

**GENDER AND ENVIRONMENTAL HEALTH**

a review prepared for the OXFAM "Women Linking for Change" Conference, Thailand 1994.  
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**1 Introduction**

Oxfam is an agency engaged in development and emergency humanitarian relief in Asia, Africa, Latin America and Eastern Europe. Oxfam's Technical Unit established the "Emergency Water Supply" approach adopted in the 1970's and 1980's. A high profile "quick technical fix" option which saves many lives during critical periods and generates significant savings in time and energy spent on water collection. However, in the long term, research has shown that improvements in water supply alone do not lead to better health unless they are accompanied by improved hygiene behaviour. Similarly improvements in sanitation facilities alone do not result in health benefits unless also accompanied by improved hygiene behaviour. It is the changes in hygiene behaviour which ensure health improvements over time. The former Technical Unit's strategic plan placed emphasis on an integrated environmental health approach for both development and emergency programmes. This integration of water supplies, sanitation improvements and hygiene promotion is more sympathetic to the requirements of the community, including gender issues.

Women are the main stakeholders and beneficiaries of water supply and sanitation programmes, being the water carriers, the caretakers of family health, the teachers of hygiene practices and users of water for production. Each of these roles are "women's business". Women have always known this and the men in the village will confirm it, laughing at the mere suggestion that men should be involved in such work. The surprising fact is that planners have taken so long to realise that women are an important target group. In the mid-seventies, women were rediscovered and reintroduced into the water and sanitation sector. A lot has been said about the need for involving women but it is seldom effective in practice. Women are often still excluded from both the early planning and the final implementation of environmental health projects. Women may still be marginalised by the very processes designed to involve them. We are still learning what that entails.

This paper outlines the environmental health related issues that women face, mentions ways which have been used to address them, giving some examples which worked well and some which did not. This draws on the development and emergency experience of the former Technical Unit, and suggests a checklist for gender planning in environmental health programmes.

**2 Women's Roles in Environmental Health****i Water carriers**

Carrying water is one of the most arduous of tasks in the rural areas of Africa, Asia and Latin America: a task which is usually carried out by women and girl children. Boys may be involved when they have no other productive tasks. However in general they assist less because attendance at school is considered to be more important for them than for girls, who may be kept at home as soon as they reach an age when they can help their mothers (van Wijk-Sijbesma, 1985).

**a Time**

The actual time spent on water tasks shows an endless variation, no global generalisations can be made about the average time spent on water collection. Precise time and energy expenditure can only be adequately assessed on the spot, taking into account the opinions of

the women and children involved. In villages in the Newala District in Tanzania women are reported to spend 11 hours to collect one 20 litre bucket in the dry season. As a result water consumption drops to four litres per head per day or even less. Roughly a quarter to a third of the average household's labour is devoted to collecting water during the dry period. According to Whittington, the lack of water would not only be a threat to health, but it would also be a severe constraint on the economic production of the household unit (Whittington et al, 1989). Hygiene promotion generally advocates practices which implicitly incur greater time demands on the use of more water, more frequent handwashing, and so on.

b Energy

The task of carrying heavy loads over long distances requires a great deal of energy, which comes from metabolised food. Women have been reported to carry as much as 18 to 25 kilograms weight of water (one litre of water weighs one kilogram). In Alemi, Uganda, women have carried 41 kilograms of water in one container. It is reported that carrying a weight of 3.5 kilograms is as energy consuming as the heaviest agricultural work done by women although the total time spent in agricultural work tends to be longer (Christine van Wijk-Sijbesma, 1985). The longer the distance and the more difficult the terrain, the greater the quantity of food energy needed.

Women and girls carrying water are frequently exposed to malnutrition, anaemia and water related diseases. White, Burton and White found that women in Kenya expend on average 12% of their energy fetching water. In steeper, drier areas this can rise to as much as 27% (White et al, 1972 in Kamminga, 1991).

c Physical Strain

Carrying water on the head requires strength of the neck and considerable skill, a skill often acquired at around nine years old. A major problem arising from the carrying of water is the early aging of the vertebra. Where children are concerned, the main problem associated with carrying heavy loads of water is the effect on the growth of bones. When girls begin to carry water, they are still growing and a deformity known as scoliosis of the vertebral column may occur, particularly when water is carried on the hip or shoulder. Carrying water on the hip may also cause deformed pelvic bones in girls. People carrying water on their backs with a head-strap exhibit a marked cranial depression and many suffer from severe headaches. Also because of the development of the neck muscles, they may have problems with the thyroid gland. Other problems include fractures, slipped discs and damage to the knees, (Dufaut, 1987).

ii Caretakers of family health and teachers of hygiene practices

By virtue of their domestic functions, women are in constant contact with polluted water and faeces and are therefore the group most vulnerable to water and faeces related diseases. Women are the family members whose role determines that they should take care of the sick. Hence the burden of water and sanitation related diseases within the family falls to them. Reductions in family sickness from improved environmental health will positively impact on women's lives.

Women are the family members whose role includes the teaching of sanitation and hygiene practices. Their knowledge and understanding of the ways in which hygiene can affect health, combined with traditional practices determines the way they rear children. It is through their mothers (and grandmothers) that the children learn and copy hygiene practices.

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Menstruation and the disposal of soiled rags and garments creates a unique set of problems for women. These practices are taboo and require complete privacy from other women as well as from men. Even defecation for women often requires more privacy than men's. Where there is no shelter, women must relieve themselves secretly under cover of darkness. Men are able to relieve themselves relatively indiscriminately. These gender related behaviours are passed from generation to generation by women themselves. Men may resist the construction of latrines, long after women have realised the advantages they have for privacy.

### iii Domestic producers

Traditionally in rural areas water sources are used for a combination of domestic and productive purposes. Vegetable growing and preparation of foods and beverages for sale are widespread examples of water-related work of women. Although these activities are usually small scale, the benefits in terms of food, nutrition and income can be critical for rural women and their households. Men use water for livestock, fish farming, brick making and sometimes for vegetable growing. Products are either consumed by the household or sold. Major reasons for neglecting the water demand for production are probably the focus on safe drinking water (health) and the lack of recognition of women's productive role. As a result, system design and quantities of water supplied are often not sufficiently adapted for realization of the economic potential offered or of the user's needs. Most new water projects fail to take account of these multiple water needs. In cases where improved water supplies are being used for production, this is often an unplanned side effect.

### iv Decision Makers

Men traditionally take the role of leaders and decision makers. Women's decision making in the area of water is usually limited to the areas mentioned above. However, when environmental health interventions are embarked upon, special activities planned for women's involvement may often exclude women from the decision making process. Women are seen as the active agents who can contribute labour, implement innovations and achieve the ultimate programme goals of more safe water and better health. Separate men's and women's committees can maintain women at low level positions. Challenging these roles requires sensitivity. Both men and women may resist changing their positions.

## **3 Ideas to challenge the roles**

### i Water carrying

Savings in the time and energy spent in water collection can be made by reducing the distance over which water must be carried and providing sufficient quantities of water at times of peak demand. Most time gains from improved water supplies occur when traditional sources are far away and limited in output. Women are likely to continue to use traditional sources when they are as conveniently located as the improved sources or when the taste is preferred. Poor or inadequate maintenance of new facilities has a negative effect on the time saving potential (Kamminga, 1991).

Time savings are often shared between various household members. Women sometimes obtain no net time gain at all, for example when they lose the assistance of other household members, especially children, when the water supply becomes more accessible. In some cases the time spent on water collection by adult women has even increased with the installation of a new supply. Some water supplies have been installed which only provide water at inconvenient times. The water yards in

Sudan, Oxfam Ed Daain Refugee Programme were only opened for water collection by members of the displaced community at night. Some other water supplies have been located where women were subjected to additional harassment. Discussions with the Rohingya Refugees after the construction of the water distribution by Oxfam in Damdamia Camp, Bangladesh, revealed that they were subjected to additional harassment at certain tapstands. Discussions with women and other vulnerable groups over the siting and availability of new water supplies is essential to ensure that the intervention benefits those it was intended for. Focus group discussions and participatory mapping are techniques which lend themselves very well to this process, even in emergencies (see attached case study).

The use of aids such as animals or handcarts is increasing, thus reducing the time and energy spent on water collection by women. Donkeys can pull or carry a high proportion of their body weight for a long distances. The ownership of pack animals or carts often enables women to delegate water collection and domestic transport to other members of the household. Domestic and rural economies. The "pousse pousse", a simple wheel-barrow like devise for carrying water was developed in Burkina Faso. This not only lessened women's drudgery but helped break down taboos which prevented boys from assisting with water transport. The introduction of donkeys as carriers of water in the Sudan raised a gender role conflict. Was water collection now men's work as the animal handlers or women's work as collectors of water? Such interventions can really open up the community debate on gender.

#### ii Caretakers of family health and teachers of hygiene practice

All elements of a community should be targeted with the messages about improved hygiene practices. Often, women are the only people targeted because of their role as "mother". Many effective interventions can be undertaken with children teaching other children and their parents, or by involving other women and the men. By targeting "mothers only" the intervention creates additional responsibility on women rather than on the community as a whole, increasing their burden and reinforcing stereotypes.

One alternative is the Child to Child way of teaching the community about health. This method gets children to participate actively in the learning process, to put into practice what they have learnt and to help other children and adults to do the same. Children are good at passing on information to other children, they enjoy the responsibilities which make them feel valued and important. It helps to develop their confidence. Children find practical activities fun and interesting. A series of Child to Child books have been published on all aspects of health education, including those in the especially difficult circumstance of living in refugee camps.

#### iii Domestic producers

Social and economic benefits are assumed to stem from water projects. By reducing the time and energy spent in water collection, more time becomes available for other activities. However, on asking women what they consider to be their greatest burdens, studies show that women may not mention water collection but may talk about firewood collection and grinding grain for flour. When asked what activities they enjoy, water collection and gathering wild vegetables were mentioned. It is assumed that this is because these activities offer an opportunity to get away from the house and to meet other women. In such situations provision of grinding facilities may be a more popular intervention than environmental health! It is important that women's own opinions of what they want and what they will do with any extra time are listened to and realised. With more time available, they may want to spend that time on income generation activities, on domestic chores or having some time for relaxation.

#### iv Decision makers

A woman should be seen as an individual whose quality of life is her own right. Women's needs, customs, preferences and traditions should be taken into consideration during the technical design of projects. Female technicians or community motivators may be required to make links with the women, to gather their opinions and give them the confidence to contribute to policy decisions in public fora. A hygiene promotion intervention linked to a health referral system using motivators proved to be a very valuable element of the Oxfam supported Rohingya Refugee Programme in Bangladesh. The Bangladeshi men and women motivators were able to establish close links with the refugee women despite severe restrictions on access to refugees imposed by the Bangladesh Government. These hygiene motivators gained the trust of the refugee men and women, gathered their opinions and shape the interventions according to real needs and were able to lobby for changes outside the immediate scope of the environmental health programme.

Women can be successful managers of communal water points, latrines, shower facilities and domestic waste collection and recycling. Their water related work may be taken for granted and denied its economic and social value. Handpump maintenance is an example. By using women caretakers instead of male mechanics the number of working handpumps improved from 50% to 89% (India, Black, 1991, Kenya, Hoffman, 1992, Bangladesh, Hoque et al, 1991). This has been made possible by the installation of handpumps with lightweight components that are easy to assemble and dismantle without heavy equipment. Women handpump mechanics pride themselves in being able to fulfil their role and enjoy their improved status in the community. However, where they undertake this role as volunteers, this assumes that women's time is plentiful and therefore less valuable than a male pump mechanic. Equal work deserves equal pay.

The emphasis on women's participation should not imply that the activities must be carried out by women only. It stresses the need for both men and women to address the issue. It is important that water supply and sanitation provision remain community responsibilities so that any new work involved does not become a purely women's burden.

Women require proper training for their new roles, as it should improve their chances of being accepted in their villages. If women fail as a result of lack of training, it will be taken as a general indication of their unsuitability for the job. Trainings should be sympathetic to the situation that women find themselves in and take into account convenient locations, child care facilities and appropriate teaching methods.

#### **4. Emergencies - the special challenge**

Some people think that emergencies are fundamentally different from development programmes. They are stereotyped by a top-down approach, a rapid turn over of money, the use of many external inputs from equipment to staff, large numbers of fragmented, traumatised communities in a state of poor health and little perceived time to consult with them. Such an approach creates dependence on external assistance. Resentment towards the affected displaced people from the local communities may develop when services and facilities are disparate.

Altering this image continues to pose a real challenge for Oxfam Emergencies Department, including the newly formed Specialist Support Team. The quick fix approach is essential but should be broadened from the purely technical option. Communities which are not in their usual environment do not have the commitments to homes and land that they may have had in their normal environment. This has obvious disadvantages for them. Whilst some refugees are so traumatised that they become apathetic and without hope, others find a special kind of energy which is channelled to help others

and get involved in improving the situation. This gives great potential to work with these communities in a developmental way - but faster!

#### i Policy

A policy was written in 1992, which addressed Oxfam's approach to Public Health in Emergencies, including gender aspects. This policy was well received, but never been ratified. It stands as a paper outlining best practice and guidance. This includes the timing of interventions, notably that engineering options should be addressed at the same time as hygiene promotion and community participation activities.

#### ii Staff

The key element is probably the selection and training of emergency staff. Experienced Oxfam staff, who are socially aware and gender sensitive in a development context may be under such enormous pressures of work in emergency situations that they simply fail to make time to keep the refugee communities informed, let alone consulted. They may otherwise spend so long approaching the emergency in a developmental and consultative way that they make insufficient progress and lead to an excessive loss of life. With experience, these staff develop their own ways of working and learn to incorporate gender sensitivity into their work. Staff without the Oxfam perspective and/or the development experience have a larger amount to learn and may simply take longer. The contract lengths are short (often 3 months) and the learning process significantly longer. These factors, combined with the high turnover of emergency staff, the limited pool of personnel with relevant skills available at short notice, reduce the likelihood of recruiting staff with adequate experience in gender issues. Unless this shortfall is addressed, more emergencies will be handled in an insensitive manner.

The Emergency Support Personnel (ESP's) posts linked with environmental health, (now 3 Engineers, 1 Health Educator) have ensured that there is a small pool of experienced Oxfam personnel available. However current demand for staff is very high. Of the 24 UK recruited engineers in the field today, only a handful of them have been on any Oxfam supported programmes before. Many of these people were on our own emergencies retrieval register and members of REDR (a Register of Engineers for Disaster Relief) and have undergone some voluntary training sessions in the UK prior to departure. The REDR training programme may include some community listening skills if the person is interested, but these have not gone into much detail on developing a gender perspective to environmental health work in emergencies. There is a strong case to develop training sessions, providing the necessary skills for potential candidates. This could be offered to those on our own register or by encouraging REDR to include gender awareness training as part of their training programme.

#### iii Information gathering

The attached checklist may serve as a guide for those involved with environmental health projects. If there is time to collect all of that information about and around a project, then there will be enough data to target and monitor the intervention. Lack of information from the onset has been the criticism of many emergency interventions. There may not be the time to collect all of the information suggested in this checklist, but with rapid appraisal techniques much of it can be collected quickly. Our experience has shown that techniques such as key informant interviews, focus group discussions and participatory mapping are all quick and effective ways of gathering quality information. Backed up with keen observation these techniques should serve environmental health workers adequately to provide the information to channel the relief effort in the ways really required by the affected

communities. Solo subjective assessments also take time. It may be advantageous to send a team of people out at the start of the emergency, some to commence interventions and others to collect the information required to ensure that the interventions are correctly targeted for women and other potentially disadvantaged groups.

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## A CHECKLIST FOR ENVIRONMENTAL HEALTH PROJECTS

Unless women are consulted and the participation of women of all socio-economic classes is facilitated, the impact of a project will be minimal.

This list is intended to provide useful questions to address:

### Assessing needs and priorities

1 What baseline data has been collected? Has a picture of environmental health needs been collected from all sectors of the community? Have current patterns of water collection been fully understood?

2 What measures have been taken to ensure women's participation in the project? Do women participate in setting priorities and objectives? Do men and women identify needs and priorities differently? Who makes the final decisions?

3 Are women specifically mentioned in the objectives? Are targets sex specific?

4 What are the requirements for sanitary privacy?

5 What will women do with the additional facilities and with any free time released by the project, particularly if the results in a substantial reduction in workload and working hours? Will there be any negative impact?

### Accessibility and acceptance of water/sanitation facilities

1 Have women participated in decisions such as:

- design and location of water points?
- selection of latrine designs and sites?
- design of additional provisions for washing, bathing, livestock watering, waste disposal and waste water drainage?
- timing of operations?
- timing and content of hygiene promotion activities?
- timing, location and content of training activities?
- selection of local people for maintenance/management of the project? (Are women themselves encouraged to play this role?)

2 Are technologies used suitable for women? Is the engineering design appropriate for women's use? Does the structure of latrines ensure privacy and conform to cultural rules? Can women repair the facilities? Can women afford to maintain them?

3 Are women's attitudes and beliefs taken into account in devising hygiene promotion? Are hygiene activities geared toward "mothers" only? Are fathers and other women taking care of children also included?



### Project Personnel

- 1 What is the proportion of women staff in the programme?
- 2 Is there special recruitment of women as programme managers, water and sanitation engineers, extension workers and programme promoters?
- 3 Are women represented in decision making positions?
- 4 Are the staff on the programme sensitive to implementing programmes with gender perspective?

### Programme training

- 1 Do programme training activities give equal opportunity to women?
- 2 What is the proportion of women in training activities? What special efforts are being made to involve more women?
- 3 Do educational and promotional materials show women as sanitation engineers, as programme workers? Are men shown using the facilities?

### Community involvement

- 1 Have women's organisations been identified, notified and involved in the programme?
- 2 Do plans of work exist for the involvement of women's organisations?
- 3 What kind of support is being given directly to women's organisations?

### Programme effects, monitoring and evaluation

- 1 How will the programme affect women's workload, hygiene, health or other benefits? To what extent do women attribute changes in these areas to the project?
- 2 How will the programme affect women's access to water and use of water? How will it affect women's work in cleaning house, clothes, children, food preparation and cooking?
- 3 What changes are expected or have occurred in women's use of time (eg number of hours worked) and what were the hours saved for?
- 4 How will the programme affect women's income? Do changes cost women more or less money than before? Do women use time saved to make more money?

Adapted from Checklist for Gender planning (Cleves Mosse, 1993 and Tribune, 1990).

# INTEGRATING GENDER INTO ENVIRONMENTAL HEALTH INTERVENTIONS - A CASE STUDY

## Sudanese Refugees in Koboko

50,000 Sudanese fled south over the border into Uganda during August 1993. Some fled after Government of Sudan aeroplanes loaded with bombs flew low over their homes threatening to attack. Others had their homes raided and burned, the women raped, their children killed and cattle stolen by rival SPLA factions. The Sudanese found themselves in Idi Amin's home town, which up until two years ago had been evacuated because of Ugandan fighting factions. The Ugandans in the area had only recently returned from their refuges in Zaire and Southern Sudan and knew what it was like to flee. Many Sudanese had left behind them all of their possessions and crops ripening in their fields.

Along with the Sudanese refugees, some agencies which had been working in southern Sudan were also displaced. They continued to provide health care and education services, but there were unmet needs for improvements in water supplies and for hygiene promotion. Providing water quickly for the large population settling on forested hills bisected by rivers, was complicated to plan and implement. The Oxfam Uganda Emergency team offered to meet this need. They requested additional help from the former Technical Unit to assist with the first phase of the emergency intervention. This was my chance to find out whether the advice I had been giving to field personnel on environmental health, including the integration of gender sensitivity into technical programmes was appropriate in emergencies.

Camp statistics were difficult to get, even after a counting exercise performed by UNHCR and the Ugandan Red Cross Society in which Oxfam assisted. Most of them were Kakwa people and many of them were Christians; only 500 were Muslims. The small sample of households which Oxfam staff counted had the following proportions:

AGE & GENDER	NUMBERS	PERCENTAGES
16+ years Male	141	24
16+ years Female	156	27
6-15 years (Males & Females)	158	27
0-5 years (Males & Females)	124	22

These figures are unusual because there are often less than 20% of men over the age of 16 years in refugee camps. There were more male than female headed households. Those female headed households when asked, said that their men were still in the Sudan.

The count had been initiated because there had been no real ideas of numbers of people and locations. It was also seen as a way of getting the refugees into small groups with elected block leaders to improve the distribution system and make it more equitable. When I first arrived in the camp I witnessed the distribution of soap. A small riot was occurring because UNHCR had brought only