WATER AND NGOS

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Proceedings of an ODA workshop

Edited by Ian Smout

Water, Engineering and Development Centre
Institute of Development Engineering
Loughborough University
1996

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This Workshop was supported by the Overseas Development Administration of the United Kingdom. However, the Overseas Development Administration can accept no responsibility for any of the information provided or views expressed.

ISBN 0 906055 47 4

Designed by Rod Shaw
Printed by Audio Visual Services, Loughborough University

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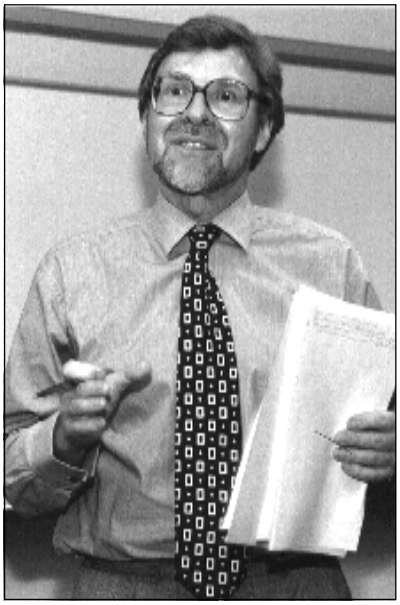
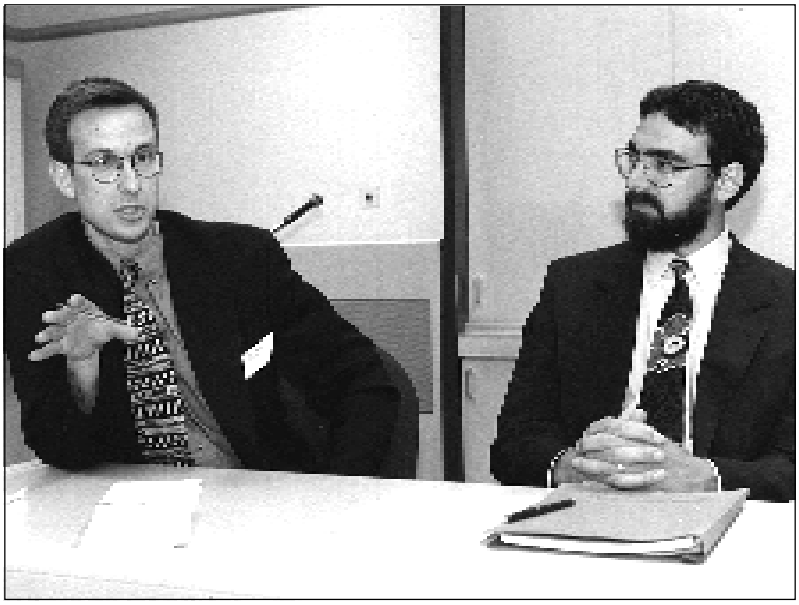
Above: Jim Howard presenting a discussion group report
Below — Left: Alistair Wray, Senior Engineering Adviser, ODA *Right:* Nick Dyer from ODA and Jon Lane from WaterAid





INTRODUCTION

THE NUMBER OF people in the developing world without access to clean water and adequate sanitation continues to grow, as additional provision fails to keep up with population growth and the breakdown of existing facilities. Filling this gap is a major developmental challenge, to prevent the illness and death, particularly of children, which results from inadequate water supply, sanitation and hygiene. Non-Governmental Organisations (NGOs) have been involved in this work for many years, helping many communities meet their needs. With the general growth of NGO activity, this water sector work has expanded and now involves greater interaction with governments and aid agencies.

In this context the Overseas Development Administration (ODA) initiated and sponsored a one-day workshop *Water and NGOs,* to explore how to expand community based approaches and strengthen the role of NGOs working in the water sector. The workshop was organised by WEDC, and held at Burleigh Court, Loughborough University on 10 June 1996.

Five papers were circulated in advance, these were presented briefly at the workshop, and participants divided into seven groups to discuss the topics, with findings presented in plenary sessions. The names of the members of the discussion groups are given in Appendix 1.

Over seventy participants attended, from British and other European NGOs, research institutions and the ODA. About thirty NGOs were represented, showing there is a substantial interest in the water sector among both large and small NGOs in the UK.

This volume records the proceedings of the workshop. One of the conclusions was that NGO projects could be improved by better sharing of experience and dissemination of relevant reports, and we hope that this material will be of interest to practitioners and planners who did not attend the workshop.

It is divided into three sections, following the sessions of the workshop.

- Technical, management and social issues
- Policy issues
- Recommendations

The first two sections comprise the written papers which were circulated in advance, followed by a report on the presentations and the discussions which took place in the groups and the plenary session. The final section provides summaries of the group discussions on Next Steps to be taken and of final plenary contributions and the concluding Summing Up of the workshop.

The workshop was generally regarded as most successful, with many practical recommendations to be followed up, both within our own organisations and across the wider network. I hope we can build on the momentum generated by the workshop and the papers and recommendations in these proceedings, to continue strengthening the role of NGOs in the water sector.

Ian Smout, WEDC
Loughborough University 1996

Paper 1: An Overview of NGO Involvement in the Water Sector

Alistair Wray, Senior Engineering Adviser, ODA

1. Introduction

This paper provides an overview of how ODA is assisting NGOs improve the quality of life for people in poorer countries by providing assistance for projects in the water sector. It reviews access to drinking water and sanitation and the availability of water for other uses. It considers the various channels under which NGOs obtain funding from ODA for water projects. The strengths and weaknesses of these mechanisms are considered with reference to this sector. It concludes by considering some of the issues related to strengthening the role of NGOs in the water sector. While the paper refers to ODA's channels for assistance, the issues raised are of general relevance.

2. The Water Sector in Context

2.1 Access to Water and Sanitation

Lack of clean water, inadequate sanitation and poor hygiene practices are a major cause of death and illness in developing countries, and particularly affect childrens' health. Global efforts were made during the 1980s through the 'International Drinking Water Supply and Sanitation Decade' to address this situation but progress fell far short of the goal of universal access by 1990 (WHO, 1990).

At the beginning of the 1990s, about 1.3 billion people in rural areas and marginal urban areas in developing countries, lacked access to safe drinking water, and 1.9 billion had no access to appropriate sanitation. At least 2 million children die every year because of these problems. A recent report (WHO\UNICEF, 1995) estimates that in 1994 less than half the population in 31 countries had access to clean water (18 African countries; 11 in Asia and the Pacific, and 2 in Latin America and the Caribbean). The coverage rates for sanitation in these countries are generally lower except where particular priority has been placed on this area.

To achieve universal coverage by the year 2000, taking into account projected population increases, nearly 2.2 billion people will have to gain access to safe water supply and 2.9 billion to adequate sanitation (UNICEF, 1995). More than 75% of these populations are in rural or marginal urban areas.

2.2 Water Resources Issues

The quantities of water required for basic human needs are minimal. However, the freshwater that is available is under increasing pressure in many countries. The competition for the available water is expected to increase six and a half times over the next three decades (Serageldin, 1995). At the country level, it is suggested by Falkenmark and Lindh (1993) that regular shortages of water (water stress) will occur when the annual renewable freshwater available per person falls below 1,700 cubic metres,. If availability falls below 1000 cubic metres per capita per year (water scarcity), health, economic development and human wellbeing will be hampered.

Many of the countries that might be most affected by severe water shortages over the next 30 years are in the Middle East and Africa. The poor in many of these countries already suffer from a lack of access to safe water and may increasingly be marginalised in the future.

There is thus a pressing need not only to increase access to water supply and sanitation services, but also to manage the water resource in a sustainable way to secure it for future generations. Increasingly, work in the water sector has to consider not only local demand for water but also wider issues of water resource allocation. This must take into account the demand for water by irrigation which accounts for 70% of all water used worldwide, the majority of which is in developing countries. Consumption of water by industry is also growing rapidly and accounts for 20% of overall global water demand. The discharge of industrial effluents can have serious impacts downstream and can effectively make unusable far greater quantities of water. There is also an increasing priority placed on ensuring that water is available to preserve eco-systems by maintaining minimum flows in rivers, wetlands and coastal habitats. The failure by many countries to price water economically is resulting in water wastage and increasing problems of access for the most vulnerable groups (ODA, undated).

2.3 An Overview of Experience

A recent review (ODA, 1995) summarised some of the main water related problems that are encountered or are emerging in developing countries. These may be summarised under the following headings:

- Scarcity, shortages and lack of access;
- Absence of policies, legislation and planning capability;
- Inadequate evaluation of water resources;
- Technical constraints;
- Lack of participation;
- Vulnerability of the environment;
- Shortcomings in education and training.

All partners in water projects have learned many lessons since the early 1980s. An attempt is made to summarise some of these lessons in the recent ODA sector overview document (ODA, 1995). This identifies the key principles that are generally accepted to be necessary to guide effective and sustainable water projects. These may be grouped under 5 headings:

- An integrated approach (improved water resources management, water supply schemes to include environmental sanitation and hygiene education)
- Organisational development (governments' policy and facilitating role, community involvement and partnerships)
- Financial sustainability (cost recovery schemes for operations and maintenance, incentives to economise on water use and reduce pollution)
- Appropriate technology (choice based on technical, sociological, financial and environmental studies)
- Environmental protection (assessment of risks, water quality management and groundwater over-exploitation).

The work of NGOs has contributed particularly in promoting appropriate technologies and building local capacity to manage water supplies. NGOs play a catalytic role in championing the poor, stimulating demand and promoting change. Increasingly sanitation and hygiene education are integrated into water schemes, the role of women is strengthened and operations and maintenance issues are addressed through the links built with local communities and NGOs, both local and international. The grass-roots characteristics of NGOs bring particular strengths to these activities. Many donors, including ODA, have encouraged NGOs to take an expanded role in the sector (ODA, 1996).

The ODA sector overview (ODA, 1995), in support of an expanded role, suggests that the experience of UK NGOs in rural and peri-urban areas should continue to be tapped, and support be given to the building of capacity of local NGOs, NGO partnerships, advocacy and the reflection of community based approaches in government policies. It recognised that water frequently can be a good entry point for broader social development and a means of assisting local NGOs to contribute to strengthening of civil society.

Expansion of the role of NGOs raises two general issues. First, to what extent is the independence, catalytic nature and community focussed approach under threat from closer links with donor official support. Are these very attributes, which have built success, secondary to the ability of NGOs to effectively channel aid to poor communities. Secondly, as water comes under increasing pressure, should NGOs take a broader approach to the use of water and seek to work more with national organisations on water development programmes rather than ad-hoc projects.

Strengthening of the role of NGOs also involves considering the activities that are currently undertaken and how these activities may be improved. The following sections look at the level and range of NGO involvement in the sector supported by ODA.

3. Activities Under the Joint Funding Scheme (JFS)

3.1 JFS Total Expenditure

The main channel of ODA support for the overseas development projects of British NGOs is the Joint Funding Scheme (JFS). Projects are normally funded on a 50:50 basis with ODA able to contribute up to £500,000 for an individual project. Water related projects accounted for £2.41 million of JFS expenditure in 1994/95. This represents 7.1% of total JFS expenditure for that year. For reference, in the same year 3.1% of all ODA bilateral expenditure was in the water sector.

JFS expenditure is split between accountable individual grants and Block Grants. The JFS individual grants are awarded on a competitive basis. Projects are submitted by NGOs to ODA on an annual cycle and appraised for funding. The Block Grant system provides certain larger NGOs with advance notice of the amount that will be made available to them over the coming financial year to co-fund projects that meet JFS criteria. In recent years, there has been a greater emphasis on the award of individual grants. The proportion spent on the water sector is determined by the projects put forward by NGOs and accepted by ODA.

Projects funded under the JFS are sector coded under 21 separate headings, one of which covers the water sector. There is always difficulty in aggregating what is spent on water related activities, as many projects have an integrated water component. For example, the construction of a borehole or latrines may be associated with a health centre. The following statistics are based on projects with a primary reference to water.

3.2 JFS Accountable Grant Expenditure

27 water related projects received JFS individual grants totalling £1.95 million in 1994/95, 11.3% of the total for the year. Over the last 5 years, the projects supported have ranged considerably in size (JFS component ranging from £5,000 to £500,000). The average spent per project per year has increased over time (£25,000 on average in 1986/87 and £72,000 in 1994/95). The duration of projects also ranges considerably (2 to 6 years). Table 1 summarises the water related projects supported by individual JFS grants by region.

Table 1 Water Related Projects under JFS

Region	1986/87	1992/93	1993/94	1994/95	1995/96
Africa	486,000 (19)	1,337,000 (13)	875,000 (10)	1,459,000 (18)	1,381,000 (21)
Asia	101,000 (4)	217,000 (5)	339,000 (4)	405,000 (6)	459,000 (7)
Latin Am.	-	91,000 (3)	92,000 (4)	86,000 (3)	85,000 (2)
Totals	587,000 (23)	1,645,000 (21)	1,306,000 (18)	1,950,000 (27)	1,925,000 (30)

Notes: ( ) number of projects active in region in FY

In geographical terms, there is a clear focus on Africa, receiving over 70% of the support. Table 2 provides an analysis of the JFS individual water projects supported in Africa. Uganda and Ethiopia in recent years have received the largest number of projects. Other trends are evident in the country support. In Asia, projects have been supported in Bangladesh, Cambodia, India, Nepal and Sri Lanka. There have also been some small projects in Latin America.

Table 2 JFS Accountable Grant Water Projects in Africa

Country	1986/87	1992/93	1993/94	1994/95	1995/96
Burkina Faso	1	1	1	1	1
Ethiopia	1	1	-	2	4
Ghana	2	1	1	1	-
Kenya	2	1	1	1	-
Malawi	-	1	1	1	1
Mozambique	-	-	-	1	1
Senegal	-	1	1	1	1
Tanzania	3	1	1	1	1
Sudan	3	1	1	-	-
Uganda	3	2	2	6	8
Zambia	-	-	-	1	2
Zimbabwe	-	-	-	1	2
Others	4	3	1	1	-

3.3 JFS Block Grants

The Block Grant system funds a much larger number of smaller water projects. This pattern is typical for other sectors. Table 3 shows the details of this support for four Block Grant NGOs. The proportion spent on the water sector is less than under JFS individual grants. This totalled £461,821 covering 39 projects in 1994/95 with an average project annual spend of £11,000. This was 2.9% of the Block Grant expenditure. Again, the majority of the projects are in Africa.

Table 3 JFS Block Grant Expenditure in the Water Sector

Agency	**1991/92**	**1992/93**	**1993/94**	**1994/95**
Cafod	120,794 (10.0%)	148,018(11.4)	79,413 (5.3)	65,623 (3.6)
Christian Aid	93,010 (4.5%)	66,016 (2.9)	73,375 (3.0)	134,879 (4.7)
Oxfam	165,254 (4.3%)	254,392 (6.2)	214,539 (5.0)	210,225 (4.2)
SCF	-	-	37,807 (1.0)	51,694 (1.2)
Totals	379,058	468,426	405,134	461,821

Note: ( ) percentage of total Block Grant to agency

3.4 Type of Projects Supported

Under both schemes the majority of projects are predominantly rural rather than urban. Although the JFS supports a few projects involving irrigation or micro hydro schemes, the majority of non-Block Grant projects are concerned with providing safe water supplies for domestic use. This reflects the nature of the proposals that are submitted to JFS for funding. It is harder to categorise the Block Grant water projects which are smaller and rather more diverse.

The individual projects tend to show a strong technology focus, particularly an emphasis on the provision of water points, usually by means of boreholes or hand dug wells but occasionally involving piped water from springs. As is often the case, in such technology-driven activities, there is sometimes a tendency to regard the cost effective delivery of appropriate technology as an end in itself, and to under-estimate the significance and complexity of social development issues such as gender. However, there has been a clear trend in recent years towards a more participatory and integrated approach and the review process for the individual projects provides an opportunity for JFS advisers to interact with the NGOs to address apparent weaknesses. Most water supply projects normally involve setting up or facilitating processes of community water management via water committees or user groups. There is increasing emphasis on an integrated approach whereby the provision of infrastructure is complemented by related health, hygiene and sanitation activities such as health education and the promotion of latrines.

Some of the common weaknesses in the JFS proposals submitted for appraisal include:

3.5 Technical Issues

- The choice of water source and technology is frequently prescriptive and options not investigated;

- Sanitary improvements often take second place to the provision of water supply and appear as an add on;

- Few projects consider the wider use of water in the community, including its use in communal gardens and local water/land use management, a more flexible approach should be encouraged;

- The possibility of upgrading to higher levels of service in the future is not apparently considered in the planning process;

- Technical back up is often not fully thought through and responsibilities remain unclear;

- Problems of quality control and health and safety at work are often not addressed.

3.6 Social Issues

- Accountability of community managers is commonly taken for granted; few details are provided on how to develop this important characteristic of local organisations;

- Opportunities for the strategic improvement in the position of women is often missed; this objective should be incorporated in all water and sanitation projects, even if tangible results are difficult to achieve/evaluate;

- Little detail is given on cost recovery systems and local comparative experience; is it realistic to assume that all communities should build up funds for preventative maintenance?

3.7 Issues Regarding JFS Projects

JFS has proved an effective way to assist NGO address water needs in local communities. Many of the weaknesses cited above have been addressed by many NGOs and the quality of individual JFS submissions has improved steadily. With respect of the water sector, some issues to consider are:

- How to continue to strengthen submissions and address some of the points noted above? Submissions from smaller NGOs are usually weaker in this respect.

- How are decisions made on which regions or communities are to be assisted and gain access to external resources? Is this built on degree of need or effectiveness of contacts?

- JFS approach promotes ad-hoc projects. As the water resource comes under greater pressure, there is a need to consider wider water needs. Can more be done to encourage local water resource management and link this to land use?

- NGOs can be most effective if their inputs are reflected in national development plans and policies. Does this compromise their role? Are NGOs seen to be outside of these frameworks?

- Does the JFS individual grant process raise local expectations prematurely? Is it compatible with local community development? The role of local partners is often ambiguous in JFS submissions.

4. Country Bilateral Programmes

4.1 Technical Cooperation Projects Involving NGOs

About two thirds of British bilateral aid goes to individual country programmes. NGOs are involved in a range of water projects funded under ODA's country or geographical programmes. Overall figures for this involvement are difficult to obtain, as the involvement of NGOs ranges from leading on a particular project to small specialist inputs into larger projects. The provision of some examples helps to highlight the range of this involvement. Some examples are given in Table 4.

Table 4 NGO Inputs to Geographically Funded Water Projects

Nigeria: Oju Water and Sanitation Project
This is a 3 year £1.4m project involving WaterAid and the British Geological Survey (BGS) to develop water sources throughout Oju involving identification, selection and implementation of low cost technologies. BGS is providing specialist hydrogeological support.

Uganda: Busoga Borehole Project
ODA contributed £236,000 to a project implemented by WaterAid and considered under the ODA evaluation synthesis study described separately for this workshop.

Uganda: Busoga Trust Lowero Diocese Project
The project covers lined dug wells with hand pumps fitted with concrete cover slaps. Pip latrines are to be installed at a number of institutions such as schools. The value of the project is £350,000.

Tanzania: Help Age Project in Karague
The water component of this project (value - £245,000) covers the construction of concrete water containers for rain water harvesting from roof runoff.

India: Kalahandi Water and Development Project - Orissa
Save the Children Fund are working with locally based NGOs. Project value - £200,000 per year. Project covers working with predominantly tribal communities to establish a sustainable and replicable model for planning provision and usage of water in remote areas.

India: UNICEF - CDD Watsan Project in West Bengal
This involves a local NGO, Rumar Krishna Mission with funding of approximately £50,000 per year for the sanitation component of the project. The purpose is the sustainable reduction in morbidity from diarrhoeal diseases in the district with emphasis on under 5's and tribal groupings.

India: NGO Support for Larger Bilateral Funded Projects
Local NGOs are providing specialist input in areas such as training in community participation and community based planning of services, training of craftsmen and hygiene promotion activities.

Cambodia: Kratie Drinking Water Project
CARE are assisting in the provision of sustainable potable water supply to 10,000 villages in this province. This involves the drilling of boreholes, construction of hand dug wells, hygiene education for villagers and training of government technical staff. Funding : £343,000 over 3 years.

Nepal: Gurkha Welfare Trust This involves the construction of 100 water schemes in hill regions, community development and hygiene education. Funding is £1,884,000 over 5 years.

4.2 British Partnership Scheme (BPS)

A significant number of small water projects are supported under the British Partnership Scheme (BPS). This allows the Heads of Missions (Embassies and High Commissions) to approve development projects typically costing up to £40,000 per annum with an annual ceiling of up to £250,000. It is designed to provide a cost effective means of mounting small aid projects and, in a limited number of countries, to replace the conventional aid programme. The Scheme has steadily increased in value in recent years. This is set to continue as the main bilateral programmes concentrate more on the poorest countries. Table 5 gives details of BPS expenditure by region and year. Around 45% is spent in Africa. Details of the expenditure on water projects are not readily available. However, some examples of BPS projects are given in Table 6.

Table 5 Total BPS Expenditure by Region (£'000s)

Agency	1990/91	1991/92	1992/93	1993/94	1994/95
Africa	2,369	1,779	1,944	2,443	3,196
Asia	675	695	1,002	1,254	1,705
L America & Caribbean	634	691	1,115	1,072	1,521
Eastern Europe	60	171	225	257	401
Pacific	86	178	142	204	229
Totals	**3,824**	**3,514**	**4,428**	**5,230**	**7,053**

Table 6 Examples of Water Projects under BPS

Lesotho: Provision and Installation of Rainwater Collection System at Makhetisa School
The project covers the provision and installation of a rainwater collection system at the school. A Skill Share Africa volunteer undertook to see the implementation of the project - value £1,254.

Kenya: Examples of BPS Projects
Water projects involving local NGOs include Majimboni Water Project (£7,200) through Eastern Africa Development Services and Olondo Water Project (£18,200) through HelpAge. Another local NGO, Rehema, is starting a project to provide treadle pumps to small scale farmers in Kitui (value £12,900). There are a large number of other BPS water projects, but these tend to be undertaken directly by the communities concerned and typically involve the installation of one or two boreholes. In 1994/95 water projects under BPS amounted to £40,100 and in 1995/96 to £62,600.

Senegal: BPS Funded Rural Water Supply Project
Improved access to potable water and hygiene awareness by increasing the population served from existing under used borehole schemes and through the provision of hygiene education and community management training - funding £180,000 per annum.

4.3 Issues Regarding NGO Involvement Under Bilateral Programmes

NGOs, both UK and local, are providing a growing input to geographically funded projects in the water sector. This has largely built on a local presence and a community network of contacts.

In some cases, the support has been associated with the work of the UN agencies. The larger projects, both in preparation and implementation, have tested some of the local networks and capability.

There are a number of constraints to expansion of involvement in this area:

- The larger geographically funded projects are subject to competitive tendering and NGOs might not wish to compete with others for this work. This might create conflicts of interest. There is also the effort required to prepare proposals;
- Some country projects have taken advantage of a strong NGO presence in the region of the project. There are clearly constraints in building up a local presence, local contacts and local knowledge;
- There is NGO concern over the loss of influence on project design during the appraisal process for the larger bilateral country projects.

5.0 Emergency Aid

5.1 Funded Activities

By the nature of this work, it is not possible to analyse trends but it should be noted that water related projects form a significant part of ODA emergency aid supported activities and rely heavily on NGO involvement. Table 7 summarises expenditure on water related emergency activities over the last 5 years by region. Expenditure is heavily influenced by certain significant disasters but again, the pattern is for the bulk of the spending to be in Africa. A number of the water related activities were supported through the UN agencies.

Table 7 ODA Emergency Aid Expenditure on Water Projects (£'000s)

Region	**1991/92**	**1992/93**	**1993.94**	**1994/95**	**1995/96**
Africa	1,033 (4)	1,140 (6)	2,126 (11)	2,997 (9)	973 (6)
Asia	130 (3)	125 (2)	1 (1)	300 (1)	336 (5)
L America & Caribbean	-	137 (2)	33 (1)	-	32 (1)
Middle East/FSU	26 (2)	1,322 (3)	-	415 (3)	183 (2)
Totals	**1,189 (9)**	**2,724 (13)**	**2,160 (13)**	**3,712 (13)**	**1,544 (14)**

Note: ( ) Number of projects in region in that year

These emergency interventions cover a range of work from immediate relief such as the tankering of water through to more developmental activities such as the deepening of boreholes. Activities supported during the last 5 years have included:

- Provision of water tanks and bowsers, water pumps and portable water treatment units;
- Water purifying tablets, decontamination of existing water supplies;
- Rehabilitation of boreholes and drilling of new wells, deepening of existing wells, rehabilitation of urban water supply systems;

- Latrine construction, hygiene education, installation of drainage and sewerage systems, and the rehabilitation of sewage treatment plant.

The projects involving NGOs have ranged in value from a few hundred pounds to £1.4m. Typically, it is the larger NGOs that undertake most of the emergency work.

5.2 Issues Regarding Emergency Aid Work

Clearly, the unplanned nature of this work presents major constraints. Sudden disasters create emergency requirements for water, but equally many of the slow onset disasters are a result of drought.

The tankering of water is always relatively expensive but this is normally undertaken only when there is no alternative and the beneficiaries may be present only temporarily. Experience in Goma, Zaire, with Rwandan refugees indicates firstly that where water is plentiful, the beneficiaries static costs per litre can be dramatically lowered by efficient logistics; and secondly, that success might best be achieved by cooperation in bulk tankering by donor government inputs (as government service packages perhaps) and local treatment and distribution by NGOs. Equally, the development of new water supplies or their rehabilitation takes time and to be sustainable, requires local involvement and organisational development. There are obvious tensions in this area of work. However, adherence to the principle of emergency relief inputs contributing wherever possible to longer term development should ensure maximum cost effectiveness possible in the situation. Can this be enhanced?

Effort is now being placed on developing drought strategies for critical areas such as Central and Southern Africa. The role of NGOs in terms of drought preparedness and mitigation of affects deserves review. Climate change and the increasing pressure on water resources underlines the importance of this work. Issues to be considered include:

- How can NGOs best assist communities to monitor and manage drought?
- How do NGOs access technical information on hydrogeology, vulnerability to drought, water and land use management practices and lessons from elsewhere? Can this be improved?

6. Technology Development and Research

6.1 Scope of the Work

ODA funds a significant programme of technology development and research in the water sector. Many of these projects are of potential interest to NGOs. They include work on groundwater management in drought-prone areas, handpump testing, removal of iron in groundwater, community gardens, the role of women and on-site sanitation in low income urban areas. Some of these projects directly involve NGOs. Some seek to improve emergency work such as the projects on rapid assessment of emergency water supplies and the development of relief agency water treatment systems.

6.2 Issues

Are NGOs, particularly the smaller ones, aware of this work? The new publication “ODA Water” will help disseminate this information. Feedback is also required on NGO research needs. How can this dialogue be strengthened? It is of note that NGOs are the largest user group

making enquiries to the ODA supported Global Applied Research Network (GARNET) which is run by WEDC. Can this network be strengthened?

7. An Enhanced Role in the Sector

The emphasis of this review is the water related work undertaken by NGOs with ODA support. Other bilateral donors and multilaterals support NGOs to varying degrees and there is a general desire to see a strengthened role played by NGOs in the water sector. There is also a growing awareness of the current unsustainable use of water resources and the need for sound policies and integrated management. This paper has looked at the various channels of ODA support for work by NGOs in the water sector and their characteristics. Some of the underlying issues for consideration are summarised below.

7.1 Water Resources Issues

- There is a growing consensus that water resources must be managed in an integrated and comprehensive manner. To what degree is it necessary to take this into account in community based NGO projects? How can this be best incorporated?
- With increasing water scarcity, communities should develop a greater awareness of wider water management issues. Are NGOs in a position and willing to encourage local integrated water management? How many projects consider the water needs of livestock, community gardens as well as human consumption?
- Is information on groundwater, surface river flows and drought vulnerability adequate and available to NGOs?
- Should projects continue to be ad-hoc? Is there a case for a programme approach in certain countries as water resources come under greater pressure? This could increase recipient government ownership and ability to expand the activities. How would a programme approach affect funding mechanisms?

7.2 Working with Government

- Is there consistency in the approaches between NGOs and government departments? Are government policies and regulations appropriate?
- How are decisions made on project location? Are they based on equitable provision?
- How do NGOs, local and international, view their long term role in this sector? Are they to become a primary provider of services or act as a catalyst? What are the implications?
- What are the advantages and disadvantages of working with government departments? Can/should this be enhanced? What mechanisms exist for negotiations to take place?
- How do NGOs view advocacy and influencing government to adopt and scale up community based approaches?
- Is there a role for NGOs in assisting to develop communications strategies and public participation?
- Are there issues of loss of independence and accountability in working more closely with governments and also in greater involvement in official aid funding?

7.3 Capacity Building and Learning

- What mechanisms exist to share good experiences and examples? How is systematic learning promoted within the NGO community? Is it adequate?

- What opportunities exist for using or developing networks? The largest user group for the Global Applied Research Network (GARNET) is NGOs. How effective is this? What use is made of other networks, such as UNICEF? Is there a risk of re-inventing the wheel?

- What are the advantages and disadvantages of partnerships with local NGOs? What are the comparative advantages and the added value? Not all international NGOs appear to be working through/alongside local counterparts. What efforts are made or should be made to build local NGO capacity?

- Are NGO research needs adequately met? If not how can they be best addressed?

The issues and opportunities are wide ranging. There are other points that are technical, social and managerial in nature which other papers in this workshop will consider in detail.

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Paper 2: Selected Evaluation Summaries of ODA projects

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1. Evaluations of non-government organizations (NGOs) development projects synthesis report (EV 554)

1.1 Background

The findings in this report are mainly drawn from the evaluations of 12 projects undertaken by British Non Government Organisations (NGOs) throughout the developing world. These evaluations were commissioned by the ODA and were largely undertaken jointly with the corresponding NGO with the objective of obtaining more information about the impact of British NGO projects, and to generate from this lessons for the future for both British NGOs and ODA. A full list of the projects evaluated is given at Annex A Section 1 of the report.

In addition, the report has taken account of the findings of the substantial material indicated below, to add robustness to the report's findings:-

- Other relevant ODA Reports
- An ODI study of 16 NGO Poverty Alleviation Projects
- Other Donors' Evaluations and Reports
- Other published material on NGOs.

A bibliography of this material is given at Annex A of the report in sections 2-5. Where the findings of this material have been significantly drawn upon to reach the conclusions made in this report, this is indicated in the text. In all other cases, the findings in this report can be regarded as being drawn from the evaluations of the 12 projects commissioned by ODA.

Although this material is a substantial amount of evaluation evidence, it is a relatively small slice of the many hundreds of projects funded by British NGOs, and not necessarily representative of their work. It cannot therefore be used to draw conclusions about the effectiveness of the work of NGOs as a whole. Furthermore, British NGOs vary considerably in terms of size, function and methods of operation. While this synthesis attempts to draw out the main themes arising from this work and to draw lessons which might be useful to improve future effectiveness, these cannot be assumed to apply necessarily to any particular NGO or to any individual NGO project.

1.2 The Report

This report was written by Martin Surr of ODA's Evaluation Department.

1.3 Success Ratings

Of the 12 NGO project evaluations commissioned by ODA, none was considered highly successful in meeting its stated objectives. Eight were considered to be successful, 3 were considered to be partially successful, and one was considered to be largely unsuccessful.

1.4 Main Findings and Lessons Learned

1.4.1 Impact on the poor

All NGO projects evaluated by ODA had as one of their main objectives the provision of benefits to the poor. In the majority of these projects significant benefits were received by the poor and few benefits were obtained by the non-poor or by local elites. These evaluations and other evaluations undertaken by other donors and institutions listed at Annex A of the report indicate nonetheless that generally the poorer the project's participants the lower the level of benefit obtained, and that the very poor was often the group that was most difficult to assist. In most projects, however, there was no explicit objective to assist only the very poorest. The intention rather was to help the poor which generally made up the vast majority of people in the communities in which NGOs operated.

Few of the projects evaluated by ODA, ODI or other donors resulted in benefits to the poor which could be regarded as significant enough to challenge the existing social or economic status quo in their local areas. Usually the scale of the project supported and the volume of benefits generated were small enough not to create social tensions between beneficiaries and, for example, local elites or other poor beneficiaries. There were, however, some notable exceptions to this which particularly emerged in the evaluations commissioned by ODA of 2 Oxfam projects in Orissa, India. In the opinion of the evaluators, both of these projects led to the existing social and economic structures within communities being challenged to the benefit of the poor. The success of these two projects must be seen, however, in their wider context. The approach adopted in India may not work in other less pluralist countries, or in countries with repressive regimes.

1.4.2 External environment

An important factor which often influenced the success or failure of evaluated NGO projects listed at Annex A of the report was the external social and economic context in which the project operated. NGOs, like other donors, tended to underestimate the influence of the external environment on the project's outcome, the former often being outside the NGO's control.

A notable finding of the evaluations commissioned by ODA is that carefully designed projects implemented by NGOs can provide benefits to poor people even in a situation in which governments are following unhelpful political, social and economic policies. The risks, however, of project failure may be, nonetheless, greatly increased in these circumstances.

1.4.3 Management of projects

In many of the projects evaluated by ODA and the ODI, a key finding was that the quality of the management and project staff had a crucial bearing on the success of the project. In particular, well organised management and highly motivated leadership were regularly in evidence in those projects that succeeded. A common theme, however, that emerged not only in the 12 evaluations of NGO projects commissioned by ODA but also from the findings of a large number of evaluations of NGO projects commissioned by other donors, including projects run by non British NGOs, was that NGOs' strategic planning practices could be strengthened and their project management could be improved, particularly in the monitoring and ex post evaluation of projects, although significant progress has been made in these areas by NGOs over the past few years.

For some NGOs a rigorous, interdisciplinary approach to project planning, design and management, and the systematic use, for example, of project frameworks, conflicts with the view they

have of themselves as relatively small low cost, flexible, unbureaucratic organisations running on very tight administrative budgets. The amount of money spent on administration in relation to the total spend of the NGO is often very closely monitored by the NGO and the donating public. There is a prevailing attitude, particularly amongst the donating public on whom NGOs depend for a good deal of their resources, that NGOs with very low administrative costs are more effective in that more money therefore goes to those in developing countries for whom the money is intended. This perspective, however, may undermine the quality and coverage of the management of NGO programmes of assistance in developing countries.

1.4.4 Impact on women

Gender issues, and particularly the involvement and impact on women emerged as an important theme in many of the evaluations. Evidence emerged, however, of the problems of getting a gender approach accepted among male project participants and among certain local NGOs themselves.

Although several projects evaluated had clear and positive benefits for women, in the majority of projects the impact on women was limited and often fell short of expectations held at the project's outset. Where direct benefits to women were produced, these tended to be in projects which implicitly accepted and worked within the existing role of women and sought, within that framework, to relieve women's burdens.

1.4.5 The role of groups

A common feature was the formation of groups as part of the strategy to implement projects. The group was intended to become the vehicle for collective and participative action. One problem, however, often encountered, was the difficulty of integrating a group, particularly a newly formed one, firmly within the community's social context. Unless the group was formed with a clearly understood set of shared or common interests, in a social context which allowed that group to flourish, then groups were often formed in name only and did not provide any dynamic contribution to the achievement of the project's objectives.

1.4.6 Participation

The results of the evaluations listed at Annex A of the report show that over the past 10 years or so, there has been a shift of emphasis towards a flexible and innovative process approach to project design involving project participants at each stage in order to maximise project impact. Many of the evaluations of NGO projects commissioned by ODA and others listed at Annex A of the report highlight the importance of ensuring the participation of beneficiaries in a project so that they are able to influence decisions and take part in the activities of a project which affects them.

The results, however, of the evaluations commissioned by ODA show that a wide range of activities and quite different approaches to consulting beneficiaries are presented as 'participation' or 'participatory' without precise definition.

NGOs generally are aware that it is a mistake to suppose that a community always has common interests and that participation is merely a matter of establishing and taking account of these interests in the project design. 'Participation' creates risks of aggravating conflicts between stakeholders, or playing into the hands of powerful vested interests. The findings of the evaluations demonstrate that there are both potential benefits and costs of participation. What is not yet clear from the results of evaluation work, is the form, scale and depth of participation required in different contexts, and in different types of project, to achieve more effective development commensurate with the costs.

1.4.7 The evaluation of social development projects

Community-based, participative projects with social development objectives are increasingly becoming important areas of NGO activity. Due to problems of methodologies faced by all donors in assessing the success of these projects, there is often, however, no clear understanding at the project's outset as to how these social development objectives are to be assessed, what indicators of achievement are to be used to monitor the project's progress, or the way information about these indicators is to be collected.

1.4.8 Sustainability

Sustainability is a term which is used by NGOs and others in a number of different contexts. Very few of the projects evaluated by ODA and ODI however, were likely to be institutionally and financially sustainable in the near future in the sense of being able to stand on their own feet unaided by the sponsoring NGO. Some projects evaluated by ODA and ODI were, nonetheless, sustainable in the sense that the activity sponsored, for example rural water supply, had enabled people to achieve a sustainable improvement in their health and had helped local people to do things for themselves, even if the project to build wells in a particular region was not institutionally or financially sustainable without continued donor support. Projects may therefore be sustainable in the sense of increasing the capacity of the poor or local institutions to do things for themselves, even if the project itself cannot continue without ongoing NGO support. Also, some projects that were not financially self-sufficient, in the sense that project costs were greater than the project's revenue, had nonetheless been able to provide sustainable benefits to poor people as a result of a long-term financial commitment made to the project by the NGO. Although in many cases, the sustainability of projects or their results was only likely to be achieved in the long term and in conjunction with a programme of institutional change, NGOs often lacked a clear explicit and realistic strategy at the design stage to ensure the sustainability of the project's objectives once it had withdrawn.

1.4.9 Replicability

The sustainability of a project clearly has a bearing on its replicability. The evaluations suggest that most projects tend to have a narrow project perspective. Explicit objectives to replicate the project elsewhere tend to be absent from project design. Replicability is often seen by NGOs as being beyond the scope of the project or, alternatively, the project may be seen as being inappropriate to the circumstances prevailing outside the boundary of the project.

1.4.10 NGOs and Developing Country Governments

NGOs often seek to operate in a way which retains their independence from developing country government control. Although some NGOs seek to influence the policies of developing country governments both within and outside their project work, in the majority of projects evaluated by ODA the NGO had a very distant relationship with Government, and, with some notable exceptions, rarely had a significant effect on developing country policy.

In many of the projects evaluated, the NGO was providing services which either the developing country government was unable to provide itself or was improving the quality, coverage and delivery of existing services provided by Government. None of the projects evaluated by ODA consisted of an intervention undertaken by an NGO to assist Government directly in the delivery of government services.

NGOs can not only provide effective services directly to poor people, but can also play an important role both in strengthening civil society and in promoting good government.

1.4.11 British NGOs and local NGOs

For those British NGOs that implement projects through local NGOs, the relationship that they build up with their local NGO partners is absolutely vital to their effective operation. The results of the evaluations commissioned by the ODA show that in the regions where these projects are operating, these British NGOs have generally built up a good local knowledge and long-standing good working relationships with local NGO implementing agencies. This has enabled them to develop a highly effective network between themselves and local NGOs which provides the foundation for their current and future work.

In some projects one objective of this partnership was to assist with the institutional strengthening of local NGOs. In the case of these projects evaluated, however, British NGOs only had a limited impact in improving the institutional performance of local NGOs.

1.4.12 Particular circumstances in which NGOs can be successful

The results of the evaluations commissioned by ODA, ODI and other donors do not suggest that there are some sectors in which NGOs can always provide assistance to the poor more effectively and efficiently than developing country Governments, irrespective of the context in which the NGO is operating. Where a British NGO has tended to be successful in achieving its objectives is in those situations in which it has established a close relationship with potential beneficiaries, either directly or through local NGOs, and where it has a distinct advantage, either in its overall professionalism in a particular sector, or experience in a particular country or region, which has provided it with a set of skills, resources, and contacts to meet effectively the needs of potential beneficiaries. There seems to be no particular advantage overall between those British NGOs that operate directly in developing countries and those that worked through local NGOs. The method of effective working depended on the context in which the British NGOs were operating.

1.4.13 Aspects of the dialogue between British NGOs and ODA

The ODA is an important source of funding for British NGOs. Relations between British NGOs and ODA are generally good, and there is a great deal of common ground between ODA and the NGOs. NGOs however, very much value their independence from donor Governments and are sensitive to any attempts by Governments to influence their policies or programmes. NGOs regard themselves as working with ODA to achieve their development objectives in the context of a shared perspective of overall development goals.

ODA's appraisal and reporting requirement for NGOs submitting projects varies considerably across the aid programme. Projects submitted for funding by NGOs under the block grant provisions of the JFS, for example, face requirements which are quite different to those for projects funded under the ODA's country programmes. Although projects funded under country programmes tend to be larger than under the block grant provisions of the JFS this is not always so and some inconsistency has emerged in ODA's appraisal and reporting requirements for NGOs across the aid programme. The substantial appraisal and reporting requirements for projects funded under the country programmes have also created difficulties, particularly for small NGOs.

1.4.14 British NGOs and Evaluation Work

British NGOs may find the experience and guidance of ODA and other donors useful in helping them to design their own evaluation systems. It may not be possible, however, for British NGOs simply to replicate the major donors' approaches to evaluation work. British NGOs have to undertake evaluation work within the context of the situations in which they work and the resources available to them. Although ODA has an interest in agreeing with British NGOs certain

common principles about the purpose and content of evaluation work, the systems, procedures and methodologies adopted by NGOs need to be driven by their own legitimate perspectives and their own operational requirements.

1.4.15 NGOs and Credit

Small to medium scale credit-focused initiatives to support income generating projects constituted an important proportion of the NGO projects which have been evaluated by the ODI study, and were also included in the projects evaluated by ODA. These schemes are popular and can grow very quickly, often because credit is offered at below the prevailing market rate and the repayment terms are generous. NGO schemes evaluated were, however, generally costly to administer and taking account of the default rate which varied enormously but averaged almost 40%, these schemes do not seem to provide, at the moment, a model for a durable financially-sustainable initiative to alleviate poverty.

1.4.16 NGOs and Emergency Aid

Emergency relief and rehabilitation has become an increasingly important element of the overall British Aid Programme. NGOs play a crucial part in delivering this type of assistance. It is not possible, however, to make firm judgements about the impact of NGO's emergency relief and rehabilitation work on the basis of the results of the few evaluations of emergency relief and rehabilitation undertaken by ODA. ODA currently plans, however, to undertake further evaluations of emergency aid in the near future.

1.4.17 Relating costs to identifiable benefits

A central issue for NGOs and their donors is whether NGOs provide good value for money in the sense of the costs of a project being justified by the benefits. A number of the evaluations commissioned by ODA, as well as those by ODI, have highlighted that NGOs tend to see the success of a project largely in terms of whether the project had succeeded in achieving its objectives, rather than whether it had achieved these benefits in a way commensurate with its cost. However, of the 12 evaluations commissioned by ODA 8 projects were considered by the evaluators to have had significant overall benefits in relation to costs. For 3 projects, although there were some benefits, the evaluators concluded that it was not possible to say whether the benefits exceeded the costs. For only one project did the evaluators conclude that the benefits were not commensurate with its overall cost.

2. Synthesis Study of Institutional Strengthening Projects (EV 559)

Institutional Strengthening (IS) is defined as a process which facilitates and assists change in organisations, typically through reform and development of systems, structure, staffing mix and skills, strategic planning, and shared values, taking account of the wider external environment (political, institutional, legal, economic and social) in order to improve the effectiveness and efficiency with which the organisation fulfils its mission. As such it is a means to a wider end.

The study distinguishes between IS and Institutional Development (ID). ID is at a different level and concerns a prior issue by questioning the appropriateness of existing institutional arrangements within the framework of a whole sector.

2.1 The Synthesis Study

The study considers evidence from four different sources: ODA ex post evaluation reports on five projects with substantial IS components, together with the summaries of some 25 other evaluation reports; contemporary material on current ODA projects; reports from a range of other donors; and a sample of the academic literature on organisational behaviour, culture and change.

2.2 Overall Success Rating

The performance of the IS component in the five ODA case studies is disappointing, ranging from partially successful to unsuccessful. The lower ratings applied to those projects which had IS components "tacked on". This assessment is reinforced by the other evidence, including other donors' experiences.

As a result of earlier monitoring and evaluation work, however, a number of improvements have been made in recent years to ODA's procedures and guidelines for identifying, negotiating and designing IS projects.

2.3 Main Findings

IS projects are extremely difficult to plan, design and implement. This judgement is supported by all four sources of evidence consulted. IS is hard to achieve effectively, and there are no ready formulae or prescriptions.

The main reasons advanced for the poor outcome are: poor design, including lack of proper involvement of stakeholders; insufficient account taken of local political and social contexts; lack of sufficient flexibility in project inputs; weak monitoring; over-ambitious objectives; and insufficient use of change management expertise in design and implementation.

2.4 Lessons: The Critical Success Factors (CSFs)

A number of "critical success factors" can be identified from the range of material consulted during this study, although they should be treated with some caution because successful IS cannot be boiled down to a simple equation.

2.4.1 Lessons for Institutional Development

a. a realistic assessment of the whole institutional framework - social, political, cultural, budgetary, economic and legal - needs to be undertaken, to help determine the most appropriate organisational arrangements for achieving the purpose of the proposed activity; and the action needed to achieve them and make the environment sufficiently supportive of institutional effectiveness. Consideration should be given to what prior conditions need satisfying before the project can go ahead, in the light of this institutional framework appraisal.

2.4.2 Lessons for Institutional Strengthening

b. A multi-disciplinary (team) approach to design and implementation is needed, involving specialist skills in change management and organisational behaviour and development, as well as in institutional analysis.

c. The partner institutions should be involved in all stages of the project cycle, so as to help engender a strong commitment to and ownership of those objectives which can be mutually worked out and agreed. Identification of target beneficiaries should also be carried out using a participatory approach.

d. Project design needs to be flexible, whilst preserving accountability, so project implementation can respond to a changing operating environment and especially to recipients' absorptive capacity and willingness to change.

e. Objectives should be realistic, taking account of the likely capacity of the recipient institution. This would usually mean that, at any one time, the project should probably attempt to tackle a limited number of prioritised actions. Careful and detailed monitoring is essential: this requires that appropriate (modest) objectives, milestones, or targets be set for, say, six month periods, after which they can be reviewed against a longer term strategic framework.

f. An appropriate balance needs to be struck, were IS is part of a wider project, between objectives for technical or operational improvement and IS. It is often desirable to help alleviate immediate problems, as well as addressing their institutional causes, while taking care not simply to reduce the pressure for change. In addition, a balance between diagnosis and action in IS is important.

g. The realism of IS proposals needs to be assessed in the context of the external environment referred to in (a).

h. On-the-job or local training may be more cost-effective than overseas.

i. The use of properly designed institutional twinning or NGO links as a means of achieving IS objectives should be considered, alongside other alternatives.

j. Dynamic and committed leadership is important to drive through the process of change and see it through to completion.

k. It is necessary to ensure that project staff/beneficiaries are sufficiently motivated and encouraged to back proposed change.

l. IS is an organisational process which will often require a long-term approach to design, negotiation, and definition of organisational requirements, and a long-term aid relationship.

g. In the absence of an appropriate mix of these critical success factors, the material studied suggests that institutional change will not be sustainable.

3. CARE: Moyamba Rural Water Supply and Sanitation Project (EV 540)

3.1 The Project

For the past 11 years (1980-91), CARE International has addressed the problem of water and hygiene-related diseases in the Moyamba district of Sierra Leone by providing assistance to communities in the construction of hand-dug wells and ventilated improved pit (VIP) latrines, combined with a programme of community-based environmental health education. By the end of 1990, ODA had contributed £123,000 to the project and had committed itself to spending a further £475,000 during the period up to 1995. In 1991, the annual cost of the project was approximately US$450,000.

The main objective of the project is to reduce morbidity and mortality due to water and hygiene-related diseases and thereby achieve a sustained improvement in the health of the villages covered by the project.

3.2 The Evaluation

The project was selected as one of a series of evaluations of projects funded or co-funded by ODA but undertaken by Non-Governmental Organisations (NGOs). The evaluation was jointly undertaken by CARE and ODA. Comments made about the Government of Sierra Leone relate to the one in power preceding the change of Government in April 1992.

3.3 Overall Conclusion

The project was partially successful. In those villages covered by the project, prior to 1989, where health education and latrine construction received a low priority, the project failed to meet its objectives and was unsuccessful. In those villages covered after 1989, where the health education programme was effective and high latrine coverage was achieved, the project has led to a sustainable improvement in the health of the villagers.

3.4 Main Findings

An analysis of the results of a detailed inspection of the project wells made during the rainy season between July and October 1991 revealed that 42% were not in use. However, nearly all of the wells not in use were in those villages covered by the project prior to 1989 where health education had received a low priority.

The extent of the project's impact and sustainability at the individual village level has been largely dependent upon the extent to which the villagers' popular participation in the project has been secured. Popular participation has been achieved only in those villages where considerable time and effort has been made to explain to the villagers the overall objective of the project; to involve them in its design; and to provide effective health education which has not only taught the villagers the link between water sanitation and disease, but also made them realise that remedies to disease arising from poor water and sanitation can be achieved largely through their own efforts. Effective health education can promote genuine popular participation in the project.

Greater impact and sustainability has been achieved as a result of the recognition of the important role of women.

The design of the project's hand-dug wells and VIP latrines represents, in general, the most technically appropriate and cost-effective way of providing potable water and sanitation in the circumstances faced by the project.

The population covered by the project consists almost entirely of the rural poor. CARE International in Sierra Leone is currently meeting a need by the provision of services which the Government itself is incapable of providing. CARE, on its own, however, has very little leverage over the direction of Government water and sanitation policy.

Full baseline surveys of villages selected by the project were not conducted until recently, and repeat surveys following the project's intervention have not yet been undertaken. As a result, it has not been possible, either for CARE or the evaluation team, to quantify the project's impact.

However, although it has not been possible to quantify the project's impact, the evaluators did find evidence of changes in hygienic behaviour in those villages covered by the project after 1989. The current health education programme would therefore seem to be effective in promoting improvements in hygienic behaviour which has had a positive impact on the health of people in these villages.

3.5 Lessons Learned

It is essential that the popular participation of the village is obtained in defining and achieving the objectives of the project.

In order for rural water supply projects to be successful three vital components are required to be implemented in parallel. First, an effective, carefully designed and culturally appropriate health education programme is required. Second, widespread household latrine provision is essential in order to improve the village standard of hygiene. Third, a potable water supply must be provided, designed in such a way that it is technically appropriate, cost-effective, and accessible and which can, to the maximum extent practicable, be maintained solely by the villagers.

In order to design, monitor and evaluate the impact of rural water supply and sanitation projects adequately, a well designed baseline survey of selected villages is required. When the project has been completed, the baseline survey should be repeated in order to assess the impact of the project.

In communities where there is an abundance of easily available water from traditional sources, both time savings and importantly health benefits are likely to be significantly lower than in areas where local water is far away.

Although it may be very useful to understand the broad pattern of disease in a community so that the project can be tailored to meet reduction in certain disease rates, behavioural change is in general a more practical and reliable measure of the impact of this type of project than disease rates, the latter often being difficult and expensive to collect accurately.

In countries like Sierra Leone, where the economy is in a state of near collapse and where the British Government's bilateral aid programme has been forced to run down due to the ineffectiveness of the Government in implementing sustainable programmes of reform, carefully selected, well organised NGOs with specific skills and experience can provide ODA with an effective way of delivering aid to the poorest groups.

4. Madura Groundwater Irrigation Project — Indonesia (EV 548)

4.1 Introduction

The Madura Groundwater Irrigation Project (MGIP) was funded by ODA from 1974 until 1990: study and design of groundwater development from 1974-77 and the pilot phase and tubewell irrigation from 1979 - 1990. Madura, an island in East Java Province, Indonesia, has a long dry season and limited surface irrigation potential. These difficult agricultural circumstances have led to a history of migration to Java.

4.2 The Evaluation

The evaluation team consisted of a team leader, an agricultural economist and an engineer with additional input from the ODA Evaluation Department. The team spent three weeks in Indonesia, of which two weeks were in the field in Madura. 20 tubewell sites were visited, and interviews were held with farmers, government officials and MGIP staff and consultants.

4.3 Overall Conclusion

The evaluation has found the project to be partially successful. The main construction objectives have been achieved, but at considerable cost and timescale overrun. The economic benefits are very marginal, but a significant proportion of the target beneficiaries have benefited from greater crop security and increased farm incomes. An effective framework is yet to be put in place to ensure either economic or institutional sustainability

4.4 Main Findings

ODA disbursed £5.2m in current price terms (£9.8m in 1991 constant values), from 1972 to 1990. The Government of Indonesia (GOI) and the Commission for European Community (CEC) contributed (in current prices) £ 4.5 and £ 7.2m respectively. Total project expenditure was £ 17m (£ 26m in 1991 prices). The main output has been the completion of 126 deep tubewells with a design command area of 4,600 ha out of the original potential of 6,500 ha.

The first two Phases (1979-82 and 1984-87) suffered serious delays in equipment procurement that extended the life of the project into an Interim Phase (1982-84) and Phase 3 (1987-90), was itself extended by the CEC (1991-92), principally to allow adequate time for handover of tubewell systems to the farmer water user associations (HIPPAs) and local government.

The delays in procurement led to an extension of technical assistance needs which in turn raised project costs and meant that the technical assistance was underused. Equipment when received was found to be faulty through inadequate testing or poor components. As a result, the average construction cost per tubewell reached £35,000 for a 40 hectare scheme or £ 875 per ha (1991 prices). Steps were taken in 1992 to have the supplier repair the locally manufactured pumps and by August of that year all had been reinstalled and were operational.

The appraisal for Phase 1 failed to remedy the lack of a suitable mobilisation period in the implementation plan, with serious consequences in terms of high project costs. The Phase 2 appraisal failed to examine critically the overall direction of the project, and the repercussions of the delays experienced in the pilot Phase 1. Insufficient attention was also given to the hand over process to government and to ways of improving the efficiency of water use at the farm level.

The project evolved a more integrated approach to tubewell siting and development, incorporating agricultural demonstrations, training, and institutional development. A water supply component was expanded in Phase 3, with 60 tubewells having a domestic water supply system added. Only 40% of these were in operation in 1992 due to the delayed installation of booster pumps.

For both irrigation and domestic purposes, tubewell use has been lower than expected. The original production goal was to attain 300% crop intensity based on a wet season rice crop, a dry season irrigated rice crop, followed by an irrigated maize or pulse crop. Pumping requirements would be 40 hrs/ha/mth for irrigated rice and 20 hrs/ha/mth for other crops, giving a possible

maximum over 40 hectares of approximately 4 - 5,000 hrs per year. In fact, on an average scheme of 36 ha, around 875 hours of pumping occur each year.

Farmer support and training for management of the water supplied by the tubewell was initiated by the project yet the precise means of continuing this vital programme remains unclear. The need to overcome the considerable losses of water in the tubewell systems, and to avoid the resulting disaffection by tail-end users, is likely to remain a critical problem.

Tubewells in the eastern half of Madura contrast markedly with those in the western half. The dry season production of tobacco in the east, an important cash crop supplying cigarette manufacturers in Surabaya, has maximised the use of the tubewell (600 hrs/month) and led to incremental net returns of over Rp 2 mill per ha (£ 600) over non-irrigated areas. With an irrigated maize crop in the second half of the dry season, crop intensities of 270 % have been achieved.

In the west of Madura, however the higher rainfall prohibits tobacco and, to date, lucrative alternatives have not been found. Pump use is a half or a third of that in the east (300 hours for the wetter inland and 600 hours for the drier coastal area in the west). The average landholding is around 0.3-0.5 of a hectare, so actual household incremental income in the west is Rp 0.2 to 0.3 mill £50-£80. This is insufficient to overcome the attractions of seasonal employment opportunities in Surabaya and other Javanese cities (a minimum income of Rp 0.5 mill is required). As a result, the project infrastructure has remained at best underused, and at worst has suffered damage and theft.

GOI nevertheless places considerable emphasis on the development of local capacity through the HIPPAs, to ensure continued use of the tubewells. Technical Guidelines on water management have been published, to encourage irrigation officials and farmers to utilise and maintain the pumps and canals more effectively. The formalisation of HIPPA responsibilities is being reinforced in 3 pilot areas through their absorption into the Cooperative Department (KVD).

From a financial point of view, tubewells in East Madura have proved viable, comparing construction and operation costs against crop benefits that depend largely on tobacco. In West Madura, the investment is marginal (below 15% rate of return). The overall investment cost per HIPPA household is approximately £1,400, which compares poorly with the incremental net farm incomes of around £180. In economic investment terms, the project has failed to produce a satisfactory return, with an ERR of under 1%. From the farmers' perspective the tubewells have provided insurance against crop failure, and supported the introduction of improved seeds and inputs which lead to higher yields and to returns per manday of Rp 5,000 to 9,000, two to three times the agricultural wage.

The project focused on a relatively poor part of East Java Province with considerable agricultural limitations. The farming population directly benefiting from tubewells nevertheless constitute only 3% of the total inhabitants of Madura. Within Madura, tubewell areas were selected on the basis of geology rather than relative poverty. Within tubewell zones, many sites were chosen by village administrators and other key figures which usually meant placing them on better-off farmers' land. This in turn led to head and tail-end differences in water supply and crop production.

It is probable that poverty alleviation has been achieved for the majority of HIPPA member households, although the distribution of benefits within the tubewell area is likely to be often uneven and concentrated at the head of the system and in the 'larger' (over 0.5 ha) landowners.

Although efforts have latterly been made to encourage greater involvement by women, the success of the pilot WID programme is moderate, with 10 women extension groups established in 1992.

Finally, the impact of the tubewell programme on groundwater aquifers and other environmental features has not been significant.

The investment performance of MGIP is poor for three reasons:

i) The delay in procurement led to a delayed and extended implementation period. This increased costs and led to a fifteen year build up of costs and benefits. The cash flow stream only became positive after 1991.

ii) Half the tubewells are located in West Madura where irrigated agricultural benefits are outweighed by seasonal migration opportunities and confounded by difficult social circumstances.

iii) The pilot phase (Phase 1) could not provide sufficient guidance on tubewell viability. The economic benefits anticipated in 1982 which relied on the untested assumption of a double rice crop have not been realised.

4.5 Lessons

Sufficient lead time must be given for procurement before construction starts and before expensive TA staff are placed on site.

Construction performance was hindered by the unavailability of competent local contractors and by shortage of experienced supervisory staff. This led to the need for rehabilitation of canal linings and structures. More attention should be paid in future to contractor upgrading and selection and to upgrading supervision ability.

Over-optimistic cropping projections (rice-rice-palawija) and 300% crop intensities repeated the mistakes seen in other ODA projects in Java. More realistic estimates at appraisal, as used in the 1977 Madura Study, should have been used.

Earlier recognition of the need to integrate community interests into the process of tubewell location would have avoided many of the tubewell failures in Phase 1.

The deployment of tubewells in areas without a prolonged dry season is unlikely to be viable.

In order to avoid the widespread inefficient use of irrigation water in communities unfamiliar with irrigated agriculture, greater attention should be paid to the development of on-farm water management skills.

The process of handover of the tubewell from the project to local government and HIPPA has only been addressed in the latter stage of the project. An important lesson is that institutional arrangements must be developed as early as possible, to allow a smooth continuation of the tubewell's use.

Tubewell size is a critical factor in the less socially cohesive parts of Madura. The larger the tubewell command, the greater the number of farmers involved and the greater the problems of co-operation.

The poor maintenance of canals in many schemes may be an indication of low commitment from the majority of farmers who receive less than their share of benefit. On the other hand, the minimal maintenance of the system may be a rational response to an externally imposed asset that in fact produces very marginal benefits in many locations compared to those arising from alternative occupations.

5. Nepal Eastern Region Water Supply Project (EV 549)

5.1 The Project

The objective of the ERWSP was to install water supplies to 16 communities, covering about 63,000 people, and improve the water supply to one hill town (Dhankuta). It included a Community Health and Sanitation Programme and community-oriented Operation and Maintenance. The schemes were to consist mainly of public tapstands and, in the hills, gravity-fed supplies. In the plains areas, however, schemes required more complex pumping and storage works. Substantial benefits were expected from the reduction in time and labour spent collecting water and from an improvement in health from safer water supplies.

UK engineering consultants were to have overall responsibility for the management of capital funds, with the Nepalese Department of Water Supplies and Sewerage (DWSS) as the implementing agency. Implementation was expected to last three years from 1984 to 1987. ODA intended to meet 100% of the costs, estimated at £3.9m (at 1982 prices). Project conditions included provision by DWSS of adequate budgetary support for maintenance, and progress towards reform of the national water tariff policy.

5.2 The Evaluation

The evaluation was jointly undertaken by ODA and DWSS. The full report provides details of team members, terms of reference, itinerary, and people consulted. The field work for the study was carried out in Eastern Nepal in November 1992.

5.3 Overall Conclusion

The project was partially successful. Eight schemes were completed to a high standard of construction, often in difficult circumstances. The community health and training components were effective in the short to medium term and the project has brought significant benefits of better quality water, better health conditions and practices, and a better quality of life, especially for numbers of women, arising in part from easier access to domestic water and the associated time saving. The project was less successful in that there were significant time and cost overruns and fewer schemes were completed than planned. Three of the largest schemes were left unfinished. They were subsequently finished under a separate project. There is also doubt over the longer term sustainability given the inadequate budgetary and institutional support and the lack of capacity for management at the community level.

5.4 Main Findings

As designed, the project was clearly overambitious. Early on, 5 schemes were dropped and, by the end, 3 schemes and the work in Dhankuta were still to be completed. In addition, there were

significant time and cost overruns: the project was extended to June 1989 and, overall, there was a 46% escalation in costs.

Given the lack of relevant previous experience with implementing such schemes in Nepal and the geographical inaccessibility of the project sites, implementation should have been sequential, not simultaneous, with a longer time period.

The project went ahead on the basis of inadequate technical, economic and social data. Engineering redesign took place only when the consultants had staff in post.

The implementing agency and the consultants were primarily engineering organisations and the bulk of the project was engineering-led, with emphasis on provision of infrastructure constructed to a high standard. Overall project objectives, however, required a wider approach.

Institutional and social issues were given some but insufficient consideration during the redesign and implementation. This may have been because of the limitations of the original design. Greater attention should have been given to such issues, to promote community involvement and ownership, in order to underpin longer term sustainability.

Water supply schemes were continuing to function in the villages visited by the evaluation team but routine and preventative maintenance work has been neglected since the project's end. DWSS lacks the capacity and adequate maintenance budget for sufficient maintenance work. A serious problem affecting the operation of the schemes visited was the lack of minor spare parts and tools. Typically, about a third of all taps were broken or needed replacement parts.

Access to water was widely and, for the most part, equitably distributed among the sections of the communities which could be reached by the systems. Greater attention should, however, have been given to the possibility of misuse or waste of water, both of which were occurring in some cases, to the detriment of other users.

Women reported physical and mental health benefits from easier access to piped water and savings of time; for many women, such time savings, especially when these were substantial, were perceived to be the greatest benefit. Nevertheless, the evaluation found that women should have been consulted more about aspects of infrastructure design.

The health and sanitation programme was well-designed in terms of staff, content, approach to communities, and educational materials. Implementation, by training of trainers with cascade effect via male and female Village Health Leaders (VHLs), was very effective. The programme was successful in reaching both men and women and was designed to involve women at all stages. It reached households of all castes and social groups in the communities.

Post-collection care of water and, possibly, its quality were improved by the programme: so too, was food management in the home, especially with regard to protection from flies. The programme also increased latrine coverage in communities receiving sanitation education. Disease morbidity, especially diarrhoeal disease, reportedly fell, the most common reduction being by 60-75% and children being the greatest beneficiaries.

The Health and Sanitation programme did not begin until 18 months after the start of the engineering component. Earlier implementation of the health programme would have enhanced its positive effects.

5.5 Lessons

Many of the project's problems arose from its overambitious objectives. These could have been reassessed if the original design had received a more searching appraisal. The key lessons here are:

(i) the need to appreciate the logistical and organisational difficulties presented by the mountainous terrain of middle hills Nepal and the dispersed location of the schemes;

(ii) the need to provide careful checking of all technical and social data used as the basis for scheme design;

(iii) the need to have a realistic appreciation of the limited capacity of partner institutions like the DWSS.

Community participation needs to be built into the initial design, particularly in relation to the engineering component. The community focus of the health and water user education components can be a notable strength but here also the programme needs to address those institutional issues upon which depend the sustainable impacts of such projects over the longer term. In particular, a more broadly based social development component would have made possible: (i) greater awareness of the social characteristics of the target populations; (ii) formulation of strategies to promote, from the outset, community awareness of the project, community participation in scheme design and location of outlets; development of village level institutions such as Tapstand User and Health Committees; and links between these and with regional level agencies; (iii) overall strengthening of a community sense of ownership of schemes and capacity for sustainability over the longer term.

The question of sustainability of the schemes should be of central concern from the start. Provision for long term maintenance needs to be realistically tackled. Given previous general experience in Nepal it was unrealistic to expect that a project of limited scope can either bring about reform or survive without it.

Construction of relatively large centralised and costly schemes may not be the best solution to the provision of much needed water supplies. Consideration should also be given to smaller schemes based on more numerous local sources.

6. WaterAid in Uganda: Busoga Region Borehole Rehabilitation Project (EV 584)

6.1 The Project

The project aimed to provide selected communities in three Districts of Eastern Uganda with access to a clean and reliable domestic water supply. It planned to rehabilitate 120 boreholes, equip these with handpumps suitable for a village level operation and maintenance system (VLOM), and set up the community element of the new handpump Operations and Maintenance (O&M) system. The project also planned to support health education and improved sanitation in the same communities, so as to reinforce the potential health benefits from improved rural water supplies. It was initiated and implemented by WaterAid, an NGO set up by the UK Water

Industry. ODA contributed £236,000 to the project. Some 234 boreholes were rehabilitated over the period June 1989 to June 1992. Work had just begun in the third District when the project ended.

6.2 The Evaluation

The project was selected as one of a series of evaluations of projects on rural water and sanitation. The evaluation was carried out jointly by ODA and WaterAid with assistance from the Uganda Government's Directorate of Water Development. During a fieldwork visit to the project area the condition and use of all 215 boreholes rehabilitated by WaterAid in Kamuli and Jinja Districts were assessed. Discussions were held with Borehole Users' Committees, caretakers, and handpump mechanics (HPMs) in order to assess how well the VLOM was working in practice, and with women at waterpoints to try to quantify potential project benefits (time savings and increased quantities of water collected). Separate sample surveys were conducted to identify the take-up of improved latrines and improved hygiene behaviour in the project area. Detailed information was collected on the impact of the borehole rehabilitation programme in two villages, using participatory techniques.

6.3 Overall Success Rating

By rehabilitating some 234 boreholes, the project almost doubled the number originally set as its target (120) but was largely unsuccessful in achieving its other objectives. (Numbers of boreholes was the main measure of project success used by WaterAid). It did not establish a sustainable community-based O&M system and about one-third of the rehabilitated boreholes are no longer in use. It did not make any impact on hygiene and sanitation practices in the same communities and any health benefits are likely to have been minimal. The project was low cost, but not cost-effective. Alternative water sources which existed in parts of the project area, could also have been improved at low cost.

The project design was engineering-led. It focused on borehole rehabilitation, with the sanitation and hygiene education components "tacked on". It set out a detailed strategy for borehole rehabilitation but provided no description of a hygiene education strategy, and very little for sanitation. The project appraisal did not consider alternative technical options but assumed that borehole rehabilitation and a particular type of VIP latrine were the optimum economic and technical solutions. There was confusion at appraisal between borehole rehabilitation's purpose and its outputs. This confusion prevented the formulation of good performance indicators, which made monitoring more difficult.

There was no analysis at the project preparation stage of the Government of Uganda's institutional skills and its capacity to undertake the tasks required of it by the project. During implementation those working on hygiene education and social mobilisation had to be trained in order to enable them to undertake their project-related tasks more efficiently. ODA project monitoring was regular but lacked a desirable multidisciplinary dimension. WaterAid knew before project implementation got under way that a major Danida-funded rural water and sanitation project was imminent in the same region but chose to go ahead with its project, rather than transfer to another area. The project exit strategy evolved over time. The project was wound up with significant funds in hand, its activities transferred to another major donor and with borehole rehabilitation work just begun in the third District of its project area.

6.4 Main Findings

The decision to speed up the borehole rehabilitation component, i.e. doubling the number of boreholes covered by the project, was at the expense of the social mobilisation component.

The activities of Danida's very large rural water and sanitation project (Ruwasa) overlying the WaterAid project area has influenced the project's outcome and made it hard to separate out the influence of each donor.

In total, 61% of the boreholes rehabilitated by WaterAid in Jinja and Kamuli are functioning satisfactorily. If, however, those with pumps that were subsequently replaced or repaired by Ruwasa are excluded, only 34% were still in regular and satisfactory use in May 1995.

VLOM development of the is still at an early stage. There is very little sense of ownership, which is partly because WaterAid did not formally commission and hand over O&M responsibility to the community for the rehabilitated boreholes. Borehole Users Committees (BUCs) exist for boreholes still in use but are operating at varying levels of efficiency. Handpumps are not being given routine maintenance but are repaired when they break down.

Willingness to pay for water exists in the project area but not at a level high enough to cover long-term borehole O&M costs. The poorest members of the community seem usually not to be denied access to water when unable to contribute to the O&M costs. In places where there is water vending, willingness to pay is higher for daily purchases of water than for one-off contributions for O&M costs of boreholes. There is therefore a question mark over the ability of the villagers, in the longer term, to maintain the boreholes in regular use. These doubts threaten the project's sustainability.

The VLOM system comprises three tiers. The village handpump caretakers have only an inadequate understanding of their duties. HPMs, (trained in a joint programme with Ruwasa) are competent to carry out their maintenance tasks but the system within which they operate is very weak. The distribution of pump spare parts is still poor. The Government's Borehole Maintenance Unit (BMU) has not yet been called upon to carry out major repairs.

The choice of handpump was in line with national policy to standardise the use of U2 and U3 pumps. However, the pumps incorporate galvanised steel pipes which are easily corroded by the "aggressive" water found in the area. This greatly increases the maintenance burden.

Many of the rehabilitated boreholes are inconveniently sited for users, reducing potential time savings from the project. In one case where a borehole was conveniently sited, women were collecting increased quantities of water. Time savings from the project have also been reduced by the drilling of new boreholes by Ruwasa in the project area.

Based on limited evidence, there would appear to be a small increase in kitchen gardening and poultry -keeping, which are traditional women's activities.

The impact of WaterAid's activities on latrine coverage was minimal. By the project's end WaterAid had only contributed to the setting up of a small, highly subsidised production unit in one village in Jinja District. Three years later, Ruwasa is still underpinning the operation as no private sector distribution network has developed (effective demand for the type of latrine produced is not yet high enough to make production commercially viable). Ruwasa's own activities

have had a considerable impact on latrine coverage but without a corresponding impact on actual latrine usage.

WaterAid's activities in hygiene education were extremely limited and have had no appreciable impact. Although in the villages surveyed there is a high level of awareness of good hygiene practices, actual practice does not reflect this. In spite of Ruwasa's substantial efforts to improve communities' hygiene practices, these too have had very limited impact.

Proxy health indicators, e.g. increased water usage and improved hygiene practices do not suggest that there have been appreciable health benefits arising from the project. Where women were collecting more water, they were not using it for bathing.

It is not clear what WaterAid's intended or actual value-added in the borehole rehabilitation project was, given the vast resources made available by Danida to rural water and sanitation activities in the same area.

6.5 Lessons Learnt

Where an NGO chooses to work alongside a major donor it should exploit its own comparative advantage, i.e. by working at grassroot level, by concentrating on appropriate, affordable technologies and, by experimentation, to maximise its value-added.

For any project, a focused baseline situation analysis of relevant variables is essential for effective monitoring and evaluation.

An analysis of pre-existing institutional skills and capacities is vital where some of a project's activities are to be undertaken by local government.

Where a new system for O&M for rural water supply projects is being introduced, progress in achieving this is a vital monitoring target.

Developing new institutions at community level takes time, and requires substantial resources. Success depends on ensuring that physical work does not outstrip the pace at which social mobilisation can be achieved, and upon continuing support to capacity building after completion of the physical work.

The choice of appropriate handpumps depends on many, often conflicting factors e.g. standardisation, technical suitability, ease of maintenance and capital cost.

To ensure the sustainable VLOM management of an improved water source, transfer of ownership to communities is required, through publicly acknowledged, formalised mechanisms.

Substantial resources, both in time and staff, are necessary in order to achieve even marginal improvements in health and hygiene practices.

A successful latrine programme is dependent on the affordability to households of the technology proposed.

Project monitoring of rural water supply projects is best done by a multi-disciplinary team rather than by a single technical adviser.

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Paper 3: NGOs and Water and Sanitation: Technical and Management Issues

Jeremy Ockelford

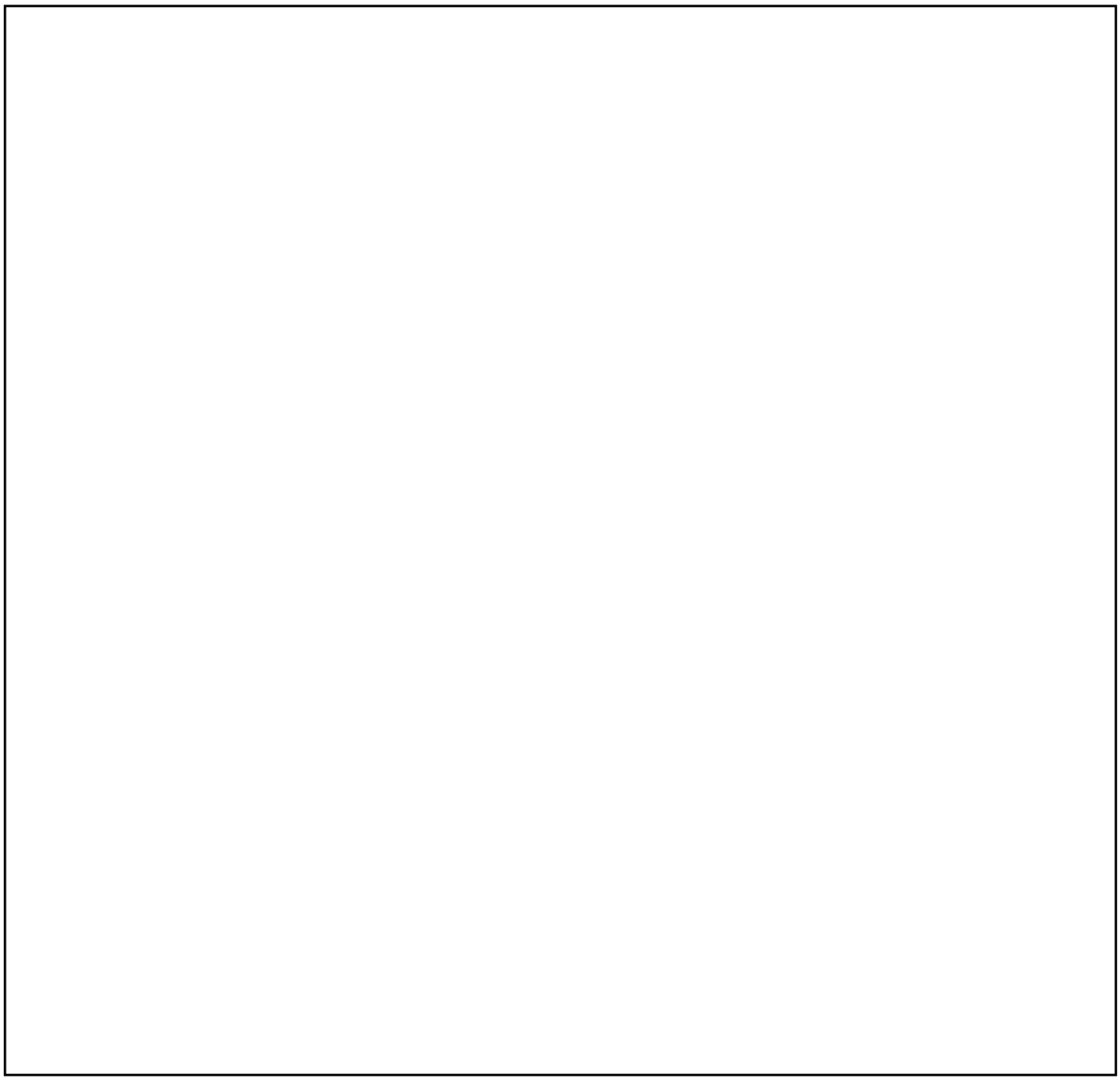
1. Introduction

Access to safe water for domestic use is often taken as a basic human right. The provision of the infrastructure to provide this right has traditionally been considered the duty of governments, which have tended to take a centralist approach to both the construction and the operation and maintenance. Over the past two decades it has increasingly been realised that this approach has not resulted in sustainable water supplies, and sanitation has been neglected in the process. The scale of the need is still very high, with UNICEF's figures indicating that only about 60% of rural populations and 87% of urban populations have access to safe water supplies, and only 20% of rural and 72% of urban people have adequate excreta disposal facilities (UNICEF, 1996). Many governments feel that the task of constructing and maintaining thousands of scattered rural water supplies puts an intolerable burden on their scarce resources (Cairncross and Feachem, 1993), so increasingly communities are expected to be involved together with support from local and international NGOs.

NGOs' growing role in provision of water supply and sanitation brings with it some special issues concerning the nature of the technologies and the management of these. The circumstances in which NGOs work vary enormously, from emergency interventions, through rehabilitation to development, with equally varied relationships, including national and local governments, local NGOs and the communities themselves. The issues need to be considered against the particular context in which the NGO is working, so there is rarely one right answer. This paper discusses some of the main issues based on experience and citing examples. These examples are mainly taken from the experience of larger NGOs, but the lessons are also applicable to smaller NGOs. The important thing is that the implications of managerial and technical decisions are fully considered in the preparation and implementation of projects.

2. Accountability

NGOs pride themselves on their independence and their freedom and flexibility in working with the poor. However, independence, freedom and flexibility also have obligations of responsibility and accountability. NGOs and accountability is a major subject in its own right, so only the special aspects of water supply and sanitation projects and their technologies will be considered now. NGOs have multiple accountabilities - downwards to partners, beneficiaries, staff and supporters, and upwards to trustees, donors and host governments (Edwards and Hulme, 1995). Avina (1993, quoted in Edwards and Hulme, 1995) provides a useful distinction between short-term *functional accountability* for resources, resource use and immediate impacts, and *strategic accountability* for impacts that an NGO's actions have on other organisations and the wider environment. It is useful to see how water supply and sanitation projects with their technologies fit into both categories, with the accountability upwards and downwards, as suggested in the following Table:



When designing a project, NGOs and their donors should consider how the components of the project will affect each of these, and their responsibilities for them. Some of these things are discussed in the rest of this paper.

3. Compatibility of Objectives

There are often a number of objectives in water supply and sanitation projects, which can include:

- provision/construction of water supplies facilities,
- provision or promotion of latrines,
- community organisation and management,
- hygiene and water use education,
- institutional strengthening of local partner

Special care is needed to make these different objectives work together, both in planning and implementation. Each has different rates of implementation and different types of indicators, the easiest to measure being the construction targets for provision of water supplies. Since these are the easiest to measure, and usually account for most of the expenditure, there is a tendency

and pressure by both project implementors and donors to concentrate on these at the expense of other objectives which are more difficult to achieve or may be outside a technical advisor's immediate expertise. In particular, institutional strengthening requires very different approaches, methodologies, time frames and technical advice (Oxfam, 1995 (2)). In two projects known to the author, tying construction targets to be achieved by the institution to strengthening has resulted in the latter being ignored or not given proper attention.

Integration of the social and community components of a project with construction is a difficult area. Obviously the integration should be designed into the project from the beginning, but Oxfam's experience in Cambodia in trying to add the former to an on-going construction project provide some lessons for project design. The fundamental dilemma was how to slow down the construction activities to give enough time for the community organisation and water use education activities in the villages (Oxfam, 1995 (1)). It is very easy for construction activities to dictate the pace of a project, especially if the cost-effective use of expensive drilling machines and teams of technicians are involved. However, it is clear that a project should proceed according to the pace of its social components. Management and donors will have to accept that this may mean that equipment is not used efficiently.

The understanding of the objectives and the priority attached to them by the various groups involved in a project often differ. For example, the outside NGO's priority may be to improve health status, whereas the community just wants improved access to water supplies, and is not interested in latrines and improved hygiene practices due to "lack of understanding" as perceived by the outsider. A government may just want to improve the coverage figures for water supply and latrine provision (not necessarily sanitation). In the project to rehabilitate the waterworks in Phnom Penh, Oxfam's priority was to improve the quality of water, whereas the water authority wanted to raise the quantity of water delivered and was not interested in the quality (Oxfam, 1994).

Outsiders, and engineers in particular, have a natural inclination to solve problems quickly with ready-made solutions to achieve quick results. An alternative approach should be to start from an assessment of priorities and resources of the local partner to reach a shared goal and objectives, though this takes much more time and effort. (Kolsky, 1991).

Thus setting of goals and objectives in project design requires much careful thought and consideration in order to make them work together. Time has to be allowed for this, particularly if the project is being set up in the rehabilitation phase after an emergency, unfortunately quite common. One project in Cambodia was started in a new area based on a week long preliminary visit and two further short visits. A week is a very short time to assess a new area and analyse what the real problems are, especially from the people's point of view. All too often the outsider's definition of the problem prevails, particularly when the local and national institutions are weak or desperately in need of money. In these circumstances, it may be better not to define detailed objectives and indicators at the beginning, but for the donor and implementing agency to allow flexibility for the first six months so that a more detailed understanding of the area and needs can be gained for more appropriate goals and objectives with indicators to be set. ODA already uses a mechanism for this in some of its own directly implemented projects. In the Management Support Project to the Department of Hydrology in Cambodia, ODA's Technical Advisors had six months to work with the government staff to analyse the problems and needs of the Department. At the end of this period, they had to produce and an inception report with a detailed work plan for the remaining project period. (Rosenboom, 1995). This system could be adapted for use in projects by NGOs.

Related to this is the imposition of projects or objectives by donors on NGOs which may not be competent or willing to be involved in the areas concerned. One example of this was a proposal by IFAD (International Fund for Agricultural Development) in Tanzania for WaterAid to undertake major deep well drilling, an activity of which it did not have substantial experience in the country (WaterAid, 1994). Another example was UNHCR's attempts to involve Oxfam in the "emergency" repatriation of refugees to Cambodia in 1992, which would have substantially altered Oxfam's programme from its move to long-term development, as well as substantially increasing the scale. Another NGO in Cambodia found itself trying to meet the objectives of two different donor agencies, one for development approaches and one for emergency relief type targets, after accepting part funding from each for the same project.

NGOs such as WaterAid and Oxfam are more able maintain their own priorities because they have clearly established principles of operation, and their own core funding from their own sources so they do not have to rely on particular donors. NGOs without this support base sometimes have to sacrifice their principles to undertake projects determined by donors. With the increase of service delivery type of contracting arrangements, this is becoming a bigger issue.

4. Gender

Women are most often the users, providers and managers of domestic water and are responsible for household hygiene (Wakeman, 1995). They "are not a special interest group in water and sanitation, they are a mainstream interest group" (Melchior, 1989). Thus, women are not a group to be consulted, but should be fully involved in the planning and design of water supply and sanitation projects. To assist with this, Wakeman (1995) has gathered together a number of guidelines, checklists, terms of reference, charts and participatory activities covering various stages from developing country strategies, through project processes to monitoring and evaluation. These can be selectively used by NGOs to ensure that gender issues are fully considered at the different stages of project planning, design and management.

The employment of women staff, who usually have an advantage in relating with women at field level, presents some difficulties, such as educational levels and family commitments (Mathew, undated). The NGO may need to provide extra training for women to balance out earlier disadvantages in education compared with men, and flexibility in employment conditions to allow women to meet their family commitments. Male field workers can also successfully involve women, provided they have a favourable attitude and are aware of the relative gender roles and are good communicators (Wijk-Sijbesma, 1985). The NGO will probably need to provide training for this as well, so overall, training requirements of male and female staff may not be so different.

5. Hygiene Education and Sanitation

The lack of a common goal and objectives between the partners in water supply and sanitation projects often leads to difficulties in integrating the three components which are now considered as essential - water supply, hygiene and water use education, and sanitation. Water supply is often a priority at village level, but motivation for hygiene education and sanitation is generally lacking. In addition, integrating hygiene education with water supply and sanitation requires skilful planning and management for which responsible staff are often not fully prepared, either by professional background or experience (Boot, 1991). It is not just staff who are not fully prepared. Integration of hygiene education with water and sanitation is a relatively new concept, so the institutional capacity of both government and non-governmental agencies is not yet fully

developed. For instance, hygiene and water use education was only introduced in Cambodia from about 1992, and in South India, capacity of institutions to promote hygiene education needs to be strengthened (WaterAid, 1995). In Tanzania, sanitation and health education are relatively new and need to be developed (WaterAid, 1994). Recent experience in Nepal shows that introducing hygiene education into a government programme causes confusion because the subject cuts across traditional ministerial responsibilities - water is 'infrastructure' and hygiene education is 'health'.

All this shows that much more work needs to be done to promote the integration of hygiene education generally. However, it is not enough to write it into project designs. One essential practical step is for NGOs to provide training to their own staff to develop individual and organisational capacity. From this, improved methodologies can be developed which should result in field experience and results which can be used for demonstration and advocacy to change the prevailing attitudes at government level.

Environmental sanitation can include excreta, sullage, drainage and solid waste (Pickford, 1995). However, sanitation is usually taken as synonymous with latrines (the sense in which it was used during the International Drinking Water Supply and Sanitation Decade, 1981-1990 (Pickford, 1995)), with the result that construction of latrines is often used as the only indicator for achievement, whether or not they are used. Better indicators need to be established to measure the practice of sanitation, not just the construction of latrines. Almedom and Chatterjee (1995) propose two - disposal of children's faeces and hand washing. Boot (1991) and Narayan (1993) also provide guidance for setting indicators.

Many projects insist on the construction of latrines as a precondition for construction of the water supply, without developing people's understanding of the benefits. Since sanitation is usually a low priority for village people, constructing latrines does not mean that they will be used and maintained. It is better to create a demand for latrines through the education programme. This approach in a project in Ethiopia, combined with training to local artisans on the construction of affordable latrines, resulted in most households having and using a pit latrine. (Davis *et al.*, 1993).

6. VLOM

Over the past decades the concept of VLOM has evolved, and now forms the basis of most water and sanitation projects. Village level operation, maintenance and management sounds simple, but is actually quite complicated to establish. Although the focus is at village level, it needs a national or regional framework to make it work, so an NGO's role in this needs to be defined. A National Workshop on VLOM for handpumps in Cambodia defined 17 different activities which need to be co-ordinated together for VLOM to be successful, given in the Table below (VLOM Project, 1994). Many of these activities are included as a matter of course in NGOs' projects, but some need careful consideration by NGOs in order to be achieved.

Monitoring and evaluation of both community organisation and handpump performance is essential for gathering information to ensure that VLOM is working and to feed back into project design. Preferably this carried out by specialised staff, independent of the implementation activities. Provision of hardware such as handpumps needs thought, especially if they have to be imported. Continued supply of replacement parts is essential after the NGO has finished, so the establishment of systems to enable this have to be designed into the project. Experience has shown that the only sustainable system is through the private market. (Ockelford *et al.*, unpub-

A Cambodian Framework for the Village Level Operation and Maintenance of Handpumps

No.	VLOM Activities
1	Training and Water Use Education
2	Community organisation
3	Selection of technology
4	Reach community agreement; contribution provided
5	Allocation of handpumps to user communities
6	Construction of waterpoint
7	Quality control
8	Handing over of ownership to users
9	Training of users in handpump maintenance
10	Campaigns for correct use of water
11	Monitoring of community organisation and handpump performance
12	Manufacture of handpumps and spares
13	Marketing of spare parts
14	Follow-up
15	Running cost contribution by users
16	Support to pump caretakers
17	Coordination

(VLOM Project, 1994)

lished). The handpump designs adopted as standard in Cambodia are all in the public domain, so pumps and parts can be obtained from any manufacturer (Kjellerup and Ockelford, 1993). Follow-up and support is needed to give moral support, not physical support, to the community and village maintenance workers in operating their systems and doing their jobs (Ockelford *et al.*, unpublished). This requires a long-term though diminishing commitment from an NGO.

Thus many water and sanitation projects require long-term commitment, particularly for the institutional arrangements to achieve sustainability of operation and maintenance and to change hygiene behaviour and practices. NGOs' own procedures and reliance on particular donors with short-term funding cycles may not allow this long-term view of a project, with applications having to be resubmitted each year. It is important for both NGOs and their donors to recognise that water supply and sanitation is not simply a matter of constructing facilities for a year or two. They both have to modify their implementation and funding arrangements to allow for the long-term nature of the task if sustainability is to be achieved. This should include consideration of the strategy for ending a project and withdrawing support in the project design stage. One possibility is for the NGO to arrange for another organisation to take over the long term support role. This could be a local or national government department (or possibly a local NGO) but they may also need some form of institutional strengthening to undertake this role.

7. Technical Support

Most water supply and sanitation projects employ technology at some stage. This varies in its complexity, from simple spring protection or hand-dug wells to drilling of boreholes with big rigs and geophysical location of groundwater. NGOs also vary in their organisational capacity

to undertake these technical aspects of the work and as a result face a number of challenges, such as buying technical support including recruitment, providing technical support to field operations, professional engineering responsibilities and liabilities, and purchasing technical equipment and supplies. How do non-technical managers know what sort of person to recruit or what sort of advice they need, where to get it, and whether they are getting the right person or good advice when they have bought it?

A large specialist NGO such as WaterAid has technical expertise in depth at all levels of the organisation which can provide these services or can make informed decisions about the purchase of such services. Smaller NGOs face difficulties with some of these things. Integrated projects which include small components for domestic water supply and sanitation face similar difficulties. Simply recruiting an engineer for field level activities does not provide the professional support, or understanding of the technical aspects of a project, necessary within the organisation.

This understanding must include the professional duties, responsibilities and liabilities of the individual technicians and the organisation. Domestic water supply and sanitation involve technologies which can have serious consequences if things go wrong, such as over-exploitation or pollution of an aquifer. A more specific example is Oxfam's long association with the water treatment works in Phnom Penh, Cambodia, (not necessarily a unique type of intervention in emergencies and rehabilitation) and the implications for public health if there had been a failure of water treatment, distribution or sewage disposal (Oxfam, 1994). Even small-scale dams can pose significant risks to the public. One suggestion to reduce these risks is to follow the principles in the *Code of Professional Practice: Engineers and Risk Issues* by the Engineering Council (1992) (Smout and Robertson, 1993). A point worth highlighting in this Code is "do not exceed your level of competence on risk issues or ask others to do so". Often the only technician in an organisation is expected to undertake all the technical tasks necessary whether qualified or not, particularly if the person is isolated at field level.

Networking with other NGOs with technical expertise, and establishing links with institutions such as WEDC, may be ways for smaller NGOs to access such support when needed. Establishment of a database of pre-screened engineers and technicians for development, similar to the register operated by RedR for emergencies, could be another possibility. Obviously, NGOs must be prepared to pay for such technical advice.

It is often assumed that a water supply and sanitation project needs an engineer to run it. In many rural projects, the technologies involved are relatively simple (with the possible exception of drilling) though the responsibilities are not. Many projects involve institutional strengthening, community organisation, hygiene and water use education, so the choice of personnel to run them should be more open. Where there is a significant institution building component, whether of a local NGO or government partner, it may be more appropriate to employ a management specialist (Oxfam, 1995 (2)).

8. Technology Choices

Ideally for genuine community based projects, the community should be offered a choice of technological solutions to their domestic water supply and sanitation needs. These solutions will depend on the available water resources, so the NGO needs to have hydrological and hydrogeological data to decide the possible options. The possibility of up-grading existing systems should not be ignored. A successful project in Zimbabwe is providing subsidies for people

to improve their own family wells at less cost to the project than the alternative community supplies (Morgan *et al.,* 1996).

To enable the people, and particularly the women who will be the main users, to make an informed decision, each solution needs to be explained with advantages and disadvantages, and if possible demonstrated. Some of the advantages and disadvantages relate to quality and protection of water sources, so understanding of health implications through hygiene education needs to be introduced first. Others will concern capital and running costs, community contributions, and operation and maintenance needs, and risks such as breakdowns (Davis *et al.,* 1993). The level of service is also an important choice for the people themselves to make. In many places people are prepared to pay more for a higher level of service than the minimum.

In practice, offering choices is not so straightforward. The capacity of an NGO to offer a range of choices may be limited. For instance, if a choice is offered between improved open wells and handpumps, the NGO may over- or under-order the number of pumps required. Cost is an important factor, with technologies such as rainwater harvesting being relatively expensive per person compared with handpumps or improved open wells. Operating and staff training costs are also likely to be higher, particularly if equipment is not used full-time. Providing several different technologies may also stretch an NGO's competence. Linked to this is the ability of an NGO to provide all the possible solutions in variable conditions, as was the case with Oxfam in Cambodia, where it was not possible due to staff work loads to develop rainwater catchment as an alternative in areas where drilling was not possible, at the same time as developing the drilling programme (Oxfam, 1995 (1)). More choice may also contradict one of the objectives of standardisation of handpumps (see below), which is to provide sufficient numbers of one type of pump in an area in order to create a demand for spare parts making it worthwhile for the local market to supply.

Offering alternative designs of latrine is important so that householders can choose the most appropriate for their needs and income. A project in West Bengal in India offered ten alternatives based on pour-flush pits with costs between $10 and $100, all suitable for up-grading as the household had more money (Huda, 1993).

Whatever technology is employed, it is essential that the users understand how it works, so that they can maintain and repair it. This means developing ways of explaining engineering technology so that village people can understand it, as well as overcoming engineers' prejudices that "simple" people cannot understand their special knowledge. For example, a FINNIDA project in Nepal has developed a model to show how a gravity flow water supply system works.

9. Standardisation

In many countries rural public water supplies are constructed with the assistance of external support agencies, often international NGOs. The agency usually supplies the capital hardware such as handpumps according to its own criteria, so if there is more than one agency working in one country they may all provide different types of pumps, each requiring its own supply of spare parts and maintenance training (Kjellerup and Ockelford, 1993). For example, a survey of all the pumps in one region in southern Ethiopia found nine different types of pumps from nine different countries (Davis *et al.,* 1993).

In Cambodia the rapidly increasing number of NGOs brought the risk of a similar proliferation of the number of types of pumps. To avoid this, the two government departments responsible for rural water supplies were supported by NGOs and UN organisations to standardise on only three types of pump - one suction (0-7m), one medium lift (7-15m) and one deep lift (15m plus). The process used helped to ensure the successful adoption of the standard pumps in the absence of government legislation to enforce their use. All the agencies and government departments involved in the sector were invited to propose possible pumps and attended a national workshop to review these pumps and recommend the best for adoption as standard (Kjellerup and Ockelford, 1993).

Standardisation of a different kind has helped to improve the sustainability of gravity flow water supply systems in the hills of Nepal. In the 1970s and early 1980s, it appears that each individual (often from one of the international volunteer agencies) working in the programme designed his or her own structures. Some of these worked well and have lasted, but many failed long ago. The introduction of standard designs for spring and stream intakes, reservoir tanks, tapstands and other structures and hydraulic design guidelines has probably done more to improve the quality and sustainability of these systems than anything else. This type of standard can easily be adopted by NGOs. The author developed a *Design and Procedures Manual* for ActionAid-Nepal in conjunction with its own staff in 1988, which is still in use today. One of the benefits of standardisation is that it can bring professional engineering standards to assist people without technical expertise.

The individual often believes s/he has a better idea than the person or organisation that made the original design. It is very easy to make a change to a pump without considering all the implications, and without properly monitoring the result of the change to see if it works. For example, the Tara Handpump was designed and developed over more than seven years in Bangladesh, with intensive monitoring and evaluation of every design point and component. The design was an iterative process, with individual components being replaced as alternatives were tested, the most successful elements progressing into the next stage of testing. Initially 148 pumps were installed and monitored over three and a half years under closely controlled conditions and later a further 300 were monitored at bi-monthly intervals, with random monitoring of another 1,700 pumps (Kjellerup *et al.*, 1989). The Tara pump was designed for particular conditions in Bangladesh, but it can be and is used in many other places. Adaptation may be necessary for different conditions, but given the development process for the original pump, there is an obligation on the organisation modifying it to monitor and evaluate any changes made in a similar way. This requires professional standards, commitment and resources, not all of which are available in a project intended only to supply water.

A similar argument applies to the introduction of any new technology. Testing, monitoring and evaluation are needed over several years to ensure that the villager does not end up with yet another technological dream which does not work. Any NGO and donor introducing new technology has an obligation to provide the resources necessary. One way to do this is to link up with research institutions. Oxfam's emergency water treatment packs were developed in a project with a university post-graduate programme, and the DelAgua water testing kit was developed with the Robens Institute at Surrey University (Reed, 1991). Another way is to link up with manufacturers. In 1991 Oxfam asked a small company making drilling rigs, Eureka UK Ltd., to develop a simple small scale rig for use in emergencies. The prototype "Port-a-Rig" was field tested in Cambodia, with designer himself conducting training courses on the use of the new rig. There are now several of these rigs in use by NGOs in Cambodia and elsewhere, with the users providing feed-back on performance to the designer.

10. Water Resource Management

Water and sanitation projects do not take place in isolation, but have to be considered as part of the wider environment. Other activities affect and are affected by them. One aspect which needs serious consideration is use of the water resource itself. The use of groundwater for domestic water supply is often in competition with irrigation, which can have a dominating effect. For instance, in Bangladesh pumping of groundwater for irrigation lowered the groundwater level out of reach of the simple suction pumps for domestic supply, necessitating the development of the medium lift Tara handpump (Kjellerup *et al.*, 1989). In South India the same problem is being faced with heavy demand on groundwater resources. In theory, 15% of groundwater is reserved for domestic and industrial use, but whether this is the top 15 % or the bottom 15 % is not defined, though this has implications for accessibility (WaterAid, 1995). A project by one local NGO supported by WaterAid is taking a holistic approach to water supply and water resource management by encouraging conservation and recharge of groundwater. Its method is to facilitate the memory of traditional methods of water conservation and recharge, particularly among the old people, and to reintroduce these techniques (WaterAid, 1995). Although comparatively the quantities of water for domestic supply are low, overall use, exploitation and management of water resources must be taken into account when designing domestic water supply projects.

11. Quality Control

An essential component of sustainability is the quality of construction. Unless water systems and latrines are built to the specified quality, it will be difficult if not impossible for villagers to maintain them. Standardisation can significantly help in promoting quality work, but control of quality at site is the most important factor. The project manager is responsible for setting and ensuring that correct work procedures are followed (Davis *et al.*, 1993), but with projects covering many sites over wide areas this is not always an easy task. An alternative is for villagers themselves to monitor the quality of workmanship. They will need to be given training for this, including things like check-lists for the number of bags of cement in a structure, and simple measuring devices, such as a cube of wood to check the thickness of a concrete well apron.

12. Health and Safety at Work

Safety standards and the perception of safety vary from country to country, with much higher standards now being enforced by law in western countries. However, this does not absolve an individual agency from applying safe working practices in its own projects. Although project staff have responsibility for personal safety, it is the project manager who is responsible, on behalf of the organisation, for the safety of all the people involved in a project (Davis *et al.*, 1993). Guidelines and procedures should be developed and staff training should be given on the use of them. Particular attention needs to be given to safe methods of hand-dug well construction and the type and use of dewatering pumps. (Davis *et al.*, 1993).

13. Subsidies

Beneficiaries are generally expected to contribute labour and local materials towards the construction of a water supply system, with the rest of the materials, funding for skilled labour and technical advice being provided by the agency running the project. This external assistance

represents a subsidy. The proportion of subsidy to local contribution is usually set by the agency according to its own criteria, but it can have a wider effect beyond the immediate project. It has been known for communities to refuse one agency's project because another agency provides a higher subsidy. Different levels of subsidy for latrines is very common (e.g. Huda, 1993). It is now generally accepted that users have to build their own housing, but the level of subsidy for the below-ground parts can vary enormously. It is important that agencies co-ordinate the level of contribution expected of villagers within a country or region to avoid confusion.

14. Co-ordination

NGOs have a strategic accountability to the host government and other organisations working in the sector. In some places, the national government may have domestic water supply and sanitation policies and will play a regulatory role over NGOs. In the absence of such direction, and even with this direction, NGOs should co-ordinate together to achieve what should be a common purpose. Issues which may need to be addressed include coverage data and working areas, as well as those already discussed in this paper. Donors could also usefully join in this co-ordination.

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Paper 4: Social Issues in NGO Water Projects

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1. Background

This paper is based primarily upon the experience of the team in the Department of Social Anthropology at Edinburgh University, who have been since 1988 the contracted social development advisers to the ODA's Joint Funding Scheme[1]. As Alistair Wray's paper describes, a significant number of JFS-funded projects are recorded as targeting the water sector. However, this rather understates the level of JFS investment. Many JFS-funded NGO projects are integrated in character, and numbers of these involve direct water-related activities such as provision of tube wells, latrines, or hygiene education, but are not scored under the water sector because such activities form only a small part of an overall programme concerned primarily with health, say, or women's savings and credit groups[2].

Water projects reflect the general pattern of JFS funding, in that a large number of small water-related projects are funded through the Block Grant system, whereas a smaller number of larger projects are funded through the competitive, non-Block grant system. In both cases the geographical focus is mainly on Africa, and the majority of projects are predominantly rural rather than urban. Although the JFS supports a few projects involving irrigation or micro-hydro schemes, the water components of the great majority of current non-Block Grant projects are concerned above all with providing safe water supplies for domestic use[3]. This involves a strong technology focus, particularly an emphasis on the provision of water points, usually by means of tube or hand-dug wells but occasionally involving piped water from springs. In the past, as with other technology-driven activities, there was a tendency to regard cost-effective delivery of appropriate technology as an end in itself, and to underestimate the significance and complexity of social development issues such as gender or community development. Residues of such views are still sometimes evident, which is hardly surprising given the leading role generally played by engineers and hydrologists in project design, but as in the official aid programme (see ODA, *Water for Life: Water and British Aid in Developing Countries*.), there has been a clear trend in recent years towards a more participatory and integrated approach (see WaterAid 1996, for example). Nowadays, water projects funded under the JFS normally involve setting up or facilitating processes of community water management via water committees or user groups. Moreover, the provision of water infrastructure is now almost invariably complemented by related health and sanitation activities such as hygiene education and promotion of latrines.

In another marked departure from earlier views, there appears to be growing recognition of the importance of providing water for all domestic purposes rather than focusing just on drinking water. This goes hand-in-hand with a realisation that quantity is as important as quality if full health benefits are to be obtained and the desired hygienic procedures with regard to bathing, clothes washing, etc., are to be made more realistic. This move away from a vocabulary stressing the importance of drinking water towards one which emphasises domestic water, helps to ensure that other water uses, and their associated implications for hygiene, do not become marginalised.

This paper considers the social issues which arise in implementing such projects; it deals with the problems posed, and highlights issues which, if resolved, can help maximise the impact and effectiveness of projects in this increasingly important area of development. It begins by considering two key general issues - the strengths and weaknesses of participatory approaches and the importance of integrating gender considerations into all stages of the project cycle - in the particular context of NGO-implemented water projects. It goes on to consider particular issues arising from such projects, including the effectiveness of community participation and management; the complex trade-offs between poverty, cost-recovery and sustainability; the content and delivery of hygiene education; and project monitoring and impact assessment. The emphasis throughout is on domestic water supply projects, particularly in the rural context, though some reference is also made to urban projects and small-scale irrigation.

2. Stakeholder Participation in Development Projects

Stakeholders are those persons, groups, or institutions with an interest in a particular development project, including beneficiaries, NGO staff, those excluded from the project for whatever reason, and those 'downstream' from the project such as members of future generations (ODA 1995a: 2). Different groups of stakeholders are thus distinguished from one another by the particular interests which they have in common vis-à-vis the project. Primary stakeholders are those directly affected by a project, including but not limited to project beneficiaries; secondary stakeholders are those affected indirectly[4]. The distinction is of course not a hard-and-fast one. Like many other social considerations in the development sphere, the notion of 'participation' is simple enough in principle but may have enormously complex practical ramifications. The term can cover a wide range of circumstances, from being in sole control, through partnership with others of roughly equal power, to being consulted, informed, or merely manipulated (ibid.: 8). Almost inevitably, different stakeholders, even different primary stakeholders, will participate in a project in ways that locate them at different positions on this continuum. The nature and extent of participation by particular stakeholders may also vary during the course of the project cycle. The levels of participation expected of, offered to, or likely to be demanded by, key stakeholders need to be kept in mind from the beginning. It is also important to identify and characterise linkages between stakeholders, such as conflicts of interest, co-operative relations, patron-client relationships and other dependencies, and consider how these might or should be affected by project activities.

It is now widely accepted that community participation at all stages of the project cycle is crucial to the sustainable operation of water supply projects, since some form of community management offers the greatest prospects for long-term sustainability, and it is through such participation that the necessary sense of ownership and responsibility is developed. This section looks first at the strengths and weaknesses of methods of participatory rural appraisal, then at the scope for other kinds of beneficiary participation at various stages of the project cycle. Although some of the points made are general ones, they are illustrated with examples from NGO-implemented water projects.

2.1 Participatory Rural Appraisal

A fully participatory approach to development involves local people, including all key primary stakeholders, as participants at all stages in the project cycle, including their participation in identifying and designing projects, often through use of PRA-related methods and problem trees. A range of increasingly well-known PRA techniques is available, which can be learned relatively quickly by development workers - and can even, as I saw recently on a CARE project in Bangladesh, be routinely applied by beneficiaries themselves, without external moderation[5].

Basic ecological, technical, economic and social information about the locality and its people can be collected or at least checked using PRA methodologies. It is important to recognise, as is encouraged by the recent stress on approaching problems of poverty via the notion of sustainable rural livelihoods, that local people are themselves the prime experts as regards their local environment and its impact upon their lives[6]. For example, obvious areas for investigation for a rural irrigation project would include: current rain-fed and irrigated cultivation practices in the target area; the capacities, needs, constraints and priorities of different categories of farmers; local understandings of competing demands on water (e.g., domestic, sanitary, agricultural) by different stakeholders; local knowledge about water flows, ground water sources, and irrigation principles, both technical and social (e.g., the principles governing the collective management of the village level irrigation systems found in parts of Asia); and perceived needs for changes in current water use technologies and practices (see ODA 1993b).

The effectiveness of PRA methods, which in principle at least are inherently democratic in operation and effect, often depends crucially on the attitudes of external agencies and personnel, including project staff (who will generally require special training), technical experts, consultants, staff in relevant government departments, etc. It is important not to underestimate the degree of resistance that may be encountered. For example, it can be extremely difficult for large scale bilateral programmes, never mind smaller-scale NGO interventions, to facilitate changes in the institutional cultures of Water or Irrigation Departments set up to operate in rigidly hierarchical ways under previous colonial regimes. Likewise, urban-based or foreign technical 'experts' may not find it easy to recognise the limits of their own expertise, and admit that they have much to learn from ill-educated, unsophisticated rural farmers.

One problem faced by sectorally specific development activities, particularly those premised on the promotion of particular technologies (stoves, tube wells, etc.) is that the outcome is to some degree predetermined prior to the start of the participatory process. An official aid agency planning a water sector programme, or an NGO whose specific expertise lies in this sector, would obviously only be able to respond to a very limited extent if the outcome of the PRA consultation process was that local people identified a quite different set of problems and priorities. Despite this initial limitation, which may require that processes of participatory problem identification and prioritisation be given a fairly explicit steer by NGO staff, there is still enormous scope for using participatory methods.

It is, however, important to be aware of the inherent limitations of such methods, especially as there is some evidence of a growing view that PRA provides a repertoire of off-the-shelf, instantly learnable techniques, doing away with the need for certain kinds of specialised advice and analysis. In part, the increasing interest in PRA on the part of some technically-based development professionals seems a response to the growing influence of social development agendas in both official aid agencies and NGOs. It appears to offer technical experts the prospect of acquiring quickly, for themselves, the kinds of data that they are increasingly being asked by Social Development Advisers to take into account.

Knowledge obtained through PRA methods seems to rest directly on the authority of statements made by 'the people' themselves, rather than through the mediation of an SDA. PRA involves a set of apparently simple techniques which anyone can learn, and appears to provide almost instant access to local views, understandings and opinions. Yet this may reflect an over-optimistic view of the ability of such methods to provide directly usable information (see Mosse 1995). If social anthropology teaches one lesson it is that informants' statements can never be treated as straightforward matters of fact. The key questions about all information acquired by means of

PRA are *what*, *who*, and *when*, i.e., what is said, who says it, and in what social context? Taking 'what' by itself, in the absence of 'who' and when', is a sure recipe for confusion and misunderstanding[7]. All statements, whoever makes them - villagers, NGO staff, government ministers - require contextual interpretation if their significance is to be fully understood. Moreover, information produced during PRA is not only valuable for its factual content (once interpreted as just explained) but also because it can reveal how people conceptualise the issues being discussed. Once again, this is an area where expertise in interpretation remains crucial.

It would be disastrous if the increased application of PRA led to its widespread use as a recipe book of off-the-shelf instant techniques, leading to simplistic half-truths about indigenous knowledge. Local knowledge divorced from context is indeed simply the impoverished or 'mistaken' version of science which it was conventionally taken to be in the past, since it is precisely when intimately bound up with a thorough knowledge of the local context that it is so valuable. PRA methods have enormous potential for empowering people and generating more effective forms of development, but only if used properly, in full awareness of their limitations as well as their strengths.

2.2 Participation in Water Projects

If, as is increasingly the case, development strategies in the water sector depend upon local people taking over managerial responsibility for repairing and maintaining project infrastructure in the long, medium or short term, then it makes absolute sense to conduct all stages in the project cycle in as participatory a fashion as possible. People are far more likely both to agree to and actually perform such managerial roles if they have a stake not merely in enjoyment of project outcomes but also in the design of the project and even the initial definition of the problem.

Community participation may be involved at the following stages: assessing water needs; decision making on well location; construction methods and schedules; the construction work itself; determining priorities for health education; management structures; and evaluating the impact of wells and hygiene education programmes. It should (but does not always) go without saying that all relevant stakeholders should be consulted on all these matters. It is particularly important to ensure that women as well as men are consulted on all the issues raised below, including technical options, and that their responses inform project design.

There is thus considerable scope for stakeholder participation in both project design and implementation. For example, precise objectives can be jointly agreed, and user preferences can be established regarding the available technological options. There are practical limitations to this participatory process, however. At the project identification and design stages, for example, local people may hanker after technologies which are unsuitable for local conditions, or voice a need for technological change without displaying corresponding awareness of the related changes in behaviour which may be required (e.g., in irrigation management, or hygiene and sanitation practices). Moreover, it is likely that local priorities will not correspond to those of NGO staff. It is rarely the case, for example, that cost recovery ranks high on spontaneously-produced lists of local priorities, even though people may recognise the importance of the issue once it has been discussed with them. Health is often not seen as a high priority, perhaps because the link between unsafe water and disease is not perceived (see Section 6). For example, a recent evaluation of WaterAid's South India programme found that local people almost invariably gave health improvements lower priority than providing water for cattle, irrigation, and kitchen gardens; furthermore, within the health sphere they valued improvements in curative medical facilities more highly than health education and preventive strategies[8]. In such cases it is up to project staff

themselves not merely to identify priorities within the health and sanitation field, but to design and implement those aspects of the project in such a way as to convince people of their importance and relevance.

Turning to work plans and implementation, the number and location of irrigation channels, water points, or latrines need to be discussed, along with the proposed time schedule for their construction. Again, balances inevitably have to be struck between the expressed wishes of local people and professional judgements on technical feasibility. The relative weighting of these considerations will be in large part determined by local ecological and social conditions. Regarding location, for example, there are many parts of Bangladesh where tube wells are sunk through a hundred or more metres of silt rather than rock (cf. the project being implemented in Rajshahi District by VERC with JFS cofunding through WaterAid), and where success in striking potable water is virtually guaranteed. It is therefore perfectly possible to locate tube wells in the most socially convenient locations as selected by local people, subject to the social safeguards discussed below. By contrast, a project in Cambodia, implemented by Action International Contre la Faim with JFS support via Oxfam, reported that only 50% of borings were successful in finding aquifers suitable for a boreal, even though an expatriate hydrologist was permanently attached to the drilling team. Similar difficulties are encountered in much of Central and Southern Africa. Under such circumstances, professional assessments necessarily assume greater importance vis-à-vis participatory decision-making[9].

Under circumstances where local wishes regarding location can be directly taken into account, considerable sensitivity to local political and gender relations may be needed. The notion of 'community consultation' is almost always far too vague, since the term inevitably lumps together several different stakeholder groups - men and women, powerful and powerless, etc. The danger is that the ostensible voice of 'the community' may in fact be the voice of certain members of the local male elite, and that the most beneficial outcomes for the largest number may therefore not be achieved. Powerful families may seek to maximise their own convenience at the expense of others; or even to limit access to the water points to members of their own family, caste, class, or political faction. This was a very real issue in the Cambodian project mentioned above. Obvious precautions therefore include ensuring that all stakeholder groups are identified and consulted; that particular weight be attached to the views of those (normally women) who actually fetch water for domestic use; and that the best possible safeguards and assurances are obtained in advance (preferably in writing and certainly in a public forum) concerning guaranteed community access.

Procedures for construction and maintenance also need to be worked out jointly, with particular reference to reaching agreement about the responsibilities and contributions of all key stakeholders, including project staff, technical personnel, and government departments as well as local people. The same applies to plans to create or support the requisite community organisations and supply necessary training. For example, do bodies suitable for acting as water committees already exist or will they have to be developed or strengthened to act effectively both in continuing dialogue with project staff, and later in taking on responsibility for maintenance and cost recovery? (For further discussion, see Section 5.) Regarding timing, and particularly if local people are to contribute resources - including labour - to these construction works, then obviously the work schedule must take optimal account of local agricultural and labour cycles, periods of intense social activity such as marriage seasons or festivals, etc. The NGO may also need to ensure that locally devised arrangements for community inputs are equitable; for example, are labour demands fairly shared out and (where relevant) fairly rewarded? It may sometimes be necessary to consider provisions to compensate people adversely affected by the project, e.g., those whose

land is utilised for constructing wells or washing slabs. Such compensation should be perceived as equitable by all stakeholders.

There is also great scope for adopting participatory methods in the regular monitoring of project outcomes, as well as in the periodic activities of evaluation and reporting. Some of the issues arising will of course be specific to the water sector, but the basic principle that participants' views on the progress and impact of the project should be solicited applies far more generally. Adoption of participatory methods in these spheres is not merely desirable from the viewpoint of donors, both as an index of good practice and as a key source of information on project impact and value for money, but is particularly advantageous from the viewpoint of the operational agency itself, as providing one of the key feedback mechanisms by which it can assess and learn from its activities, thereby turning the 'project cycle' into a 'project spiral'. Issues involved in participatory monitoring and impact assessment of water projects are discussed in more detail below (Section 7).

3. Gender Issues

Cultural restrictions mean that women are generally seen and talked to by experts and planners much less than men. A further problem in designing projects to meet women's needs is the frequently invisible, informal character of women's work. This section examines women's work and women's gender needs in the context of water issues, and goes on to consider the role of gender analysis in water projects.

3.1 Women's Work

Caroline Moser (1993: 27-36) notes that women's social roles are reflected in three distinct though over-lapping forms of work: reproductive, productive, and community management work. First, reproductive work comprises domestic activities to increase or maintain household resources. It includes bearing, looking after, and educating children; fetching wood and water; cooking food; washing clothes; cleaning the house; kitchen-gardening; keeping chickens or small livestock, etc. Such work is often markedly undervalued because all these tasks are seen as 'natural' things for women to do, and are therefore taken for granted.

Second, productive work covers activities which generate income for the household. It obviously includes any paid employment outside the household for which women receive remuneration in cash or kind. Often women's rewards for such work are significantly lower than men's even where they perform identical tasks (this may not be the case, since much agricultural work is gender-specific; under those circumstances, male tasks are generally viewed as more prestigious and hence are better rewarded). But women are also more likely than men to engage in work not generating obvious direct income from external sources, such as work on the family farm. As such work is hard to quantify for economists doing 'income-poverty' calculations, the economic contribution of women is often under-valued.

Third, women often do a great deal of largely unrecognised community management work. For example, in many societies it is primarily women who maintain social links with relatives, friends, and neighbours, through patterns of socialising and visiting. This may not sound like work as conventionally understood, but is essential to social cohesiveness and cooperation. More to the present point, because women fetch water, collect firewood, and herd small animals, they often play key roles in maintaining communal resources like water sources, forests and woods, and common pastures. It is also useful to remember that water collection is not simply a component of

the drudgery involved in women's reproductive work but also, more positively, a key social event. Especially in countries where women's mobility outwith the domestic context is severely limited by cultural factors, the well or pump is one of the few places where women can meet each other for conversation, socialisation, and the exchange of information. Construction of washing slabs adds to and facilitates this important aspect of women's 'community management work'[10]. Because so much of women's work is devalued or not even counted as work at all, it is easy to slip into assuming that women have spare time which can be utilised for project activities, even voluntary rather than paid ones. Many participatory projects depend upon local women taking on key unpaid roles, and tend to take for granted that they have free time available for this. In appraising proposals, it is important to ask what new activities will be required of local people if the project is to succeed, and how these will add to existing activities, particularly in the case of women. If women are required to contribute resources to the project (e.g., as labourers in construction work, or Village Health Workers) it is important for the NGO to ensure that their involvement is on an equitable basis. For example, if pay is involved, do they receive equal pay to men for equivalent work? If the work is voluntary, will these new demands on their time add unacceptably to their existing work and responsibilities?

Community water projects are increasingly involving women in key roles as members of user committees and as trained mechanics looking after hand pumps, and while this potentially represents a considerable improvement in effectiveness over previous strategies such as expecting local government officials to carry out routine repair and maintenance, the demands placed on such women need to be realistic, and set into the context of other calls on their time, which are bound to be considerable. There is not much clear evidence that this is currently being done. One way of ameliorating these extra burdens could be to consider the situation of women at different stages of the life-cycle, comparing both their relative social standings and the demands placed on them. What are the relative merits of involving unmarried girls, women of child-bearing age, or older women, in these roles? In South Asia, for example, unmarried girls have *relatively* light work loads, and are full members of their natal villages, but lack the respect and status needed to play any kind of managerial role. Women of child-bearing age are not only newcomers who are only gradually integrated into their marital villages, but are also extremely over-burdened with domestic tasks. Older women, on the other hand, have completed the process of becoming identified and assimilated into their husbands' villages, enjoy the prestige which comes from being mothers to adult children, and no longer suffer quite the same burden of drudgery as in their younger days. All being equal, then, it might make sense in South Asia to seek to maximise the involvement of this final group; in other parts of the world, of course, different conclusions might be reached.

3.2 Practical and Strategic Gender Needs

Because poor women, in comparison with poor men, are doubly deprived for the reasons discussed, it should clearly be an important priority to pay special attention to meeting their needs, particularly in a sector such as water where it is usually women who bear the brunt of existing deficiencies. Where poor women *qua* women are concerned, two levels of need can be distinguished: practical gender needs and strategic gender needs.

Practical gender needs arise because of women's existing roles in society, e.g., the three kinds of work just discussed. In other words, practical needs arise from the status quo; consequently, tackling them does not require radical social changes but can nonetheless make an enormous difference to the quality of women's lives. For example, given their role as cooks, women need more efficient, smoke-free (healthier) wood-burning stoves, and easy access to potable water.

Given their reproductive role, they need maternal and child health care services and (again) clean, accessible water. Regarding productive work, if one objective of the project is to increase crop yields it is important to recognise that this may also lead to increase demands for women's labour. Moreover, women may tend different livestock and grow different fodder or crops from those produced by men. Though the above point applies primarily to irrigation projects, it is also relevant to domestic water supply activities in cases where women cultivate kitchen gardens for family consumption or sale. It is therefore important to ensure that the specific water needs of productive women workers are identified and met. As for community management work, insofar as women are jointly involved in maintaining common water resources, water projects may add to or help alleviate the burdens involved, depending on how they are designed.

Strategic gender needs arise because of the subordinate position of women in society. Tackling these issues involves changes in existing social practices and values, so is usually more radical and difficult. It also requires a clear, detailed baseline analysis of existing gender-based power relations. They may be manifest, for example, in the division of labour between men and women; wage levels; women's legal rights; their degree of control over their own bodies in sexual and reproductive contexts; and domestic violence. Following on from the first of these points, strategic gender relationships often manifest themselves in male domination over new technologies, even where these impinge on what were formerly female domains. In this context, the water sector provides an unusual opportunity for introducing new technologies while simultaneously empowering women and raising their public profiles; for example, by training women to carry out repairs on water pumps, and encouraging them to play significant roles on water management committees.

3.3 Gender Analysis in Water Projects

Very broadly, there are three ways in which development projects have addressed gender issues; these form a rough historical sequence, although all still go on:

gender-blind approaches ➡➡➡➡➡ WID-based approaches ➡➡➡➡➡ GAD-based approaches

Gender blindness is one consequence of approaches which treat project participants as an undifferentiated, homogeneous group, without recognising internal class, ethnic, gender or other similar distinctions. However economically and ethnically homogeneous a population may be, it is always relevant and necessary to consider the differential impact of development activities and outcomes on men and women, yet it is still quite common for proposals and reports on water projects in the NGO sector not to provide gender breakdowns for key project stakeholder groups such as community-based water committees, health workers, or those trained in hand pump maintenance. Almost invariably this information proves to be instantly available once requested, i.e., it is normally collected but for some reason is not considered important enough for inclusion in project documentation.

Women in Development approaches (WID) attempt to avoid the lacunae of gender blind planning. For example, ODA guidelines for designing projects insist that in drawing up project goals and purposes explicit attention should be given to how these address women's practical and/or strategic gender needs. Though a vast improvement over gender-blind planning, the WID approach still has clear limitations. It encourages specific 'women's projects', in which women are sole or principal participants and beneficiaries, and men are not involved or even considered. There are advantages and drawbacks in such an approach, and the balance between two needs careful

thought in each case. This tends not to be an issue for water-related activities in the narrowest sense (e.g., actual construction work), as these generally involve men in significant if not dominant roles; however, sanitation and health education elements often target women and children primarily if not exclusively. The danger here is that, however well motivated, women may not be able to initiate the necessary behavioural changes, especially if financial outlay is involved[11], without their menfolk's approval. This is likely to require the dissemination of health messages among men too, so that they understand why such changes in behaviour are necessary.

Gender and Development (GAD) approaches focus not on women per se but on relationships between men and women. Consequently they tend to involve women's strategic gender needs, whereas WID approaches tend to involve practical gender needs. GAD approaches generally require a thorough, detailed gender analysis, ideally employing information gathered using PRA or related techniques as the basis for a stakeholder analysis of locally significant categories of men and women. This might involve a "SWOT analysis", i.e., identifying the strengths, weaknesses, opportunities and threats associated with each group, in relation to the problems addressed by the project.

The GAD approach encourages a broader perspective than WID, and neglect of GAD issues may lead to unrealistic objectives or strategies. Thus, development strategies must temper broad feminist notions of gender equality with a more realistic appreciation of gender-based power relations within rural households if they are to make any progress. In the cultural context faced by an ActionAid water project in NW Pakistan, for example, it would have been futile to insist on equal (or indeed any) female representation on the village committees supervising the location and maintenance of water systems, since there was no chance of this being agreed to and insistence would have jeopardised the entire project. But project staff faced with this situation were able to make some progress by getting men to agree that as women actually fetched domestic water, it made sense for them to be consulted over preferred locations for water points. In this way women were at least empowered, if only to a severely limited extent. In less extreme contexts, water projects provide considerable scope for increasing social recognition of women by involving them in positions of clear, publicly recognised responsibility - as members of water committees, as village health motivators, or as trained personnel equipped to carry out the routine maintenance and repair of infrastructure.

GAD approaches help reintegrate women's concerns into the heart of project design and strategy, discouraging the kinds of compartmentalisation or even marginalisation of "women's issues" which WID-based approaches sometimes inadvertently encourage. In sympathy with that approach, this paper does not consider women's issues and interests in the water sector just in this separate section, but instead raises them throughout, as and when they arise.

4. Poverty and Long-Term Sustainability

Poverty reduction is of course central to ODA's statement of purpose with regard to all its development activities. This manifests itself in a particularly direct form in the case of the JFS, whereby eligible proposals must meet the general criterion that "the intended beneficiaries are the poorest communities in developing countries" (ODA 1993a: 1). Most NGOs share the ODA-JFS objective of directly targeting the poorest and most needy people. However, this rhetoric is not always combined with a clear set of criteria for determining just who these people are, particularly in urban areas. A general conclusion from the available evaluation studies of JFS-funded water projects, is that methods for accurately targeting the poorest people need further

refinement. This section therefore deals first with the complex multi-dimensional nature of poverty and the problems this poses for identifying and targeting the poor.

The explicit poverty focus proclaimed in the majority of water-supply projects obviously raises questions about whether it is realistic to seek full cost-recovery from within the local community. There may be circumstances where a subsidy is required in the short-term, so that the NGO is in effect providing a safety net in recognition of the fact that the very poor have no resources of their own to bring to projects in the early stages. Is it realistic to assume that all communities should - at least in the long term - build up maintenance funds for the future and undertake preventative maintenance?

4.1 Defining and Identifying the Poor

In this context of an explicit commitment to directly addressing the needs of the poor, it is always important to verify that the poorest people are indeed targeted both in the project plan and its execution. In practice, targeting is generally done at the level of the neighbourhood, village or urban area rather than the individual household, and so almost inevitably beneficiaries differ markedly in economic status[12] . The question then becomes, how can the poorest people among the target population be identified, either in order to target project activities at them or to devise ways of minimising the financial burdens which the project may place upon them? It is rarely possible to obtain detailed data on cash income for this purpose, partly because such data are notoriously unreliable even when obtained through prolonged, intensive fieldwork, and partly because the poor usually follow complex livelihood strategies in which easily quantifiable income may play only a minor role. However, this second point also makes us realise that such income-based data are less important than obtaining a more multi-dimensional understanding of the contexts in which poor people live.

From the broadest perspective, poverty is the opposite of autonomy, which may be defined as a person's ability to make and carry through their own decisions, either because they have the social and economic freedom to do so as individuals, or because appropriate mechanisms exist (through the state, community-based organisations, the private sector, etc.) to support them in obtaining their rights and achieving their ambitions. Autonomy has an economic aspect (you can get what you are able to pay for), but is also a political matter (do all members of society have equal rights in practice before law?) and a cultural one (is the autonomy of women or ethnic minorities restricted by cultural conventions about permissible, appropriate, or respectable behaviour on their part?).

The poor are those who lack personal autonomy, for the reasons just given or others. According to this view, poverty comprises several interlocking and mutually reinforcing elements (cf. Chambers 1983: 112). In addition to (a) income poverty, i.e., poverty in the purely financial sense, there are also (b) physical weakness (the poor are the least well-nourished and healthy, yet have to do the most unpleasant, physically-demanding forms of work); (c) isolation (poor people live on the periphery of society both geographically and socially); (d) vulnerability (they are least able to cope with misfortune, because they have no reserves and live hand to mouth); and (e) powerlessness (power inequality operates at several levels, e.g., between urban and rural areas, rich and poor, men and women).

Given the complexity of these issues, and the practical impossibility of incorporating long-term anthropological fieldwork into project funding cycles, the best way of addressing the issue of poverty seems to be through utilising forms of PRA (see Section 2.1). In particular, such tech-

niques generally involve wealth ranking, whereby people are asked to rank each local household in terms of its wealth, according to whatever criteria they agree to be appropriate. Not only do such methods provide the only realistic source of poverty assessment likely to be available within a reasonably brief time scale, but they have the added advantage that, once consensus is reached as to the poorest families in the neighbourhood, general agreement is far more likely when the issue arises of providing such families with preferential financial terms through credit or subsidy.

4.2 Poverty, Cost Recovery, and Subsidy

Clearly, the impact of cost recovery on local people depends upon the scale of the charges levied; this depends in turn upon the per capita cost of installing and maintaining project infrastructure. In calculating the per capita cost of a project it is crucial to determine how many people actually do benefit in practice. Project documents often appear to quote numbers comprising the entire populations of the towns or villages covered, with little attempt to verify how many of these people really do use and benefit from project infrastructure in practice. This raises broader issues about the kinds of indicators used to determine per capita cost, project impact, and levels of community participation (see Section 7).

When poor people are explicitly targeted in programmes where cost-recovery is nonetheless seen as important, it becomes more important than ever to ensure that per capita project costs are kept to a minimum. For this reason, NGOs such as WaterAid have tended to develop cost criteria, setting maximum per capita charges for each type of technological input, and only supporting projects whose costs fall below these ceilings. However, this process is far from straightforward. First, contributions in cash, labour or materials by local people may need to be taken into account. Second, it is far harder to determine standard per capita charges for the increasingly important hygiene education components of such projects.

Third, analysing the per capita costs of projects requires accurate measures of the number of beneficiaries; so far, the methods used for counting and verifying these figures have often appeared suspect. A number of issues arise here. For example, as discussed in Section 7 below, it is important to determine actual levels of use, which in turn requires fairly detailed observation. Moreover, complications may arise when the project does not only involve construction of new infrastructure, but where existing facilities are being repaired or upgraded; this is generally the case in urban projects. Finally, the number of beneficiaries will almost certainly vary for different components of the project; for example, many more people may use water points than acquire domestic latrines. For this reason, global per capita cost calculations are meaningless, and such costs have to be calculated separately for each line in project budgets and expenditure statements, factoring in the planned or actual number of beneficiaries for each component.

As noted above (Section 2.1), cost recovery is rarely if ever identified by beneficiaries themselves as a priority. This is understandable, and there may even be resistance to such an idea, particularly in places where ground water has previously been perceived as a free resource with open access to all. In such cases, NGOs may need to think about how to promote changes in these attitudes and achieve wider understanding of the importance of and need for cost-recovery. On the other hand, particularly in regions of greatest water scarcity, the idea of paying water charges may already be familiar to local people. The team evaluating phase I of CARE's Inhambane Community Water and Sanitation Project in Mozambique found several cases where people were already paying mechanics to do repairs, buying spare parts, and even paying for water by the bucketful from local businessmen.

Even if no resistance is encountered, it is important that cost-recovery mechanisms are fair and transparent, as well as efficient. Before pumps are installed, a commitment fee may be required from the water committee, which is in turn expected to collect contributions from individual beneficiaries. In return the community receives the pump and acquires ownership of it. Such fees are usually intended primarily to ensure community recognition of the ongoing financial commitment required for maintenance, with the financial return to the NGO being only a secondary consideration. From this perspective, payment indicates both the willingness of the community to pay such costs and their ability to collect them. This therefore constitutes a kind of 'dress rehearsal' in preparation for the time when the long-term sustainability of project outcomes will depend upon the committee's continuing ability to collect water fees at a level sufficient to cover recurrent maintenance and administration costs. Vital though these financial contributions therefore are, careful thought may be needed on how to help poorer households (or even whole communities) meet these commitment and maintenance costs, e.g., through credit, loans, or subsidies. For example, the evaluators of WaterAid's South India programme suggested that adoption of such alternatives should depend on a combination of several factors: the level of poverty of local people, their health status, and the enthusiasm with which they assist in construction.

In designing fee structures, account should be taken of the existing costs of current water supply and waste disposal facilities to the poorer households. This may be difficult, as such costs are more likely to have manifested themselves in the form of unpaid labour on the part of women, rather than in straightforward cash terms[13]. Key questions include: Will poor people be able to afford the connection charges, water rates, etc., entailed by the new facilities? Do cost-recovery plans take account of differing abilities to pay among householders at different economic levels? If user charges pose a problem for poor households, what arrangements can be made to ease the burden and facilitate take-up? This may be achieved by providing cheaper alternatives, e.g., public standpipes rather than domestic water connections. It may also (or instead) involve special financial arrangements, such as credit, loans, and subsidies (in which case decisions are necessary over whether these facilities should be offered at preferential or commercial terms).

The question of subsidy is one about which a great variety of views and strategies are encountered, even sometimes among different bodies active in the same locality. The CARE Mozambique evaluation cited above found that government water organisations adopted different policies in different areas with regard to provision of spare parts, charging for them in some places, subsidising them in others, and sometimes even distributing them freely. To further complicate matters, lack of coordination between different state bodies meant that these policies were occasionally countermanded by local administrators. Under such circumstances the freedom of action for NGOs to develop their own strategies may be severely limited.

Even where government policy does not pose such problems, they may arise when different NGOs active in the same locality adopt different stances towards subsidy. This problem is particularly acute in those regions of South Asia, such as Bangladesh and Tamil Nadu in India, where the SNGO sector is highly developed yet at best only partially coordinated. The inherently problematic nature of this issue is then made still more acute by beneficiaries' awareness of and responses to these different strategies; for example, low subsidy strategies in South Asia are often interpreted by local people as evidence that the SNGO is embezzling money from foreign donors which should rightfully have come to them.

There does, however, appear to be a growing consensus - reflecting greater concerns with cost-recovery and self-sufficiency as much on developmental as on financial grounds - that subsidies should be kept to a minimum. This view does however need to be flexible enough to ensure that

the needs of poorest, most at-risk beneficiaries are adequately served. For example, in its Women's Development Project in Bangladesh, CARE provides seed capital to each new Savings and Loan Group, out of which small loans are made to members. When these loans are repaid the interest remains in the SLG account, while the capital forms a fund to subsidise purchase of latrines for those households deemed by SLG members themselves (following PRA wealth ranking) to be most in need of such subsidies.

Whereas long-term sustainability of wells and pumps requires the development of enduring community managerial and technical capacity, the sustainability of latrine programmes depends far more on the capacities and motivations of the individual households receiving them. The initial capital cost may be significant for a poor family, but recurrent costs may be negligible, particularly where latrine slabs and rings can be re-used whenever new latrine pits are dug. In this case, therefore, sustainability depends far more upon the effectiveness of hygiene education.

5. Community Management

The emphasis on stakeholder participation outlined earlier (Section 2) is of course associated with an emphasis on community management of project infrastructure, as the most likely way of ensuring long-term sustainability. Some of the considerations involved in setting up systems of community management in water and sanitation projects have already been discussed. This present section begins by looking at the broad context in which such schemes are implemented, considers the possible scope of the management responsibilities involved, and mentions other issues (such as training needs) which follow on from this.

The first issue to be considered in project design concerns pre-existing arrangements within the community, if any. It is important to investigate whether there are any existing institutions for managing, regulating, or maintaining communal or public water supplies or waste systems within the project area. For example, in parts of South Asia one finds traditional community-based institutions governing the maintenance and operation of village-level irrigation systems. Even in the absence of such institutions geared specifically towards water issues, there may be other forms of community organisation whose remit could relatively easily be extended to cover community water management too, or which could provide culturally appropriate precedents when setting up such organisations. In WaterAid's hand-dug wells project in Ghana, for example, many partner SNGOs were able to work through pre-existing and at least partly democratic Town Development Committees, and to take advantage of existing practices whereby farm work was prohibited on certain days and people were required instead to engage in self-help initiatives designed to benefit the whole community.

In either case, it may be more effective (and cost-effective) to build on institutions which are already in place rather than entering into the time- and labour-intensive process of creating entirely new institutional structures whose long-term viability is often much less certain. This assumes, of course, that the existing institutions are acceptable in character and mode of operation, or might reasonably be expected to become so. For example, to work through institutions currently dominated by particular ethnic groups, political parties, or genders would clearly be divisive (though it may in some cases be unavoidable). As a minimum, it is always necessary to investigate the extent to which the interests of women are represented in such institutions, and to devise culturally acceptable ways of increasing their involvement where necessary (see Section 3.3 for an extreme example). Women may sometimes already participate in traditional water

management institutions, given their community management role discussed earlier (Section 3.1), but as a general rule of thumb the more formal the existing arrangements the less the likelihood that women have been meaningfully involved hitherto.

The next question concerns the intended scope of responsibility of these traditional water-related institutions, where they exist, or the newly-established water committees where they do not. As a bare minimum they are normally assigned the key role of responsibility for and organisation of the long-term management and maintenance of project infrastructure. However the scope of their involvement may often be much broader than this (see the comments in Section 2.2 on the scope of participatory methods). For example, these institutions, suitably modified if necessary, may become the conduits through which routine dialogue between project staff and local people takes place, not only as regards maintenance arrangements during and after the project lifetime, but also much earlier on, in the participatory design, implementation and monitoring of the project itself. Even if suitable institutional mechanisms do already exist, the people involved are likely to need training in managerial or technical skills if they are to fulfil their new or modified roles effectively. An early decision will therefore be needed over how the project is to be designed so as to recognise and meet this need. This is of course just one particular context in which may arise the far more general question: what skills will local people need in order to manage and maintain the new water/sanitation systems effectively, and what provision has therefore to be made to provide the necessary training? The answer will depend in part on whether local communities are expected to carry out their own maintenance

If problems are envisaged due to conflict, arising perhaps from people misusing water infrastructure or failing to discharge their individual maintenance responsibilities (e.g., if some kind of household rota is involved in implementing certain tasks) then it needs to be decided how the community management institutions will deal with this, and what kinds of training they may therefore need. Possible remedial measures might include mobilising community pressure; offering increased work incentives; mounting public awareness campaigns; introducing disincentives for misuse such as requiring all local residents to contribute towards the cost of repairs; or offering more advanced maintenance skills training to a wider range of people, in a form perceived by them to be more generally useful.

Whether they carry out the actual repairs themselves or not, training has to be geared towards maximising the community's capacity to *manage* maintenance and repair independently. As another aspect of this, it is important to ensure that they do not continue to be dependent on the NGO for technical inputs, spare parts, and tools. Projects whose sustainability strategies depend upon setting up enduring systems for community maintenance of project infrastructure need to ensure that tool kits and spare parts are readily available in sufficient quantity. These can of course be provided by the NGO, at least in the first instance, but it is far preferable to ensure that such items are available locally from other sources, in order to reduce dependency in the short term and enhance sustainability after the NGO has withdrawn. In general this does not present much of a problem in South Asia, where rural retail outlets are all-pervasive and the mere operation of the market can largely be relied upon to ensure the stocking of items in demand among their rural customers. In Africa on the other hand, as in CARE's Mozambique project (Section 4.2), responsibility for distribution of spare parts may lie with government bodies, which are not necessarily as efficient. Price considerations are also important, in view of the aim of targeting poorer people. In short, the local availability and affordability of tools and spare parts are important criteria which may in many cases have to take priority over technical quality.

Like health education, community-based management is often not a high priority in the eyes of local people; this was found, for example, by the evaluation of WaterAid's South India programme. In order to make the strengthening of community-based approaches a realistic objective,

it is important to decide at the very start what forms of community involvement are bought sought, and how these are to be measured, i.e., the kinds of indicators which will be used to determine levels of community participation (see Section 7).

Finally, successful strategies of support for traditional or newly-established water committees may encourage these local groups, following the successful completion of well construction, to undertake other activities, such as income-generating projects designed to help meet well and pump maintenance costs and other financial needs. These may of course be activities outwith the remit of the existing programme, particularly in the case of sectorally-specialised NGOs, in which case, as with WaterAid's hand-dug wells programme in Ghana, the local committee can be put in contact with other NGOs or government bodies better able to meet these newly-identified needs. In integrated development programmes, on the other hand, such as World Vision's Louga Water Project in Senegal, water supply projects are sometimes explicitly used as entry points, leading to a wider range of programmes in the spheres of health, agriculture, and women's development. Their advantage for this purpose stems from the fact that provision of water is a basic human need around which it is comparatively easy to get the entire community to unite.

6. Hygiene Education in Water Projects

As mentioned earlier, the recent trend towards integrated approaches to the water sector has meant that virtually all NGO water projects funded under the JFS also have sanitation and health components[14]. There has also been a tendency for the latter to become less generalised and more specifically focused on hygiene and other water-related health topics[15]. It is now very generally agreed that hygiene education is necessary if full benefit is to be derived from the provision of safe water. This is particularly necessary in view of the fact that in so many societies the link between dirty water and disease is not recognised, though for the same reason local people may need some convincing as to the importance of hygiene and sanitation activities. Where health issues are identified as priorities, they are often conceptualised by local people in terms of improved curative services (e.g., a local health centre or dispensary) rather than preventive education. Moreover, small SNGOs working in the water sector may have the technical expertise required for construction work, but are often unsure how best to proceed with hygiene education (as found in the evaluation on WaterAid's South India programme). This is therefore an area where southern partners may need particular support.

As mentioned briefly above (Section 2.2), WaterAid's South India evaluation found that health was a low priority for most local people relative to other issues; levels of awareness of the links between sanitation, hygiene and health were poor, and the consequent lack of interest in sanitation measures constituted a major constraint to the programme. For example, there is widespread hostility to the whole notion of latrines among rural South Indians, for whom defecation in the fields is a far more culturally acceptable practice. This points up the need to collect information on pre-existing opinions and behaviour about hygiene and sanitation, as part of a general baseline attitudinal survey. Without awareness of existing notions regarding health and hygiene, education programmes cannot be effectively designed and targeted[16]. For these reasons, health education strategies need to pay particular attention to how the relations between water, hygiene and good health are introduced, and the extent to which these messages reflect acknowledged concerns of beneficiaries rather than merely the priorities of project staff.

Many NGO projects aim to transmit health and hygiene messages through voluntary Village Health Workers (VHWs). Who should these people be, what training should they receive, what training materials do they need, and what methods should be employed?

Typical selection criteria are that VHWs should be people who are permanently resident locally, and respected members of the community. Clear decisions based on local circumstances are necessary regarding the number of VHWs needed in each community; this depends in part, of course, on how much they are being asked to do. The gender of VHWs is another important consideration, bearing in mind, firstly, that cultural restrictions may significantly inhibit them from coping effectively with people of the opposite sex, and secondly, that all key stakeholders need to be covered if hygiene messages are to achieve maximum impact.

The methods to be used by VHWs in transmitting hygiene messages are usually intended to be participatory to at least some degree, but tend in practice to be stiff and over-formal, e.g., to rely on rote learning, and to employ at best question and answer methods rather than true discussion. This is partly because effective understanding and use of participatory methods requires far more training, as well as greater experience and confidence. The extent to which VHWs can be supervised needs to be taken into account here too; this depends on their numbers and geographical spread. The balance between the degree of reliance on VHWs, and the use of other participatory methods whereby NGO staff themselves work more directly with the community, needs to be considered. The latter strategy is often more effective, particularly where the NGO has particular target groups in mind, but it is also of course liable to be more labour-intensive and consequently more expensive.

Evaluation studies report that many VHWs seem in practice to work through informal house visits rather than public group discussions. However, the evidence suggests that the latter may be more effective - with the proviso that groups should not be too large (which would minimise the scope for meaningful participation) and should preferably be village or neighbourhood-based so that people already know each other and have shared experiences on which to draw. Moreover, mere transmission of information often produces superficial and unsustained changes in behaviour, whereas approaches emphasising discussion, practice, and problem solving are more likely to produce long-term sustainable impact. In general however these require higher levels of skill and longer inputs of time on the part of those who are to train the VHWs, adding yet further to the cost[17] .

Because the skills required in health education are quite different from the kinds of technical and engineering knowledge called for in constructing water infrastructure, many NGOs engaged in water projects, particularly SNGOs, feel uncertain about what the content of health education components should be, and about how best to implement such education. As regards content, issues to be considered include consideration of the inputs needed to ensure that all participants understand and minimise health risks from water-related diseases such as malaria and filariasis, water-contact diseases like bilharzia and guinea worm, and polluted drinking-water. How can people best be brought to understand the health risks associated with stagnant water and water pollution? Will they have the capacity to implement the suggested methods for minimising such risks, e.g., by constructing drains, and preventing contamination by livestock, human faeces, and pesticides?

The extent to which health education should be specifically designed to enhance women's roles in promoting healthy practices needs to be considered Similarly, what channels will be used to convey health education messages, e.g., kin groups, women's communication networks, or more formal channels such as schools?

Lack of suitable educational materials covering water resource management, and health, hygiene and sanitation behaviour, is frequently a constraint. These may not be available at all in the local

language, or even if materials do exist they may prove to be inaccurate, poorly produced, ill-suited to levels of literacy among the target population, or inappropriate for use in the desired participatory teaching methods. NGOs often find themselves compelled to design appropriate materials for themselves, in which case the need for an understanding of existing local notions about health and hygiene again becomes a key issue. Ideally, the information offered should build upon these local idioms rather than being couched in the often completely alien language of western biomedicine.

Finally, other aspects of the project can be designed so as to facilitate these processes. Thus, technical interventions should be designed and planned so as to minimise the need for health education or facilitate desirable changes. For example, construction of washing slabs with proper drainage near to wells or pumps can help promote health standards by ensuring hygienic disposal of the water used. In addition, it is important to coordinate construction work with health-hygiene education, so that the perceived relevance of the latter can be maximised at the point where community enthusiasm is likely to be at its greatest. For well-construction the relevant education sessions can probably go on simultaneously, but effective uptake and utilisation of latrine building programmes usually requires that training precedes the actual provision of infrastructure.

7. Project Monitoring and Impact Assessment

Monitoring is consistently identified as an area of weakness in evaluations of water-use projects, and similar findings are clearly evident in comments over the years on JFS project proposals and reports by NGO Unit's Edinburgh advisers. It is very easy to devise suitable indicators for monitoring physical infrastructure (e.g., number of wells and/or pumps constructed; percentage of pumps still in use X months after construction; chemical and bacteriological quality of water produced), and this is virtually universally practised in a thorough manner. However, it is much less common to find equal weight being given to indicators for measuring community participation, and for assessing the social and health impact of water supply, sanitation, training, and hygiene education.

Yet indicators for measuring community participation are relatively easy to devise (ODA 1995b: 4-6). Quantitative indicators might include: how many people are involved in each institution or activity; how do these numbers break down in terms of gender, ethnicity, caste, and class; how many attend meetings (again these figures should be broken down further); how many participate in communal activities; what level of contribution do they make? For example, in an un-named South Asian water supply project (ibid.: 7), the number of labour days contributed by beneficiaries was used as one indicator. Indicators may also involve targets or time-bound milestones. In the same project, Village Water Committees were to be set up. The indicators used were (a) that 20 VWCs were to be formed by month 6, 80 by month 12, etc.; (b) at least 50% of elected VWC coordinators were to be women.

Qualitative indicators of community participation are even more commonly absent from project proposals, logframes and reports (though in this the water supply sector is far from unique). Yet such indicators convey crucial information about the character and intensity of participation. Sometimes quantitative 'proxy indicators' may be devised to measure such aspects indirectly; for example, the degree of commitment to and involvement in group activities can be assessed by recording how many of those attending actually speak. However, this is not always possible. Factors which need to be assessed by purely qualitative means are likely to include the quality of group leadership; the effectiveness of decision-making; the effectiveness of participants' contri-

butions; and the extent to which groups achieve greater self-reliance. There are many possible ways of carrying out these assessments, according to local circumstances. For example, the quality of leadership might be assessed in terms of the existence of democratic election procedures; the effective allocation and rotation of leadership roles among members; ability to resolve conflicts and achieve consensus, and so on.

In determining the impact of health, hygiene and sanitation education, it is important to distinguish between knowledge and awareness on the one hand, which can be determined through more-or-less formal and structured questioning, and behaviour on the other, which can only be studied through actual, detailed observation. In both cases, baseline data are required if the conclusions on impact are to be anything other than impressionistic. Many water NGOs seem in the past to have carried out adequate baseline surveys of pre-existing water availability, but to have devoted insufficient attention to such baseline attitudinal and behavioural surveys. Consequently they find themselves at the end of the project in the position of being unable to demonstrate the extent of project impact in these areas.

Given the over-arching objective of targeting poorer people, it seems clear that wherever possible a detailed knowledge of the health and hygiene practices of poorer households should be used as the baseline against which to assess both levels of acceptance and use of the new water and sanitation facilities, and (what is rather more difficult) the behavioural changes which have taken place.

In many cases, indicators for assessing social and health impact may be best developed during the project lifetime, through discussions with beneficiaries and other stakeholders, rather than being pre-determined during the design phase. For example, an evaluation of WaterAid's South India programme found that particular stakeholders consistently identified certain positive impacts. Villagers themselves mentioned provision of safe drinking water compared to earlier dependence on contaminated sources; savings of time and workload thanks to the greater proximity of the supply; increased school attendance thanks to a reduction in sickness among children; improved availability of water for bathing and clothes washing; and greater food security and income thanks to their increased ability to grow crops and vegetables, and to water their cattle. From the perspective of the SNGOs, there had also been significant steps forward in community development processes, including increased cooperation among local people, increased self-confidence and self-reliance, and improved maintenance levels for communal facilities generally. Finally, positive impacts for the NGOs themselves included their own greater technical and organisational capacities, and their enhanced credibility among the target community.

Armed with such information, it becomes much easier to design appropriate indicators, though if they are to provide quantitative information the importance of baseline surveys is again evident.

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Notes

[1] I am endebted to the work of my colleagues in the Edinburgh JFS consultancy team, especially Neil Thin and Louise de la Gorgendière, for their comments on water projects over the years, upon which I have drawn in preparing this paper.

[2] A recent JFS review visit to Bangladesh, for example, saw four projects involving provision of both tube wells and latrines, but only one, funded through WaterAid, had this as a key objective and figured in JFS statistics under this sectoral code.

[3] This is less a matter of deliberate policy, than a reflection of the character of the proposals submitted for JFS funding.

[4] ODA regards itself as a secondary stakeholder in view of its intermediary role in project implementation (ODA 1995: 2).

[5] In the case referred to a neighbourhood women's committee used a village map, drawn by themselves as the outcome of PRA processes, to pinpoint the locations of domestic latrines of various types within the village. This became the basis for a discussion on the pros and cons of water-seal latrine slabs, followed by a tutorial conducted by the group president to explain the principles of their operation, which involved taking apart and reassembling a water latrine as part of a discussion of problems some families were experiencing in understanding how it worked.

[6] This 'contextual' expertise complements, and sometimes supplants, the broader, deeper, yet less specific expertise of external professionals.

[7] For example, important consequences follow from the public nature of PRA. Women, like members of other subordinated groups, are thereby restricted in their ability to articulate their concerns, especially on a topic "which falls beyond the publicly endorsed definition of women's roles" (Mosse 1995: 575).

[8] It is not clear whether this was a universal view or whether, for example, the priorities of men and women differed.

[9] This is doubly necessary because of the greater expense incurred by mechanical drilling compared to the manual 'sludger' methods employed in Bangladesh.

[10] There is further opportunity for participatory dialogue here, with local women being consulted over the design of these slabs and suggesting improvements in light of their normal washing practices.

[11] Boiling drinking water, for example, uses fuel, with a resulting cost either in cash or in terms of women's time spent in fuel-gathering. If the former applies, a woman may well be unable to initiate such changes, however well-motivated she may be, without her husband's approval.

[12] This happens not only because of the social problems in identifying the poor which are discussed in this section, but also for unavoidable technical reasons. The character of the technology normally requires that water provision (unlike latrine promotion) be targeted at neighbourhoods or entire villages, rather than individual households.

[13] This may create further problems in convincing beneficiaries of the necessity of cost recovery. Generally, water delivery will have hitherto formed part of the reproductive work of women, so that its costs will largely have been hidden, particularly from men. As soon as cash payments are required, however, it is likely that the cost burden will fall far more upon men; for them, accustomed to discounting their wives' labour, such charges therefore appear as an entirely new element in their household expenses.

[14] This reflects the strength of competition for JFS funding, whereby projects lacking this rounded approach would be unlikely to gain support. It is not necessarily true of NGO water projects in general.

[15] There are exceptions to this under certain circumstances. For example, a JFS-supported PLAN International health education, water supply, and sanitation project in Uganda incorporates a significant HIV/AIDS component into its health education.

[16] It is important not to assume that local project staff, merely because they are from the same country, are already familiar with such local ideas among the target population and hence able to incorporate such awareness into their training.

[17] This need not always be the case however, as the CARE Bangladesh project mentioned in footnote 5 illustrates. One might well surmise, however, that very intensive inputs by NGO staff are necessary in the early stages of a project before most groups can achieve anything like this level of competence, self-confidence and self-sufficiency.

Report on Session 1: Technical, Management and Social Issues

Ian Smout

Presentations

Four papers were presented by the authors, as follows:

Paper 1. An Overview of NGO Involvement in the Water Sector (Alistair Wray)
Paper 2. ODA Synthesis Evaluation of Rural Water Projects (Nick Dyer)
Paper 3. NGOs and Water and Sanitation (Jeremy Ockelford)
Paper 4. Social Issues in NGO Water Projects (Tony Good)

These followed the written papers (reprinted above) except for the presentation by Nick Dyer. He explained that a synthesis evaluation study had recently been undertaken by the ODA Evaluation Department, but the report was not yet finalised. The report had drawn on previous work, including the Evaluation Summaries reprinted above, and 16 evaluations by other donors. The presentation highlighted the following findings emerging from this work:

1. *Health and hygiene education is the key.* There has been a consistent failure to achieve health targets. Hygiene education was given a low priority and technical components determined the pace of the projects. Projects were more effective if they used a local base of people and material.

2. *Community participation* is crucial to success, and needs to be included throughout the project cycle. Many projects were supply rather than demand driven. Attention is needed to establish effective demand, recipients' views and willingness to pay.

3. *Sustainability.* Operation and maintenance were often not sufficiently planned and costed. Gender issues were slow in moving from rhetoric to practice, and an environmental focus is more visible in recent projects than in the 1980s.

Nick Dyer focused on the following particular lessons from the many identified in the synthesis evaluation:

- establish felt needs and demand
- the solution lies not in technology but social change
  - full participation of communities is needed, with adequate resources to identify needs
  - need to balance prescription and choice
  - technology must reflect the community's wishes
- sanitation requires priority and its own resources
- plan operation and maintenance at the design stage
- improve gender analysis
- role for willingness to pay and participatory appraisal
- institutional co-operation is crucial.

Discussion

The discussion groups were asked to focus on ways to improve NGOs' current practice on water and sanitation projects. The report below was prepared by compiling and editing the separate reports from the discussion groups and the plenary session. For convenience, it is divided into two parts: Long-term development projects, and Emergency work, but readers should note that each section includes points which are relevant to both types of NGO work.

1. Long-term development projects

Networking and co-ordination
There was general agreement that improved networking and co-ordination were needed, both in UK and in-country. In UK this should focus on a sharing of best practice between NGOs, ODA and research institutions. Clearly some NGOs felt there were lessons to be learnt, whereas other participants thought the principles were well established and the problem was to follow them in practice[1]. Hopefully networking could cover both points of view through information exchange and sharing of experience. It could also help to mitigate the effects of competition amongst universities and NGOs which one group saw as undermining an integrated and sharing approach to water policy. Another group saw a need for networking the resources of NGOs, including the links between the southern and northern NGOs.

At country level, co-ordination was seen to be important between all the players involved in delivering aid projects/programmes, improving communication between government officials, donors, NGOs, local staff and beneficiaries. Co-ordination could be particularly useful for technical aspects such as handpump standardisation and establishing and maintaining a database of technical information (e.g. local groundwater conditions). Co-ordination among NGOs themselves could contribute to sharing this type of information, and was also important for agreeing geographical areas of working to reduce overlap and extend coverage.

Training
Groups identified a need for training of project staff for their varied range of duties, including for example project frameworks and monitoring and evaluation activities. One group described a need for longer lead times in education and training. Technology implementation may be achieved in 2-3 years but 20-30 years may be needed to affect patterns of behaviour. Therefore project proposals need to consider ways in which longer-term training needs can be met. This is bound up in the problem of 'projectisation', in which activities and outcomes are tied to temporal limits of projects.

Timeframe
Groups reported that project management faced severe difficulties in incorporating all aspects of a water project and ensuring that the pace of the project was balanced. It was agreed that greater integration was needed, with a reduction in the tendency for the hardware to drive the programme. This requires flexibility from donors to allow projects to over-run original timetables.

One group noted that the actual time spent in the community is crucial for the community development, but at present this is generally not sufficient, because of lack of resources. Better understanding is needed of how much time is required for the desired changes in the community. Another group however referred to the assumption that management can overcome social and participation issues, following an out-dated planning approach to development. They called for recognition that projects are limited, bounded and imperfect.

Pre-appraisal studies
Several groups referred to the difficulties which NGOs face in PRA (Participatory Rural Appraisal) studies and project preparation. Identifying community needs and wants, building on existing practice and making best use of local resources are clearly important, but these require detailed field investigation. Smaller NGOs in particular face difficulties obtaining resources to support this type of activity. One group also stressed the valuable role of local NGOs in this process, to provide the benefits of local knowledge. Another group observed that community expectations of the level of service needs consideration as in some cases it may not be possible to meet these expectations.

Cost recovery
A number of groups thought further consideration was needed of cost recovery, and how the concept should be applied in different circumstances - particularly for poor people with few resources. One group made the point that financial ownership by the community is important for the long term sustainability of a project. Another group however reported that charging communities for their water was a source of conflict in Mozambique. They proposed adopting the phrase 'cost-sharing' which allows for other contributions from beneficiaries of water services. For example, labour should be accepted as a contribution. There was a general feeling that donors should accept payment-in-kind as a means of cost-sharing. The difference in opinion here may be partly a matter of whether cost recovery is being applied to operation and maintenance costs or to capital costs, and a different approach may be needed for each of these.

Technology
Although there was general agreement that a balance was needed between technical and social components of a project, it was unclear how that balance should be achieved. Most participants seemed to feel that too much emphasis tends to be placed on technology, but others saw a danger of some technical aspects being buried as emphasis shifted to social issues. One group suggested a policy of providing feasible technical options for the community to choose between, rather than top down technical solutions.

Project objectives and evaluation
One group reported that objectives are sometimes disguised in order to obtain funding from donors. For example, an NGO's objective of capacity-building for a local organisation may have to be described or 'disguised' as a water supply scheme to get funding. Another example is that a proposal may need to state that a project will be 'integrated' when in fact the intention is to implement a single technology. Not surprisingly, the confusion over objectives then leads to problems of evaluation.

Another group raised a different point related to monitoring and evaluation. It is not always clear for whom data are being collected and for what purpose. Data collected for donor evaluation may not be the right type of information for those at the 'sharp end' and therefore there is a danger that mistakes are perpetuated because of a failure in the feedback loop. There was a concern that a relatively small number of people have access to project performance information and that systems to feed this useful information to the field are inadequate. This relates to earlier points about networking and dissemination.

2. Emergency Work

The members of discussion group E were mostly involved in emergency work and therefore focused on improving the quality of current practice by NGOs in relation to their work in emer-

gency situations. The group's report identified main areas of weakness and indicated where practical solutions might lie, as reproduced below:

a. The failure to build upon lessons already noted in the past and a tendency to "reinvent the wheel" with each new emergency.

1. The primary mechanism for avoiding this must be self-evaluation post-response, though this would require dedicated resources of time and funding. Evaluation by external agents is also possible but a recognised forum for the exchange of evaluation information and 'lessons learned' by NGOs, would be of more use.

2. Evaluation would be a purely academic exercise unless it provided a base for constructive preparatory work by NGOs and disaster mitigation measures in threatened communities, predominantly through the development of relevant training programmes. These would address the managerial and organisational shortfalls more than the technical ones, enabling both NGO staff and their developing country partners to work together more effectively in all phases of a disaster.

3. The larger NGOs can afford to be more proactive and implement disaster preparedness programmes. Their response will depend upon the effectiveness of these programmes and their own flexibility, particularly in the availability of appropriately trained staff. Training is expensive, but increasing the pool of suitable people will increase this flexibility, and the larger NGOs may be able to offer training, in both technical and managerial skills, to members of the smaller ones.

b. The requirement to meet the new challenges associated with the relatively recent spread of emergencies outside 'familiar' environments. There are significant complications in addressing water and sanitation problems in new (perhaps more) complex emergencies, in cold climates and in urban areas. Dealing with these factors will raise new contradictions and possibly conflicts of interest; whilst neglect of local circumstances will negate most of the positive impact of NGO interventions. They therefore require new techniques for implementation, and relatively little thought has been devoted to this. These methodologies could perhaps be derived from the common codes of practice for NGO action in emergencies, now under consideration.

c. The reconciliation of short term emergency response with long term developmental issues

1. There is a common perception that emergencies are short-term events whereas experience proves otherwise. As a result NGOs are squeezed both by their desire to make an immediate difference to the vulnerable population and the requirement to demonstrate early results to their donors.

2. Both donors and NGOs need to be educated to take a longer term view and adapt their emergency work to incorporate measures including long-term sustainability. NGOs need to make the time to follow an abridged project appraisal and planning process to ensure that their proposed interventions are suitable, sustainable, and capable of future development. Donors need to accept that such interventions may not produce quick results, nor are they likely to be short-term.

3. Funding for major emergencies has remained on an ad-hoc basis even when the general situation, although unresolved, has long since passed through the initial crisis phase. This,

and the pressure on NGOs to take immediate, inadequately considered action, inhibits long term planning and the transition from emergency relief to development. NGOs and donors must recognise and compensate for this, ideally moving the funding arrangements on to a longer term footing. This will encourage a more programme-orientated, balanced and developmental approach to emergency interventions.

[1] One group expressed surprise at the reiteration in the papers of lessons already known, raising the important question: what prevents application of these practices?

Paper 5: Policy Issues for NGOs in the Water Sector

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1. Introduction

This paper attempts to examine a number of policy issues facing NGOs working in the water supply sector. It suggests that NGOs involved in water should examine their role in a much broader context and try to see themselves as part of a wider family of agencies, facing common concerns and challenges.

The paper initially attempts to describe what is meant by "NGOs" and thus tries to identify them as more than their negatively defined label suggests (ie. simply that they are not government organisations).

At the local level it also makes clear the important distinction between local membership organisations controlled and accountable to local people and local welfare agencies or service organisations where the people are simply clients or beneficiaries with little or no real control or power. This suggests that despite the rhetoric of "participation" and "empowerment", NGOs, by their structural identity and their need for external resource inputs, are thus only really accountable upwards, away from the poor whom they try to serve.

To look beyond the identity of NGOs, in an attempt to delineate the policy issues which face NGOs in this sector, the paper examines the context within which NGOs are working. By looking in turn at the structural, ideological, national, financial and physical contexts within which NGOs operate, the paper explores some of the decisions which face NGOs in the changing social and political environment and the challenge which these decisions represents to this NGO sector.

Although each national context is different, the paper attempts to outline a series of practical steps which could assist in setting up a national policy framework for the water sector. This process would require close cooperation among NGOs and between NGOs and government and these two aspects are specifically explored.

The paper concludes by drawing out a number of specific issues which require important strategic decisions to be taken. In addition to uncontroversial calls for increasing and sharing technical know-how and improving the evaluation of impact, the paper also raises a few more controversial issues.

Water supply interventions commonly leave unchallenged or even in some cases reinforce the existing unequal power relations. However, with the escalating demand for water and the continuing depletion of water resources, water supply interventions will increasingly challenge powerful interest groups and hence almost inevitably result in conflict. The key policy question to NGOs in the water sector is whether they are ideologically and financially equipped to face this challenge.

2. NGOs : What do we mean?

2.1 Categorising NGOs

NGOs have grown in number, resources and visibility since the 1970s. Attempts to define or delineate what is meant by "NGO" have been many, varied and rarely completely satisfactory (see, among many others, Clark, 1991; Devine, 1996; Fowler 1991; Green and Matthias 1995; ODI 1995; ODI 1994; Sollis 1992; Uphoff 1992 etc.)

By its negative concept, that is they are *not* government organisations, "NGO" risks becoming a residual term for almost all civil society. "NGO" can indeed encompass everything from small local welfare associations through to global organisations such as Red Cross or Oxfam.

One description, found frequently in literature about NGOs and in material produced by NGOs themselves, is that they aim to engage marginalised groups and provide an opening for the formulation, articulation and consideration of these groups' specific interests. Many NGOs are considered to be and believe themselves to be a force for social change and the promotion of meaningful participation and representation of the powerless (after Devine, 1996). This is further examined in Section 3.2 below.

Table 2.1 Categories of NGOs involved in the Water Sector

NGOs can be categorised in many ways : by their size, structure, location, orientation or objectives. Table 2.1 is an attempt to describe NGOs for the context of this paper. NGOs by their very nature will not fit neatly into one category but undertake a range of activities with different objectives and hence may span several categories. The table below is not an attempt to be all-encompassing, but to suggest the range and variety of NGOs that we should be considering.

The enormous difference in the perspectives of northern and southern NGOs is not always fully appreciated by the staff of northern NGOs, whether they are themselves nationals from the "north" or the "south"[1]. Although normally well concealed, there is often antagonism and bad feeling towards northern NGOs which, simply stated, emerges from a perceived or actual inequality of access to resources and the impression of a neo-colonial agenda and patronising attitude among the northern NGO staff. In the context of this conference where it can be expected that the majority of participants are from northern NGOs, it is extremely important to make this fundamental distinction clear.

In the context of this paper, "NGO" will be used to describe organisations outside government structures but within the legal framework of the country, working on the design, study and implementation of development projects (after Devine, 1996:3).

2.2 Public, Private and Participatory Sectors

NGOs rail somewhat over being categorised as part of the "private" sector alongside Glaxo, Coca Cola and Marconi. Adding *"not for profit"* makes NGO staff feel better but it is essential to examine the relation with individuals at the local level fully to comprehend the negative aspects of being a private organisation albeit "not for profit". Uphoff (1992) probes this by identifying an extremely pertinent distinction between NGOs and local community self-help organisations. He challenges the normal division of public/private, and proposes that institutions should be divided into three sectors [2] :

- government or quasi-government;
- private or quasi-private (including multinational corporations, NGOs, local charitable or service organisations and rural enterprises);
  and, in the a middle;
- participatory, membership or collective action sector.

At the village or local level, Uphoff examines the local institutions and identifies a valuable distinction between membership organisations and service organisations, clearly differentiating them by their relation to local people. Local membership organisations are organisations "of" the people and are controlled by and accountable to local people. Local welfare agencies or service organisations, which would include most NGOs, are in contrast organisations "for" the people. People are simply clients or beneficiaries with little or no real control or power (Uphoff, 1992:5).

2.3 Accountability of NGOs

It is instructive to compare the "profit" and the "not for profit" (ie. NGO) parts of the private sector:

> Customers of a private business, in non-monopolistic situations, can refuse to patronise the business and thereby attempt to influence it.
>
> Clients or beneficiaries of a charitable organisation or NGO appear, in contrast, to have an even more limited influence over these "businesses", which can give or withhold services as they please.

This suggests that despite the rhetoric of "participation" and "empowerment", NGOs, by their structural identity and their need for external resource inputs, are thus unaccountable to the poor whom they try to serve.

Both northern and southern NGOs clearly feel the need for clarity and accountability to their donors, whether individual supporters, corporations, other NGOs or official agencies. This accountability is rarely more than a regular flow of information, deemed essential if for no other reason than to protect the income source. In the UK, legal regulation of charities also requires them to account for their finances through regular audit and to account for their actions to the Charity Commissioners. For southern NGOs, and northern NGOs registered in the south, each national regulatory structure also requires differing legal accountability to the national authorities.

The common terminology of "partnership" between northern and southern NGOs does little to clarify relationships of accountability. The inequality of power relations and of financial resources, all result in an unequal partnership. There is a clear parallel between the inability of villagers to demand accountability from NGOs and a similar inability of southern NGOs to demand accountability from northern "partners".

In comparison to the array of formal demands that require NGOs' accountability upwards, away from the village, it is usually only their moral agenda which ensures their accountability to the poor[3]. It is perhaps an unreasonable request that NGOs should continuously scrutinise the balance in these two qualitatively different forms of accountability. However, it is an uncomfortable reality that, with the proliferation of NGOs and a growth in competition for both resources and recognition, north and south, the accountability of NGOs to the poor is increasingly questionable. Many of the policy issues raised in this paper directly reflect on this.

2.4 Comparative Advantage and Disadvantage of NGOs

Many aid agencies, both bilateral and multilateral, believe that NGOs are more effective and efficient at reaching the poor than either the local government or themselves. Aid agencies are thus channelling resources through NGOs and encouraging local governments to do likewise. There have been many attempts to identify the advantages of NGOs for promoting development (see, among many others, Clark, 1991; Devine, 1996; Fowler 1991; Green and Matthias 1995; Sollis 1992; Uphoff 1992 etc.).

The Japanese government identified the advantages of channelling aid through the non-government sector as their ability to:

- implement development aid projects directly at grass-roots level;
- provide a fine-tuned response by means of small-scale projects; and
- provide assistance at relatively low cost.

(Randel and German, 1993:xii)

Green and Matthias introduce their paper on the role of NGOs in the health sector, by saying that in some quarters NGOs are *"... regarded, among other things, as being more efficient and accountable than many developing-country governments."* Advantages stated by Fowler (1991) are that NGOs are flexible and have an integrated, bottom up approach to development.

In the context of advocacy concerning the international marketplace and the global ecosystem, NGOs working in development are an essential link between the rural and urban poor in the

south and the affluent north. NGOs have a distinct role to play in mobilising public awareness and influencing policy in the north and in the affluent segments of southern society.

In contrast to these advantages, a critique of the role of NGOs in the water sector by Abrams (1995) suggest the following potential shortcomings:

- the assumption that they necessarily hold the moral high ground;
- an assumption that they represent grass-root perspectives;
- indiscipline in administration;
- unprofessional general approach;
- inability to change with changing circumstances;
- inability to overcome ingrained negativism about all things governmental and official;
- inability and reluctance to compete; [4]
- inadequate or simplistic critiques of the economic, political and social influences in society.

Some cynical commentators see the "discovery" of NGOs as simply the neat coincidence of the exposure of the previous failures of the development process with the growth of the New Right ideology of "rolling back" the state.

3. Context within which NGOs work

3.1 Structural Context

The changing economic climate since the early 1980s has combined with extensive structural adjustment programmes to recast national macro-economic policies. This has resulted in a political vacuum in which the state is no longer capable or even feels responsible for providing services to the public. This is seen in schools without books, benches or teachers, hospitals without drugs, syringes or doctors and water schemes without pumps, diesel or maintenance workers.

It is in this context that NGOs are now seen as the players who will fill the gap : the "gap" in public services which, to quote Devine (1996), is *"a cosy way of describing what for some countries has become a massive hole!"*

During the 1980s, along with the changing economic climate and the structural adjustment packages, the New Right ideology also arrived which believed in the efficiency of the market and its moral superiority over government bureaucracies. With donor countries engaged domestically in privatisation programmes and their evangelistic conviction of the power of the market, the competitive private sector is seen now as the best method for delivering development. This is the wider context within which NGOs must see their actions, irrespective of any individual ideology, dedication and commitment, however strongly held or genuinely felt.

The increased interest in funding through NGOs thus appears as simply the contracting out of the normally state provided services. Sollis (1992:174) comments that now this potential focus on NGOs is a reality, NGOs must prepare and determine the "when, why, how and what" of the engagement if they are to avoid being no more than simply the implementing agencies of the official aid agenda.

3.2 Ideological Context

The ideology of NGOs appears to have changed over the past few decades. In the context of water supply we could identify the following evolution:

From:	relief and welfare	*To:*	development
	short term		long term
	water supply alone		integrated water, sanitation and health education
	beneficiaries		owners / clients
	voluntarism		professionalism
	inappropriate technology		appropriate technology choice
	system installation alone		operation and maintenance
	construction alone		training and capacity building
	construction by outsiders		local employment priorities
	instinctive		strategic

(after Gibson, 1993)

But are NGOs actually still a force for social change that will promote the meaningful participation and representation of the powerless? (Devine, 1996:13) NGOs are clearly and solidly within the social structure both south and north and far from immune to the dynamics of the inherent power struggles (White, 1992; Uphoff, 1992).

When we see NGOs as the flavour of the month, as they clearly are, we must look closely to see whether and to what extent the existing unequal power structures are being challenged. If the power structures are not being challenged, then NGOs are simply being used to implement a pre-existing agenda, and are being exploited for their comparative advantage and efficiency.

The current vocabulary of development : *"participation, empowerment and mobilisation"* is as firmly part of the World Bank's language when promoting and empowering civil society and reducing the power of the state, as it is of the NGOs' language in promoting and empowering the poor and marginalised to reduce the power of the elites. We should examine more closely the use of similar vocabulary by such different agencies and we should ask whether it is:

(i) a process *"whereby the approach and methods of the NGOs are now influencing the activities and perceptions of donors and official aid programmes, in some cases as a direct result of donors seeking out NGO ideas"* (ODI 1995:4)

or else that:

(ii) NGOs are being co-opted and formalised within the official aid strategies, limiting their room for manoeuvre and confining them to the role of service agents within an official aid agenda?

A pessimist could indeed claim that the NGO vocabulary is being hi-jacked[5] and their contacts, ideology and energy used to implement a development agenda that does little to promote social change. An optimist, on the other hand, would claim a major success for the NGO sector over the past two decades in influencing the programmes of much larger players on the development scene.

3.3 National Context

The characteristics of any country's NGO sector have developed as part of the colonial, religious and political history of the country. Gandhian self-help groups, mission based service-delivery organisations, politically aware mobilisation emerging from colonial independence struggles : each country has developed its own peculiar constituency of NGOs with a distinct relationship to the government and specific regulatory conditions. Relations between NGOs and government are further discussed in Section 4.1.

3.4 Financial Context

As indicated above, many aid agencies, both bilateral and multilateral are increasingly channelling resources through NGOs and encouraging local governments to do likewise. This is as clear a trend in water as in any sector and is one of the most telling indicators of the change in official attitudes to NGOs.

From 1970 to 1992, the total amount of official aid going through northern NGOs increased in real terms at twice the rate of increase of official aid. Such a global figure, although showing a clear trend, conceals wide variation: funding of NGOs by UK aid, for example, increased by nearly 400% from 1983 to 1993 (Randel and German, 1993).

Although the data is notoriously difficult to extract, published OECD information suggest that on aggregate about 5% of all official aid is now channelled through NGOs (ODI, 1995:1). Looking at the trend from the other perspective we can see that the percentage of total NGO funding from official sources has risen from about 1.5% in 1970 to a present figure of around 30% (ibid:1). In the north, this again conceals a wide variation with NGOs in some donor countries such as Sweden and Belgium receiving over 80% of their funds from official sources while in the UK it stands at around 10% (ibid:2).

The support to NGOs takes two forms. Firstly there is the selection and funding of projects submitted by the NGOs to official donors. Clearly many donors have explicit policies and NGOs tailor their programmes, or at least as a minimum select the projects for submission, to fit these policies. Anything less than this would be a pointless waste of staff time. The second form of funding through NGOs is where official agencies sub-contract NGOs, both northern and southern, to implement the donor's own projects.

Donor funding through NGOs has naturally received a mixed reception by national governments ranging from open hostility to sullen acceptance. The latter is particularly understandable where NGO projects have not been integrated with particular line ministry programmes (ODI, 1995:3).

There is concern among NGOs at the growth of official donor support to the extent that some radical social action NGOs maintain a stern refusal to accept official foreign aid. The concern has two aspects : firstly, that the official aid agenda and approach is qualitatively different from and potentially at odds with that of NGOs and, secondly, a feeling that dependence on official aid would threaten NGO integrity. This ideological stance however is deemed by most, in the face of growing funding constraints, to be an extravagance. Some northern NGOs maintain a theoretical independence with a careful paper-based sleight of hand whereby projects are fully funding by the NGO's own resources before applying for official support. This convinces none except the particularly gullible, as the overall budget allocations become increasingly dependent on official support.

An article entitled "reaching the poor", sums up the rather worrying attitudes which result from this change in aid flows with the assertion that:

> *"If we are not quick to both evolve the capacity to absorb larger amounts of money and scale up our programmes and develop new methods to prove our effectiveness, fashions will change again, and we will have missed the boat."*
>
> (Young, 1995:1)

3.5 Physical Context

The water resources of a country have a significant impact on the mode of development of water supply. Situations where small, discrete investments allow families to develop self-standing low running cost supplies have brought significant private sector involvement into water supply. Examples of this would be shallow tube well development in Bangladesh or small gravity water schemes for richer villagers in Nepal. In situations like this, small non-technical NGOs often use water supply as a very flexible entry point for community development.

As the required investment gets larger, the inequality between the "haves" and the "have nots" also becomes clearer and non-specialist NGOs still tackle water supply (deep tubewells, hand dug open wells, larger gravity flow schemes etc.). It is maybe here that the technical NGOs start to criticise the technology choice and implementation methods of these agencies and the consequent sustainability of the projects.

As water resources become more constrained, depths get greater, distances to water sources larger, the technicalities more complex and running costs higher, specialist agencies believe they come into their own.

It is vital however to realise that this technical analysis of water resources lacks the parallel socio-political analysis. As resources become scarcer, ownership and power relations become more important. The simplest example of this is that when the cost of supply increases, the problems of cost recovery, financial management and sustainability also increase. As projects become larger to exploit potential economies of scale in supplying water, management complexity of both construction and operation multiply exponentially. The same phenomenon of increased socio-political constraints can be seen in urban slums around the world where, with increasing resource scarcity, illegal connections, powerful black marketeers and general social insecurity are common. In semi-arid lands such as Somalia, water has become a major motive of conflict and in South Africa and Palestine, solutions to the issue of water rights are still awaited and promise to cause more conflict. With the increasing water demands and decreasing water resources, these foci of conflict can only increase.

Thus, although as water supply becomes more technically challenging with increasing scarcity, it also requires a better social and political analysis. Agencies in the field are beginning to realise this parallel requirement but unfortunately they are learning most frequently by their mistakes.

4. Developing a National Policy Framework

4.1 Relations between NGOs and Government

This issue, like many touched on in Sections 2 and 3 of this paper, is very country specific. State policy towards NGOs varies from complete indifference to repressive prohibition, with all shades of regulation in between. Green and Matthias (1995:317), in their study of the role of NGOs in the health sector, concluded that most *"NGOs do want a clear framework within which to operate, with clear explicit ground rules."* They report that most NGOs believe that some form of regulation will ensure that government at least acknowledges possible roles for NGOs and that NGOs will realise that their own house is not always in perfect order.

Abrams (1995) and White (1991) both recognise that even if senior government officials or politicians establish an enlightened policy towards NGOs, this policy will not necessarily result

in cooperation throughout government departments. The reaction of individual civil servants and politicians may range from being:

- supportive, especially where these staff have themselves worked in NGOs previously;
- supportive conceptually but lacking any understanding of how NGOs operate;
- disinterested;
- antagonistic.

Hence it is important to realise that the practice may be at variance with the stated government policy.

4.2 Relations within the NGO Sector

As outlined in Section 2.1 it is vital to explore the variety which makes up the NGO sector. The NGO sector is also often riven with bad feeling, competitiveness and jealousy. Ideological differences and size are perhaps the most divisive factors which frustrate cooperation.

There is no inherent problem in the diversity between NGOs and it is indeed often cited as one of the sector's key strengths. Fowler (1992:7) suggests that *"the challenge is to identify and collaborate with others who are sufficiently like-minded to allow both (a) mutual support and learning to improve practices and (b) the exploitation of complementarity."* In the water sector this is not difficult to imagine, and in fact occurs in several countries : Cambodia, Nepal, Bangladesh to name but a few.

"Like-minded", however, is not necessarily restricted to the water sector and the more significant challenge is to build constructive relations with NGOs and NGO staff of other sectors for the future. As suggested in Section 3.5, if resources are depleted and disputed, water sector NGOs[6] will require and profit from liaisons with agencies who have previously fought for equality of other resources such as land, employment and women's rights. Within multi-sectoral NGOs, where water projects are just some of the interventions among many, cooperation, communication and integration of staff working in water projects with those working in other fields is essential.

In the urban sector, water NGOs are often new arrivals. We must now make the linkages and learn from the social development and social action NGOs that have often been working much longer in these areas. When new opportunities arrive and funding seems plentiful, it is easy to forget the lesson that it took the International Decade to teach us in the rural areas : technology is the least of the problems. While these social development NGOs are realising that the rural technology is inappropriate in urban slums, we also must realise that we need to learn new skills to deal with the social, political and economic aspects of urban slums.

In building relations between northern and southern NGOs, Fowler (1992:7) suggests building on respective strengths and positions within the global power structure. His analysis of what this would mean is that we will probably see operational development work and local policy advocacy being undertaken by southern NGOs, while northern agencies will provide:

> *" a) greater professionalism in providing institutional support to southern NGOs and their activities;*
> *b) greater development education work;*
> *c) linking northern people's organisations to those of the south;*
> *d) concentrating on policy development and lobbying directed at influencing official aid agencies and international economic bodies located in the north."*
>
> Fowler (1992:7)

This statement, I suggest, should stand as a warning to this conference. It directly falls into the trap that we must avoid - coming up with a general recipe based on the assumption that we know best and are also more influential. If we are saying that we must develop inter-agency cooperation and dialogue within the sector then this is exactly what we should do and not feel good about suggesting it while in advance determining the outcome. There are southern NGOs who are more professional, more committed, more experienced and more influential than those in the north.

4.3 Establishing a Policy Framework [7]

Analysis is fine but it is instructive to suggest practical steps that could be taken to develop a policy framework for the water sector. This strategy builds on the assumption that NGOs do have a role in the water sector while governments have the responsibility. The policy development process which is outlined below is in three parts:

Part I	:	Preparatory work
Part II	:	Developing the policy framework
Part III	:	Developing the policy tools

Readers will recognise countries where some of the recommendations have been undertaken, countries where they would be impossible and countries where NGOs are indeed in negotiation with the government to proceed along such lines.

An individual NGO may recognise the need for a national water policy but see no way in which to initiate or influence the process. Each national context is different, but it is clear that if NGOs want to have any influence on national water policy then they must somehow coordinate action among themselves and with government to press for it.

Developing such a policy is a major undertaking and requires resourcing both financially and in terms of skills and sympathetic staff. Donors should take note of the financing and capacity requirements for developing such a policy framework. They should also realise the potential folly of duplicating the privatisation so popular in their home countries without the necessary regulatory framework. This can only be a recipe for long term disaster.

The increasing strain on water resources, the reduced resources available to governments and the increasing interest in NGOs, are all strong incentives for governments to work with NGOs to develop a policy framework with the overall objective of protecting and improving the lives of the population. The following outline process is suggested as a way forward.

I a. Defining and surveying the NGO water sector
Many governments are yet to distinguish the NGO sector in their policy discussions concerning water. It is also essential for the NGOs themselves to review their corporate identity and channels of communication. The size and diversity of the sector is often unknown. It is essential for a policy framework to have this baseline information.

I b. Assessment of roles
To carry out any analysis, the actors in the water supply, sanitation and public health sector - government, non-government, self-help and private - need to be subdivided into groupings either by their principle roles (eg project implementation, health and hygiene education, training etc.) or geographically.

I c. Assessment of strengths and weaknesses
Before allocating roles and responsibilities the strengths and weaknesses must be assessed.

The comparison may be relative to the private sector, to public provision, or relative to the fundamental requirements of the sector. This assessment should be carried out by both the government and the NGOs themselves and should cover all the actors identified in I b.

I d. Identification and analysis of policies
Identify existing policies in the sector: both government and NGO policies. This should include such things as level of service, cost recovery, role of private sector etc. Government policies should also be examined which enhance or inhibit the roles of NGOs. Again this should be carried out by both government and NGOs.

I e. Collating present knowledge of the water sector.
This would build up data on water supply, sanitation and water resources. It should be carried out from many directions : central, district and local government, city corporations and municipal authorities, NGOs centrally and through local projects, UN agencies, private companies, foreign consultants and academia. There are major funding requirements for this study and donors should be persuaded by both government and NGOs, to support this vital requirement. If at all possible systems should be put in place that will continuously update the data. Appropriate technology must be employed with a wariness of the dangerous sense of truth which systems such as GIS encourage.

I f. Examining the role of co-ordinating bodies
Coordination will be vital but the specific role of coordinating bodies must be carefully examined and agreed by government, NGO coordinating bodies and by the NGOs themselves.

II. Developing the policy framework
The information from Part I, above, will now allow development of new policies for the water sector and particularly for NGOs in that sector. This will require dialogue and NGOs must ensure they maintain their flexibility and are not designated simply as contractors to the government.

Examples of policies may be, among others:

- cooperation on planning and resource allocation to reduce duplication and competition;
- government support for coordinating bodies;
- water rights laws;
- environmental protection laws;
- legal status of slum dwellers with respect to water services;
- regulatory controls for NGOs;
- increased support for NGOs;
- standardisation of a range of technology choices;
- standard integrated approaches of water, sanitation and health education;
- greater involvement of NGOs in government policy;
- standard training packages.

III. Developing the policy tools
The development of specific policy tools will allow the implementation of the policy. A variety of tools would be available to governments, which include such things as:

- water abstraction licences;
- pollution monitoring and control;
- recurrent grants or subventions;
- capital grants;

- provision of supplies to NGOs;
- tax relief;
- foreign exchange controls;
- registration, reporting and evaluation procedures;
- support to develop and disseminate standard training packages;
- access to government training facilities;
- coordination mechanisms;
- NGO membership of government planning committees and vice versa;
- government membership of NGO evaluation teams and vice versa;
- promotion of agreed national public awareness campaigns;

5. Policy Decisions facing NGOs in the Water Sector

Even if such a process were possible and a national policy framework could be established, there are still some specific challenges to NGOs working in water which they need to address if they are to maintain respectability in the sector. Some of these issues are outlined below to stimulate discussion.

5.1 Technical Excellence

NGOs must attempt to share and develop their technical competence across the board. Technology selection, installation, operation and maintenance is just one aspect. All the other technical and social issues outlined during this conference must be explored and developed. Project budgets must include funding for both evaluation and dissemination of findings, and donors should both expect and support this. Inter-project visits should be encouraged within and without the NGO sector to enhance agency competence.

5.2 Evaluating Performance

Fundamental to the above, evaluation procedures must be further developed. Improved indicators of sustainability, acceptability and affordability in the long term are required. In addition to other more standard evaluation procedures, assessments are required of the impact on poor and marginalised groups, the environment and on the community management structures. Project evaluations five or even ten years after construction should be considered as unanticipated lessons may emerge only in the longer term.

5.3 Gender Issues

NGOs in the water sector now agree shrewdly to gender demands. As a policy matter they should also look at their own internal institutional gender relations. Certainly technically focused NGOs or technical departments with NGOs tend to be male dominated for reasons that we all recognise but should not necessarily accept.

Advertisements, interviews and appointments procedures require checking for unnecessary blocks to women applicants. In addition to the now ubiquitous gender training, observation and action is required to tackle the prejudiced staff who actively undermine women's positions. Practical action may be required at field level which might include such things as : payment for child care or other expenses; provision of secure, acceptable accommodation for women field staff in the village; where women's mobility is problematic, consideration of alternative means of transport. Donors must expect the additional costs these would incur and indeed demand to know why they are not included.

5.4 Process verses Delivery

It is a truism of development that pressure to implement projects and deliver the finished product reduces the ability to promote engagement. As direct funding of NGOs increases, both southern and northern NGOs are moving into more formal project implementation procedures and tending to take on the conservative habit of contractors.

NGOs should clearly identify when the risk of being judged by quantity rather than quality is approaching and attempt to avoid being drawn into this through a lack of financial independence.

5.5 Equity and Challenging the Existing Power Structures

Following on from this pressure to perform, it is another truth of development that implementation proceeds faster by accommodation with the existing power structures. The ideology of NGOs to promote equity in the face of unequal power relations is rarely challenged when water supply interventions add to the resources available. Everyone apparently gets more. Where or when the resources are scarce, the story changes.

If NGOs occupy "space" where elites have little or no interest, NGOs or other civil actors will be allowed to operate, expand and indeed may receive significant cooperation. If however NGOs strategies attempt to occupy the "space" where political elites have interests, then there will be conflict (Devine, 1996).

An example of this is in the urban context:

Bendahmane (1994), in her study of water services for the urban poor, identified that many of the problems of water and sanitation came back to the issues of the lack of legal tenure for the slum and squatter settlers. She also comments that in the vast majority of cases, however, the water and sanitation professionals ignored this issue and did not recognise that a legal approach establishing security or legal recognition of status would overcome one of the biggest barriers to water and sanitation provision in urban areas.

"This neglect of a potentially effective approach can be partly explained partly by the lack of legal expertise among water and sanitation workers, and partly by the fact that their experience is mainly on the local level, with relatively short-term technology driven interventions."

Water sector NGOs are relatively inexperienced in such conflict and the associated strategies, tactics and implications. Water NGOs need to build alliances with social action and social development NGOs to whom challenging existing power relations is unavoidable.

5.6 Maintaining their Comparative Advantage

A new catch phrase in water supply is "demand-led". Superficially it sounds laudable because it should:

(a) respond to people's needs;
(b) be requested by beneficiary groups;
(c) avoid political patronage.

"Demand led" programmes aim to develop simple channels for efficient delivery. They can however only be described as poverty focused if someone is facilitating entry to these channels for the poor.

The South African Reconstruction and Development Programme, RDP, is one such "demand-led" system. Applications for water supply must come from the villagers, facilitated by consultants. The marginalised, the poorest and the most remote have little chance to knock on this, albeit open, door.

World Bank Social Investment Funds [8] are very clearly to be "demand led". In many countries they are to relieve the impact of structural adjustment programmes or as in the case of Cambodia, described below, focusing on relieving the impact of the war. Sollis (1992) and Whitehead (1995) write to warn NGOs of the problematic roles that they are being offered in such programmes and in water supply such funds will rapidly un-learn the lessons of the Decade.

The Social Fund of the Kingdom of Cambodia, SFKC, was established by royal decree in 1994, funded by the World Bank as a fund specifically targeted, to quote from the promotional literature, *"to improve the living conditions of the poor through speedy investments in social and economic infrastructures, social services and productive services."* It is to be administered by an independent agency, set up by the World Bank. Primary schools and water supply are the stated first priority projects.

To get a new well, the village must apply for a grant to the SFKC, on a specific "APPLICATION FORM FOR WELLS" which, in addition to questions such as:

Total population of the village ..... Total number of families .....

also asks: Type of well requested (choose only one type):
Hand Dug Well Drilled Well Dug/Drilled well
Are you willing to participate in the maintenance of these wells?

It also asks for three quotations from drilling contractors which is presumably to determine how much funding is required. The whole approach of the Social Fund appears to be based on the concept that villagers require only financial assistance to improve their living conditions. This has proved invalid in the case of drinking water in Cambodia, as it has all over the developing world. A concerted, coordinated, experienced approach to planning, community organisation, design, hygiene education and community motivation for maintenance is essential if more that a small fraction of the potential benefits from investment in village water supply are to be realised.

NGOs will only be able to call attention to structural inadequacies which exclude the poor and blow the whistle on potential misuse of valuable development resources, if they maintain their financial and institutional independence and their ability to look at the whole picture and challenge the bigger players.

6. Conclusions

One of the swings of the development pendulum over the past 20 years has brought NGOs from small bit players on the development scene, to fashionable darlings of official aid and ideology. This paper has argued that, with this unprecedented attention and associated increased funding, NGOs must attempt to exploit the opportunities without losing their distinctive role.

In the water sector, working with governments to improve the policy framework and allocate roles and responsibilities clearly between government and the other actors, is the only way to ensure responsible action and long term regulation in the sector.

As flavour of the month, we should ensure that NGOs continue to challenge the power structures that maintain inequity. If this does not happen NGOs' energy, commitment and enthusiasm will be co-opted and formalised within the official aid strategies, limiting their room for manoeuvre and confining them to the role of service agents within an official aid agenda.

If the threat appears melodramatic then readers should reflect on the NGOs' own vocabulary of development : "participation, empowerment and mobilisation" and how it has been hi-jacked and devalued by misuse. It is easy to see how, similarly, NGO contacts, ideology and energy are gradually being co-opted to implement a development agenda that does little to promote social change.

If, on the other hand, the power structures are indeed being challenged, perhaps we are seeing, even in the water sector, NGOs developing influence, leading change and affecting the development process.

Notes

[1] Readers are requested to excuse the use of "north" and "south" to indicate advanced industrialised countries and less developed countries respectively. This short hand is not intended to exclude or misrepresent former Soviet States, Eastern Europe or Australia.

[2] This is not to be confused with the alternative categorisation when NGOs themselves are termed the "third sector" (for example Fowler, 1991, among others).

[3] Interestingly it is often required that NGOs continually reiterated this moral agenda in funding proposals which demand statements on who and how people will benefit.

[4] Perhaps questionable when resources are scarce.

[5] Devine (1996:7) brings to our attention how previously radical or alternative development discourses such as "empowerment" or "participation" are now often described as being vague or meaningless. He predicts the sanitization and de-politicisation of NGO discourse to the extent that it loses any analytical value.

[6] Throughout this paper, references to "water sector NGOs" or "water NGOs" generally apply just as aptly to water projects or water staff within multi-sectoral NGOs. It is common to find technical staff operating in isolation within an NGO.

[7] This approach is developed from the work of Green and Matthias, 1995, Where do NGOs fit in? Developing a policy framework for the health sector".

[8] For example the Emergency Social Fund in Bolivia, the Social Investment Fund in Guatemala and the Social Development Fund in Peru.

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NGOs' Involvement in International Networks and Events and in Advocacy

Jon Lane, Director of WaterAid

NGOs' Involvement in International Networks and Events

Other organisations (UN, bilateral) have historically dominated the water sector. They now say the right things, but often don't do them. They can be remote from the actual work. Hence, there is a valuable role for NGOs:

- giving alternative perspectives;
- putting ideas into practice; and
- linking to actual people and fieldwork.

How to be involved?

The arrangement of international events militates against NGOs and other small organisations, but slowly the atmosphere is changing. Sometimes it is difficult to identify the important networks/events to attend. The water and sanitation sub-sector is well organised, e.g., the Collaborative Council. The irrigation and water resources management sub-sectors are less clearly organised, although the Global Water Partnership is now starting and may become the main relevant forum.

Conclusion

NGOs should be involved in international networks and events in the water sector — just as they already are in other sectors.

Advocacy

Other organisations can change, and are receptive to new ideas. NGOs are well-placed to influence them, because our field work and communication work are closely connected to each other. We can probably help more people through advocacy than through field work. As an example, WaterAid's principles are:

- clear definition of advocacy: to influence other organisations to allocate more resources to the water sector, and to use them in accordance with the principles that we promote;
- advocacy through dialogue, not confrontation;
- advocacy is based on our own field work.

WaterAid's methods of working are:

- identify target organisations;
- identify issues and changes desired;
- plan work (e.g., meetings, publications, visits), according to resources;
- monitor and hence adapt plans.

Conclusion

NGOs should be doing advocacy, to demonstrate our equity with the larger organisations which have to be involved on the public stage. If we retreat and remain project-focussed, we can be ignored.

Report on Session 2: Policy Issues

Ian Smout

Presentations

The paper on *Policy Issues for NGOs in the Water Sector* (reprinted above) had been prepared by Alison Barrett. Unfortunately she could not attend the workshop, and the paper was presented by Paul Sherlock of Oxfam, following closely the author's text.

This was supplemented by Jon Lane of WaterAid who spoke on international networking and advocacy, recommending NGOs to take these seriously, and to draw on their field experience and close links with poor communities to influence the policy of influential bodies such as the Collaborative Council and the new Global Water Partnership. The main points from his presentation are shown on the previous page.

Discussions

The discussion groups were asked to focus on the most important policy issues for NGOs. The report below was prepared by compiling and editing the separate reports from the discussion groups and the plenary session.

In this session the discussion seems to have covered rather different ground in each group, reflecting the wide range of priorities among the participants.

Roles
Discussion generally favoured the NGO working as a facilitator, with local partner organisations. It was noted however that with governments stressing regulation, effective service provision depended on the emergence of strong local organisations.

According to one group, there is often a withdrawal of responsibility for service provision by government, leaving a vacuum which NGOs both international and national need to fill[1]. Thus international NGOs will continue to provide services related to technical know-how, project management and capacity-building. This has to be coupled to national NGOs and community-based organisations which are able to provide information on existing practice and know-how. This relates to the point made by a different group that NGOs need to understand the national and local government frameworks in designing projects for sustainability.

One group recommended that NGOs adopt both "bottom-up" and "top-down" approaches, empowering local people to organise themselves, within the capacity for physical infrastructure. It also saw a need for NGOs to work in collaboration with others, to meet people's expressed needs, so that for example if the NGO can assist with water supply and sanitation, but the community wants agricultural development, the NGO can link it with another NGO with the neces-

sary experience and personnel. Furthermore the NGO should work towards building structures in-country to continue and sustain the work. Education and long-term institution building were seen as key NGO roles.

The role of academic/research institutions was considered by another group, which identified a weakness in the relationship between NGOs and researchers. NGOs were not making use of the available research material, which could help with the technical components of projects. The group suggested that NGOs invest more staff time in this area and make better use of the GARNET[2] network, and that donors support this with research funding on water-related issues.

Advocacy
The group which focused on emergency work felt that there were no inherent contradictions between the implementation and advocacy roles of NGOs, and that the same organisations could, indeed should, do both; since implementation experience lends credibility to the advocacy role. Nonetheless implementation should emphasise less the contracted service delivery aspect than the facilitation of water resource development in the field; whilst advocacy should emphasise the presentation of facts and experience, both in recipient countries and on a wider international platform, to encourage change.

One of the discussion groups stressed that in addition to ensuring that services are provided, NGOs have an important role in influencing national policy. This means that NGOs need clear policy objectives and means by which these messages can be transmitted at all levels. It is important that information transfer between local and international NGOs is effective to ensure that clear, and widely-supported messages are relayed to regional / national policy-makers and to donors. Advocacy is a long term activity and is usually best achieved through the establishment of a long-term relationship with national government and donors. The group emphasised however that the activities related to advocacy and capacity-building should not detract from the need to provide services.

Donor influence
Concern was expressed in one group that NGOs were losing their independence by having to be more accountable to donors. This was evident not only from financial requirements but at times from the types of intervention/projects which donors would support. These requirements sometimes impinged on the responsibilities NGOs had towards the communities with which they were working, when donor policy was different to the wants or needs expressed by local groups.

Target groups
One group stressed the need for effective dialogue in every stage of the project with the beneficiaries and especially the disadvantaged groups. Another group discussed the issue of equity versus power structures, including gender, noting that most NGOs focus on poverty and gender in their programmes. The role of women on water user committees and the risk that it is merely tokenism was examined. The question was raised of how to exploit rather than challenge existing power structures, without real conclusion except that there are no easy answers.

Urban
NGO work in the urban water sector was considered in one group. Some participants felt that NGOs lacked experience in this sector, but others commented that the urban area was too complex to work in and that they preferred to concentrate on empowering people to demand the essential services from the local government. Thus, in many cases the city NGOs were seen to be far more political than their rural counterparts.

Project Management
The following points were made in the group which focused on emergencies, but seem to have wider application:

a *Establishing a Policy Framework – Constraints.* Large bilaterally-funded rural development projects, in spite of their multi-sectoral objectives, have often failed to live up to expectations precisely because of the breadth of their objectives. The group felt that it was important that NGOs working in the water sector do not lose sight of the need to treat water as a national resource of vital economic and thus political importance. Any project involving water will be complicated by the conflicting requirements for this resource which cut across departmental or ministerial boundaries of health, agriculture, industry, environment and the law. All these different interests constrain NGOs' freedom of action in planning and implementing projects using water resources.

b *Pre-Project Appraisal.* External factors such as those above naturally affect the appraisal of proposed projects. Even though these factors may only be expressed in qualitative terms, they must be incorporated into a full planning process, working from the 'bottom up'. This is the only way to improve NGO performance during implementation, and more important; to ensure that the project remains relevant and fully operational after the NGO staff have left. Risk of failure is reduced by an effective and unhurried project definition, and NGOs must be prepared to devote time and resources to this process, just as donors must be educated to expect it, and build these costs into project funding from the start. When the pace of a project is dictated either by the NGO's or donor's desire for results, rather than reflecting the beneficiaries' needs; this mitigates against the wider long-term success of the project.

c *Post-Project Evaluation.* Post-project evaluation is as important and must be as thorough as pre-project design. Many of the results will be qualitative rather than quantitive, but often they will contain more usable information than comparisons of cost-effectiveness, even if this is possible. NGOs must therefore strive to be conscientious in the production of reports, and to be honest in their self-scrutiny, with the corollary that donors must not penalise failure due to inexperience (as opposed to incompetence) by withholding funds, or NGOs will be discouraged from innovation, which necessarily involves the risk of failure.

[1] Another group stressed that government was still the largest spender on water supply.

[2] GARNET is the Global Applied Research Network for water supply and sanitation and can be accessed through WEDC at http://info.lboro.ac.uk/departments/cv/wedc/garnet/grntover.html

Report on Session 3: Recommendations

Ian Smout

There were no papers prepared for this session. It started with group discussion of Next Steps, in which participants were asked to identify the Next Steps which needed to be taken by donors, research institutions, and NGOs individually or collectively. The plenary session included responses from a panel (Shala Kaussari, Jon Lane, Nick Dyer and Ian Smout) and the chair (John Hodges), and a final Workshop Summary by Alistair Wray, (page 99) after which the workshop was closed.

This section comprises a summary of the reports from the discussion groups and the plenary session, followed by the Workshop Summary.

Discussion

The general emphasis in all the discussions was on more communication and collaboration between all parties in order to strengthen partnerships and improve project performance in specific ways as detailed in the following paragraphs. The report is introduced with three recommendations which appear to be generally representative of the discussions in the various groups, though they were produced by the group focusing on emergency work. These are followed by summaries of points made in all the groups.

a The emphasis throughout the discussions was on more thorough consultation and design in advance of projects, and more appropriate and usable evaluation post-project. Any lessons must be truly learned, through regular and specific project management training for relevant staff. This will require additional resourcing, or perhaps internal reprioritisation of existing resources.

b Externally the lessons learned, particularly those drawn from failures, must be shared with other organisations through a well resourced focal point for information sharing. The establishment of such a focal point may entail the development of an existing system or the creation of a new one, but the emphasis must be on accessibility and the active management of the information, using systematic indexing, to promote its use across the NGO field.

c The basis of this post-project evaluation database could be the ODA “EVSUMS”, but it would also be important to maintain face to face dialogue, through short but periodic (6 monthly?) informal working groups. These would involve 1 or 2 regular attendees from each relevant organisation in the water development sector, both UK NGOs and governmental organisations. The maximum attendance would be about 50, and there would be no prescribed aims, agenda, or programmes, thus the meetings would require the minimum of administrative support and avoid the preparation of unnecessary paperwork. This forum would be the basis of a network for the promotion of best practice across the many disciplines involved in water and sanitation development, and would attempt to match the level of co-ordination that sometimes already exists in the field, usually based on personal relationships.

Sharing experience
There was general agreement of the need to share experience through existing structures, and to consider new methods of dissemination such as the Internet. For example the information contained within ODA's Evaluation Summaries (EVSUMS) was considered to be very useful but not widely known. NGOs also had similar project evaluations which could be useful to others. Ways in which these could be made more easily available were suggested such as publishing a list in the *Waterlines* journal[1] or through GARNET or BOND[2], supported perhaps by establishment of an accessible database and library of relevant reports.

The improvement of information systems was recognised as a joint responsibility, and several discussion groups proposed additional ways to promote this, for example:

- by NGOs paying more attention to documenting and sharing their experiences, preferably through a recognised forum; it was noted however that the reluctance to publicly admit shortcomings would need to be overcome;
- by analysis of material, rather than just collection of data, to provide critical feedback;
- by closer links between NGOs and research groups, possibly through regular workshops.

It was emphasised that this dissemination of lessons learned and best practice should be given a high priority in funding, with an expectation that planners and practitioners should use the reports. Methodologies need developing with simple formats to enable field workers to contribute.

Improved co-operation and NGO co-ordination
There was general agreement that inter-agency co-operation should be improved (bilateral donors as well as NGOs). It was suggested ODA take a lead by encouraging all country programme managers to promote country level/regional level communication.

Greater co-operation should also help mutual understanding. For example:

- donors need to understand NGOs' policies, priorities and agenda, and to realise the resource implications of their requirements;
- NGOs need to appreciate the restrictions under which donors have to operate, and the reasons for policy change;
- consensus is needed on approaches when the output is not easily measurable — like community development.

It was agreed that effective NGO co-ordination was needed at local, national and international levels. Suggestions included inter-NGO co-operation on

- country policy;
- further experience sharing;
- training on water, sanitation and hygiene/water use education;
- linking Southern NGOs among themselves and with the network of Northern NGOs.

BOND was seen as a useful forum for opening up dialogue between NGOs as well as donors. UK and in-country or regional workshops were seen as a means to establish regular contact and exchange of information between agencies working in the water sector, to promote greater collaboration and co-ordination, and to identify other sources of information and support for NGOs. One suggestion was a workshop for southern NGOs associated with the annual WEDC conference.

Aid agency procedures
Discussion considered the problems of converting plans into practice, and highlighted the need for greater flexibility in aid agency procedures. Details are listed below, and seem to have wider applicability beyond the water sector.

- allow funding for project identification and design;
- review programme timeframes and duration and their significance (e.g. long gestation periods are sometimes needed);
- allow matching contributions to include contributions in kind;
- accountancy and audit requirements should relate sensibly to the magnitude of the project, and to the donor's acquired trust of the NGO;
- common accountancy systems are needed;
- allow roll over of funds from one financial year to the next;
- allow adequate funding for evaluation and management.

Additional steps for researchers
Several groups reported that many NGOs are not technically equipped and need technical guidance, suggesting that a resource centre funded by donors could provide answers to NGO queries. In addition NGOs would like to have a directory of water NGOs[3] and a directory of relevant research.

Various groups proposed the following research areas and topics for the water sector:

- cost recovery;
- impact evaluation;
- organisational behaviour;
- the interaction of social and technical issues in practice (the real life context);
- whether participatory processes and attention to inequity (including gender and poverty) lead to sustainability of services;
- the time taken to bring about significant changes.

Additional steps for NGOs
The following points were made in discussion groups:

- NGOs need to understand the roles, strengths and weaknesses of other organisations, and to co-operate effectively with the other organisations;
- NGOs need to become more aware of the national and international water strategies, understanding policies as well as the implementation procedures;
- NGOs should consider increasing the resources they allocate to identifying sources of funding and to accessing the technical expertise available from academic/research institutions;
- NGOs should submit their local data to the appropriate national agency, for use in other development work;
- NGOs need to develop evaluation criteria which reflect water project objectives.

Urban and peri-urban water supply and sanitation
Many participants saw a need and scope for greater NGO activity in urban areas, but noted that different approaches will be required from those developed in rural areas. It was agreed that an NGO workshop on this topic would be a useful way to take this forward. One group proposed that this should be based on urban experiences and cover:

- practicalities and advice;
- priorities;
- types of programmes and approaches needed;
- on-the-ground structures.

[1] *Waterlines* is published by IT Publications.

[2] BOND: British Overseas NGOs for Development.

[3] The list of workshop participants and their organisations (Appendix 1) provides a starting point for this, and BOND also has a list of members with water sector interests.

Workshop Summary

Alistair Wray, Senior Engineering Adviser, ODA

This workshop on *Water and NGOs* is one of a number of initiatives that ODA is promoting to highlight and enhance the efforts being made to provide safe water and sanitation for everyone. Many NGOs are working hard to assist in meeting these basic needs. Meanwhile, donors are encouraging NGOs to do more and governments in many countries are stepping back from direct service provision. This workshop has explored how to strengthen community based approaches and expand the role of non-government organisations working in the sector.

The level of interest in the workshop and the discussions have confirmed the need to explore these issues, learn from past projects and disseminate the lessons, and take actions to improve future efforts. The range of topics addressed was kept wide so as not to preempt the discussions. The circulation of the five papers in advance of the workshop, intensive group discussions and very effective organisation by WEDC has enabled much ground to be covered during the day.

Participants in the workshop included representatives of more than 30 NGOs, both large and small, as well as members of academic and research organisations working in the sector and ODA. The discussions revealed a great deal of common ground between these different groups and a shared willingness to strengthen activities in the sector.

The Future

It is apparent that more needs to be done to exchange information and provide support for field activities, and channels need to be established to facilitate this. It is recognised that a greater involvement in the sector implies that NGOs should consider wider advocacy roles and seek to influence government through closer links. There is a need to ensure that NGO projects fit within national water and sanitation policies and adopt nationally agreed standards. It is also recognised that in many countries this relationship with government is difficult.

It was noted that an emphasis on direct service provision by NGOs can fail to take advantage of their potential to catalyse communities to establish sustainable services. As governments pull back from direct service provision and seek to encourage other organisations to take up these challenges, there are opportunities for NGOs to assist in the building of these new structures while ensuring that the interests of the poorest communities are safeguarded. Furthermore, the increasing scarcity of water in many countries is requiring a more integrated approach to water use, even on relatively small schemes.

These influences suggest a need to look beyond individual projects and for NGOs to seek longer term involvement in particular areas to play a more effective role. The ways in which NGOs are funded often do not facilitate such involvement.

Next Steps

While the above issues were raised during the discussions and will need to be considered in examining the longer term role of NGOs in the sector, the workshop discussions focussed on identification of a number of more immediate issues to be addressed as next steps to strengthen

current NGO water sector inputs. The group discussion reports identify these steps. The key ones may be grouped as follows:

Networking and Systematic Learning

- more effort to document and put NGO experience into the public domain;
- creation of an enabling environment and channels for better dissemination of information (using existing channels where possible);
- greater emphasis on monitoring and evaluation of impact of NGO projects over time;
- better dissemination of project evaluations, including information in forms readily accessible to field workers;
- closer links with researchers to improve the sharing of information, identify needs and build on field experience; the Global Applied Research Network for Water Supply and Sanitation (GARNET) offers opportunities in this respect;
- further research to address issues of:
  - improving health impact
  - cost recovery and willingness-to-pay
  - sanitation including the special needs in low income urban areas
  - appropriate community based structures in urban areas;
- improved access to centres of expertise for guidance and advice; electronic communications offers particular opportunities for improved networking;
- more appropriate training opportunities for NGOs, including guidance on advocacy work;
- sector meetings on specific topics and other opportunities to discuss emerging trends and share recent experiences.

In-country Coordination of Activities

- establish mechanisms to ensure that inter-ngo collaboration is more effective;
- improved inter-agency cooperation, including between donors and strengthened links with government;
- improved access to and sharing of collected data (water resources, technology options, social and economic);
- provision of effective country level training.

NGO-Donor Project Mechanisms

- more realistic donor information requirements, with a balance between the need to know and magnitude of activities;
- donors, including ODA, to acquire a better knowledge of NGOs and vice-versa with actions to make this happen;
- more flexibility in project funding including longer funding timescales which reflect community based approaches and enable programmes of work to be undertaken;
- provision of adequate funds for project identification and preparation activities, including baseline surveys and follow up evaluation activities.

The workshop recognised the need for follow up actions to build on the opportunities created and take forward the various recommendations.

Much information and experience is with NGOs, the UK research centres and donors but channels need to be developed to exchange this knowledge. There was a strong case for further workshops to address specific issues. In order to take forward the ideas on **improved networking and capacity building**, it is proposed that a small working group should be formed to

develop a plan of action. It was noted that BOND could assist in this.The Water Supply and Sanitation Collaborative Council provided opportunities to improve international networking and should be tapped.

Coordination and information exchange also needs to be strengthened at the **country level**. The absence of local NGO and developing countries representatives at the workshop was noted. Similar workshops in countries with a high level of NGO activity in the water sector to explore ways for better coordination, exchange of information and links with government are required. One of two countries should be identified where local initiatives could be started.

It was also noted that a number of the recommendations had implicatiions for ODA funding mechanisms. While some of the issues are specific to the water sector, many are not unique. These recommendations will be fed into the review process that ODA is undertaking of NGO funding and systems.

The workshop closed with recognition of the open exchange of views that had taken place involving a significant cross-section of the UK constituency engaged in community-based water and sanitation work in developing countries and the common desire to learn from and strengthen these activities, and move forward with a concrete programme of actions. Proposals to take action on these recommendations will accompany the workshop report and an update on the latest situation can be obtained from Ian Smout at WEDC.

Appendix 1

List of Participants

Discussion Group A

DERBYSHIRE Helen	ODA
DYER N	ODA
HAMBLYN Vera	The Marlborough Brandt Group
KAUSSARI Shala *(Facilitator)*	Africa Now
MARSHALL Alison	Farm-Africa
OCKELFORD Jeremy	
POWELL Gerry	Rotary
SAYWELL Darren	WEDC
WALLER W R	Christian Engineers in Development
WRIGHT E P *(Notetaker)*	

Discussion Group B

BIRCHMORE Sue	World Vision UK
BUTTERWORTH John	Institute of Hydrology
CLEAVER Frances *(Facilitator)*	DPPC University of Bradford
GRAYBURN James *(Notetaker)*	ODA
HOLLOWAY John M	Christian Engineers in Development
HOWSAM Peter	Silsoe College
O'NEILL Dominic	Environmental Health Overseas
REED Alan	Oxfam
SILVA Luis M L	Skillshare Africa
SMOUT Ian	WEDC

Discussion Group C

BALFOUR Nancy	AMREF
FRANCEYS Richard	WEDC
HERBERT Robin	British Geological Survey
HOWARD Jim	Ex OXFAM
LANE Jon *(Facilitator)*	WaterAid
MACKENZIE Ann-Marie *(Notetaker)*	ODA
MEEKINGS Helen	ODA, Engineering Division
PEARSON Andrew	Busora Trust
PEPPER Andrew	Tear Fund
SKUTCH John	

Discussion Group D

CLARKE Brian	Centre for EHE, University of Surrey
CRAIG Catherine	Concern Universal
GOMME Joe	Self-Employed Consultant
KHAN Sohail *(Notetaker)*	WEDC
MORSE-BROWN J	
NICOL Alan	Save The Children Fund
OSMAN Mohamed A	Relief Association of Somalia
PEACE Gillian	Christian Aid
PEARCE Geoff	Hydraulics Research
VICKERS Piers *(Facilitator)*	ODA

Discussion Group E

CARTER Richard *(Facilitator)*	Silsoe College
DAVIS Jan	Freelance Consultant
HANLEY Teresa	British Red Cross
HIGGINS Charles *(Notetaker)*	ODA
LEEUWENBERG Barend	MSF Holland
NIEDRUM Susanne	CARE
SHERLOCK Paul	Oxfam
SWANN P	ODA
TEBBUTT Melvin	REDR

Discussion Group F

COTTON Andrew *(Facilitator)*	WEDC
DAVIES Jeffrey	British Geological Survey
FRAENKEL Peter	IT Power Ltd.
GOOD Tony	University of Edinburgh
HODGES John W	ODA
MATHER David	WaterAid
PRICE Ivor	The Marlborough Brandt Group
SINGH Mukat	International Task Force for the Rural Poor
TYRREL Sean *(Notetaker)*	Silsoe College
WRAY Alistair	ODA

Discussion Group G

ALLUM Cliff	Skillshare Africa
ASHTON Kate	One World Action
CONNELLY Richard	Steffen Robertson and Kirsten (UK) Ltd.
CROXTON Simon	ITDG
EYNDE Pierre van den	Université Catholique de Louvain
GELPE Sarah	WaterAid
HOWARD Guy	University of Surrey (Robens Institute)
INCE Margaret *(Facilitator)*	WEDC
LANE Robert S	Wells for India
SQUIRES Neil	ODA

Plenary Sessions

BREEN Mary	IT Publications
CAIRNCROSS Sandy	London School of Hygiene and Tropical Medicine
MOFFAT Bill	WEDC
PARR Jeremy	WEDC
PICKFORD John	WEDC
SKINNER Brian	WEDC

Appendix 2

Workshop Programme

09.30	**Session 1: Technical, Management and Social Issues** (Chair: Ian Smout)
09.30	Start/welcome/introduction to the day's programme
09.40	Paper 1: *Overview of NGO involvement in the water sector* Alistair Wray, Engineering Division, ODA
09.50	Paper 2: *ODA synthesis evaluation of rural water projects* Nick Dyer, Evaluation Dept, ODA
10.00	Questions
10.05	Paper 3: *Technical and management issues* Jeremy Ockelford, drawing on experience with Oxfam and WaterAid
10.20	Paper 4: *Social issues* Tony Good, Dept of Social Anthropology, University of Edinburgh
10.35	Questions and points of clarification
11.00	Discussion in Groups (technical and social issues)
12.00	Plenary
13.30	**Session 2: Policy Issues** (Chair: Ian Smout/John Hodges)
13.30	Paper 5: *Policy Issues* Alison Barrett, IIDS, University of Southampton, presented by Paul Sherlock, Oxfam
14.00	Discussion in Groups (policy issues)
15.00	Plenary
15.45	**Session 3: Recommendations** (Chair: John Hodges)
15.45	Group discussion on Next Steps
16.15	Plenary
16.45	Summing Up
17.15	Close