aspects of HIV and AIDS but also on particular measures to make them less susceptible to infection. This applies specifically for mobile staff who are away from home for several days or weeks at a time, such as drilling or maintenance crews.<sup>48</sup>

People in water and health duty-bearing institutions need to be informed and made aware of their responsibilities as duty-bearers and the entitlements of their clients as rights-holders. They have to be transparent and be held accountable not only in a vertical manner within their own institutions but also horizontally with the rights-holders and their representative organizations (for example, through consumer committees). The water users and their organizations have the right to be well informed about their entitlements and to have mechanisms to hold the duty-bearers to account.<sup>49</sup>

### ***The Right to Social Security, Assistance, and Welfare***

The right to water and sanitation implies pro-poor policies, strategies, and measures that enable poor people, including individuals and communities affected by HIV/AIDS, to have equal access to services. In the past decade, it has been understood that in community water projects, water users are responsible for organizing the operation and maintenance of their systems through user payments and training of community members in (simple) maintenance techniques.<sup>50</sup> Due to the impact of HIV/AIDS, however, sustainability of these systems is at risk because of the reduced ability of water users to pay water fees.<sup>51</sup>

Management of water supply systems is affected because of the reduced ability of water users to spend time and energy on management activities or because of the loss of trained community members:

Community-based management systems devised for sustaining community resources have become particularly vulnerable as they rely on the collective action of the whole community in order to function effectively and they must compete with other more pressing needs. A survey in Malawi indicated that after two poor agricultural seasons, the disposable incomes of subsistence populations had been greatly reduced and other issues such as food security and caring for the chronically sick had taken priority.<sup>52</sup>

Clearly, in countries with high or increasing HIV/AIDS prevalence, water sector planners and decision-makers at all levels have the responsibility to assess, address, and continuously monitor the current and expected impact of HIV/AIDS on the ability of communities to finance and manage water supply and sanitation. In a context of AIDS, it is imperative that all installations are robust and affordable, and can be sustained without reliance on a declining pool of skilled outsiders.<sup>53</sup> It may be necessary to change this approach and to develop a cross-subsidy within or between communities that ensures access to safe water by affected families, as is for instance done in Iringa, Tanzania, in a program supported by Concern, where affected households are no longer required to pay for water.<sup>54</sup> However, such cross-subsidy is unlikely to work in highly affected communities where all households have problems coping because of the impact of the epidemic.

## How to Make Rights Real

Despite a well-developed human rights framework and the fact that most countries have ratified the treaties and conventions, the reality of individuals, families, and communities affected by HIV/AIDS is entrenched with rights violations. Poor access to water, sanitation, and hygiene is one of them.

A rights-based approach to development (RBA) can be a catalyst for transforming the practice of development from a focus on identifying and meeting needs to enabling people to recognize and claim rights.<sup>55</sup> The realization of rights is regarded as a process that has a different character in each context. Although there are variations, RBAs have in common the fact that rights are defined as entitlements or legitimized claims that give rise to correlative obligations or duties. The three structural elements are: 1) rights-holders (individuals or groups) who are claimants; 2) duty-bearers (state or non-state actors with obligations); and 3) an object or end of the right (for example, adequate and affordable access to water supply). RBAs usually apply, in one way or another, the following core principles:

1. People have entitlements. Although usually influenced by international standards, the national legal, policy, program, and project frameworks define people's entitlements and thus legitimate claims (for example, minimum standards and conditions of water supply and sanitation provision and health care).
2. Duty-bearers should be responsive, transparent, and accountable. Adequate laws, policies, practices, and mechanisms of redress should be established or reinforced to hold duty-bearers (for example, public and private service providers) accountable. Accountability structures are usually vertical (within the institutional hierarchy) rather than horizontal (for example, local government monitoring service delivery).<sup>56</sup>
3. Participation is considered both an end and a means. Rights-holders must have a voice and be heard. They must be able to hold duty-bearers to account, either directly or indirectly through organizations that represent their interests.

4. Non-discrimination and attention to vulnerable groups. Equity, equality, and inclusion are core elements of RBAs. Specific measures are needed to provide people infected or affected by HIV/AIDS with appropriate services in order to achieve equitable outcomes and to give them a voice, either directly or indirectly, through organizations that represent their interests.
5. Empowerment. When the principles all come together, the rights-holders will be empowered and become active agents of their own development rather than passive receivers.<sup>57</sup>

Essentially, a rights-based approach to development aims at improving governance by enabling those who are most affected to articulate their priorities and claim genuine accountability from duty-bearing institutions. In order to make rights real, institutional change is required within the water sector (state and non-state actors) and the voice of citizens, including PLWHA, must be built, so that they can claim their rights. Such transformation may seem difficult or even impossible in a context where the capacity of service providers is already eroded by the HIV/AIDS crisis and resources are increasingly scarce, but the issue is governance, not resources.

Within a human rights framework, the most important policies and strategies for state and non-state actors to promote access to water and sanitation in an HIV/AIDS context are the following:

- Internal (organizational) mainstreaming of HIV/AIDS. This implies assessing organizational policy and practice in order to address vulnerability to the impacts of AIDS and then taking action. It should also include the protection of employees and the rights of infected employees to information, social security, and benefits.
- External mainstreaming of HIV/AIDS. This refers to addressing the impact of HIV/AIDS on the core programs and services implemented by the organization and the effect of such programs on the spread of HIV/AIDS. It should include attention to the obligations of the sectors as mentioned in General Comment 15, as well as the entitlements of individuals to water.

- Developing strategies to ensure fulfillment of the right of caregivers, PLWHA, and their families to receive information and education on how to reduce exposure to water- and sanitation-related diseases.
- Establishing minimum water and sanitation standards, and to have these considered as rights (entitlements) by both water and sanitation sector staff and consumers.
- Redefining “domestic water supply” to include not only water for basic needs but also water for small-scale production.
- Developing and offering technologies to the maximum extent possible that require the least labor for operation and maintenance (for example, hand pumps, spring water protection, rainwater harvesting), home-based water treatment such as SODIS (solar disinfection), SWS (safe water system), and sanitation (SANplat, VIP latrines, or pour-flush latrines).
- Speeding up funding for water and sanitation coverage in rural areas and low-income urban settlements, especially those areas most affected by the epidemic.
- Creating mechanisms for poor people, with specific attention to PLWHA, to establish their needs, their ability to influence water and sanitation decisions, and to hold water providers (and local government) accountable.
- Using rights language to place access to water and sanitation in the political arena (creating a lobby).
- Addressing inequality in assets and incomes by, for example, including social protection measures for the poorest and adapting cost-recovery strategies to accommodate the poorest (often HIV/AIDS stricken) households.
- These are not only the obligations of nation states. International development agencies are duty-bearers as well and have the obligation to support those countries that have difficulties fulfilling their obligations because of HIV/AIDS-related poverty. Although the HIV/AIDS crisis has generated significant international funding flows, poor political will and lack of good governance have hampered the effect of these resources on access to water and sanitation.

In the context of HIV/AIDS, ensuring people's access to water supply and sanitation as a right will have a positive effect on the range of relevant political, civic, cultural, social, and economic rights. This will help demonstrate that HIV/AIDS is not just a health but a development problem, and that a rights-based approach is the best way to address it.

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