

The Justice of Water Conservation Education: NGOs and Civil Society

Lexine Tallis Hansen and John Kerr

Abstract

Water distribution is often considered a question of environmental justice. For example, critiques of water management schemes, particularly water pricing, are often framed in the language of rights and fair access. However, nonprice water conservation strategies, especially educational programs, rarely address fairness in target, impact, or outcome. Yet, these water conservation programs can be embedded in unequal social contexts no less than are other water management approaches. Moreover, nonprice education-based programs are often implemented by NGOs with the aim of empowering civil society. Examining such programs with a justice lens not only allows for a new perspective from which to critique them, but also suggests new methods by which to improve interactions between NGOs and communities.

In this case study of a multi-scale NGO-led program in rural Jordan, focused on women users, we find that, like government- or private sector-led management and distribution systems, the program ignored the multiple socio-political hierarchies that restrict access to and control over resources. As a result, it further marginalized those women and men already marginalized by water distribution systems. We conclude with recommendations for how such conservation initiatives could incorporate fairness as a guiding principle to enhance local agency through bottom-up approaches.

Key Words: Environmental justice, environmental education, water conservation, Jordan, participatory approaches.

1. Introduction

Water distribution is often considered a question of environmental justice; for example a Google Scholar search of “environmental justice water distribution” returns 149,000 results. In countries where water is scarce, social inequalities are illustrated by unequal water access.¹⁻³ As one of the world’s ten most water-scarce countries, Jordan has limited ability to increase

supply: annual groundwater withdrawals already exceed natural recharge by 40 percent.⁴ Thus, reducing water demand is vital for Jordan.

Multiple approaches to reducing water consumption have been tried worldwide. Policy responses on the demand side have focused primarily on economic incentives and much has been learned about water pricing and its impacts.⁵⁻⁷ However, in Jordan it has proved politically infeasible to drastically increase the price of water to consumers so Jordan is emphasizing nonprice motivators for reducing consumption.^{8, 9} Internationally, nonprice water conservation initiatives have included low-flow technology development and conservation education.¹⁰⁻¹² Critiques of such initiatives have not addressed distributional impacts, either globally or in Jordan.

We combine an environmental justice focus on impacts and action with a feminist political ecological emphasis on local and larger scale interactions to examine how water scarcity and conservation education programs impact rural Jordanian communities. We found that conservation programs often ignore the multiple socio-political hierarchies that restrict access to and control over program resources and thus benefit already powerful people. This study of a multi-scale NGO-led conservation program in rural Jordan reveals the manner in which such programs further marginalize those people most harshly affected by water scarcity.

Here, we will describe Jordan's water scarcity crisis using feminist political ecology and environmental justice lenses. Then, we will discuss how an NGO-led conservation program unintentionally marginalized those people already suffering from both water scarcity and lack of community power. Finally, we will suggest ways that NGOs can improve their impacts on those marginalized populations.

2. Feminist Political Ecology and Environmental Justice

Because it recognizes multiple causes of and effects on local environmental issues while also emphasizing the multiple agencies of local people, feminist political ecology is an excellent lens with which to examine water conservation education work in Jordan and its impacts on local people.¹³⁻¹⁵ An environmental justice focus uncovers the material implications of these programs and whether they assist marginalized groups.¹⁶⁻¹⁸ Other scholars have analyzed how both top-down and "participatory" development and environmental programs still marginalize local voices,¹⁹⁻²³ especially those of women.²⁴⁻³¹ The continuing recognition of women's central role in water provision means that water conservation programs still explicitly aim to improve women's resource management;²⁷ thus, a gendered focus is inherent in the programs themselves and must be considered in any analysis of them.

A. Study Methods

This paper details findings from exploratory research conducted during 18 months over three years from 2006 to 2009. The research aimed to

understand how women's water conservation education programs were designed and implemented and how they impacted women participants. After interviewing 38 water sector professionals in Jordan, we selected rural water conservation education programs as case studies. The researcher, Hansen, lived with families in each village, experienced their water scarcity and observed how they handled it. She also watched their interactions with program staff. Hansen interviewed participants individually and in groups to understand their perspectives on water conservation, the education programs, their communities, their social networks, and learning processes. Interviews with participants and with program staff were transcribed and, with all observation notes, were analyzed using thematic coding.³² Hansen often discussed her observations with informants, clarifying her interpretations and honing her comprehension. These data, as well as program documentation and participant feedback, inform the findings presented in this paper.

3. Jordan's Gendered Water Crisis

Jordan faces a severe water scarcity crisis: total water availability for all purposes is only 135 cubic meters per capita annually and for domestic consumption only 52 m³.³³ The Jordanian government distributes potable water on a rationed schedule, with most households receiving water once a week, some more often and some only once every two to three weeks. However, the crisis is not shared equally by all Jordanians; it is gendered in two ways. First, women and marginalized communities bear the brunt of water scarcity. Jordanian women are primarily responsible for domestic water use. They sacrifice to accomplish all they can with the small amounts they receive and can store, usually around two to four m³ per week. If water comes weekly, or less often, women spend much of their "water day" cleaning, washing clothes, bathing children, and filling storage tanks. Rural communities are also slighted. Often urban residents have access to municipal piping systems while the rural poor are not connected, or water does not reach them. Then these families must buy water from private suppliers at high rates. Moreover, rural households often have more members than urban households, so they receive less water per capita than urban consumers. Any new scheme to manage household water differently (e.g. through changing pricing or promoting conservation through other means) thus impacts rural women first.

Second, focusing on community power reveals that women and marginalized communities are also neglected in water conservation programs meant to help address scarcity. Elites organize and implement programs that affect non-elite populations: the power dynamic is framed by a person's gender but also by location. Rural water conservation programs are funded and controlled by international donors.^{34, 35} Even Jordanian staff members have little experience with contemporary rural living. Thus, programs are designed to address the problems that staff and donors identify (i.e.

household water waste) while rural people's problems (i.e. poor water quality) are sidelined. Jordanian conservation projects usually conduct adult conservation education or promote water saving devices, and often integrate these, regardless of the context of water scarcity in a given community. As this case demonstrates, such top-down approaches marginalize the rural Jordanians who deal with water scarcity every day.

4: Case Study: the Ghor Conservation Program in Three Springs, Jordan

Three Springs, pseudonym, is a village of approximately 3000 residents in the fertile north central Jordan River Valley. Crops are tightly packed into the flat valley floor and houses nestle the steep hills above the fields. The community contains four main groups: Ait Omar, or 'Omar's Kin,' Ait Hakim, Ammanies, and Egyptians. Ait Omar clearly dominate the village: they own most of the land, their homes border the fields at the base of the hills, they hold the major leadership roles in the area, and they are well-connected both to local and national government. Ait Hakim, on the other hand, have little power in Three Springs: most do not own land, their houses are farther up the steep hillsides, and they often do not have access to resources outside of the community (i.e., through local or national government positions). Moreover, Ait Hakim are poorer than Ait Omar and few of their youth attend high school or higher level education.

Egyptian migrant workers also live in Three Springs. These men and women live in tents or shacks near the fields they tend. They are not represented in any of the local or national governing agencies and we found no conservation education programs which involved them despite the understanding among professionals that labourers manage daily water use on many farms. Finally, some people from Amman have purchased land or homes in the community, either business ventures or vacation spots. They may have some political sway in the village due to their connections in Amman, but they generally stay out of local issues.

A. Top-down planning

Like other water conservation programs, the Ghor program was designed from Amman with little understanding of contemporary life in the village. This top-down approach means that the "participatory" program was neither planned nor implemented in a truly participatory manner. As a result, the water conservation program separated women and men, and irrigation and domestic water use. The program also ignored social divisions in the community which led to marginalization of some groups.

International donors and their national NGO partners planned most of the program before any community members were involved. They decided that the program's goals would be to increase access to water for underserved communities and improve local management practices by creating community groups to collaborate with governing bodies. These goals did not

match community members' problems: poor water quality, leaking pipes, insufficient pressure to reach upland homes, and multiple households sharing one weekly ration. "Collaboration" and "community teams" were not able to address structural issues, and even the local government partners did not have authority over infrastructure, water quality or pressure. For example, the community team "discovered," as one of my informants noted, that many Ait Hakim, who live highest up the mountainsides, have no access to piped municipal water because the water pressure is insufficient to reach their homes. To address this concern, the donors purchased a water tanker to deliver government potable water to those houses. However, it was unclear who was served by the tanker, whether it delivered water regularly, or who maintained it. Moreover, in eight weeks in the village, Hansen never saw this tanker, though private tankers delivered water supplies regularly to off-network houses. The community team had no lasting authority to get the water from the municipality or to ensure timely delivery. As we will discuss next, the team was also a majority Ait Omar and leaders were not concerned that the Ait Hakim might still be suffering from inadequate water supplies.

Globally, water consumption is perceived as a gendered activity in that men control irrigation water systems and women are responsible for household water use.^{27, 36} Generally, Jordanian water programs recognize this division and either work with men in agriculture or with women in domestic consumption, according to informants. In this program, men and women were both included, but the program highlighted domestic water use so women in the community were trained in more efficient use of household water while irrigation concerns were not addressed. However, in the village, men and women manage both sources of water together to meet their dynamic water needs; few community members saw them as separate issues. Thus the assumptions of program staff determined which water issues would be addressed regardless of how water was managed in the village.

Similarly, program staff priorities restricted the other community project. In addition to the tanker mentioned previously, the program developed a rolling loan fund which provides small loans to individuals to improve their household water systems, i.e., repairing storage tanks or installing water saving devices. While the program was "participatory," rolling funds were created in the other five communities involved in the program and it seems unlikely that the fund, which does not address the major concerns of community members, was a high priority in Three Springs. One informant said the fund was just 'one of the things the project did.'

B. Social Divisions Leading to Marginalization

Additionally, the international donors and national NGO partners in Amman determined what community teams would look like, how many members they would have, and what their role would be. Ghor program staff members conceive of Three Springs as a homogenous village: they see

residents as all of similar social standing. However, the people of Three Springs are divided by ethnicity, kinship, gender, socio-economic status, age, and ability. Missing this social diversity, programmers worked with local leaders to plan and implement programs, select participants, and evaluate progress, which then enforced the status quo power relationships in the community. The community team had eight men and four women: all of the women were Ait Omar as were three of the men, and the other five men were Ait Hakim. Thus the team was a majority Ait Omar. Because of this domination, the rolling fund was not a neutral, equitable solution. At the end of the program, the Three Springs Women's Association took over responsibility for the fund. Ait Omar women, the same four who sat on the community team, control this association and have significant social and economic resources, whereas Ait Hakim male team members lacked such social power or economic resources. So it is now Ait Omar who determine whether an applicant is eligible for a loan or capable of paying it off, for what the money may be used, and how much to lend. Moreover, during meetings and observations at the Women's Association office, it was rare that a woman requested a loan. Rather Ait Hakim husbands and brothers were given loan funds. In short, not only do Ait Omar women continue to hold the reins of opportunities in the community, but Ait Hakim women rarely directly access the resources. Program staff members saw all villagers as a homogenous group; they did not recognize the community social hierarchies. So while they were attempting to empower locals, they in fact further marginalized the Ait Hakim and its women, and completely ignored the Egyptians.

5. Linking Conservation Education to Environmental Justice

The case of Three Springs demonstrates that water conservation programs should incorporate an environmental justice perspective as a central part of their environmental education efforts, particularly when advocating capacity-building goals. We see that people are enmeshed in multiple structures of power, which sometimes hinder and sometimes help them benefit from programs. Like Nightengale,²⁵ we found that despite the "gendered" focus of water conservation programs, overall women's access to water resources did not improve. Rather, Ait Hakim women and Egyptian families were excluded from program benefits. Environmental justice requires that environmental concerns and social challenges are addressed simultaneously, so that water conservation programs must help those most affected by water scarcity, not just those with the best ability to manipulate program outcomes.

Firmly incorporating justice into their approach, conservation education programs can work to empower the marginalized rather than further entrenching the status quo. At the local scale, the Ghor program should have included other community members, especially Egyptian labourers, male and

female, to ensure that the impacts of water scarcity to all in the region were understood and incorporated in program solutions. Many people in Three Springs have the ability to lead and build local collaboration. Some of these are Ait Omar women, and were empowered by the program, but there are also strong local agents who are Egyptian labourers, Ait Hakim, and even new landowners. Including all these groups in such programs increases available resources. Even in formulating solutions, the program could have required that Ait Hakim have leadership positions on the revolving loan fund, or could have developed local resources for building improved water infrastructure both in households and throughout the community.

At the larger, national scale, such programs should be designed locally rather than be imposed from Amman. Considering the problem of water access at the local level first would create a very different program. Rather than focusing on assumed household water waste, such a program would focus on local people's stated problems. Since women and men together manage their water, both irrigation and domestic supplies, to meet their overall needs, water conservation programs should not automatically divide men and women or irrigation and potable water programs. Working with both groups on shared water issues would help families determine the best way of addressing their needs as such needs change week to week and season to season. Moreover, when considering larger policies, NGOs involved in these local programs can share insights with national policy-makers. Increasing the flow of information from the village to the national level allows national policy to respond to actual local needs rather than assumed ones.

In short, environmental programs, like water conservation education programs, should focus on the social relationships that frame environmental challenges rather than separating environmental concerns from social ones, especially as we see that marginalized people bear the brunt of environmental degradation. Rather than treating women and men as the only axis of analysis, programs must understand the complex multiple hierarchies which organize such communities. While women may have the unique ability to work as change agents, through both their own efforts and through their education of their children, they cannot be conceptualized as a homogenous group without continuing the marginalization of those women of lower social ranks.

Notes

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