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Women and Water Resources:

Continued Marginalisation and
New Policies

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This Gatekeeper Series is produced by the International Institute for Environment and Development to highlight key topics in the field of sustainable agriculture. Each paper reviews a selected issue of contemporary importance and draws preliminary conclusions of relevance to development activities. References are provided to important sources and background material.

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This paper draws on the work of Diane Elson on structural adjustment and gender (Elson, 1991) and that of Frances Cleaver on informal water resource management in Nkayi District, Zimbabwe.

WOMEN AND WATER RESOURCES: CONTINUED MARGINALISATION AND NEW POLICIES

Frances Cleaver & Diane Elson

Introduction

Over the past decade, the policy context for water resources has profoundly changed. Once the emphasis of policy makers was on planning the physical provision of water resources through the identification, design, appraisal, and implementation of projects. Now, however, the emphasis has shifted to the task of managing water resource systems. The key idea is that the state ceases to be a provider of water resources, and instead promotes and facilitates, creating an enabling environment for others to provide and use water resources. The policy focus has shifted from projects to programmes; from the micro level to the macro level. The emphasis is on creating a 'sector' for water-related activities by the establishment of a framework by governments and external donor agencies in which communities can themselves construct, operate, and manage improved facilities (Briscoe and de Ferranti, 1988).

International policy statements announcing this new approach do refer to the importance of women in water management, but we are concerned that these references are simply tacked on to policies and in fact do very little to enhance women's powers. In several respects they may actually be undermining them, with adverse consequences not only for the equity, but also for the efficiency of water resource use. This paper considers the extent to which the new approach to water is gender aware and outlines steps that might be taken to increase the level of gender awareness.

The Changing Policy Climate

The 1980s were designated the International Drinking Water Supply and Sanitation Decade. In the early years of the decade, the central role of the state in the provision of water resources was recognised and generally accepted. Water and sanitation were considered to be basic needs to be provided for through effective central government planning (Lee, 1992). However, the Water Decade coincided with a period of economic stagnation or decline in many countries and with a general reconsideration of the role of the state in the economy. This led to the widespread adoption of economic policy reform, aimed at reducing the role of the public sector and giving a greater role to the market and the private sector. The belief underpinning this move was that this kind of structural adjustment would restore economic growth through more efficient allocation of resources.

Recent discussions about the future organisation of water resources reflect these reforms. For example the principles outlined in the *Global Consultation on Safe Water and*

Sanitation for the 1990s at New Delhi (UNDP, 1990a) echo these main themes and are also present, if less explicit, in the statement of the 1992 *Dublin Conference on Water and the Environment* and *Agenda 21* of the Earth Summit (ICWE, 1992; UNCED, 1992).

Some themes common to these discussions include:

The changing role of government, from that of provider to that of promoter and facilitator, the involvement of NGOs in the private sector, communities as service providers and the need for strong institutions.

Improved financial efficiency, including recovering costs from the users through widespread promotion of the fact that water is not a free good, but should be recognised as an economic good.

Community management as the key to sustaining services for the rural poor and a viable option for poor urban settlements. Community management aims to empower and equip communities to own and control their own systems. Decisions should be undertaken at the 'lowest appropriate level'.

Encouraging women to play influential roles in both water management and hygiene education. Capacity building is necessary to make community management effective and enable women to play leading roles. *'A focus on the role of women, among the poor and unserved, can enhance the sustainability of basic improvements in water supply and sanitation services'* (UNDP, 1990b).

So what are our concerns about these newly emerging themes, and why?

The Displacement of Women in the Management of Water Resources

Our main concern is that these statements pay lip-service to the role of women and the community in water resource management, without examining the implications of such comments in any real depth. Where women do already legitimately have some influence over water resources this is likely to be eroded by the new policies. In this section we discuss the main ways in which the new policies are in danger of marginalising women as managers of water resources.

Marginalising Health Issues

The move towards viewing water primarily as an economic resource shifts the emphasis away from the area of health in which women have recognised interests and a strong professional presence. The contention here is that current policies underplay the value of approaching water from a health point of view.

"The emerging issue, common to all domestic consumers, is that water is an economic good, and in spite of the high social and health benefits accruing from a plentiful supply, the price of water must be more closely aligned to the economic cost of supply" (Edwards, 1993)

Much current thought is devoted to devising ways of valuing the economic rather than the health and social benefits of water, as it is thought that the former can be more easily quantified. It is believed that investment in the sector is more likely to be forthcoming if it can be justified in terms of economic returns (UNDP, 1990a & b; Briscoe and de Ferranti, 1989; Churchill, 1989). An extreme example of this approach suggests that there is a very tenuous link between improvements in health and investments in water and sanitation services, and therefore effort should be concentrated on proving and calculating the non-health benefits of water (Churchill, 1989).

This tendency is questionable for two reasons. Firstly, by underplaying the potential health benefits of improved water and sanitation, the recognised role of women as informal hygiene educators at the household level is undermined (Wijk-Sibesma, 1985). Funds are less likely to be obtained for health education, so establishing a vicious circle. Without education and promotion activities, health benefits are unlikely to be forthcoming and therefore the policy of downplaying them appears justified. Moreover, women may be still considered to be 'responsible' for hygiene improvements without having any command over the resources necessary to implement them. They can then be 'blamed' for the absence of substantial health benefits.

Secondly, the shift away from health as a focus and the simultaneous weakening of government-provided health services (as a result of cuts in public expenditure) hit a sector in which women have a recognised professional role. There are probably more women professionals in health than in most other sectors (with the possible exception of education) and therefore more women in positions which enable them to implement gender-aware policies.

Markets and Meetings: Commoditising Water

The idea of water as a basic human need is being overshadowed by the notion of water as a commodity. 'The concept of water as a free good is finally on its way out, and there is a growing consensus on the need to charge for services...' (Najlis and Edwards, 1991). The New Delhi Background Papers describe one of the problems of the water sector as follows: 'often, service delivery is organised around the assumption that people have basic needs for water that need to be met, rather than around the actual demand and willingness to pay for these services' (UNDP, 1990b).

Emerging sectoral programmes focus on quantitative analysis and formal structures. The key quantity has become the price of water and the key formal structures are markets and meetings. Through markets of various types users pay for water. Through meetings of various types users and providers take decisions. The new system of water resource management can thus be summarised as revolving around cash and committees.

Both cash and committees might be thought to be gender-neutral instruments. But closer examination reveals that both tend to be marked by gender bias of various forms. Women tend to have less access to cash than men. Cash accruing to women is often earmarked for different forms of expenditure than cash accruing to men. Through households, men and women do to some extent pool and share money – but this is generally incomplete in ways that are biased against women (Dwyer and Bruce, 1988) so that women's lack of access to cash remains a barrier.

Ability to Pay

The centrepiece of the new approach is the idea of paying for water. From the point of view of those responsible for public expenditure on water resources this is described as 'cost-recovery', where 'cost' refers to those resources for which the public sector has had to pay. The extent of cost-recovery depends on ability and willingness to pay. There is already some recognition in the literature of gender differentiation in willingness to pay. Women in Zimbabwe are willing to pay 40% more than men for an improved domestic water supply (Briscoe and de Ferranti, 1989). This is probably related to the fact that much of the burden of fetching water falls on women. Improved water supply would save women's time and effort.

However, women's willingness to pay may not be matched by ability to pay, because of lack of access to cash. They may be unable to raise the cash from their husbands because water is regarded as women's responsibility; and because husbands place a lower value on saving women's time and effort than do the women themselves. They may be unable to raise the cash from undertaking income generating activities on their own account because they are caught in a vicious circle – without improved water supplies they have no spare time for income generating activities, but without the income they cannot pay for new facilities.

Even if this circle could be broken through provision of credit to pay for the improved water supply, women might still face difficulties in turning liberated time into cash because of lack of other complementary resources. The extent of cost-recovery may depend on translating willingness to pay into ability to pay and this in turn on the organisation of resource transfers from men to women. In the absence of this, women's low cash incomes may constrain the scope of cost recovery, or lead to gender inequity in paying the costs.

Valuing Women's Time

Gender differences may also result in under-investment in water resources even if such investment is guided by formal cost-benefit analysis that does not assume women's time to be a free good. Assessing the benefits depends on determining the amount of time users would save and the value of this time. The value of the time saved in fetching water is typically determined either by estimating what income women could generate in the time saved through waged or self-employment; or by what it would cost to hire someone else to fetch the water. Both methods rely on market valuations of women's time, and both

therefore reflect the unequal terms on which women typically enter markets as compared to men. Women's time typically commands a low return, either through outright discrimination against women, or because women are constrained in their market activities through their social obligations to care for family and friends (Lewenhak, 1992).

Domestic and Productive Water: A False Division

The commoditisation of water (enabling it to be privatised, sold and attributed a market value) also shifts the focus towards so-called 'productive' water with quantifiable monetary benefits and raises the issue of ownership and property rights. The dangers inherent in this shift are illustrated by the example in Box 1.

Box 1. The false division between domestic and productive water

The common division between 'domestic' and 'productive' water has in the past reflected the sectoral division between water for health and basic needs (domestic); and water for agriculture and industry (productive). The division is a false one, particularly at the household level where 'domestic' water may be used for a variety of income-generating purposes (both in cash and in kind) commonly undertaken by women: the keeping of small livestock, brewing beer for sale, brick moulding, vegetable growing and so on. However, the productive possibilities of 'domestic' water are less easily quantified. There is a danger that the focus will shift dramatically to supplying water where the economic benefits are obvious, substantial, and easily quantifiable to the neglect of those cases where the economic benefits are less clear.

There are already major gender differences in the use of water resources for 'productive' and 'domestic' purposes. Men predominate in the use of 'productive' water (for irrigation and for watering cattle) whereas women are only dominant in the 'domestic' sector. Research in Nkayi, Zimbabwe, for example, showed that only men were on dam committees (for cattle watering); whereas hand-dug wells, used primarily for domestic purposes, were almost the exclusive domain of women. At boreholes, used for both purposes, the user profile was mixed and conflicts arose over the priorities of different users, with cattle watering generally taking precedence over domestic use (Cleaver, 1991).

Property Rights and Ownership

Another aspect of commoditisation is the issue of property rights and ownership. The desirability of 'ownership' is a much repeated and rarely challenged theme in recent statements about water; with ownership of water supply facilities being associated with responsible water use and improved operation and maintenance:

'Community management goes beyond participation to encompass ownership of and responsibility for water supply and sanitation services..... The community-based organisation should have legal authority to own land, employ people, maintain a bank account or its equivalent, and collect user fees' (UNDP, 1990b).

The creation of property rights over any resource inevitably involves the power to exercise these rights to exclude non-owners. We know that women are in a disadvantageous position in relation to property rights, particularly over productive resources such as land, livestock and even their own labour. It is optimistic to assume that vesting 'ownership' of a water source in the community will give women equal rights over that resource; and far more likely that the creation of ownership rights will confer opportunities for the rich and powerful to appropriate preferential access to the resource. In addition, the creation of private property rights and the commoditisation of water may lead to the undermining of relationships of reciprocity, and of indigenous hardship survival mechanisms (Box 2).

Box 2. Ownership and tradition in Zimbabwe

In Nkayi, communal hand-dug wells were introduced by aid agencies in the 1980s. They had been installed with the participation of the users who were told that by contributing to implementation they had 'paid' for the well which they now 'owned'. The regular user community consisted of the ten or fifteen families living in the immediate vicinity of the well who had participated in implementation. However, there were at least as many occasional users; those from further away whose nearest source was broken or dry. They were allowed to use the well because of a strong traditional principle that no one should be excluded from using a water source.

However, when the new wells started to dry up during a drought, the regular water user community started to impose restrictions on the use of the well, limiting pumping to certain times of the day and closing the wells at other times so making it very difficult for occasional users to draw water. They had to plead, wait until everyone else had taken to draw any residual water in the well and, if still unsuccessful, go elsewhere. The very definition of an 'owner' community meant the exclusion of others in times of scarcity, and the weakening of traditional reciprocal rights of access, critical to survival in dry lands. Those excluded from easy access to water tended to be the more marginal households who had less adequate facilities and little influence. It is ironic that success in Nkayi in achieving one of the declared policy goals of a sense of ownership and responsibility is likely to be detrimental to the avowed aim of equitable access to water for all.

Formalising Management Procedures

One of the emphases in the New Delhi document is on strengthening local institutions. Much of the effort in implementing community management is put into formalising such involvement through committees, contracts, the delineation of responsibilities; making the community in many respects the lowest tier of government structures. For example, waterpoint committees or water users associations are linked into village development structures, with their own chairman, treasurer, and secretary. The New Delhi Background Papers talk of various levels of community management, on a spectrum ranging from the extended family caring for a spring at one end, to a public works agency, parastatal or private sector company providing water to large numbers at the other. It is asserted that 'These differences are only ones of scale, cost and complexity, the basic model remains the same.' (UNDP, 1990b). This makes it far less likely that women will be able to exercise

real power; local government and politics being effectively dominated by men in the majority of situations.

The insistence on women's presence on water committees is not enough. The culture of the committees and their way of doing business remains a barrier. Women tend to find it harder to get their voices heard than men. In many contexts it is regarded as inappropriate for women to speak out or take the lead in public and women find it difficult to break through the barriers of their own diffidence and the indifference or hostility of men in the meeting. In a significant number of contexts there is a strong tendency to exclude women from meetings.

Neither does such bureaucratisation recognise the existing informal institutions for water resource management, which may have been developed, and mostly operated, by women over many generations. These often remain invisible because they do not exclusively involve 'productive' sources of water and because management is largely through rules-in-use and compliance is almost universal (Box 3).

Box 3. Informal institutions for water resource management in Zimbabwe

An example is a traditional management system over an important water source in Nkayi, the Shangani River. Local people believe that the river cannot be owned and therefore access is free to all. However there is a comprehensive system of rules and regulations relating to the river and ensuring the good condition of water taken from it. The river is dry for most of the year and water obtained by digging holes in the sand. Drinking wells are dug in the middle of the river bed where the sand is cleanest and where the water underneath is flowing fastest. The drinking wells are always communal, shared between neighbouring families, to minimise the dangers of witchcraft and poisoning. Drinking wells commonly have a tin with holes punctured in the bottom sunk into them to prevent them from collapsing and are covered to protect them from animals. Water for gardens and washing clothes is taken from wells dug at the dirty margins of the river. They may be individual but anyone can use such a well if they come across them. No one washes clothes near any well, soap always being used at some distance away and the water carried from the well to that spot. There are designated perennial pools for cattle watering and specified sites for men's and women's washing.

There is also a special place in the river reserved for the rain-making ceremonies of spirit mediums, or church services to pray for rains. No one is responsible for enforcing this system of management and there is very little non-compliance, the most serious cases reported being children leaving the lids off drinking wells. District officers, however, believe that people use dirty water from the river and that the solution is to encourage them to use and participate in the management of wells and boreholes for which they must be mobilised and trained through formal structures.

More Responsibility - But Without More Rights

Markets are structured by social norms, and the prices they generate reflect these norms. It is easy to assume that the way to overcome the barriers caused by under-valuation of women's time and women's relative lack of access to cash is to give women more responsibility within the management system:

“In rural water supply, probably more than in any other sector, sustainability is dramatically enhanced when women have key responsibilities.” (Briscoe and de Ferranti, 1989).

The problem is that women may be given more responsibility without more rights. They may thus share disproportionately in the costs of the management system; while men may be happy to see water responsibilities as ‘women's work’ and may shoulder even fewer of the burdens of the system. Enhanced responsibilities for women must be matched by enhanced rights. This is much more likely to happen if women are organised in some kind of movement for social action which will give them a presence in the public arena.

Community Myths

The community is a prime focus of current policy documents and community management is presented in some as a universal panacea for the problems of the sector:

“Improvement efforts are more likely to meet felt needs. Investments are more likely to be well spent. New projects are more likely to be completed and kept in service.... As a result, the country's overall resources are likely to be more effectively utilised. No less important, more communities are more likely to get safe water sooner and, because of that, water sector policies and programmes will be better instruments to help alleviate poverty, improve the lot of women and increase equity” (Briscoe and de Ferranti, 1989).

However, there are very few attempts to define the community concerned and a great deal of ambiguity about its nature.

The Unitary Community

Both academic literature and policy documents combine the concepts of a water-using community and a decision-making community. However, these are not necessarily one and the same. The gender profile of each community is likely to be very different. In practice, the water-using community is likely to be predominantly women, whereas the decision-making community is far more likely to be male dominated. Furthermore, patterns of water use rarely fall conveniently into simple administrative boundaries, traditional or modern. The establishment of waterpoint committees or water user associations (even with a majority of women members) may be unsuccessful precisely because they comprise the water-using rather than the decision-making community, and because their remit is so

limited. At local level, other communal resources such as grazing lands, are subject to an area level decision making process, usually dominated by older men. (In Nkayi nearly all decisions regarding the allocation and regulation of resources were taken at the Village or Ward Development Committee meetings despite the existence of specific committees for a variety of other activities.)

The Competent and Resourceful Community

According to many policy documents, the community is competent to undertake most of the tasks in which governments have failed: identifying needs, choosing technologies, providing adequate funding, implementing to a high standard, and maintaining facilities indefinitely. Perhaps the most ambitious idea about community competence is that it will be able to make complex decisions (which existing implementing agencies shy away from) about who pays what charges.

“An acceptable level of cost recovery will require decisions on what prices to charge to whom and for what services. the ultimate decision rests with the local or community decision makers...” (UNDP, 1990b)

In some irrigation systems, the organisational complexity of devising equitable and collectable tariffs for water has led some implementing agencies to levy a bulk tariff on a farmers' group, leaving the group itself to decide on the contributions of individual members.

“It is an interesting paradox that, in extremis, the practical viability of market principles should be perceived to depend on local, non-market patterns of social interdependence and hierarchy” (Moore, 1989)

The Equitable Community

In so far as the community does prove competent to decide and impose a structure of charges, it may do so with little regard for issues of equity. There is an assumption in much of the literature that the community is a philanthropic social entity concerned with ensuring distributional equity amongst its members. In fact it is clear that many communities are based on strong principles of hierarchy. Access to and distribution of resources are dependent on the place occupied in the hierarchy (Box 4). Indeed it has been suggested that certain people have been pre-selected within social structures not to receive equal access to such resources (Torry, 1986). Ensuring that all survive is not the same as striving for equality.

Box 4. Inequality in indigenous water use in Zimbabwe

At Mtswirini well in Nyaki, a restricted hours rule was introduced as the dry season progressed to preserve the limited supply of water until the next rains. However, although this could have meant that everyone received at least minimum supplies of water, no attempt was made to ensure that this limited supply was distributed equitably. Water was taken on a first-come, first-served basis. People would place their buckets at the pump to queue before the well was opened. There was no restriction on the number of buckets one person could place in line. On one occasion, buckets from a relatively wealthy household occupied the first five places in the queue. The water generally ran out after twenty buckets had been drawn and those at the back of the queue had to try their luck elsewhere. Unsurprisingly this family had much higher water use than other members of the community (12 litres per person per day as opposed to a more common 8 litres).

In such circumstances, households with more able-bodied women and children (and more buckets – an expensive item) are able to gain preferential access to water supplies. Poorer households, particularly female headed ones with only very young children are likely to occupy a weak position in terms of access to and control over water resources. They are also less likely to be able to acquire ownership rights by contributing to the implementation of the waterpoint.

Towards Gender Awareness in Water Resource Management

The marginalisation of women in water resource management is not simply a cause for concern on grounds of equity. It is a cause for concern on grounds of efficiency. It means a loss of women's knowledge of water resources; it means a loss of women's knowledge of how to make effective use of resources; it means a weakening of the process whereby benefits are transmitted from adults to children, since women are known to be more effective in this respect than men. A gender-aware system of management would minimise such losses.

Developing a gender-aware system of management means rethinking the instruments and processes currently being developed. These instruments and processes involve combinations of markets and meetings, of private and public sector activities. They may appear to be abstract and gender neutral. But as soon as we ask the question 'who decides what for whom?' we can begin to disaggregate the management system and investigate its gender dimensions. Probing the gender dimensions of the emerging systems of water resource management may well reveal some important inconsistencies and mismatches which need to be tackled.

Appropriate means of gaining further understanding of gendered roles in water resource management could be incorporated into project planning, monitoring, and evaluation on a routine basis. Methods for doing this are varied but might be undertaken at the following levels of analysis.

Waterpoint Analysis

The waterpoint analysis is a useful approach which provides a quick profile of the community to be studied (i.e. the water using community). The waterpoint is one location where people interact with both the resource and the technology. Data can therefore be gathered about water use and its organisation (Cleaver 1991). Waterpoint observations and interviews also offer access to women and their views; something not always easy to achieve with other methods. This form of analysis combines survey type data with in-depth observations on technical features, use and management:

- technical data: type and age of facility, number of breakdowns in past year, installing agency, maintaining agency, condition;
- use data: number and type of users, amounts of water used, collection practice, variants in use, mapping of households in relation to water supply; and,
- management data: management of water supply, existence and functioning of committee or caretaker, profile of committee members, rules and regulations regarding supply, role of others in water supply management.

Household Analysis

Selected households can be chosen for in-depth analysis of water use preferences and practices, water source mapping, time budgets, labour availability, cash availability.

Households could be selected according to their socio-economic status or their proximity to the resource and to the decision-making centre. It should be noted that such surveys should gain the views of men and women separately as their ideas about the importance of water sources and their command over cash, labour, and time may differ substantially.

Institutional Analysis

The aim of collecting data under this category would be to identify which institutions (formal and informal) community members currently participate in, and whether they offer potential to be built on or integrated with water resource management activities. Examples might include savings clubs, burial societies, and income generating groups. Information would be required on the following:

- What does the institution currently do in terms of organisation, mobilisation, support, exchange of information, collection of money etc. Is it effective in these activities?
- What are the jurisdictional boundaries of the institution? Do they incorporate/overlap with water using boundaries?

- Who does what in this institution? Do women play a prominent part in decision making, management of resources etc? Does it include people of different socio-economic status?

All the above information may be collected by observation, key informant interviews, and limited, highly focused household surveys.

Conclusions

This paper has discussed in detail the potential threats posed by the new policy climate to women's roles in water resources management and the likely consequences for equity and efficiency. In conclusion, the marginalisation of women can largely be avoided if the following key areas are recognised, understood and taken into account by policy-makers:

- that all data should be disaggregated by gender;
- that markets and meetings structure the system but that the situations of women and men in relation to these differ;
- that matching ability to pay and willingness to pay may require redistribution of income to women;
- that not only water but also women's time is an economic good – and that markets are likely to undervalue women's time; and,
- that gender-barriers to effective and equitable management of water resources are more likely to be overcome if women are organised into movements for change.

References

- Briscoe J. and D. de Ferranti. 1989. *Water for Rural Communities*. World Bank, Washington DC.
- Churchill A. 1989. *Rural Water Supply and Sanitation: Time for A Change*. World Bank, Washington DC.
- Cleaver, F. 1991. Maintenance of rural water supplies in Zimbabwe. *Waterlines* 9(4).
- Dwyer, D. and J. Bruce (eds). 1988. *A Home Divided: Women and Income in the Third World*. Stanford University Press, Stanford.
- Edwards, K.A. 1993. Water environment and development; a global agenda? *Natural Resources Forum*, 17(1): 59–64.
- Elson, D. 1991. Male bias and macroeconomics – the case of structural adjustment. In: Elson, D. (ed.) *Male Bias in the Development Process*. Manchester University Press, Manchester.
- ICWE. 1992. International Conference on Water and the Environment; The Dublin Statement on Water and Sustainable Development. *Waterlines*, 10 (4):4–5.
- Lee T. 1992. Water management since the adoption of the Mar del Plata Action Plan: lessons for the 1990s. *Natural Resources Forum*, 16 (3):202–211.
- Lewenhak, S. 1992. *The Revaluation of Women's Work*. Earthscan Publications, London. Second edition.
- Moore, M. 1989. Fruits and fallacies of neoliberalism: case of irrigation policy. *World Development*, 17 (11):1733–1750.
- Najlis, P. and A. Edwards. 1991. The International Drinking Water Supply and Sanitation Decade in retrospect and implications for the future. *Natural Resources Forum*, 15(2): 110–117.
- Torry, W. 1986. Morality and harm: Hindu peasant adjustments to famines. *Social Science Information*, 25 (1):125–160.
- UNCED. 1992. The Dublin Statement on Water and Sustainable Development.
- UNDP. 1990a. Global Consultation on Safe Water and Sanitation for the 1990s, 10–14 September 1990, New Delhi, India, Safe Water 2000; The New Delhi Statement. United Nations Development Programme, New York.

UNDP. 1990b. Global Consultation on Safe Water and Sanitation for the 1990s, 10–14 September 1990, New Delhi, India, Safe Water 2000; Background Papers. United Nations Development Programme, New York.

Wijk-Sibesma, C. 1985. *Participation of Women in Water Supply and Sanitation*. IRC, The Hague, Netherlands.



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