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Rethinking Community and Participation in Water Governance

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Introduction

The international community has recognized water as a human right, but water continues to be unequally available and accessible across the globe. The Millennium Development Goals (MDGs) have pointed to the importance of increasing safe water provision, which is also a gender issue, since it is women and girls throughout the developing world who labour to provide water for their families. Development goals can be hindered when insufficient water constrains people's abilities to live healthy and productive lives. As a result, water governance has become important in development policies and projects in the Global South.

Community and participation have permeated development discourses and practices in recent years. This is particularly prominent in the water sector, where there has been a shift from state-led, technocratic water management programs to an increase of 'participatory' and 'community-based' water management. Emanating from the participatory development models of the 1970s and 1980s, where civic participation and ownership of development endeavours were seen to result in better outcomes, participatory community-based water management projects have become popular among states, international donors, and NGOs. Thus, there have been changes in the governance of water resources away from state-controlled management to a focus on community-based institutions and reduced direct state responsibility.

Despite their popularity, there are several problems with discourses and practices of participation and community in water governance. Gendering such approaches further exposes both conceptual and practical limitations of the concepts. Water governance approaches that generally view communities as homogeneous entities can overlook complex realities where access to and control over water resources vary by multiple, interlocking, and hierarchical systems of differentiation. Similarly, participation involves processes of inclusion, exclusion, negotiation, and resistance, which are insufficiently understood or addressed. This chapter demonstrates that not only are gender and class relations important in assessing how notions of community and participation must be extended, but that geographical location and nature/water play important intersecting roles in local water management projects and institutions. The analysis is based on extensive research conducted in areas of rural Bangladesh that are facing acute drinking water crises from arsenic contamination of groundwater sources (Sultana 2007). There are an estimated 35 million people in Bangladesh consuming poisoned water, as naturally occurring arsenic (from

aquifer sediments) is present in groundwater pumped up by tube-wells that are widely used for both drinking water and irrigation purposes. While the introduction of tube-wells was deemed a development success, as 'safe' groundwater reduced mortality and morbidity from pathogen/microbial surface water sources historically used for drinking water, the discovery of arsenic and subsequent poisoning have resulted in drinking water crises in recent years (Smith et al. 2000). Arsenic's unpredictable spatial heterogeneity in the aquifer (due to minor differences in Holocene deposits) is reflected in the spatial heterogeneity of contaminated tube-wells (i.e., there can be contaminated and uncontaminated tube-wells within a few hundred feet of each other, and entire villages may have only contaminated tube-wells, or have few uncontaminated ones, which may be spatially clustered at a variety of scales and often be quite dispersed in pattern on the landscape). Arsenic primarily occurs in the shallow aquifer, where the vast majority of the tube-wells can affordably draw water; a few rich households can afford to drill into the deep aquifer, where there is little or no arsenic. As a result, there is great hardship in accessing safe drinking water and great conflict over safe water in many areas. In order to address the water crisis, arsenic mitigation projects have been implemented by organizations throughout Bangladesh to provide safe/alternative water supplies. These projects generally mobilize discourses of community and participation in local water management institutions. This chapter discusses some of the failings and challenges in the conceptualizations and practices of community and participation, whereby water management strategies produce inequalities and differences in safe water usage, access, and exposure to arsenic.

Community and participation in water governance

Scholars have debated the controversial issues surrounding the ways that community and participation have been conceptualized, mobilized, and deconstructed in natural resources management and development literatures (Agrawal and Gibson 2001). Despite critiques of exclusions, captures, and marginalization, the considerable staying power of notions of community and participation in development policies has resulted in a proliferation of community-based and participatory projects throughout the Global South. In the water sector, creating water user committees as part of community-based water management plans are common, whereby the committee is responsible for representing communities/villages in managing water infrastructure and decision-making at the local scale. Committee members often are assumed to have common interests and goals, overlooking social difference and heterogeneity of communities as well as environments. While development planners may acknowledge the problems that exist, project implementation often operates by treating communities as territorially defined intact wholes within the remit of the projects. However, notions of community being inherently egalitarian are problematic (Cornwall 2003). The social and power relations that play out in water management can challenge the notions of democracy and equity that are increasingly embodied in national water development policies uncritically espousing community and participation (Mosse 2003). Thus, while notions of community in water management may be externally defined by implementing organizations (e.g., local or extra-local NGOs, donors, states), the projects are implemented through local power relations, where different people with various strengths and weaknesses based on their structural position in village society will negotiate their positions within

such projects vis-à-vis the costs and benefits in the context of their overall lives and livelihoods. As a result, it is important to look at the ways that community institutions operate in creating boundaries, exclusions, inclusions, and regulation.

The second popular discourse, related to that of community, is participation. Community members are expected to participate in projects in order to enhance equity and efficiency, as well as to feel greater ownership towards projects, which is also expected to lead to better water management and improved overall development. Participation invokes notions of inclusion, of people's abilities to make decisions, and to voice opinions/concerns that are heard (Agarwal 2001; Cooke and Kothari 2001). As such, participation hints at deliberative democracy. While notions of participation have become hegemonic in development discourses, they conceal processes of unjust and illegitimate exercises of power. Agarwal (2001) further argues that participatory institutions are often socioeconomically inequitable and perpetuate unequal relations of power. While locally accountable representatives can be sufficient if everyone cannot participate, their accountability is often a problem as there can be elite capture and corruption. Downward accountability may be lacking, although there is meant to be greater sharing of powers and resources with all the members who are meant to benefit from a project. Networks of relationships of reciprocity and livelihoods may also mean that people make decisions to support dominant institutions and not to challenge them (Cleaver 2000). Traditional notions of participation in village life are often worked out through patronage systems and kinship structures. It is within such unequal set-ups that participatory water management projects often embed themselves and thereby perpetuate cycles of inequality. As a result, participation is a process that involves conflict and consensus, within broader historical factors and constraints, and is not just a mechanism to facilitate project success or a set of techniques, although this is primarily how it has been treated in a majority of development projects.

Gendering and spatializing community and participation

Furthering these debates are contributions made by scholars who have looked at either the gendered dynamics of community/participation, and/or the spatialities of the processes of community/participation. I argue that it is important to look at these issues simultaneously. By undertaking a gender analysis, Cleaver and Elson (1995) expound the view that community water management schemes may not be equitable and may lead to further marginalization of poorer women in accessing water. Gendered analysis allows for understanding structural inequalities in community and household resource use and allocation. Women's and men's involvement in community projects have to be assessed in terms of their decision-making powers and the benefits accrued to them in various forms. If the beneficiaries/participants are conceptualized along certain criteria, then groups of people may be targeted, for example 'women'. In such instances, it is likely that women of any background can be assumed to be representative of the different groups of women, and differences between women in a locality get overlooked or obscured in the project. Blindly assuming that having rich or elite women participate in the project leads to 'gender mainstreaming' can be problematic, as exclusions and privilege may become institutionalized.

While adding women to a project may seem to address gender concerns stipulated in project documents, it does not necessarily address power issues between men and women, and among different women. Gendered subjects experience simultaneous processes of inclusion and exclusion

based on other intersecting social processes, and thus it is not possible to generalize across all women or even men (Agarwal 2001). Social relations of class, kinship, marriage, and household relations can all complicate the ways that people experience exclusion and inclusion. There may be a range of different lines of connection and differences that situate women differently from each other, and the myth of female solidarity thus does not hold up to the ways that women may choose to pursue different desires, connections, and needs (for example, not all women in a neighbourhood may be similarly exposed to contaminated water or have similar water needs). In water management, however, some more clear patterns of exclusion do emerge, vis-à-vis men excluding women in decision-making roles, and men and women of wealthier households excluding people of poorer households from accessing their safe water sources. What is evident is that it is not just women but many poor and marginalized men are also excluded, which is often not captured by only focusing on women.

Participation is often portrayed as increasing overall 'empowerment' of women, but recent evidence suggests that many women are disempowered and marginalized in the process (Cornwall 2003; Agarwal 2001). The critical assessment of how participation is conceptualized and a gender perspective on who participates, in what capacity, to what effect, and with what means, is important in understanding the outcomes of participatory management institutions being set up as the solution to water governance problems as well as achieving problematic notions of 'empowerment'. For instance, women's participation in the process of planning or decision-making regarding water resources, generally seen as a male domain, is constrained by gendered responsibilities (both productive and reproductive), time, costs, as well as local norms of what is deemed appropriate gender behaviour. Agarwal (2001) posits that seemingly participatory institutions can exclude people through 'participatory exclusions', which can individually and interactively constrain a woman's participation in water resource management. These are: rules of entry, social norms of women's behaviour and actions (e.g., speaking in public for a gender division of labour), social perceptions of women's abilities, entrenched territorial claims by men, personal endowments and attributes of women (e.g., education), and household endowments and attributes (e.g., class).

Furthermore, participation is a spatialized process, taking place in specific spaces and places, which are symbolically gendered. As a result, spatialized subjectivities can discourage people from speaking in public, and people may perform differently in different spaces. For instance, when meetings take place in bazaars or market places, it is more difficult for women to attend meetings (as these are gendered spaces for men). Public space and decision-making in participatory development projects in many places also exclude women largely due to notions of appropriate feminine behaviour as well as practices of *pardah* (varied practices of veiling and seclusion that curtail women's mobility as well as public behaviour). Given that participation activities are largely conducted in public spaces, or what are perceived to be public activities of decision-making and sharing opinions, notions of femininity and masculinity can be challenged when women and marginalized men are involved. This results in both women and men being uncomfortable with projects that attempt to have participatory planning sessions or public committee meetings. These gendered subjectivities and identities are shifting, contested, and rethought in development projects so that they make sense to each individual in what it means to be a 'good' man or woman, husband or wife, son or daughter, within the contexts of other factors, experiences, and goals in their lives (Sultana 2009). Thus, women's mobility and autonomy, as well as decision-making powers, are spatially challenged in addition to the sociocultural ideologies of their capacities and rights to

participate in decision-making fora. Such participatory exclusions can be powerful in highly unequal and patriarchal settings.

Greater attention to both gendered identities and agency is thus important in understanding how and why women and men participate in water management projects or not. Thus, women can manoeuvre through patriarchal structural forces in resisting, challenging, and reproducing power relations that operate in the ways that participation plays out in water management. Heeding subjectivities of femininity and masculinity that are associated with activities of participation help explain why different people relate to community participation in the ways they do. Partaking in water projects is bound up with sensitivities beyond the 'rational' water user that is assumed in participatory development projects, where water users are expected to automatically want to participate and do so with unified and collective identity. This is generally not the case. People display varying opinions and agency in the ways that water projects function in their locality, and what it means in their own access to safe water. Such realities are not just socioculturally defined, but also inflected by various understandings of water contamination and relations to water. This is where a closer attention to nature/water comes to make a difference.

Arsenic mitigation and water management projects in Bangladesh

Nearly all of the arsenic mitigation projects studied in this research were promoting community-based participatory water management options in order to address the acute drinking water problem. It was found that local people were less involved in the actual selection of technology (such as deep tube-wells, dug-wells, rainwater harvesting technologies), conceptualization, fund mobilization, and decision-making about management, than in site selection, collection of fees, and construction of infrastructure. While such involvement varies across different projects, what was noticeable is that there is greater investment and attention given to technology and physical infrastructure and less to the social organization and management institutions by the implementing organization. The main criteria by which most arsenic mitigation projects proceed are: explicit interest from the local community in having water technology options, agreement to invest in costs and construction (typically some 5–15 per cent of capital costs and 100 per cent of maintenance costs), and commitment to self-regulate user access and control. However, there is usually little follow-up beyond the physical construction and initial fund collection by the implementing organizations. At the village level, arsenic committees or water user committees are often set up as the local management institutions for the projects. In some instances, these committees are set up ad-hoc by implementing agencies in order to get arsenic mitigation projects started up; in other instances, existing village groups are used.

In the majority of cases, people are asked to form groups on their own, or recommend others to join, and this type of group formation is generally understood to form the 'community' for the project, as well as those who will 'participate' in it. In many projects, since users are usually seen as household units, it is the household head whose name is on the list of users. Since this is most likely to be a male head, the committees end up involving men. Thus the rule of entry ends up discriminating against the actual users (i.e., the women and girls who fetch the water or manage it at the domestic level). Community projects also require certain skills such as literacy, numeracy,

organizational, networking, and people skills, which can also be lacking in many areas, or taxing on the few who have the skills. Thus there are limits to local capacities, as the numerous community projects ongoing in any given area can often involve the same people, thereby overburdening them with work and contributions of time and resources for the various projects.

The notions of participation and community among implementing officials largely consist of following guidelines that project documents have articulated, often under assumptions that spatially clustered arsenic-afflicted households have equal water needs. In order to have the quickest and optimal outcome in terms of project delivery schedules, officials generally contact the village leaders or elders and work through them. Very few officials felt the need to operate otherwise. However, all projects articulate goals of participation of the poor and equitable water use. When community groups are formulated along traditional lines of kinship or power hierarchies, there is a tendency for marginalization and elite capture, which have been identified to be serious problems in implementing community water projects. Similarly, since project requirements often required involving some women in water committees, this was often accomplished in instrumentalist ways (where any woman was placed on the committee irrespective of their water problems) or subverted (where fake names were included or the actual women noted were not really involved at all).

Members of committees are supposed to be engaged in the implementation of arsenic mitigation projects in their area, or at least to be responsible for the running (operation, maintenance, fee collection) of the water project with which they are affiliated. A caretaker is sometimes chosen from among those on the committee and is responsible for looking after the maintenance of the water technology and ensuring only official members obtain water from the source. However, several projects involved the implementing organization freely donating water technology without formation of committees or groups. These organizations generally did not require financial contributions and expected that local people will sort out management and maintenance issues on their own. Many of these donations were seen on the land of influential and wealthy households, although some were also specifically targeted and given to households with arsenicosis (arsenic poisoning) patients, or where there was a large cluster of contaminated tube-wells. Given the difficulties in mapping the exact location of arsenic in the aquifer, the criteria that organizations often follow involve looking at contamination levels in individual tube-wells, and the spatial clustering of unsafe tube-wells (which is a product of both natural distribution of arsenic in the aquifer and local geology, as well as human settlement patterns and historical placement of tube-wells). Government attempts to inform people about arsenic levels in their tube-well water have been to paint red those tube-wells with contamination levels above 50 micrograms/litre (the Bangladesh government standard of allowable arsenic levels) and paint green those tube-wells with arsenic levels deemed safe for human consumption. These act as visual markers of safe/unsafe water sources, in a binary colour system that does not inform people of the seasonal variations in arsenic concentration nor the actual concentration of arsenic in their water. When more than 80 per cent of the tube-wells in a village are identified to be contaminated and painted red, external organizations are more eager to implement projects and have greater access to donor funding.

The siting/location of a community water option is one of the critical issues that also requires negotiation between people and underscores various power relations that exist. Usually if wealthy households want to donate part of their land to install a community water option, they are instructed that they must allow access by other users. However, when the option is located inside the *bari* (homestead consisting of a cluster of huts of families in the same kinship structure around

a common courtyard), especially close to the dwelling huts, there are greater access restrictions imposed by the landowner. Often people will debate and negotiate which spot is the best one for installing a community water source, but it is frequently overtaken by powerful families who dictate where the location should be (often donating their land or more money in order to control the project).

In places where community water projects were operating relatively well, the general opinion of those involved in the project was the need to increase the number of water options available, reduce the number of households dependent on each option, reduce the costs involved, and configure better ways to share the water. However, among most water user group members, there was general satisfaction that they had somewhat better access to a safe water supply, even if they had to pay for it. But a majority of the women involved in these projects did raise complaints that the water sources are often not maintained, that the people on whose land it is on tend to monopolize the source and often treat it as their personal source, and that there are crowding and time factors involved, as well as conflicts and arguments at/over water sources (Sultana 2009). While outright denial of safe water may be less common, at what cost (both literally and figuratively) water is fetched is an important factor for many households. Water–society relations are also inflected by gender sensitivities in that, even if a household's water source is contaminated with arsenic and deemed unsafe, concerns of women/girls venturing far or into public spaces to get safe water from community sources often result in families continuing to consume their own unsafe water. This can happen even if the household is officially within the reach of a participatory community water project, thereby undermining the goals of a project to provide safe water to all project users. Men do not participate in fetching domestic water, as it is seen to be an unmanly job, and thus gender norms and practices can challenge the success of water projects (see Sultana 2009 for further elaboration).

Reworking and renegotiating community and participation in water

Not all households feel the burden of safe water scarcity or arsenic poisoning in the same way in any given locality. In the territorial/spatial delineation or 'catchment area' of any community water project, there may be owners of safe/green tube-wells, which complicates notions of the continuous presence of needy households in the project area. Such safe water sources can also offer alternative water options to other households in the vicinity who can also opt out to get water from such water sources rather than from the community projects. The heterogeneous presence of arsenic in the aquifer results in a discontinuous presence of contaminated tube-wells, thereby reducing the desires by many who have safe water access/ownership to invest any interest, money, and time in the success of community projects or participate in them. Dynamic social power relations of inclusion/exclusion as well as uncertainties and fragmentations in nature come to undermine community projects. As a result, the very discourses of participation and community that are supposed to bring people together to enhance equity and efficiency of projects may not come to fruition as expected, and are implicated in the very relations people have with water (i.e., their relative location to contaminated parts of the aquifer, having a tube-well that is deep enough to draw out safe water from the deep aquifer, or living in areas where there are no safe tube-wells

at all). Yet on the other hand, there are many areas that have acute problems with no safe water sources, but a community project may be quite far away or beyond the financial or social resources of the people in the locality to participate in existing water projects.

In areas where severe arsenic contamination has resulted in community water projects being introduced formally, a variety of social power relations complicate the ways that community and participation are understood and practised. A common theme regarding the management and operation of the community water projects was that many people did not know about community water projects properly, especially about their management mechanisms. Almost everyone had heard about the community arsenic mitigation projects and group formation in their area, especially if they were being implemented by an active NGO, and especially during early phases when information was disseminated. But the majority of people did not know exactly how the community-based projects functioned or how this was defined. Often, the prevalent notion was that the person on whose land the option is was fully responsible for it and that others did not need to be involved (i.e., they thought it was private property). In general, those not affiliated with projects were less aware of user committees or, if they were aware, most were not members. Generally, the rural elite and elders were key decision-makers in user committees. In some instances, committee meetings were called and people informed of the water issues and concerns, but this was more a rarity than a norm. As a result, few people knew about or attended community meetings regarding arsenic mitigation projects and water management decision-making. Very few community projects actually had functioning user committees where people actively participated and felt communal ownership of the water infrastructure. Furthermore, different notions of community and participation operating in water projects of different organizations in the same locality can further complicate the issue (e.g., for some it means making a financial contribution, for others it may mean becoming a member of the project group and sharing in decision-making). Often the same people are representing the community in the different projects, and the diverse approaches and modalities of operation under the same rhetoric can create confusion. In the end, what was apparent is that overall the men were more interested in getting technologies and the financial aspects of arsenic projects, with the assumption that issues of access, use, and conflict would be borne by women (see also Sultana 2007).

Instant validation of participation is seen when some people show up at any meeting – even at various stages of the meeting, or if they leave at various times, whether they have actually listened to the discussion, or said anything – as physical presence is generally understood to imply participation. Usually, on paper, a large number of people's names are included as committee members, but there are usually few who attend meetings or feel they are actually members of the project; also, there is little, if any, recordkeeping of meetings and how and what decisions were made. While the flexibility of rules can allow for faster action, it is also open to different interpretations and control by the powerful. In most of the community projects, few formal meetings were held as people didn't feel that there was a need if the water option was functioning properly, fees were collected, and there were no major conflicts to resolve. Costs of meetings and participating were factors that influenced this: these can be in terms of time spent, loss of income from loss of time, overcoming social barriers, and perceived risks to upsetting existing social hierarchies. As community participation involves time, those who are marginalized or poor usually cannot afford that kind of time (compared to the rich who, for instance, are generally less involved in agricultural wage labour and have opportunities to free up time for project work). Also, a sense of abandonment and powerlessness can further complicate the participation of those who feel

marginalized at meetings. Thus, not everyone can or wants to participate, or at least not in the ways that are articulated in development and water governance plans. In some instances, people said they didn't want to challenge existing authority as they wanted to benefit from projects in whatever way they could. Meaningful participation may not result even when people are able to attend meetings, due to existing power structures and social norms on who can speak, when, and how. Many poor households thought that some financial or labour contribution is sufficient participation, and that decision-making should be left up to others. Nonetheless, the majority of the people were interested in having some voice and sharing their opinions in the ways that water management affected their lives, but were less certain how to enact this. For households with contaminated water sources, it was a critical concern, whereas for those with easier access to alternative safe water sources there was less concern.

What is notable was that just setting up a committee and having meetings does not address issues of subordination, marginalization, or vulnerability (Cleaver 2000). The rights of excluded and marginalized peoples cannot be redressed by sitting in at meetings or being formal members of water groups, although it can ensure water security to some extent (which is important for household reproduction and livelihood needs). Thus, people make trade-offs between maintaining power structures for overall livelihood needs and having access to safe water, whether they participate or not. Thus, meaningful participation does not come to fruition because of the problematic way it is conceptualized, implemented, and circumvented. The meanings of participation in different contexts and spaces and in relation to other people present greatly influence how people understand and operationalize participation. The public nature of the spaces for participation and decision-making often reinforce social norms concerning who can and cannot speak up. Most women and many poor and marginalized men often do not feel comfortable speaking in public spaces. Being seen to voice an opinion that may challenge existing power structures or ideas about water management is often deemed to be risky by those who need to maintain various kinship and social networks for their livelihoods. Furthermore, class mentalities often position less powerful or poorer men at a disadvantage as they are often expected to go along with more powerful or wealthy patrons. While many may be resigned to this arrangement and accept the outcomes, some did wish they had more voice. Thus, it is seen that even within predominantly male groups, there are differences by class, age, and education. Invocations of differences through gender, class, location, literacy, and religion are common in community projects, and influence how people experience 'participatory exclusions' (cf. Agarwal 2001).

Gendered participation and decision-making activities for women were generally curtailed by age, marital status, education, and socioeconomic class positions across households with similar exposure and experience with arsenic contamination. Which women are allowed to participate or appreciated when they do participate also varies in patriarchal settings. Men often will listen to more senior and wealthy women if they have some history of influence or power in the village. Younger women find it more challenging. But if they are very educated and able to communicate with men, they are given space to speak. Nonetheless this is often looked down upon as well, as such women are out of the ordinary and seen to destabilize social norms if they speak up too much or against any older man. In general, older educated women who have played some leadership roles (e.g., schoolteachers) are more respected and participate more in decision-making fora. Similarly, hired female labour may fetch water for the wealthier households, but it is the households' more powerful women who are in a position to participate at decision-making fora; similarly, younger women (especially daughters-in-law) who actually procure drinking water are

largely left out of water management institutions and decision-making processes as older women from the household may be involved, if at all. Thus, different women in different social locations can have very different opinions and experiences about water and water management.

In many community projects, women were not aware of their rights and roles, or even membership in such institutions. Often their names existed only on paper, they attended no meetings, or were not informed of meetings nor asked for their opinions. In most cases, the water user committee consisted of only men, or mostly men with a few token women. Even if women were asked to attend meetings, they mostly just listened in, rarely giving their opinions in public, and they were not given sufficient assistance or encouragement to attend. There is a general sense that women's role is limited to deciding where to fetch the water from, and they are less involved in how to improve the access, control, and managerial aspects of water governance. While most women felt that they should have more decision-making powers, and expressed interest in voicing their opinions and having more decision-making capacity, a majority were not willing to challenge the norms and authority of their husbands, fathers, brothers, or elders in order to do so. Such constraints need to be viewed within the broader context of women's lives, as well as local geological contexts, as women in households without arsenic problems are less willing to engage in gender equality in water projects compared to those facing greater challenges in accessing safe water. Women can resist, accept, and create different meanings out of notions of participation; this can be done directly and indirectly, actively and passively. Women are more likely to share their concerns with those in similar subject-positions than with women in general or with men (although this varies depending on the conjugal relationship and household structure). Women are also likely to make strategic alliances with men in their households in order to push forth their agendas for safe water in public fora; thus, there is control, domination, negotiation, and cooperation that can be brought to bear on how households and members in the household participate in water projects. As a result, irrespective of whether women participated or not, they remained overwhelmingly circumscribed by their gendered positions of subordination and were not able to challenge or change power relations through water management projects.

Conclusion

Nuanced and critical explorations of participation and community in development discourses and practices explain why certain development endeavours fail or succeed. Gendering such analyses exposes inequities and marginalizations that are covert and overt. Simultaneous attention to social heterogeneity (gender, class) as well as natural heterogeneity (arsenic deposits, safe aquifers) helps to clear space for a better understanding of complex nature–society relations in the context of development. Water governance strategies, and development projects more broadly, thus have to critically address the gendered outcomes and dynamics of any interventions, as the very attempts to solve a problem may end up exacerbating suffering in unexpected ways.

Despite the problems of discourses of community and participation discussed above, such notions continue to have enormous staying power in development projects, as policymakers, project officials, and local elites buy into the various understandings of what community and participation mean, and how different benefits can be reaped from mobilization of such polyvalent terms. Community-based water management can simultaneously further stratify communities, as

well as create and congeal communities for specific projects, where the spatiality and heterogeneity of nature play a critical role in the ways that institutions are crafted and operationalized. People are more aware of what community means, or is supposed to mean, and can work through the processes of such development interventions vis-à-vis their own relationship with (un)safe water. Thus, a community reflects its internal stratification at such formalizing moments of interventions, where differences in needs, abilities, power, and influence become evident, as do the locational differences and relations people have to a spatially heterogeneous nature (one which is both benign in providing safe water, as well as harmful in providing poisonous water, depending on where and at what depth one draws water from). Differences are thus reinforced through arsenic mitigation and water management institutions, in that relations of domination and control tend to further marginalize those who do not have access to safe water, meaningful participation in water management institutions, and information about arsenic and mitigation (including arsenic's distribution, safe water options, impacts on health, and health management). As such, the creations of differences that are gendered, classed, and geographical (in relation to access to safe water sources as well as in relation to where contaminated aquifers are) are reinforced by the very notions of participation and community that are expected to reduce such differences and promote egalitarian and democratic water institutions.

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