

## **2 The Connection between Gender and Water Management**

**W**hat is the connection between gender and water? In the world of gender policies, water is almost never mentioned. Few cases of women organizing around water issues are known. And in the world of water policies, lip service is paid to gender, without depth or consequences for water management practices. Yet this book's premise is that important connections exist between gender and water, and when these relationships are made explicit, more effective and equitable water resource management results. Within the contexts of household (domestic) water use and irrigation, we demonstrate how water and gender are linked.<sup>1</sup>

The worlds of domestic water and irrigation water policy, planning, and management are very different. Domestic water issues are framed in contexts of social rights and welfare, health and hygiene, and basic needs, and irrigation is framed in terms of production and economic efficiency. These differences shape the possibilities for recognizing and addressing gender concerns. The “basic needs/social welfare” approach to domestic water recognizes women’s needs for water, which in itself does not guarantee that they will have the right to a voice in water management, but it at least establishes that women have a legitimate place on drinking water and sanitation policy agendas.

This approach is in contrast to irrigation policy, which focuses on production and where women are invisible. In much of Latin America, farming and irrigation are strongly associated with masculinity and identified as male jobs. Though many women farm and irrigate, they are seldom seen as farmers by water management agency staff (or even by their own communities) and, as a consequence, they are seldom endowed with the associated rights

and resources. For these reasons, the irrigation policy discourse and professional culture is more resistant to recognizing women's roles in and differentiated knowledge of water management than the domestic water sector (Lynch 1993). For such recognition to happen, deeply embedded stereotypes and cultural norms about gendered patterns of labor and behavior need to be challenged.

Gender bias refers both to unequal access to resources (land, water, credit, knowledge, new technologies, etc.) and to gender-differentiated access to the process of making and implementing decisions. What is important is not "who does what," but the exclusiveness of role distribution and its implications for resource allocation and the distribution of power. Women may be prohibited from certain roles—some that are critical for survival. In the rural water world, this situation is most evident in the effects of male out-migration. When men migrate, as is more and more often the case, they leave behind their wives, mothers, and children to manage the land. In communities where only men attend water-user assemblies and the men of a household migrate, then that household has just lost its voice in communal water decisions, and household survival may become precarious. Similar problems arise with credit (more easily available to men than to women), with irrigation (schedules that work for men do not always work for women who must juggle childcare and housework), and even with driving (more men drive than women).

The dichotomies between water for household use (which is considered part of the "private, domestic" sphere) and water for irrigation (which is recognized as located in the "public, productive" sphere) have led to a division of the water world into more or less neatly gendered halves. Because the domestic water/productive water dichotomy is to some extent pragmatically and strategically justifiable on the grounds that different agencies, with different professional discourses and cultures frequently manage domestic water and irrigation water, it perpetuates a division of the world into a "woman's world" and a "man's world." It also renders invisible the different priorities that men and women assign to water within each sphere as well as their different knowledge bases regarding water use that could be applied to water project design. Furthermore, as this chapter shows, this division is overly simplistic as it obscures the many interconnections between the varied uses and users of water and leads to distortions in planning.

Planners often claim that the cost of implementing a gender perspective during policy and project development is too high. Yet the failure to do so

means that policies are based on incomplete information (drawing primarily, or only, on men's experiences, needs, and priorities) and are unable to address the full needs and priorities of the whole population. Most important, the reluctance to deeply incorporate gendered perspectives is based on a failure to recognize that substantial gains accrue if poor women and children spend less time on the household water supply process *and* if water service improvements take into account women's knowledge.

### The Right to Water

The focus of this book speaks to an inherent social right of all human beings: the right to water. Social rights can be defined as the right to a minimum standard of living and well-being according to the prevailing values of one's society (Bustelo 2001, 4–5). A key element is easy access to a consistently sufficient supply of water of adequate quality to sustain the health and hygiene of all members of a community. Over the last twenty-five years, water for domestic uses has come to be treated and seen as a social right while water for irrigation has not. In most irrigation policy narratives, irrigation water is more likely to be treated as a production input and sometimes as a property right (i.e., as an economic right or even as a commodity). We suggest that the social right to water include not only water for domestic uses but also water for food production, as both are necessary for survival.<sup>2</sup> The right to water underpins all other social rights. At the same time, this right exists within a larger context of the reality of water infrastructure and management, behind which lie powerful economic and political interests (Levy 1992, 144). Thus understanding water as a “foundational” social right, and suggesting water policies based on such a right, often results in serious challenges to the economic and political status quo (Bennett 1995b; Kahrl 1982; Reisner 1987).

Over the last twenty years, the concept of citizens' rights across the world has dramatically expanded. One hundred and seventy-one nations signed the declaration emanating from the 1993 World Conference on Human Rights in Vienna that emphasizes the universality, indivisibility, and interdependence of civil, cultural, economic, political, and social rights. Citizenship is now seen as encompassing not only civil and political rights but also economic, social, and cultural rights (codified in the U.N. International Covenant on Economic, Social, and Cultural Rights of 1966 and signed by all Latin American states; CEPAL 2002; Bustelo 2001, 4–5; Gros Espiell 2001, 134). In the reality of Latin America, however, civil and political rights

have been separated from the others and are increasingly implemented, while economic, social, and cultural rights remain vague and unapplied in any systematic way. It is argued that implementing economic, social, and cultural rights is costly, and the conditions of poverty and scarcity that prevail in Latin America mean that resources do not exist to make these rights a reality (Bustelo 2001, 19; Gros Espiell 2001, 136–39). The result is that while lip service is paid to indivisible human rights, social, cultural, and economic policies that could reach all citizens are not developed and implemented and are instead addressed in a piecemeal fashion. Yet, implementing civil and political rights takes resources as well, and their current implementation means that they have priority over social, cultural, and economic rights. Thus advances in legal and political equality coexist with persistent social and economic inequality (Barrig 2001, 30), and human rights are treated as divisible.<sup>3</sup>

Across the world, people enjoy or are deprived of rights based on cultural frameworks built from multiple interlocking variables such as age, income, social rank, race, ethnicity, religion, and gender. For example, higher income groups always have better water supply, and often better water quality, than lower income groups. The right to use a particular resource is frequently linked to rights to other resources (Netherlands Development Assistance 1997, 4–6). In rural areas, the right to water may be linked to a prior right to own, rent, or use land, while in urban areas it may derive from the right to land titling (as opposed to invaded land that cannot be titled).<sup>4</sup> In some countries and cultures, both men and women have the right to inherit family land; in others, only men or widowed women have that right. When the right to irrigate is linked to land rights that women do not have or when families squat on urban land that they cannot title, which means they have no rights to municipal water, women and poor families find themselves with responsibilities for water management without the attendant rights.

### **Gender and Household Water**

In many regions of the world, including Latin America, women's work tends to be culturally associated with and defined as belonging to the private spaces of everyday life, and men's work is seen as belonging to the public spaces. The work of managing water in the household falls primarily on women because historically they have been, and especially among the poor continue to be, the managers of the sphere of reproduction, while men's role in relation to water tends to occur within the sphere of production.<sup>5</sup> Under

conditions of abundant and clean water delivered to household taps, people pay little attention to their water supply. However, when potable water service is erratic, unreliable, or insufficient, and when water quality is unreliable and unhealthy, as is the case in poor urban Latin American neighborhoods and low-income rural areas, then household water management becomes a labor-intensive, physically demanding, and even stressful part of everyday life.

Within the Latin American household, women are generally responsible for all tasks involving water: cooking, cleaning, laundry, bathing children, and caring for sick family members. Water scarcity and poor water quality complicates these tasks. Residents in poor urban neighborhoods often get their water either from community faucets that function a few hours each day and service as many as one to two hundred families each or from trucks that deliver water once or twice a week (Bennett 1995b). In rural areas, poor households get their water from community wells, nearby rivers, or irrigation ditches.

The lack of home water connections and the lack of round-the-clock water service create hardships. Someone must be available to collect water whenever it appears at the community faucet or whenever the water truck shows up. Someone must carry home daily multiple heavy pails of water from the community faucet or the village well and store it in large barrels or tubs. Someone must do all the water-related household tasks by transferring water from the large barrels and tubs to smaller receptacles. Someone must ration the household's water to hedge against the community faucet or village well having a dry day (or days) or the water truck failing to show up. Someone must heat water—often on open fires or propane stovetops—for laundry, for bathing, and for cooking. That someone is almost always a woman or a child.

The use of community faucets, water truck deliveries, village wells, or irrigation ditches as sources of household water results in multiple transfers of water before consumption. Water is usually stored in containers scrounged but not made for that purpose; these containers do not have fitted lids, and family members who are not educated about hygiene dip dirty hands into the water and do not keep the makeshift lids on tightly. Therefore, water must be boiled before it is consumed and this is an extra daily household task involving heavy lifting, and time, time, time. This work falls, again, to women.

Thus, water development policies and projects, always presented as gen-

der neutral, in practice, almost always have gender-differentiated outcomes (World Bank 2001, 14). Based on their different roles and responsibilities, women have different criteria for evaluating proposals on water services (Zwartveen 1994). Improving water supply and quality for poor urban neighborhoods benefits women most directly. Such projects free women and children's time and energy so that they can more actively and successfully engage in school and/or work (Jarman 1997, 188; World Bank 2001, 23–24). Family income can rise as a result. Better household water supply often results in improved family health, and good health is the primary asset of the poor (Chamber 1989, cited in Jarman 1997, 188). In contrast, water rationing has an immediate detrimental effect on women and children because it affects their household labor as described above, while men remain comparatively unaffected (Bennett 1995a).

Though planners and policy makers signal the enormous costs of improving water supply for all, a gendered analysis shows that water resource projects are vitally flawed when the role of women is left invisible. Acknowledging women's expertise and needs regarding water resources leads to more comprehensive planning, more effective projects, and significant gains for women, as well as for their families and communities.

### **Gender and Irrigation**

In rural areas, investments for improved irrigation systems are usually also gender biased and benefit men, leaving out women irrigators. The purpose of any irrigation system is to transfer water from a source (a lake, river, or groundwater) to the field and apply it to crops to allow agricultural production. Irrigation systems are complex, combining infrastructure and technology to make water available (through pumps or dams in rivers for instance) and to transport it (most often through canal networks). Next to these *technical* elements, irrigation systems also comprise *normative* elements (the rules, rights, and obligations related to the distribution of water, the organization of operation and maintenance, conflict resolution, etc.), *organizational* elements (related to the human organization necessary to govern, operate, and sustain the system), and *agropductive* elements (soils, crops, technology, capital, labor, and the capacities and knowledge of the art of irrigation; Mollinga 1998; Uphoff 1986).

Agriculture in Latin America, like elsewhere, is by far the major user of fresh water—about 80 percent in 1990 (WMO/IDB 1996). A gender division of labor that defines agriculture as a male occupation and women pri-

marily as housewives irrespective of their contribution to family agriculture characterizes many Latin American countries (Deere and León 1987). General abstractions about irrigation and gender in Latin America are difficult, if not impossible. First, irrigation systems vary tremendously in terms of technology and infrastructure but also in terms of management. The mountain irrigation systems in the Andes, built and managed by farmer communities (Boelens and Hoogendam 2002), have little in common with the large-scale pump irrigation systems in the coastal plains of Peru (Vos 2002) or the large surface irrigation systems in México (Kloezen 2002). Direct user participation in the Andes has rather different accountability mechanisms than the representational participatory management of many Mexican large-scale irrigation systems.

The degree of public involvement in funding and operation and maintenance also differs widely. The roles of governments, markets, and civil society in irrigation water allocation and management is intensely debated in much of Latin America. International lending agencies strongly in favor of reducing government budgets and public involvement in managing irrigation, promote strategies that combine decentralization and privatization with market-based allocation of water (Ringler et al. 2000). Such proposals often meet with much resistance.

Important differences also exist in gender relations and in the intrahousehold and intracommunity organization of production between countries, regions, and even within irrigation systems. The three-hectare farm of Inés, a female farmer in Ecuador whose husband has a paid job in town (Arroyo and Boelens 1998), is difficult to compare with the large agribusiness farms of more than one thousand hectares in the Bajío in Mexico (Kloezen 2002). Inés conducts all farm activities herself, sometimes with help from her children, and also plays a prominent role in the water-users' association. Ever increasing male migration from rural areas to cities has forced Inés, like many other *indígena* peasant women in the Andes, to assume more responsibilities than are considered normal or desirable in prevailing culturally gendered ideologies (Boelens and Zwarteveen 2002b). Because of male migration, women may either take over the farm—inducing a process of feminization of agriculture—or decide to rent out their land. In the whole of Latin America, it is estimated that women head 26 percent of rural families (Vargas 1998).

In contrast, the largest irrigated commercial farmers in México provide a near perfect embodiment of rural masculinity. For those landowners, agriculture has become an enterprise and does not just encompass the physical

task of working the land (which is in any case often done by hired wage laborers, some of whom are female) but also engaging in the politics of farming: talking with other men about government policies, socializing with government officials, making business deals with salesmen of agricultural inputs, and so on. Women are part of the farm enterprise and may accompany their husbands to town to purchase agricultural inputs, make water payments, rent machinery, or conduct bank transactions (Monsalvo-Vélazquez 1997), but they are mostly not identified (nor do they identify themselves) as farmers.

Food and Agricultural Organization (FAO) estimates show that women make up 22 percent of the rural labor force in Nicaragua and Honduras and roughly 30 percent in Costa Rica, El Salvador, and Paraguay. The Andean countries have by far the highest percentages of women working in agriculture, with more than 50 percent in Bolivia and Colombia and as much as 70 percent in Peru (FAO 1998). Most of these women work as unpaid family labor on family farms. If a pattern can be discerned from the various ways in which farming in Latin America is organized, it is that women's involvement increases in degree and importance with a decrease in farm scale and level of commercialization. Active female involvement with farming and irrigation is much more common in poorer households with smaller farm holdings and is often driven by poverty rather than greater gender equality or emancipation.

Women's water needs are only partially shaped by their gender as gender interacts with class, wealth, ethnicity, and so forth to structure an individual's possibilities for controlling water. Yet, and in spite of the enormous diversity that makes generalizations difficult, two facts stand out when reviewing the evidence about gender relations in irrigated agriculture in Latin America. Both formal rights to water and decision making about irrigation water distribution and other irrigation matters are largely concentrated in the hands of men (Boelens and Zwarteveen 2002b; Buechler and Zapata Martelo 2000; Deere and de León 1997; Monsalvo-Velázquez, Zapata, and Manzanares 2000). Because formal control over water lies with men, the feminist project in irrigation largely consists of challenging and questioning this gender disparity.

Control over water is important because water for irrigation is a resource associated with great power and is therefore highly contested. All over Latin America, social groups can be found struggling not just over the physical control of water and irrigation systems but also over the right to define and

organize these systems. To give just two of many examples, when an irrigation project in Lake Titora in Bolivia extended the available supply of water, its distribution became a topic of fierce conflict between two villages, Tiraque and Punata. Tiraque contested the project's initial plan to divert all extra water to Punata (Gerbrandy and Hoogendam 2002). In Ceceles, Ecuador, indigenous people had gradually acquired formal and informal rights to irrigation water that more than a hundred years ago belonged to the hacienda owner. Despite these rights, irrigation water deliveries were insecure and irrigators constantly had to defend their rights from claims by other parties. The question of who has the authority to decide about water allocation is central in these struggles as the following quote of a Ceceles farmer illustrates: "It doesn't matter if they say the government gives water rights—we have water rights" (Boelens and Doorenbos 2002, 228). Ceceles farmers built their own nine kilometers of secondary canal to secure their water supply and also threatened to blow up a dam if they were not included in plans for improving water availability: "you dynamize the system, or we dynamite it!" (228). Struggles over irrigation water also occur between peasant communities and state agencies (such as in Ecuador where the *indígena* movement has created its own water law as a protest against the law the state aims to adopt) (Boelens 2001), among different communities (such as when several communities claim water from a river), and among different members within a community (e.g., when irrigators take water out of turn or steal water).

All these struggles are to some extent gendered as men and women are differentially involved and positioned in them, and gendered metaphors are used to defend and claim rights. However, most of these water struggles do not directly occur along gender lines in the form of direct disputes over water between male and female members of communities and households. Few, if any, records of female irrigators and farmers organizing to demand more control over water *as women* exist. This is partly because rights to water are often directly linked to rights to land, and gender-based disputes over water are frequently subsumed in struggles over land (Deere and León 1997). The prevailing ideal model of organizing intrahousehold affairs and relations in much of Latin America is one of harmony and collaboration, of mutual support and help. Men are (seen as) the heads of households and often also the ones who deal with all extrahousehold matters, but they do so on behalf of the rest of the family. Even though intrahousehold realities can only be partly understood when this ideal is used as the main explanatory

framework, it does provide an important normative reference and thus shapes the ways in which women and men articulate their wishes or needs, including those about water.<sup>6</sup>

Most women do not identify individualized, independent control and rights over resources as an important need. Irrigation itself, as is explained in greater detail below, is often clearly seen and identified as a typically male domain and activity. For women, claiming irrigation rights would imply explicitly challenging these norms and thus also challenging the power and ability of their husbands to properly carry out their manly roles—and doing so comes at high social costs. The need to struggle for formalized and individualized water rights may also not always be very high because formalized rights and institutionalized powers only partly determine actual access to water. In the absence of formal rights, female farmers (and others) may therefore still be able to access water. In many irrigation systems in Latin America,<sup>7</sup> the “real” user, the one actually cultivating the plot, is not the person who is registered in the *padron de usuarios* (registry of rightholders). Often family members farm and attend meetings. Land and water titles may also be sold or rented (see Ahlers 2000c), or the land maybe divided among heirs. Formal registration often matters less than social awareness and knowledge among the group of irrigators of who is in charge of irrigating a plot. In most communities of irrigators, everybody knows each other, and usually a high degree of social control prevails. Actual irrigation water distribution to fields often differs significantly from official schedules and allocation patterns planned before the season, which results from both the difficulty of physically controlling water as well as from the challenge of effectively monitoring and controlling the behavior of all irrigators. Physically accessing water without having formal authorization to do so is quite easy and a common practice.

Actual water distribution often occurs through less formal (but often regular and sometimes normalized) arrangements among field neighbors or between gate operators and irrigators. Often gender differences in strategies and available networks for making such arrangements are found because struggles over water are part and parcel of wider social relations, identities, and networks. Brunt (1992), for instance, illustrates how male farmers in an irrigation system in Mexico invite canal operators and irrigation agency personnel to bars and brothels and offer them drinks and food and even women to make them more disposed to act favorably toward their needs. These actions are not accessible to women farmers who have other options such as

making canal operators the godfather of one of their children (Brunt 1992), or offering them money for a couple of beers or soft drinks (Ahlers 2000; Monsalvo-Velázquez et al. 2000). Even without formal rights, women (as well as men, for that matter) can physically access water as the following quotation from a fifty-year-old Mexican woman illustrates: “in the payment slips, my name does not appear, they are still in the name of my father . . . it doesn’t matter if it is in my name or not, what matters is that I get water when I need it and that’s it” (118).

Hence, gender-based irrigation water conflicts and discussions are more likely to be about the terms and conditions of access and about the control over benefits of use than about control and rights per se. For instance, studies show that women are often more interested than men in using irrigation facilities for purposes other than just irrigating the main crops. Such uses include watering gardens or feeding animals and place specific demands on the quantity, quality, and timing of water deliveries.<sup>8</sup> Women and men may also have different preferences for the operation and scheduling of irrigation water deliveries. Because of their domestic workloads, women often have less flexibility and less time to spend long hours in the field for irrigating (Jácome and Krol 1994). Workloads are also the reason why, in some communities, women prefer the flexibility of a continuous water flow though it might increase the total time spent on irrigation. In contrast, men may prefer nonpermanent rotational turns of water that enable them to irrigate with a larger flow in less time (Hendriks 2002). Many studies also report women’s reluctance to irrigate at night.<sup>9</sup> Women fear gender-based violence, and going out at night may also reflect negatively on their social status *as women* and arouse a husband’s jealousy and anger. Dark nights are typically also the times when most water stealing occurs. Men share this reluctance to irrigate at night, and studies note that as night irrigation cannot always be avoided, women (just as men) do irrigate at night when they must.

Almost everywhere in Latin America, men dominate irrigators’ associations both in numbers and in influence.<sup>10</sup> Because membership in organizations is typically linked to having titles to land and water, women are generally underrepresented in the public political spheres of life. And because mostly men hold such titles, women are denied membership; even when they are active in farming and irrigation, women’s absence limits their opportunities to control, or even have input in, important decisions about water distribution and the allocation of resources for operation and maintenance.

In rural areas, irrigators' organizations are among the most visible and strong community organizations and provide an important channel for information and resources to and from the community. Leadership positions in water-user associations are often important political positions, offering opportunities for expanding political relations and social standing at regional and state levels (Rap, Wester, and Prado 1999). Control over water thus both depends on and accompanies control over other resources and information. Participation of women in water-users' organizations for irrigation not only improves women's access to and control over irrigation but also may contribute to wider goals of women's empowerment. Exclusion of women from water users' organizations can be interpreted as denying them economic rights and complete citizenship (Bhalla and Lapeyre 1997).

Women's lack of more or less formally recognized powers, claims, and rights to irrigation water is not only unjust, undemocratic, and inequitable, it may also lead to inefficiencies. For irrigation systems to run smoothly and effectively, there must be a balance between *rights* (to water, to infrastructure, and to participation in decision making) and *responsibilities*. The reasoning behind this insight (which has become common wisdom in irrigation policymaking circles) is that those who most need access to a resource, or those who use it most, should also be granted the rights of access and control.<sup>11</sup> Without secure rights to a resource, users will be less motivated to make the investments necessary to maintain and improve it. Without secure rights, the ability to invest in the resource may also diminish because of lesser control and less access to support services such as information and credit that are often directly linked to ownership. A balance between responsibilities and rights is also important because those who most use a resource know it best.

Another inefficiency that the artificial division of male and female spheres regarding water creates is that planners almost never recognize that irrigation systems can be designed to also provide water for domestic use. If irrigation projects were designed with data regarding their potential for providing household water as well as irrigation water, both productive and reproductive work could benefit.

### **Irrigation as Masculine Identity and Culture**

Improving women's control over irrigation is not something that can be achieved solely through changes in policies and laws. Female water users themselves have to raise their voices and demand accountability from irriga-

tion water providers and women themselves have to be willing to struggle for more control. Increasing women's control is a struggle not just over water as a resource and over the power to phrase water policies and laws but is also a struggle to change "water cultures."<sup>12</sup> Articulating women's water needs requires challenging deeply rooted and culturally embedded associations between irrigation and masculinity. Most irrigation professionals are men, and professional involvement with irrigation is very much identified and perceived as a male activity. The attributes and skills seen as characteristics of good irrigation professionals—such as technical dexterity, physical strength, spatial orientation, and mathematical skills—are normally perceived as male. In this sense, masculinity and the professional irrigation identity can be seen to mutually constitute and define each other. As Lynch (1993) suggested, the characteristics and culture of the "bureaucratic tradition" to which irrigation institutions and policies are tied is one that strongly associates decision making and power with masculinity. The almost hegemonizing power of this tradition has long been maintained, and continues to be maintained, through the socialization of generations of male engineers and bureaucrats and is sustained and legitimized through the powers and financial resources of irrigation bureaucracies or *hydrocracies* (Rap et al. 1999). The ideal engineer is thus also a near-to-perfect embodiment of cultural masculinity. The strong normative link between irrigation professionalism and masculinity not only makes it difficult for female irrigation professionals to be taken seriously, it also creates strong barriers for (male or female) irrigation professionals with nonengineering backgrounds. An example is the resistance the first economist to become director of the Comisión Nacional de Agua in Mexico faced (Dávila-Poblete 2002). To argue that women's needs should be addressed, that their knowledge should affect decision making, and that their contributions should be valued is to challenge the bureaucratic tradition at its roots. It is to challenge the ways in which the bureaucracy of the water sector constructs knowledge and defines its job, it is to challenge the maleness of the profession and thus its seriousness and importance, it is to question its legitimacy.

The various and numerous irrigation activities women do are not only unseen but also tend to be defined as "nonirrigation"—irrelevant to the irrigation profession—and even as "nonprofessional." When women are cleaning canals or irrigating, they are seen and said to do so on behalf of their husbands, who are considered the "real" irrigators and farmers. Though a slight exaggeration, it is almost as if irrespective of *what* women do in irri-

gated farming, the very fact that a woman is doing the job is enough to qualify the work as “nonirrigation.” An example of an irrigation project NGO in Ecuador illustrates the persistence of the belief that irrigators are men. Staff of this NGO planned all meetings with water users on weekends because most men in the communities where the NGO worked left home during the week to work elsewhere. Women were left in charge of irrigating and farming. Despite the women’s responsibilities, the staff continued to identify the men as “the real farmers” and the ones with whom to have meetings (Boelens 2001).

The supposed physical strength or technical dexterity required often justifies defining irrigation as a masculine activity.<sup>13</sup> In some countries in the Andes, the maleness of irrigation is further confirmed and expressed in cultural rules that stipulate that women are not to come close to irrigation intakes or to walk on canal bunds.<sup>14</sup> This would “pollute” the irrigation water or lead to droughts.

Gender ideologies also have it that men are more qualified to represent the household in community and other public matters, including participation in irrigators’ meetings (Ahlers 2000c; Boelens and Zwarteveen 2002b). In Latin America, as in many other countries of the world, the exercise of political authority is socially and culturally associated with men. Gender identity partly determines the right to speak and to have a voice and the ways in which one’s voice are heard and interpreted. Even if women participate in meetings, social practices and norms that define what sorts of interaction are permissible and what the modes of conduct should be constrain their freedom to publicly interact with men. To be outspoken and have strong opinions are positive characteristics when found in men, a way of defining and reconfirming masculinity and male superiority. In contrast, when these characteristics are found in women, they reflect negatively on their status as women (Ahlers 2000c; Boelens and Zwarteveen 2002b; Monsalvo-Velázquez et al. 2000). In a small-scale irrigation project in Ecuador, almost as many women as men participated in the users’ organization. Nevertheless, observations during meetings showed that while on the average regular male members spoke about twenty-eight minutes, female members only spoke three and a half minutes. The women said that they were reluctant to voice their concerns at meetings because they were afraid to make mistakes and to be ridiculed (Krol 1994). Women in irrigation districts in Mexico explained in similar terms why they chose to remain silent at meetings, even though they recognized that many men made irrelevant

and thoughtless comments. The few women who participated in meetings usually sat in the back of the meeting room and tried, as much as possible, to go unnoticed to avoid being asked a direct question (Buechler and Zapata 2000). The one role in organizations that often still is deemed compatible with a female identity is that of treasurer: women are assumed to be more honest.<sup>15</sup>

The underrepresentation of women and their indirect participation not only destroys the democratic character of decision making but also may negatively affect the responsiveness of organizations to the needs of women. It is more than just a symptom of gender inequality—it is one of the factors that perpetuate it. Ahlers (2000c, 166) concludes that the lack of accepted public space may force female irrigators to resort to alternative strategies for accessing water. Some women invest a lot of time and energy in creating and maintaining good relations with influential men in ways that do not compromise their social status or make them liable to accusations of immoral behavior. Many women also rely on their sons for the day-to-day politics of irrigation.

Decreasing the gender gap in irrigation challenges the strong ideological and cultural associations between irrigation and masculinity. Improving women's control over water implies redefining and reshaping the water world in ways that allow women to become legitimate and respected inhabitants of that world.

### **The Connection between Gender and Water**

Important gender divisions that allocate many water responsibilities to women but vest most powers and rights in men characterize most water worlds. The precise nature and form of these divisions is markedly different between the domestic water sector and irrigation. Wherever domestic water cannot be obtained by simply opening a tap, women's responsibilities involve much time, energy, and money. Women's primary role is seldom accompanied by a parallel high presence in water-related decision making, to the detriment of both efficiency and equity.

Gendered ideologies often denominate irrigation as a male domain. Though irrigation water demands are often not neatly gender specific, women seldom actively participate in water-users' organizations. Female farmers often succeed in physically accessing water when they need it, for instance by making use of the rights of their male family members. Their weaker formal rights to water, however, lead to greater reliance on less for-

mal and therefore less protected forms of access. The fact that women, just as men, have clear ideas, wishes, and demands about infrastructural and operational irrigation matters underscores the importance of gender analysis for irrigation planning.

Water worlds are not just gendered at the level of users. Even where most water policies no longer assume gender neutrality of users, water users typically continue to be conceptualized as atomic individuals. Though such methodological individualism allows seeing men and women as distinct social categories, it does not allow the much-needed understanding of gender as social relations. Such understanding involves approaching women not only as individuals and as a social category whose problems appear to be somehow connected to characteristics of this category but also as parties to sets of social relations (involving resources, rights, responsibilities, and meanings) with men and other women through which what it is to be a woman, in that time and social place, is defined and experienced (Jackson 2002).

The very distinction between water for household use and water for irrigation builds upon and further strengthens the categorical thinking typical of methodological individualism, with the discursive construction of women's water needs as confined to the "private, domestic" sphere, and those of men occurring in the "public, productive" sphere. The tendency to clearly delineate separate women's and men's water domains obstructs rather than helps a good understanding of the many connections between men and women and between the varied uses and users of water. The framing of water policy needs to be changed and an enabling environment created and sustained purposefully to allow better recognition of the importance of a gender perspective for the water sector. Considering water as an inherent social right of all human beings and understanding water within larger political and economic contexts of production and consumption behind which lie powerful economic and political interests are two important steps in the right direction.

The biased ways in which women are represented in water policies tie in with the ways in which gender roles are molded and perceived in professional water cultures. Both the domestic and the irrigation water professions share a strong, technical engineering heritage, and both have typically attracted higher numbers of men than women among their professional ranks. The health and basic needs approach of the domestic water world tends to cherish a professional culture of "help." Those who need help, those de-

prived of water, depend upon the goodwill and technical expertise of the benevolent water professional to improve their position. It is not difficult to see how a picture of poor victimized women who need help provides the perfect mirror to strong protectionist men providing this help. In a highly diluted form, as in a watermark on expensive writing paper, the picture of the benevolent male helper can indeed be seen to color today's water policy deliberations and practices. It works as an almost invisible barrier against approaching and recognizing women as active and knowledgeable actors capable of articulating their own water wishes and demands. The professional culture in the irrigation world can likewise be seen to appeal to very gender specific ideals of expertise in which women figure as "the other," lending professionals their virile distinction.<sup>16</sup>

Making the water world more habitable for women requires changes at many different levels and in many different arenas. It requires changing divisions of labor that allocate water responsibilities to women without granting them the associated rights, and it requires changing existing routines of public decision making to allow women to participate. It requires changes in laws, infrastructure, and organizations. It also requires changing the terms of water policy discussions, because reducing the gender gap in control over water is not just a direct struggle over the resource water but is also and importantly a struggle over the ways in which water needs are defined. In both the domestic water and irrigation water sectors, albeit in very different ways, creating legitimate discursive, legal, and organizational spaces for women to articulate and defend their water interests means that deeply embedded cultural and normative associations between water and masculinity need to be challenged. This is necessarily a long and often a difficult process, and it may be one that is painful and risky. However, not making the attempt may well come at an even higher price: that of human misery, deprivation, and poverty as a result of ineffective, inefficient, and inequitable water management.