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**SIDA: SWACH EVALUATION**  
**RAJASTHAN: INDIA**  
**FINAL REPORT**

**Centre for Development Studies**  
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**February 1994**



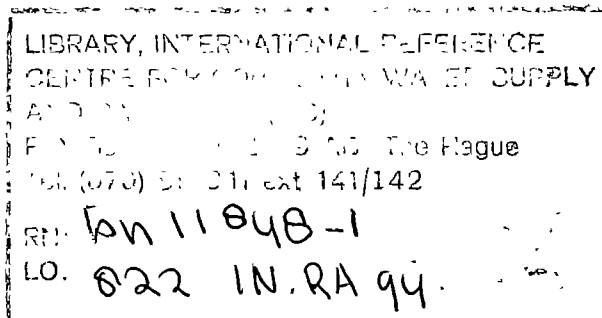
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## EXECUTIVE SUMMARY

- (i) This evaluation of SWACH was conducted between November 1993 and January 1994, in four phases: first briefings with SIDA and UNICEF in Delhi; then meetings with project staff and government officials whose departments have been involved in SWACH, and initial fieldwork by the evaluation team; one month of fieldwork by the local team; and finally report preparation. While in the project area, field visits included the use of participatory rural appraisal and specialised assessment of health issues, gender, and village level functionaries.
- (ii) SWACH, can be broadly described as a rural water supply and sanitation project. However this description does not convey the breadth and multifaceted nature of the project. At its inception in 1986 the first Plan of Action described an 'integrated Guineaworm control, rural water supply, health education and environmental sanitation project (IGEP)' that would be implemented in Banswara and Dungarpur, the two southernmost districts of Rajasthan.
- (iii) The project's objectives were to improve the supply of safe drinking water by upgrading stepwells, installing handpumps especially in areas with scarcity of potable water, upgrading the operation and maintenance of these water sources, establishing a process of continuous health education, reducing the incidence of Guineaworm infestation through improved domestic and environmental sanitation.
- (iv) The initial strategies for attaining these objectives were to be built upon active participation and consent of the community, especially the women, to integrate interventions provided through separate organisations, and to build the skills and organisational capacity of both the project and the participating agencies. Contact between villages and the project was to be initiated through Village Contact Drives, which were intensive campaigns run by teams of five persons to promote awareness of water, sanitation and "naru," the worm. The core person at village level was to be a woman, who would be trained as the social animator, an agent for change in her community. Prevention of infection was to be promoted through use of a double filter cloth which would screen out cyclops. Residents of villages with Guineaworm cases would be targeted for health education messages about how to prevent the spread of the disease. Those who were already infected by the parasite would be treated at medical camps by ayurved practitioners trained in extracting Guineaworm.
- (v) Sanctioned posts were created and project staff were deputed from Departments of Agriculture, Education, and Public Health Engineering. The project director is appointed from the cadre of IAS officers. Until 1992 a Project Advisor appointed by UNICEF was resident in Udaipur working at the project headquarters, but since then the donor's technical staff have been based in Jaipur. Chapter 2 discusses issues relating to the project's organisation and objectives.

- (vi) The Plans of Action contained targets for construction work and installation of handpumps, and the amount of training that would be needed to prepare the village teams and animators. The project developed a comprehensive reporting system for monitoring quantitative outputs; the achievement of targets is discussed in Chapter 3.
- (vii) The funding for SWACH was 60% from UNICEF and 40% from Government of Rajasthan (GOR). The first stage of the project in Banswara and Dungarpur was budgeted at Rupees 120 million from 1986 to 1990. In 1988 SWACH extended into Udaipur District with funding of Rs 180 million for 1987 to 1992, with the same proportions provided by UNICEF and GOR. In both cases, SIDA funded UNICEF's share as supplementary funds, and GOR funding was through the Tribal Area Development Department. These arrangements gave the project the flexibility to carry over unspent funds into the next financial year. A second extension of SWACH was negotiated in 1992 and funding is agreed to 1995.
- (viii) In pursuing its objectives the project has used a variety of approaches which have received different emphasis at different times. A highly refined combination of strategies for locating cases at the pre-emergent phase and for extracting the worm before it releases its larvae has led to a concentration of these resources in areas with Guineaworm. Chapter 5 traces the shifting focus of activity.
- (ix) Investment in providing safe water (drilling boreholes, installing handpumps, converting stepwells and other construction work) has absorbed 70-80% of project costs. Guineaworm will almost certainly be eradicated in the project area by the target date of 1995. During the pursuit of this single objective other waterborne diseases seem to have been ignored.
- (x) The remaining chapters explore the development of human resources undertaken by the project (Chapter 7), issues of gender including women handpump mechanics and women's groups (Chapter 8), the development of a contract culture (Chapter 9), and the use of social marketing in mobilising the community (Chapter 10). The final chapter presents findings from the participatory rural appraisal conducted by the local team in December 1993.

## KEY FINDINGS

- (xi) As a Guineaworm eradication project, there can be no question of SWACH's success. An innovative combination of interventions has set the stage for complete eradication of Guineaworm in the project area before the completion of project funding. (6.1-6.53)
- (xii) SWACH's record as a generic water and sanitation project is more mixed, though major improvements in access to handpump water has been a benefit of considerable value to people in the project area. (6.36-6.41; 5.1-5.31; 8.49-8.53; 10.27-10.35)
- (xiii) The innovative organisational structure and the deployment of an IAS officer as Director has been effective in ensuring that resources are adequately marshalled and insulated from overt political influence. (2.1-2.58; 3.1-3.26)
- (xiv) SWACH appears to have set precedents in effectiveness for a government organisation. NGOs consulted in Udaipur viewed the project as quite unlike any other government programme, and welcomed it as a demonstration of a new capacity for effectiveness and professionalism. (9.14-9.15)
- (xv) Inter-departmental integration has in the main been successful with the exception of cooperation with the Medical Health and Family Welfare Department. (2.12-2.39; 6.21-6.35)
- (xvi) The extent of project energy focused on Guineaworm eradication has meant the loss of opportunities for tackling other urgent health problems, particularly other water-borne diseases. (6.36-6.41)
- (xvii) From the point at which the first Plan of Action was drawn up, investment was targeted according to criteria based on prevalence of Guineaworm rather than on the per capita requirements for either hardware or software. The presence of Guineaworm can be seen as a key signifier for the likelihood of SWACH inputs.
- (xviii) Technical experience in Guineaworm eradication gained from the SWACH project has already been transferred and incorporated into the development of RIGEP (Rajasthan Guineaworm Eradication Project). The more generic foci of the project associated with community participation, institution building and cross-sectoral collaboration, in particular between government and NGOs is being developed in PAHAL (the Wasteland Development Project, Dungarpur). (2.1- 2.58)

- (ivx) Handpump maintenance remains an unresolved problem in the project area despite innovative schemes to improve maintenance. (3.15-3.20)
- (xx) Water testing from both handpumps and stepwells provide disturbing conclusions about the quality of water available. Contamination in both handpumps and stepwells urgently needs attention, including reconsidering the design of handpump platforms to prevent contaminated water from entering tubewells. (10.27-10.35)
- (xxi) The project illustrates complexities in multi-bilateral partnerships. SIDA does not appear to have been an active partner in the implementation of the project or to have had access to important documentation. (2.58)
- (xxii) The flow of information has been largely controlled by SWACH. (2.1-2.6; 5.1-5.31)
- (xxiii) SWACH has commissioned a great deal of work on a wide variety of topics. Some of the findings of this work have been utilised in the programme. Findings from other studies (2.40-2.48) have not, and neither SIDA nor UNICEF appear to have exercised much quality control over commissioned research.<sup>1</sup>
- (xxiv) SWACH's plans for forming 1000 women's groups appear problematic, in terms both of scale and process. SWACH has a highly instrumental view of the groups, whose mission will be to 'institutionalise SWACH philosophy at the grass roots and thus facilitate better implementation of any village development programme' (Plan of Action 1993-5). The evaluation provided evidence that the agenda around which women wish to organise is livelihood issues not water and sanitation. SWACH's top-down approach to mobilisation make it unlikely that these groups will survive beyond SWACH's orchestration of their meetings. SWACH's approach to women's participation can be characterised as a 'Women-in-Development' approach, exemplifying a policy of efficiency. By targeting women primarily in their domestic role as water-gatherers and mothers with prime responsibility for health and sanitation the project has consequently done little to challenge gender norms (8.17-8.76).
- (xxv) The exposure to new ideas and to public life experienced by animators and women handpump mechanics appears to have had a

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<sup>1</sup>It is recognised that SIDA sees the funding of projects through UN organizations in order to save money. By selecting a competent organization SIDA hands over responsibility for implementation. SIDA sees its role as following up the project by taking part in reviews and evaluations.



- (xxvii) Women handpump mechanics are employed (if at all) on considerably poorer terms than male colleagues. The conditions of their employment make it impossible for them to earn a living from the activity. (8.30-8.39)
- (xxviii) SWACH has made little attempt to involve men in its programme beyond recruiting men for the role of scouts, and in Village Contact Drives and intensive awareness drives. (8.47)
- (xxix) SWACH does not appear to be aware of or concerned by the lack of 'fit' between SWACH's stated developmental goals of bottom-up participation and the kinds of social mobilisation possible within a social marketing paradigm. (10.1-10.38)
- (xxx) The evaluation found little evidence of widespread community participation in the project. (11.1-11.74)
- (xxx1) Training programmes have tended to be task-oriented and geared to meeting immediate objectives, rather than inspired by skill development and capacity building.
- (xxxii) SWACH's District Training Teams are inappropriate for the tasks expected of them, and the nature of their contracts are not appropriate for the tasks required for longer term development and social mobilisation. (7.44-7.48)
- (xxxiii) The terminating of working relationships with NGOs led to considerable losses for both SWACH and the NGOs. SWACH lost opportunities to benefit from NGO experience in rural development while NGOs lost opportunities to benefit from the considerable resources of SWACH. (7.38-7.43)
- (xxxiv) The findings of the evaluation stated above, though critical, are intended to be constructive and in no way to detract from the considerable achievements of the SWACH project. The technical achievement of siting handpumps in remote villages, and the highly coordinated programme resulting in a relief of the annual burden of morbidity associated with the Guineaworm cycle are achievements of a high order, and are recognised as such by the evaluation team.

## RECOMMENDATIONS

It is recommended that:

- (xxxv) possibilities for replicating SWACH's organisational structure, with sanctioned posts, which has proved essential to its autonomy, flexibility and dynamism are explored further in the RIGEP project.
- (xxxvi) activities and strategies which have proved successful in SWACH are not replicated without modification into other project areas with different sources of water and major social and economic differences. Fuller socio-economic analysis and technical appraisal is needed before SWACH components are replicated.
- (xxxvii) every opportunity is taken to improve inter-departmental coordination between SWACH and MH&FWD, in particular in planning and executing activities such as Jal Melas and other health-oriented programmes. Coordination should be at the highest level as well as 'on the ground' in the active involvement, at a planning stage, of FH&MWD executive and field-level staff.
- (xxxviii) the effectiveness of current strategies for addressing diarrhoeal disease and other water-borne disease are carefully monitored to ensure that effectiveness is demonstrated and not just assumed, and that epidemiologists are used for this purpose, rather than generalist project staff.
- (xxxix) that the issue of handpump maintenance is examined in detail using operations research techniques and field data. The study should be stratified according to accessibility, types of handpumps, type of mechanics and other pertinent variables and should include a large enough sample to produce robust findings.
- (xL) the project's plans to make further investigations into quality of water in handpumps are pursued rigorously, and the results shared with donors. Appropriate interventions for ensuring that handpump water remains uncontaminated should be developed and implemented in the light of the findings of these investigations.
- (xLi) the quality of water in stepwells is addressed as a matter of priority, and steps taken to develop, with MH&FWD, sustainable and effective strategies for regular chlorination of step wells.
- (xLii) there is further debate within SIDA about the nature of its relationship to the project (and to other projects funded via multi-bilateral channels) and the extent of influence that SIDA would like to exert over direction and purpose.

- (xLiii) the SWACH team undergoes a gender-training programme (trainers are readily available in India) with a view to shifting from the instrumental way in which SWACH treats the participation of women at present to an approach that addresses the key concerns of women in the project area.
- (xLiv) SWACH seeks innovative ways of involving men in the project in the remaining years of funding.
- (xLv) efforts are made to reinstate working relationships with local NGOs, particularly with a view to developing strategies for working with women's groups and for encouraging further community participation in the remaining years of the project.
- (xLvi) SWACH is quite clear about the income generation opportunities and training opportunities that are available to the women's groups being formed. The groups must be given realistic expectations of what SWACH can and cannot be expected to provide.
- (xLvii) SWACH seeks to implement a clear process of community participation in the siting of the remaining handpumps to be installed during the project's duration.
- (xLviii) SWACH in consultation with UNICEF and SIDA undertakes an immediate evaluation of its training programme with a view to improving its effectiveness; the evaluation should include a focus on the training methods used.
- (xLix) SWACH begins the process of considering a future role for animators and scouts, while being careful not to create expectations and dependencies. This must be a fully participatory exercise in which scouts and animators together with SWACH explore ways in which they might deploy the skills they have gained once project funding ceases.
- (L) SWACH retains its emphasis on surveillance strategies until the end of project funding to ensure that Guineaworm is finally eradicated from the project area.
- (Li) SWACH pursues its study of the relative contribution of the various Guineaworm eradication strategies to ensure that this information is available both to RIGEP and to Guineaworm eradication projects in other parts of India and in Africa.
- (Lii) SWACH addresses the inequities in relation to the deployment of women mistries as a matter of urgency. A thorough review of the work opportunities should be undertaken and no further women

mistries trained until it is clear that opportunities for their deployment do exist. It is to be hoped that SWACH will not miss an opportunity for taking a lead in promoting equity in this area.

- (Liii) an element of responsiveness to issues of cost-effectiveness be introduced into environmental sanitation, drilling and construction by developing qualitative indicators that will reflect variations in performance and so increase the efficiency of these operations.
- (Liv) financial flexibility be used for allowing the time to identify cost-effective interventions rather than for pursuing new strategies before they have been adequately appraised.
- (Lv) the project develops its monitoring system so that it incorporates explicit measures of quality, eg handpumps tested for water quality, handpumps with safe water etc.
- (Lvi) Integrated monitoring of financial inputs and quantitative outputs be undertaken as an operations research initiative for a limited number of activities (such as latrine construction, or handpump installation). This will require that the project keep data in a sufficiently disaggregated form for variations in average costs to become apparent. The results will provide the basis for investigating ways of improving cost effectiveness.

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## GLOSSARY AND ACRONYMS

Adivasi	Scheduled Tribes
Anganwadi	Kindergarten, preschool nursery in ICDS
ANM	Auxiliary (or Assistant) Nurse Midwife
APO	Assistant Project Officer
ARI	Acute Respiratory Infections
Balwadi	Kindergarten, preschool nursery
BDO	Block Development Officer (Vikas Adhikari)
CBCS	Community Based Convergence Services
CDD	Control of Diarrhoeal Diseases
CDPO	Child Development Project Officer
CE	Chief Engineer
CMHO	Chief Medical and Health Officer
COD	Committee of Directions
Cyclops	Water flea; infective vector of Dracunculus by ingesting larvae
Dai	Traditional birth attendant
DEE	Department of Extension Education, Rajasthan College of Agriculture
DLO	District Level Officer
DMHS	Director of Medical and Health Services
DPIC	District Project Implementation Committee
Dracunculus	Guinea worm
DTT	District Training Team
DWCRA	Development of Women and Children in Rural Areas
EPI	Expanded Programme on Immunisation
GOI	Government of India
GOR	Government of Rajasthan
Gram Panchayat	Village level local self government
GWD	Ground Water Department
HP	Handpump
HRD	Human Resources Development
ICDS	Integrated Child Development Services
IEC	Information, Education and Communication
IGEP	Integrated Guinea Worm Eradication Project
ITI	Industrial Training Institute
KAP	Knowledge, Attitudes and Practices
Kawads	Local folk art medium for narrating mythological/religious stories
MHFWS	Medical, Health and Family Welfare Services Department
MLA	Member of Legislative Assembly
MNIO	(UNICEF) Middle and North India Office
MPW	Multi-Purpose (health) Worker
NGO	Non-Government Organisation
NGWEP	National Guinea Worm Eradication Programme
NHEES	Nutrition, Health Education and Environmental Sanitation Project
NICD	National Institute of Communicable Diseases
Nirikshak	Supervisor of Animators (Sachetaks)
NYK	Nehru Yuvak Kendra; Nehru Youth Centres
ORS	Oral Rehydration Salts
Panchayat Raj	Department of Local Self Government
Panchayat Samiti	Block level local self government
Patwari	Village level revenue official

PD	Project Director
PEDO	People's Education Development Programme (Bichhiwada Block, Dangarpur)
PHC	Primary Health Centre
PHED	Public Health Engineering Department
PO	Project Officer
Pradhan	Elected chairman of Panchayat Samiti (Block level local self government)
Pramukh	Elected chairman of Zilla Parishad (District level local self government)
RDD	Rural Development Department
RIGEP	Rajasthan Integrated Guinea worm Eradication Project
RLEGP	Rural Landless Employment Guarantee Programme
ROSCA	Regional Office for South Central Asia - UNICEF, Delhi
RTADCF	Rajasthan Tribal Area Development Cooperative Federation
RWS	Rural Water Supply
Sachatak	Animator; SWACH's contact person at village level
Sarpanch	Elected chairman of Panchayat (Village level local self government)
SC	Scheduled Castes
SEK	Swedish Kronor
SHC	Sub-Health Centre
SIAD	Social Inputs in Area Development
SIDA	Swedish International Development Authority
SIERT	State Institute of Educational Research and Training
SWACH	Sanitation, Water and Community Health (August 1992)
SWACH	Integrated Sanitation, Water, Guineaworm Control and Community Health Project
SWACH	Sanitation and Water - Activation of Community for Health (February 1987)
Swach	Hindi for "clean"
SWRC	Social Work Research Centre
TAD	Tribal Area Development Department
TADC	Tribal Area Development Commissioner
TBA	Traditional Birth Attendant, dai
TRI	Tribal Research Institute
UNICEF	United Nations Children's Fund
VCD	Village Contact Drive
VCT	Village Contact Team
VHG	Village Health Guide
Vikas Adhikari	Block Development Officer (BDO)
WCDD	Women and Child Development Department
WCNP	Women, Child Nutrition Project (nodal agency for ICDS, DWCRA and WDP at State level)
WDP	Women's Development Programme
WESS	UNICEF/ROSCA Water and Environmental Sanitation Department
Zilla Parishad	District level local self government

# 1 INTRODUCTION

## Background to the Evaluation

- 1.1 Since its inception in 1986, SIDA has provided funding for the SWACH project in Southern Rajasthan. SWACH (an acronym for Sanitation, Water And Community Health), is an area based integrated rural water and sanitation project with an operational focus on Guineaworm control due to the (formerly) high infestation rate in the area. The project started in Dungarpur and Banswara Districts in 1986 as a 5 year project. It was expanded in 1988 to include the neighbouring District of Udaipur. The District of Rajsamand was created out of the larger district of Udaipur in 1990. It thus covered almost all of the Tribal Area Sub-Plan. In formal terms the expansion into Udaipur was launched as a separate project, utilizing the existing SWACH infrastructure and increased staff. As part of its overall support to the national rural water supply and sanitation programme, UNICEF has implemented the SWACH project in Rajasthan since its inception, providing professional, financial and administrative support to the Government of Rajasthan (GOR), with major funding from SIDA. Considerable success in the eradication of Guineaworm has already been achieved in the seven years since the inception of the project, and funding is agreed into 1995.
- 1.2 To date, no comprehensive evaluation of the project has taken place although many facets have been individually (and separately) investigated. (See Appendix 1 for list of all documentation collected by the Evaluation team). The results of a mid-term evaluation carried out in 1988 were never brought together in a comprehensive overview of the project and its direction. Discussions about future direction and funding of the project indicated the need for a comprehensive evaluation, which was eventually undertaken about a year after it was intended. The current evaluation thus provides the first overall view of the multiple facets of the project. The overall purpose of the evaluation is to provide all involved parties with an independent assessment of performance and achievements of SWACH to date. The findings will then be utilized in discussions about the next phase and about possible replication elsewhere in the State and in the country.
- 1.3 At the time of its inception SWACH was a unique project in the context of the Government of India, UNICEF and SIDA collaboration in the water supply sector. Emphasis was placed on popular participation and a 'bottom-up' approach with the active involvement of women. The organizational base of the project was a semi-autonomous institution which planned and coordinated implementation which was largely carried out by the existing line departments (Medical, Health & Family Welfare [MH&FW] , Public Health Engineering [PHE] , Rural Development, and Women & Child Development). It was the first area based project supported by UNICEF in this sector. The expectation was that the project would provide important lessons for the development of

future strategies for development support and intervention. It was an important initiative in the development of multi-bilateral cooperation between SIDA, UNICEF and the Government of India.

- 1.4 The project area covers 23,800 square kilometres in the four districts. There are 4 blocks in Dungarpur, 8 in Banswara and 9 each in Udaipur and Rajsamand. According to the 1991 census the population of the four districts was 4,800,000. The project area is mainly tribal, poor, remote and under-serviced with basic community amenities. The scattered settlements of the predominantly tribal population makes the task of providing water supply and health education that much more difficult. Physical conditions within the four districts do, however, differ considerably, having a consequent effect on the pace and style of interventions. Bhichhiwara block in Dungarpur District was excluded because it was being separately funded.
- 1.5 In 1986 the area accounted for 47% of all the Guineaworm affected villages in Rajasthan and 17% of all the Guineaworm infested villages in the whole of India.
- 1.6 The infant mortality rate in the rural areas of the project is estimated to be over 165 per 1000 live births, and health care is poor. Guineaworm, malaria, tuberculosis, diarrhoea, dysentery and skin diseases are prevalent. The traditional sources of drinking water in the project are stepwells and ponds. These sources are prone to pollution due to human and animal contact as well as surface runoff from rain water.
- 1.7 The SWACH project is quite complex and is embedded in other development programmes aimed at institutional development and at general rural sanitation and health improvements in the area. These include both governmental and non-governmental initiatives. While confined to the four districts of Southern Rajasthan the approach adopted has been emulated elsewhere in the State and in other States as an effective means of controlling and eradicating Guineaworm as well as tackling rural sanitation and health problems more generally. The evaluation has had to be selective in focusing on the particular issues identified in SIDA's terms of reference (see Appendix 3). Over the period since its inception there has been a process of experimentation which endeavours to combine the considerable resources available at the local level with those available through government and international sources, to produce a more sustainable type of intervention which marries the various resources available into a locally articulated development project. SWACH contributes to and is influenced by the more general evolution in development thinking which is reflected in such programmes as the Community Based Convergence Services (CBCS), Lok Jumbish, and WATSAN. It attempts to grapple with the coordination and integration of governmental and non-governmental programmes and projects, which are trying to combine a local- or District-level focus with cross-sectoral integration.

## **Focal Points of the Evaluation**

- 1.8 SIDA asked for an assessment which focused on the relevance of the approach, the level of goal attainment, the efficiency and effectiveness of investments, the longer term sustainability of impacts and approaches, and the lessons that can be learned from project implementation. The main tasks of the evaluation were to measure field outputs, the level and sustainability of local involvement, the effectiveness of project management, establishment and organization, through an examination of the monitoring and information systems in place, and the possibilities for replication. Financial and economic issues focused on cost analyses and on resource mobilization and cost-sharing.

## **The Approach taken by the Evaluation**

- 1.9 The aim of the evaluation was to identify, assess and review the project's strengths and weaknesses through a process of dialogue and participatory investigation which involved most of the stake-holders. The evaluation does not and cannot attempt to be statistically accurate, given the time and resources available to the team. With the absence of base-line data it is very difficult to develop a pre and post intervention comparison, except in terms of physical infrastructural provision.
- 1.10 The evaluation was conducted in November and December of 1993 by a team from the Centre for Development Studies, University College of Swansea, in Wales with the support of a locally recruited Indian team. It was carried out in two parts. Part one consisted of inputs by three members of the Swansea team who examined various aspects of the SWACH project and much of the existing documentation. They held discussions with project staff, government and UNICEF officers, at national and state level. Part two involved inputs from the Indian team; two specialist inputs from a water engineer and a health specialist, and a participatory appraisal of the knowledge, attitudes and practices of selected beneficiaries and others in the project area by a group of specialists in rapid appraisal techniques. Additional inputs from members of the Indian team focused on women's attitudes to the project and on the content of the training programmes developed and mounted by SWACH.
- 1.11 The Participatory Appraisal team consisted of three teams of two people who separately visited 15 selected villages in the project area. The 15 villages included three control villages where there had been no SWACH inputs. The villages were chosen from three districts in the project area bearing in mind a series of criteria - the intensity of project interventions, the accessibility or remoteness of the settlement, the composition of the population, old or new project interventions, and varying population densities. The same villages were used by the water engineer and the health specialist for their separate studies. The water engineer examined the various 'hardware' aspects of the project to gain some understanding of the effectiveness of the various interventions. The terms of reference for the study by the water engineer are given in Appendix

2. The health specialist was asked to look at behaviour changes in water use and sanitation practices and in health awareness levels among the project community and to look at the prevailing monitoring system in relation to health interventions. The results of their separate analyses have been incorporated into chapters 3, 6 and 11.

### **The Structure of the Report**

- 1.12 The evaluation study is divided into a series of chapters. After an initial analysis of the development of the project itself and of its organizational and managerial facets, there is an attempt to analyse the achievements of the project, particularly with respect to physical infrastructural provision. Project documentation is such that numbers of infrastructural provisions can be easily found and thus this discussion will not attempt to do anything more than outline overall achievements. Following that there is an analysis of allocations and expenditure with an attempt to cost the various inputs. The next sections deal with the pursuit of the Guineaworm and issues surrounding that pursuit. These are followed by an analysis of the project's training activities and the ways in which gender has been treated in the project.

## 2 OBJECTIVES AND ORGANISATION

### Introduction

- 2.1 The current study reflects a set of dominant themes which are considered of central importance for an overall evaluation. They bring together the many facets of the project, and the context in which the project has been situated - as an experimental intervention aimed at exploring how a 'grass-roots' focused development project can be implemented through cooperative arrangements between donors, government, non-government organizations and rural beneficiaries. It should be stressed at the outset that the evaluation team were impressed with the achievements of the project and the ways in which it has attempted to grapple with some very complex developmental issues. Whether the project is perceived as a Guinea worm control project or a more general water and sanitation project it has scored some remarkable successes and has largely fulfilled the targeted objectives set. The change in name of the project during implementation reflects some of the tensions inherent in the project and appears to reflect changing attitudes over time.
- 2.2 An initial and important tension in the SWACH approach is that between a single interest and a generic focus. (See Chapter 5 below). In its achievements of the targets set the SWACH project has produced impressive results for the containment and eventual eradication of Guinea worm. Physical targets for 'hardware' activities have, by and large, been met. The techniques for containment and eradication of Guinea worm have been successful. As a project with a single targeted objective then, the stage is set for the complete eradication of Guinea worm in the areas covered. The strategies elaborated for surveillance should ensure that this is achieved in the next 3 to 4 years. This assumes the current continuation of surveillance practices, but has implications for the costs associated with this final thrust and the retention of that focus, in the face of an evident need to consolidate and expand the 'software' aspects of a more generic approach currently perceived to lie in the formation of women's groups, and the need to provide a new focus for project activities as the worm is defeated.
- 2.3 As a project with multiple objectives, including broader community health, water and sanitation components, and participatory development activities associated with grass-roots organizational strengthening and a more generic developmental focus, the situation is less positive. Questions remain as to the appropriateness and ability of government organizations such as SWACH, to tackle multi-sectoral grass-roots development work. It should be emphasised that such questions do not reflect a negative appreciation of SWACH's achievements, but rather raise more general questions about the appropriate mix of organizations and activities (both governmental and non-governmental, bilateral and multi-lateral) necessary for the effective application of the variety of resources (human, organizational, and financial) which are available, and which people are looking to re-combine in more sustainable ways for the production of meaningful and lasting development.

- 2.4 Issues associated with the development of links between the various actors involved (ranging from rural 'beneficiaries' to the expatriate funding agencies) reflect a general concern to realise more appropriate strategies for effective interventions. In this context it should be reiterated that SWACH was conceived as an experimental project and its developments since 1986 would seem to reflect this. Attempts to build on its organizational strengths are observed specifically in developments within the state-wide Rajasthan Integrated Guineaworm Eradication Project (RIGEP) and within the Pahal Wasteland Management Project in Dungarpur. It should also be reiterated that the tensions which characterise SWACH also characterise other projects aimed at producing local level institutional development which is sustainable.
- 2.5 The tensions associated with the struggle to balance the need for rigour and accountability within a governmental structure, and the need to retain an openness and flexibility to changing demands and opportunities has been another central feature in the history of the project. This is characterised by the measurement of specific concrete objectives (products) as opposed to a more general concern with the measurement of process.
- 2.6 The tensions associated with balancing the pursuit of individual interests and the needs to institutionalize and routinize are reflected in the changing emphases and foci which the different project directors have inevitably given to the project, and the interests of the funding agencies. This is also reflected in the shifting objectives which appear to have characterized the history of developments since 1986.

#### **The aims of SWACH**

- 2.7 The SWACH Approach has been developed over a number of years and emphasises 'bottom up' planning and implementation as well as community development. Considerable emphasis is placed on integrating and supporting the work of other departments and organizations and encouragement is given to innovations and experiments. All achievements of the project are supposedly disseminated within India and outside, which has given the project international recognition.
- 2.8 The aims of the project were to be achieved through integrated interventions in the fields of safe drinking water, environmental sanitation and health/hygiene education/awareness. These integrated interventions would build skills and organizational capacity within the project and the participating agencies. All interventions were to be planned and executed with the active participation of the communities involved, particularly the women.
- 2.9 As stated in the first Plan of Action the original general aims of the project were -

\* to improve the quality of life and socio-economic conditions in tribal



- \* areas with particular reference to women and children.
  - \* to promote community involvement and self reliance in the planning, implementation and maintenance of drinking water supply.
  - \* to promote and sustain positive health behaviour changes among the target population
  - \* to lower the incidence of water-related diseases
- 2.10 These aims were retained in the subsequent expansion of the project. It should be noted however that no mention is made in these original objectives of Guineaworm control or eradication.
- 2.11 To further these initial aims, the objectives of the Project were to
- \* assist villagers in upgrading unsafe water sources
  - \* provide new tubewells and handpumps to settlements which suffered from scarcity of water.
  - \* strengthen and improve the operation and maintenance system for handpumps and converted stepwells.
  - \* establish a process of continuous health education in the project area
  - \* improve domestic and environmental sanitation to reduce the incidence of Guineaworm infestation.
- 2.12 In subsequent documentation the order of these objectives changes as the objectives of the project shift. The latest proposals for the implementation of the IEC activities for 1993-4, for example, puts eradication of Guineaworm as the foremost objective, with the promotion of community involvement and self reliance as well as the sustaining of good health practices as the least important objectives. The priority given to these objectives and now part of the Plan of Action for the next two years was endorsed at the last joint annual review
- 2.13 In pursuit of these aims it is sometimes difficult to differentiate the particular impacts of the project from the overall changes that these southern districts of Rajasthan have witnessed over the past 7 or 8 years. While it can be stated unequivocally that the incidence of Guineaworm has been significantly reduced, it is less easy to assess whether more general health behaviour changes have occurred, and if they have whether they can be specifically attributed to the impacts of the project. The absence of baseline data has compounded the problem of measuring change. The objectives of upgrading unsafe water sources in the at-risk villages, and providing additional tubewells and handpumps to the affected areas have largely been achieved. The major consolidation of these achievements, in terms in particular of providing continuous and relevant health education is something that remains to be built on. The project area is characterised by a marginal physical environment and periods of drought during the implementation phase has necessitated the diversion of some efforts at times to drought relief. Taking note of that, the contributions that the project has made to mitigating the effects of drought, would appear to be significant.

## **Project Organization**

- 2.14 SIDA entered into a multi-bilateral arrangement along with UNICEF and the Government of India in December 1985. The Project formed part of the Master Plan of Operations agreed between UNICEF and the Government of India for 1985-9. A Preparatory Phase was initiated in July 1985 and continued to June 1986. The initial project focused on Dungarpur and Banswara Districts and was implemented between July 1986 and December 1990. There was an extension to the project (sometimes called a second project) to Udaipur District which began in August 1988 until the end of December 1992. This also involved an extension to the project in the original two districts.
- 2.15 Until the initiation of the Project the activities with which it became identified were carried out largely by the Public Health & Engineering Department (PHED), and the Medical Health & Family Welfare Department (MHFW) under normal government rules, regulations and procedures. One of the reasons for the project itself was to try and overcome the inadequacies of traditional line ministry working. It was also hoped that by combining some of the more innovatory methods being developed by NGOs in the area, more progress might be achieved.
- 2.16 Prior to the project there had obviously been considerable provision of handpumps. Some stepwells had been converted and Guineaworm eradication camps had been held. There was also considerable NGO activity in the project area. Indeed the SWACH agenda was initially being implemented by one such NGO (PEDO - People's Education and Development Organization) in Bhichhiwara block in Dungarpur District. The project aimed to consolidate these interventions and build on the innovatory techniques and methods being adopted by NGOs with vastly improved resources and integrated centrally with government.
- 2.17 The development of the project form of organization with its relative autonomy and independent identity, together with administrative and financial independence have contributed to the more successful management of activities than other health interventions. It has been well endowed with funds, personnel and equipment. This has implications for longer term sustainability of those activities when they are taken up by line ministries. The relative costs of various interventions are additional to normal provisioning and state-wise/country-wise norms for such activities. The issue of costs is dealt with in more detail in chapter 4. The replicability of interventions on this scale elsewhere in the state is called into question. The project form of organization does appear to have generated a climate which encourages the development of particular objectives and of greater efficiency but perhaps at the expense of any significant integration with more generic departments.
- 2.18 Government of India meets the costs of salaries of staff on secondment and also contributes approximately 40% of the costs of drilling and handpump installations. UNICEF's inputs included purchase of handpumps, tools and

equipment for repairing handpumps and drilling rigs. UNICEF also meets the costs of activities relating to education and training and other aspects of the broader project.

- 2.19 The activities in the identified Districts were taken out of the normal working of the line ministries and placed under the Tribal Area Development Department. This institutional location was meant to ensure autonomy and flexibility as well as authority, under the Tribal Commissioner with a separate Project Director from the Indian Administrative Service. Project Headquarters are in Udaipur and there are district project offices in Banswara, Udaipur and Dungarpur which are supposed to be staffed by a Project Officer and the staff necessary to implement the project at the District level. Below the District Project Officer three assistant project officers with separate responsibility for Health, Education and Engineering have been located. A complement of 96 sanctioned staff was in place by January 1987 with officers seconded from other departments.
- 2.20 Only two of the sanctioned posts were originally occupied by women, and women's representation at senior management level does not appear to have greatly improved, despite the heavy emphasis placed in the plan of action on women and children. SIDA expressed concern at this male dominance. In a small number of cases such staff have been retained by the project for a considerable period of time, others have moved on.
- 2.21 It is this small number of dedicated staff who have given the project its continuity, despite the normal but periodic changes of the IAS officers charged with management, the project director and the district collectors in particular.
- 2.22 The project has employed large numbers of field level functionaries since 1986. These latter have been associated with the project in more or less temporary positions. These short term contracts have had and will continue to have important implications for building sustainability. It has never been the intension of the project to create separate career opportunities, but many see employment in the project as a route to more permanent work, particularly with government. The issue of temporary contracts and their implications for sustainability is taken up in chapter 9.
- 2.23 Currently the most numerous of these field level functionaries are the Guineaworm Scouts. The major aim of the Guineaworm Scout Scheme was to improve reporting and detection rates. It was piloted in 1990 and launched in 1991. Six training courses for Scouts were organized in 1990-1, and in 1992 940 scouts were trained in 32 batches. To help coordinate, support and mobilize the scouts coordinators were selected from local NGOs and early village contact teams. All have a minimum tenth grade education. Each coordinator looks after 10 scouts and visits them regularly in their villages as well as holding fortnightly meetings with them and monthly meetings with 'Officers in Charge' (these are project staff designated with responsibility for reporting and managing Guineaworm eradication in focused areas). Their

report books detail all aspects associated with Guineaworm control including incidence, water sources, and family characteristics.

- 2.24 Early over-enthusiasm meant that many non-guineaworm cases were brought to the attention of project staff but with practice they have become more skilled in detection and in 1991 60% of patients were reported in the pre-infective stage. Major emphasis is put on interrupting the Guineaworm cycle, to the detriment of wider health education work. Scouts receive an honorarium of 125 Rupees per month plus 25 Rupees for travelling to meetings. Coordinators receive 400 Rupees per month plus 200 Rupees for travelling expenses. 200 Rupees is paid to scouts as an incentive to bring guineaworm patients for treatment. The Scouts scheme was expanded in 1992 to intensify the eradication drive and the levels of remuneration were also raised. (See Chapter 5, Section 5.11)
- 2.25 The overall project organization is represented by an organogram, reproduced in Appendix 4. A Project Director, an IAS officer, was appointed in the middle of 1986 and was assisted by a Project Advisor and a Project Officer appointed through UNICEF. The Project Advisor's role was to assist the Project Coordinator and the Project Director in planning, management and monitoring. The Project Officer was to assist the Project Director and the District Project staff in building up, supporting and monitoring community participation. Both UNICEF officers are members of the Committee of Direction. The removal of the UNICEF advisory posts from Udaipur to Jaipur in 1992, associated with reorganizations within UNICEF, was also part of the scaling up process associated with the inception of RIGEP (Rajasthan Integrated Guineaworm Eradication Project). It has meant less hands on involvement by UNICEF in the four districts as attention is shifted state-wide. SIDA has maintained an involvement with the project through the processes associated with the annual review, and with various field analyses.
- 2.26 There have been five Project directors since inception. Each has brought enthusiasm and, quite naturally, a different set of interests to the project. These interests are reflected in the major foci developed in different years. Because of the experimental nature of the project, directors were given scope to develop, within the overall aims and objectives, areas that they attached particular importance to. While this has produced major advances on a variety of fronts it has not particularly helped in the institutionalisation of the various initiatives. The eventual integration of SWACH activities into the normal workings of government departments remains problematic. This is not unique to SWACH and seems to be a major problem associated with the translation of, especially, experimental projects into integrated governmental programmes. The enthusiasm of management has cultivated a less hierarchical pattern of interaction as project directors and others have made efforts to ensure frequent interaction between themselves and lower-level employees, through visits and meetings. The project has remained small enough to facilitate this close interaction amongst core management. A frequent comment was that the ethos developed by the project was significantly different from that of line

ministries; a point reflected in the early review of the project undertaken by the Indian Institute of Management (SWACH document Number S-3, 1989).

- 2.27 A Committee of Direction was established to take overall responsibility for review, guidance, direction and policy. The composition of that committee is given in Appendix 5.1. It would appear that this Committee has rarely met but that the initial enthusiasm of the Tribal Area Development Department was instrumental in ensuring the recruitment of good and motivated staff. Its major strength lies in the fact that the Tribal Commissioner, as Project Coordinator is its chair and is thus in a singular position to ensure coordination of the activities of the different departments and has the authority to ensure compliance across departments.
- 2.28 For ensuring District level coordination and timely execution, a District Project Implementation Committee was formed under the chairmanship of the District Collector. The composition of that committee is given in Appendix 5.2. Again, the fact that activities were coordinated by the Collector at the district level ensured coordination between departments. While the SWACH project was only one small part of the Collector's work, a series of progressive collectors in the 4 districts has ensured that it has been given adequate attention. The individual attention given by successive collectors has been a significant feature in ensuring continuous progress and the achievement of the project's objectives. Significant attention appears to have been given by district project officers to ensuring that the collectors have been appraised of the various dimensions of the project to ensure continuity. Their recognition of the potential of the project for the coordination of district level resources and their own abilities to ensure progress has, in no small way been responsible for any successful integration achieved.
- 2.29 A major feature of the project was the divorce of provisioning from overt political manipulation through the establishment of objective criteria, derived from data on Guineaworm incidence collected through the Medical and Health Department, for the deployment of resources. It also provided an opportunity to bring together the somewhat fragmented activities pursued in the interests of integrated rural development and the reduction of poverty. Guineaworm provided not only an entry point but also a sound justification for such deployment and an opportunity to experiment with scaling up, institutionalizing and incorporating the innovative activities of NGOs.
- 2.30 It should be noted that the multiplication of development projects targeted at particular groups for particular purposes through the various projects and programmes of government at a local level has not helped in the process of integration. The Integrated Rural Development Programme, rather than achieving integration has resulted in a sometimes disparate set of one-off top-down interventions that remain unconnected. A focus on discrete physical outputs encourages this.

- 2.31 In order to ensure greater flexibility the project was executed by a semi-autonomous body set up under the Rajasthan Tribal Area Development Cooperative Federation. But much of the success in progress is related to the dynamism of enthusiastic individuals. The fact that the project was executed in a largely tribal area has also meant that the constraints of operating in more central areas with the in-built bureaucracies associated with those areas, have not been felt as much.

#### **Inter-departmental Coordination.**

- 2.32 The Project has to coordinate with various other government agencies, in particular the Public Health Engineering Department, the Panchayats, the Department of Education, the Integrated Child Development Scheme and the Medical Health & Family Welfare Department.
- 2.33 But it has had only indirect control over the implementation of much of the hardware inputs to project activities. Because some project staff are on deputation from PHED there are informal links which facilitate implementation. There were initial problems when PHED did not follow the implementation schedules for drilling and installation developed by the Project. These were eventually sorted out. The work ethos and working procedures, methods and processes advocated by the Project do not appear, however, to have been internalised or institutionalised by PHED. There is still a time lag of upto 6 months between drilling and installation of handpumps. Rigs remain underutilized and hydrogeological testing of sites is not generally carried out.
- 2.34 Since April of 1993 maintenance of handpumps has reverted completely to the Department of Rural Development and the Panchayat Samitis. Again the Project has no control over the Panchayats who are notorious in not paying honoraria to mechanics on time. Quality spare parts are still not procured and stored. Experiments for preventive maintenance have been undertaken in two blocks, but the project does not have funds to pay handpump mechanics. While it has tried to educate panchayat members and administrations through orientation programmes the maintenance problem remains a key to sustainability.
- 2.35 The project has taken several staff from the Education Department on deputation and has given orientation and training to primary teachers in the two districts. Primary teachers were also asked to report Guineaworm cases at the time of the census as well as on an ongoing basis. The project has constructed latrines in selected schools and has emphasised the need for institutionalising health education and environmental sanitation as an integrated part of school activities.
- 2.36 Anganwadi workers for ICDS have also been involved with project activities, but neither they nor the primary teachers are actively involved in generating community participation. While the social animators were expected to try and

coordinate their activities with those of primary teachers and anganwadi workers, there is little evidence of substantial cooperation. This would appear to be the result of different chains of command associated with the separate agenda of the different line ministries involved.

- 2.37 The project staff plays the role of stimulator, facilitator and educator to those departments through which it attempts to achieve its objectives, and tries to improve project management of those activities being implemented by other agencies.
- 2.38 All the software activities and activities related to health are directly undertaken by the project organization. All training activities have been organized by the project with the help of local NGOs. All education and communication activities are also done entirely by the project which recruits outside expertise as and when necessary. Human resource development is discussed in detail in Chapter 7.
- 2.39 Education and communication activities related to changes in health and sanitation behaviour changes are difficult to assess and of longer term duration and will necessarily go beyond the life of the project. They will have to be transferred to other departments to form part of their ongoing activities. Imparting health education to children will be transferred to the Education Department and ICDS. Stimulating awareness on health issues, water-borne diseases and environmental sanitation will be transferred to MH&FW. Encouraging user group participation in location and maintenance of handpumps will be transferred to PHED and to DRD/Panchayati Raj. To date these departments do not have the necessary trained expertise nor the required ethos to carry on the types of activities that the project has been engaged in. A culture which stresses IEC, community participation and a 'grass-roots' orientation calls for a re-orientation of a predominantly patriarchal style of operation. It also requires a more certain future for those trained in these methods than the ones envisaged as part of a contractual, one-off set of activities which appears now to be becoming more important.

#### **Monitoring and the development of a management information system**

- 2.40 Over the duration of the project an impressive array of instruments have been developed for monitoring achievements and providing information to management on which plans can be made. The overall information system was initially based on existing routines for physical, financial and performance monitoring developed within the different departments. This was complemented by participatory monitoring undertaken by field level functionaries - the social animators who were perceived to be central to the whole strategy. They were able to monitor the conditions and problems surrounding the maintenance of handpumps and converted stepwells. In addition there were periodic inspection reports using standardized checklists, and external assessments through analyses of key problems. An impact

assessment was undertaken in 20 randomly selected villages in Banswara and Dungarpur in 1988.

- 2.41 The set of formats prepared for physical, financial and performance monitoring include monthly reports submitted through the Project Officers to the Project Director and quarterly progress reports submitted to UNICEF through the Project Director. These reports on hardware, software, medical interventions and accounts are compiled by project staff, and form the basis for monthly review meetings of the District Project Implementation Committees where problems of direction and of inter-departmental coordination could be solved. This routine 'input monitoring' was supplemented by 'utilization' monitoring undertaken by field level functionaries to determine the extent of community participation and the uses made by the local populations of the assets created. A standardised set of formats focused on training programmes undertaken, meetings held etc. The Plan of Action 1993-5 itemizes the whole set of project activities and sets performance objectives for all those activities.
- 2.42 Although performance monitoring has been well developed for individual activities, the project has never succeeded in developing or implementing an integrated management information system in the sense of linking inputs (especially expenditure) with outputs. The lack of conformity in the annual periods used by the accounting department and the statistics department epitomise this lack of integration (see 4.4).
- 2.43 Yearly workplans have played an important role in identifying precise targets, specifying activities and resources for both projects (Dungarpur/Banswara, and Udaipur/Rajsamand). Guidelines for the implementation of a variety of activities, both hardware and software, have been prepared during the project and are utilized on a routine basis. This has helped in ensuring conformity and in developing clarity. The Basic Schedule of Rates for construction work are used for estimates and designs and the implementation guidelines also include qualitative standards for provision. UNICEF has played a key role in issues concerning the purchase of handpumps and spares, ensuring adequate quality.
- 2.44 Over 90 documents are now available, together with four video films of various aspects of the project. Some of these materials are not as widely distributed as merited. In 1992/3 new registers for Guineaworm reporting, treatment and affected water sources, and new computer programmes for close monitoring of Guineaworm containment strategies were designed.
- 2.45 Over the years a number of independent studies of particular facets of the project have been produced. A book on SWACH to be produced by UNICEF has been commissioned and is in progress. One paper on the costs and benefits of GW extraction was published in 1991 and two cost effectiveness studies of surgical guineaworm extraction are in preparation.
- 2.46 Annual Review meetings have been held between SIDA, UNICEF and the Government of India at which progress over the previous 12 months and plans



of action for the future 12 months are discussed. At the last Review meeting in March 1993 the Plan of Action for the period 1993 to 1995 was approved. At that meeting it was decided that the main focus of the project should be the complete eradication of Guinea worm disease from the project area. But it was also stressed that continued significant attention should be given to education and community involvement.

- 2.47 **Guinea worm Case Management.** In the early years of the project monitoring was achieved through the Village Contact Drives, with their wider messages and objectives, and the Medical Searches carried out through the MH&FW Department and the SWACH animators. SWACH also arranged orientation programmes for field level functionaries of government line departments. Considerable support was given to NGOs working in general awareness building programmes. At this early stage a postcard system was used to inform project staff of cases but this was found to be too slow and was not very effective. In the final stages of eradication SWACH shifted tactics and focused on the recruitment and training of a large number of Scouts who use the Rumour Register to record suspected cases and who therefore must be literate.
- 2.48 **The Village Contact Drive (VCD)** was a methodology adopted from NGO experiences in Rajasthan and elsewhere. It is not unique to SWACH and implies a particular style of intervention which, if not one off, is focused on an intense period of exposure to external messages. In organization it resembles general immunization campaigns which assumed that curative methods were likely to be effective in dealing with health problems. While this might be the case with Guinea worm it is certainly not the case with other waterborne diseases which require systematic shifts in attitudes over an extended period of time, combined with significant changes in practices which, given the lack of major economic development, are not likely to be seen as of top priority by villagers. VCDs provided the first opportunity for developing details of numbers of Guinea worm cases at village level, and numbers of stepwells, and hence provided the project with baseline data.

#### **Guinea worm reduction as an entry point or an end in itself**

- 2.49 It should be noted that in the original Plan of Action (1985-90) the issue of Guinea worm eradication was not mentioned, and the reduction of Guinea worm infestation, rather than appearing as an end in itself, was expected to be one of the results of general improvement in water and sanitation conditions. Guinea worm control was perceived as a way in which the project might be given an initial momentum; an entry point for the achievement of the wider objectives. The biennial searches carried out by the Medical & Health Department, through the National Institute for Communicable Diseases (NICD) for the National Guinea worm Eradication Programme, allowed initial targets for improvements to be identified for the launch of the project. Such a process of identification ensured that political lobbying for special treatment by particular villages could be avoided.

- 2.50 The emphasis was placed on a 'bottom-up' approach, but the contradictions associated with the achievements of such an approach, through a highly hierarchical and centralized system of government, do not appear to have been addressed. The aim was to coordinate and integrate, through a particular form of government intervention, the activities of a series of organizations at the village and district levels, and a series of initiatives derived from on-going government and non-government projects and programmes. While physical targets were set, and the issue of capacity building to ensure sustainability of interventions over time, was stressed, a balance between the targeted strategies and the more generic improvement strategies remains an issue throughout implementation. Attempts to achieve this balance are reflected in the ways in which the project evolved and the emphasis given at various times to 'following the worm' (see Chapter 5).

### **The Integration of Grass-roots functionaries**

- 2.51 To achieve the broader objectives of the project it was considered important to involve all possible change agents at the village level, and organizations working at that level. The core person originally identified to initiate and mobilize support for project activities and for integrating existing activities was the Social Animator, a female village contact person who was to be trained and given continuous support by the project. Without more comprehensive appreciation of the possible integration of the variety of village level functionaries already existing in the project area, there was a danger of merely adding to their numbers, rather than complementing or coordinating their work. Indeed it would appear that this has in fact been the case by and large as the project functionaries have been identified with a narrow set of activities which are seen by villagers as discrete from other functionaries. It is only now that the issue of coordination and integration of social development workers at the grass roots level is being addressed through CBCS and the pilot current focus of the project.
- 2.52 The female social animators were supported by coordinators and supervisors through monthly meetings, periodic field visits and training. They are members of village contact teams who conduct the village contact drives - the main thrust for the initiation of project activities. The animators were supposed to provide the organic link between the project and the community. The initial plan of action stated (p.13) "It is important that throughout the project organization support to the social animators is given top priority as they constitute the most critical point for the project momentum as a whole." Incentives to social animators were not initially given much consideration, as questionable assumptions about the availability of voluntary labour for such obviously important initiatives were made.
- 2.53 The question of incentives became more important as the instrumental objectives of the project began to take precedence over the developmental objectives associated with participation and sustainability. Social animators

were looking for work with government and the more permanent that work the better for them.

- 2.54 Instrumental objectives were achieved through the recruitment of coordinators, supervisors and scouts in addition to the social animators, whose position changed significantly as the project developed. All field functionaries were recruited on short term contracts for particular sets of activities.

### Shifting Geographic Intensity

- 2.55 A fixed set of targeted, time-bound, interventions gives the impression of shifting geographical coverage. This is confirmed by the figures presented by the project on the timing and areal distribution of interventions. As 'hardware' and 'software' items were injected into particular places there was an implicit (if not explicit) assumption that these would provide the foundations on which self-sustainable improvements in more general health and sanitation conditions would be based. The issues of consolidation and more generic progress were rarely raised as targets were achieved and the project moved on. Now that many of the physical targets are being achieved or re-negotiated the project searches for a new role, and to consolidate those achievements.
- 2.56 The project extension to Udaipur District seems to have reflected the earlier surge of interest in the conversion of stepwells in Dungarpur and Banswara, which characterised the first year of the original project. A major Village Contact Drive was launched in two stages touching the entire rural area of Udaipur district. This took up the whole capacity of the project between February and June 1989 and staff from Dungarpur and Banswara were drafted in to help with the new thrust. The animators' scheme was launched in the southern part of Udaipur District. For Guineaworm control and medical treatment the resources of the whole project were pooled. A new model called "An Integrated Drive for Guineaworm Eradication" was introduced which reflected the changing emphasis of the project in the pursuit of the worm. At this time a SWACH Document Series was launched. A mid term review took place in October 1988, although the results of that review were not available to the evaluation team. It was also decided to extend the project by one year, to make up for time initially lost and to initiate discussions on the long term implications of SWACH. As Guineaworm eradication became a realisable target, thinking focused on strategies for early eradication. The Project started to move out of the four districts and material and personnel assistance was extended to other districts of Rajasthan and Madhya Pradesh.
- 2.57 As the incidence of Guineaworm cases declined dramatically during project implementation a Fifth Village Contact Drive was launched in May 1990 in Dungarpur and Banswara. This included new health messages on immunization and diarrhoeal disease management as well as traditional messages in line with the priorities of GOR and UNICEF, but also as a second, follow-up thrust to the project. Having 'broken the back' of Guineaworm prevalence in that area

there was a move to focus on more general health and sanitation issues. This follow-up thrust marked the beginning of another shift in thinking; as the original project was drawing to a close there was a perceived need to consolidate achievements and develop strategies for a three year surveillance period which would ensure complete eradication. Thinking about the longer term consolidation of the project's achievements, if these were to be measured in terms other than Guineaworm control, would also appear to have been part of that thrust.

### **The role of the external funding agencies**

- 2.58 UNICEF coordinates project activities and facilitates implementation through the Government of India and the Government of Rajasthan. UNICEF and SIDA maintain close coordination through regular meetings and reviews in order to guide project direction. UNICEF plays a major role in the direction of project activities, through the particular personnel employed and based in the UNICEF office in Jaipur, and through the place that SWACH has in the more general UNICEF programmes in the field of water and sanitation, Mother & Child Health, Immunization, Community Health and support to Primary Health Care developments, as well as the country-wide Guineaworm Eradication Programme. SIDA has no permanent representation in the project and has made its inputs into project direction at the annual reviews and would appear to have adopted the role of observer. A question remains about the development of multi-bilateral development projects as to the position of the funder, in this case SIDA, over the role that it can and should play. The importance attached by SIDA to the more generic aspects of the project tend to be in contradiction to the single-focus Guineaworm eradication strategy that the project had become, prior to the shift in focus over the past year associated with the development of women's groups.

### 3 TARGETS AND ACHIEVEMENTS

#### Introduction

3.1

The Plan of Action developed schedules phasing the timing of completion of activities to be carried out, but there was not sufficient detail for numerical targets to be set at the outset in 1986. The project developed such targets from data collected during Village Contact Drives and then annual targets and achievements were monitored. The Plan of Action for Udaipur (1987) listed targeted outputs in detail, and the project's Statistics Department has tracked annual achievement. Table 1 shows targets and achievements for the physical inputs from the beginning of activity in the two geographical areas until March 1993.

**TABLE 1**

SWACH Targets and Achievements from Inception to March 1993

Activity (Hardware)	Banswara/Dungarpur			Udaipur		
	Target	Achieve-	%	Target	Achieve-	%
Conversion of stepwells	3600	4164	116%	3900	4987	128%
Construction of sanitary wells		27	n.a.		15	n.a.
Repair of old converted stepwells		100	n.a.		134	n.a.
Selection of handpump sites	5036	4724	94%	4706	4532	96%
Drilling of boreholes - Total	5036	4723	94%	4706	4282	91%
Drilling of boreholes - Successful	4300	4278	99%	4000	3690	92%
Installation of handpump	4300	4257	99%	4000	3591	90%
Improvement of India Mark II handpump	1000	976	98%	1000	1000	100%
Construction of washing platform	2850	3327	117%	3100	4320	139%
Construction of cattle water trough	2600	2850	110%	3000	3397	113%
Reconstruction of washing platform		50	n.a.		55	n.a.
Reconstruction of cattle water trough		148	n.a.		80	n.a.
Drainage improvement of existing handpump	5700	5539	97%	9000	10088	112%
Repair of old drainage improvement		49	n.a.		182	n.a.
Repair of broken handpump platform	1500	1631	109%	750	1357	181%
Piped water supply village drainage	12	18	150%	12	16	133%
Construction of latrines: institutional	600	713	119%	1000	874	87%
Construction of latrines: animators		152	n.a.		132	n.a.
Construction of subsidised latrines	600	2274	379%	1100	4561	415%

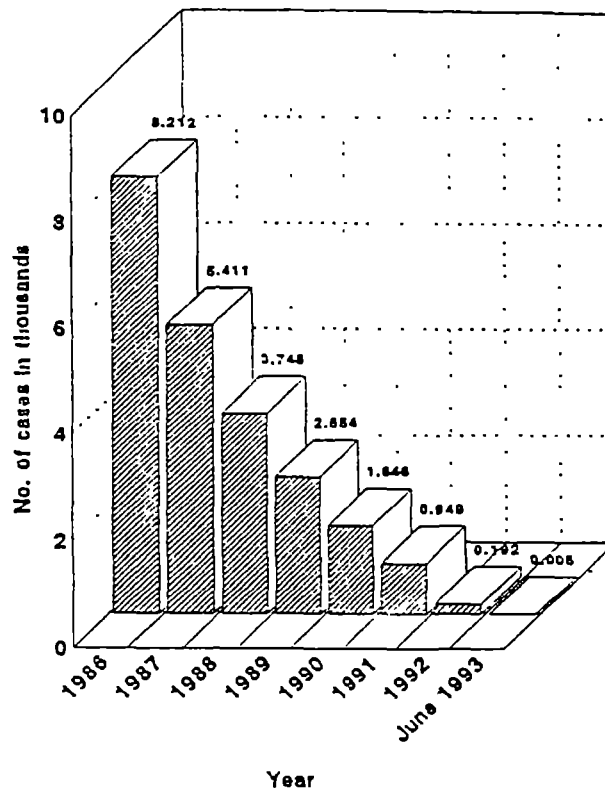
- 3.2 Table 1 shows that the project has reached or exceeded its physical targets for most of the physical inputs. Construction of subsidised latrines departs substantially from the original targets, and the number of stepwells converted is also greater than the initial targets. Repair of broken handpump platforms was also done more often than anticipated at the time the targets were set. This may reflect incomplete baseline data upon which to base the targets, or a shifting focus of activity for the hardware elements of the project.
- 3.3 Pressure to achieve physical targets has been significant throughout the life of the project but was particularly important at the beginning of the project implementation phase when it was perceived that the creation of 'hardware' in the form of handpumps and converted stepwells was a precursor to the longer term attitudinal and educational developments in the fields of sanitation and health. Achieving an appropriate balance between 'hardware' and 'software' elements has continued to be a problem, as the creation of tangible assets is so much easier to achieve than the changes in attitudes and institutional strengthening that is required for long term sustainability.
- 3.4 There were recognized problems associated with the integration of construction work with promotional and training activities. These re-appeared year after year. While there was evident need for access to more water resources it is not at all clear whether the demand for certain sorts of inputs (for example, cattle troughs) had actually developed, nor whether project staff had thought through the social and economic impacts of the changing nature of supply. While the evaluation team was not able to systematically collect information on attitudes to stepwell conversion, for example, it would appear that the process of conversion resulted in a change in accessibility as people were obliged to bring their own ropes and buckets in addition to the pots for carrying the water. The implications for increased privatization of both converted stepwells and handpumps have not yet been investigated but the success of vegetable gardening as a project input would appear to be contingent on individuals living close by taking a proprietorial interest in upkeep.

### **Guineaworm Reduction**

- 3.5 The single most notable achievement of SWACH has been the reduction since 1986 of reported cases of Guineaworm in the project area. From 8212 cases reported in 1986 to 874 cases reported in 1991. The fifth Progress Report, covering the period from July 1992 to June 1993, states that only 192 cases were reported up to December 1992 and a further 5 to the end of that reporting period. UNICEF indicates that there were only 56 cases over this past year. Whatever the actual figures the reduction is dramatic. In Banswara district no cases were treated between January and June of 1993 and only 5 cases were treated in Dungarpur. Figure 1 shows the steep reduction in the number of Guineaworm cases reported through MH&FWD searches.

FIGURE 1

REPORTED CASES OF GUINEAWORM  
SWACH DISTRICTS



Source : MHFWSO Search Reports

- 3.6 In areas where Guineaworm remains endemic there has been a major thrust over the past two years to ensure that cases are reported and treated and that water sources are made safe. The Guineaworm Eradication Strategy with its reliance on Sentinel offices at sub-district level has intensified surveillance practices with tighter procedures for reporting, detecting and dealing with 'rumours'. The scouts programme provides incentives for the detection of pre-infective patients. Since 1990 either animators or scouts have been appointed in all endemic villages with the launch of the Surveillance scheme. In 1992 the project selected mobile scouts to cover all villages under surveillance. But in 1992-3 villages considered 'at risk' were not supported because of limitations of staff to support and supervise such a large network. There is a danger that the surveillance scheme, based on a three year programme will not be given adequate support and at the time when eradication is within grasp, the costs of providing that support for the reporting and treating of such small numbers will prove too large. The success of the scouts scheme is evidenced by the fact that in 1991-2, 86% of patients were reported in the pre-infective stage.

## **Improvements in water supply**

### **Stepwells**

- 3.7 An initial focus of the project was the conversion of stepwells into draw wells. In 1987 alone 2079 conversions were effected out of a total for Dungarpur and Banswara for the years 1986 to 1993 of 4164 according to SWACH records; virtually 50% of the total of conversions in those two districts. The following year 1355 were converted in Udaipur and Rajsamand and 1666 in 1989 - 60% of the total number of converted stepwells for the whole project period. Total achievements are well above the targets set in the original plan of action. Block-wise figures recording the months when conversions were undertaken are available with the project office. In addition a small number of sanitary wells and repair of old converted borewells were undertaken.
- 3.8 Evidence from studies conducted through the project and from observations during the evaluation suggest that only a small number of such stepwells have been subsequently opened up. A focus was given by the project to converting those stepwells which were primarily public and used for drinking water. Stepwells that were used for drinking purposes and were identified as potential sources of Guineaworm infestation have been converted by the project. Maintenance remains with the project and there have been some problems in obtaining community involvement in this, as the inconvenience and changes associated with changing water supply have countered the individual needs of villagers and users. Communities and individual owners have only come forward in a limited way to shoulder responsibility for repair. If handpump maintenance cannot be guaranteed, there is a danger that stepwells will be opened for water extraction in the future. Indeed there is already evidence that this has happened in a small number of cases. There has been some discussion about the development of government legislation to control the construction of new stepwells but this has not resulted in anything to date. As stepwells are also dug to assist in irrigation development there is a possibility that construction will continue to increase. There is some evidence that villagers prefer the taste of stepwell water to that of handpump water. Tests for water quality during the evaluation suggested that 19 out of 24 dug wells that were tested contained contaminated water. The issue of water quality is taken up in chapter 10.

### **Handpumps**

- 3.9 The provision of new handpumps (drilling and installation) is the most significant contribution to safe water and accounts for 44% of total expenditure on both parts of the project. PHED and SWACH jointly prepared rig movement plans at monthly progress meetings. SWACH project officers liaised with District PHED Assistant Engineers and ensured continuous monitoring of



drill rig movement. SWACH also organized several special training sessions for PHED drilling staff to strengthen the capacity in operation and maintenance of drill rigs.

- 3.10 The handpumps installed by the project are more dispersed, more equitably distributed and serve the needs of populations previously unserved, although there is some evidence that handpump installation followed Guinea worm cases (See Chapter 5). The handpumps drilled are said to have a greater depth and are thus likely to be of more use in drought years. In Banswara and Dungarpur the failure rate for drilling of handpumps was 9%, significantly lower than that achieved by PHED elsewhere, and lower than the target failure rate of 15% used in the Plans of Action (see Appendix 6) despite the fact that there was a determined effort to sink boreholes and place handpumps in less accessible areas. The quality of installation is stated as higher because of better monitoring and greater public involvement. The time lag between drilling and installation while still high, has been reduced according to informal reports by PHED. It has been stated that as greater attention has been paid to location and to the priorities of local residents, in particular women, drainage around handpump sites would appear to have gradually improved.
- 3.11 The project is responsible for the selection of handpump sites in the project areas; although project documents suggest that communities should be involved in such selection procedures, there does not appear to be much evidence to suggest that that involvement has been particularly effective. The project does however seem to have taken considerable care to locate handpumps in places convenient to a majority of users and has made efforts to ensure that remote areas have been included. The political pressures surrounding the location of handpumps would seem to be particularly strong and the project has adopted a number of strategies for dealing with it. Firstly the project has insisted that women, as the main water fetchers and users should be involved in location decisions. Animators in particular were expected to generate the involvement of women in location decisions, initially through the Contact Drives. Village Contact Teams were given forms to be filled which recommended sites, and the teams were also given criteria for selection. Unlike the normal programme of handpump construction, the criteria for selection of sites by the project were clear.
- 3.12 The total project target for handpump installation was 4300 for the Banswara/Dungarpur project and 4000 for the Udaipur project. Up to March 1993 almost 99% of that target had been achieved in the two southern districts, and almost 90% of the target in Udaipur (see Table 1). These targets have been achieved despite delays occasioned by the diversion of drilling rigs during periods of severe drought. A delay of up to 6 months between drilling and installation has been noted in some instances. The project has made significant efforts to ensure that that time lag is reduced. Rigs have however remained underutilized and hydrogeological testing of sites has not always been carried out. The reorganization of the maintenance strategy under the project was characterised by significant investment in the training of handpump

mechanics. A particularly innovative programme for the training of female handpump mechanics gained much publicity, but appears to have involved a small number of women relative to the size of the problem, and evidence would seem to suggest that support for these women after training has not been as effective as it might have been. The issue of female mistries is taken up in Chapter 8.

- 3.13 Prior to the project it is estimated that there were already approximately 6000 handpumps in Banswara and Dungarpur. The project has thus increased the numbers available, but there would not appear to have been a comparable increase in the human resources associated with the project, the Public Health Engineering Department, or the Panchayat Samitis to cater for this increase. While reports suggested that upto 40% of handpumps were out of action at any one time for a variety of reasons it would seem to suggest that there has been an increase in the efficiency associated with maintenance.
- 3.14 Targets were set for the repair of broken handpump platforms. These were exceeded in both districts (see Appendix 6). Major repair activity was concentrated in 1990 and 1991.

### **Handpump Maintenance**

- 3.15 Since April of 1993 the Panchayati Raj has managed the handpump maintenance programme and employs mechanics who have charge of between 30 and 40 handpumps each. In addition PHED conducts a handpump maintenance drive between January and June. In this last year PHED's drive did not occur on schedule and SWACH constituted repair teams and dealt with 312 broken handpumps in guineaworm affected villages.
- 3.16 Maintenance procedures have recently been improved particularly through the training in preventive maintenance for animators and scouts, the redistribution of handpumps among mechanics as well as the recruitment of new mechanics and the retraining of existing mechanics. The formation of handpump supervision committees and the association of animators with handpump maintenance has reduced the time between breakdown and repair and future expansion of such initiatives should be encouraged. At one stage in the project it was stated that the downtime between breakdown and repair was a mere three days. This would not appear to be the current situation and with the return of responsibility for maintenance to the Panchayat Samitis, delays are likely to increase as political considerations and competing priorities re-emerge in the wake of the project.
- 3.17 One of the most difficult problems has been the design of effective maintenance strategies. Unless a clean water supply can be guaranteed then there is the ever present danger that villagers will revert to unsafe water sources. Under the traditional system villagers would inform their panchayat member of breakdowns. These would be reported to the panchayat meeting.

The sarpanch would inform the handpump mechanic (mistry). Because decisions were left with the political leaders, location was largely a political decision and subject therefore to corruption. Those with most influence and a more central location appear to have benefitted from this system.

- 3.18 Each male mistry is expected to look after about 40 pumps but a group of 3 female mistries are allocated a total of 30 pumps. They carry out minor repairs while major repairs are undertaken in the biennial repair drives conducted by the PHED. This activity was given low priority by the panchayats. Supply of spare parts and the timely remuneration of mechanics still remain problematic. Procurement of particular parts is through UNICEF and while some delays have been encountered procurement procedures appear to have worked fairly well. Difficulties with repairing Mark 2 pumps appear to remain. Since 1990 Mark III pumps have been used which require less maintenance. A lack of maintenance organization at Panchayat level is likely to decrease the efficiency of current maintenance schedules. Separate arrangements are often made between users and mechanics in the event of breakdowns and this might be a basis for reconsidering the handpump maintenance system generally as pressure builds for local communities to take more responsibility. The project has attempted to encourage routine preventive maintenance but many have commented that such a pro-active stance on the part of the villagers is not likely to be forthcoming until a major change in attitudes towards ownership and control has been achieved.
- 3.19 The Chain of Carelessness (extract from village interviews by water engineer)

Whenever the pump goes out of order someone, normally the ward member, informs the mechanic within 2-3 days. He may also come to know of it in casual visits or in the gram panchayat meeting (twice a month). He comes within 2-3 days and starts the repair. In case any replacement spare is needed, it is obtained from Panchayat Samithi after the damaged part is deposited there. It takes about 2 more days. The handpump remains defunct for about a week in general, but this period varies from place to place depending upon people's need for the handpump, attitude of the mechanic and his rapport with the panchayat samithi. It is least in case of Kupra (same day or one day) and longest in Jalapka (5 months). The major replacements like those of pipes, rods and handle bearing are done during the handpump maintenance campaign normally once a year during summer (March - June).

Before the network of mechanics, information about non functioning of handpumps was sent to Panchayat Samithi by one responsible person identified by the villagers. At many places people told about some remuneration to the mechanic towards his labour by sharing the amount. It varies from Rs. 30/- to Rs 150/-. They even complained that mechanics demand payments in some cases and the handpump is not attended to if payment is not made (Jalapka for example). People even contact another mechanic if they know one and get the work done by making payments. There are cases when they have met the cost of spare parts. On the other hand in some villages people said why should they pay the mechanic for repair when it is his job and he gets salary for that.

Mechanics say, after they reach the village to repair handpumps, they do not find any male to help them as the men are out doing their routine jobs. In many cases though people are present they shirk their responsibilities. In one or two cases the mechanics had some difficulty in getting spares from Panchayat Samithis. Visiting the samithis for this purpose many times is uneconomical and impractical. They suggested some spare parts be left with them, and they can be held accountable.

Hand pump repair is not a full time job for some of them. Their other activities also result in delayed repairs to the handpumps.

- 3.20 It is recommended that SWACH and UNICEF give priority to investigating appropriate and effective maintenance strategies that might be developed from experience with user groups.

#### **Cattle troughs, washing platforms and drainage improvements**

- 3.21 The project appears to have been unable to design a **cattle trough** which is acceptable to communities. Targets for these over the project period were 2600 in Durgapur and Banswara, and 3000 in Udaipur District. These targets have been exceeded in both projects and yet there appears to have been no systematic analysis of the ways in which they are used and of the design

problems that they are supposed to suffer from as far as the evaluation could ascertain. The major efforts in cattle trough construction occurred in Dungarpur and Banswara in 1987 and 1990, and in Udaipur in 1989 and 1990. Construction trailed off dramatically in 1992 and only 3 were constructed in the project area in 1993. Very few appear to have been used appropriately, and animals are using handpump platforms in areas where alternative supplies are restricted. This has obvious implications for sanitation. The cattle trough construction programme demonstrates the problems of physical asset creation in the absence of community awareness or acceptability. This is not just a design problem but rather a deeper failure to take community perceptions and priorities on board.

- 3.22 The use of **washing platforms** has gained greater acceptability and the ones constructed would appear by and large to be being maintained. The targets set for construction have been achieved by both projects. In Dungarpur and Banswara and in Udaipur the majority were constructed between 1989 and 1991.
- 3.23 **Drainage improvements** around handpumps are effectively undertaken where the handpumps are located adjacent to the private house of an influential family, where it is in their interests to maintain a clean environment and where the investments made in vegetable gardens and trees can be easily maintained. Such is not the case where handpumps are located in communal areas where there is no clear demarcation of responsibility. The targets set by the project for improvements to drainage around existing handpumps have been met in the Udaipur project. Figures up to March 1993 indicated that the Dungarpur/Banswara project was only 3% short of target. While work on drainage improvement is carried out by the project, and targeted figures are useful in indicating that work is ongoing, there is a need to ensure that such improvements will be continuous and this again requires a shift in attitudes by water users so that they recognize the importance of ensuring a clean environment.
- 3.24 SWACH assisted the implementation of village sanitation schemes in a total of 34 villages that had piped water supply schemes. This focus on larger nucleated settlements which are easier to service, does not seem to reflect the original objectives of the project: to meet the needs of those populations in poorer and remoter areas. From April 1993 all sanitation construction activities are being implemented through the Rural Sanitation Programme. The achievements of the Piped Water Village Sanitation Programme are measured in terms of length of pipe installed.

### **Latrines**

- 3.25 The project has been involved in the construction of three types of latrines but these have remained a small part of the project activities. A relatively small number of latrines have been constructed in public institutions such as schools

and it is likely that their utility will ensure their maintenance. But there is some evidence to indicate that they are not necessarily being used as intended and are not available to the school children. Construction seems to have been concentrated in 1988-90 in Banswara and Dungarpur, and 1990-91 in Udaipur. As the targets were reached construction has diminished. Only 105 were reported constructed in 1992 whereas 703 were reported constructed in 1990 (45% of the total constructed to March 1993).

- 3.26 A subsidized household latrine programme has resulted in the construction of 6829 such latrines to March 1993. This is well in excess of the stated targets. But construction did not really begin in earnest until 1991, suggesting that the low targets signified low priority in project plans. Evidence would seem to suggest that the demand for household latrines in remote areas is small. If that is the case then the latrine programme has presumably been most successful in areas of denser population. A small number (281) of animators' latrines have been constructed as demonstrations at highly subsidized rates.

## 4 FINANCIAL ALLOCATIONS, EXPENDITURE AND COST EFFECTIVENESS

### Sources of Information

- 4.1 Three types of financial information have been used to compile a complete picture of budget allocations and actual expenditure:
- **Budgets** cover the original lifespan of the project and show the funds needed for each major activity described in the Plans of Action. Budgets show projected funding requirements.
  - **Allocations** show the funding actually received and are found in the Annual Reports and in the project accounts for all categories except UNICEF direct procurement.
  - **Expenditure** is documented in the project's accounts for all items except those procured by UNICEF (eg rigs, vehicles, Temephos, office equipment) which are documented in shipping reports and the Annual Reports. Sometimes the accounts do not have a separate line item for specific items (eg scouts when they were first introduced). For detailed analysis it is necessary to go back to documentation from the Project Office (PO) to obtain the information required.
- 4.2 The analysis of cost-effectiveness combines the cost data with data on physical outputs. Some of these are given in the Annual Reports, others are from the PO's Statistics Department.
- 4.3 Financial records and information about physical outputs are obtained from at least six sources (see Table 2), and the annual reporting period covered by these sources do not coincide. This problem was explicitly recognised in the Plan of Action for Udaipur which listed the different dates of the financial years for GOR and UNICEF before the table of contents.

**TABLE 2**

Sources of Information on Finances and Outputs

Source	Period	Currency
Plans of Action	GOR financial year: April - March	Rupees
Budgets for GOR Budgets for UNICEF	April - March January - December	Rupees \$
Annual progress reports	July - June	\$
Project accounts	GOI financial year: April - March	Rupees
Supply Call-Forwards from UNICEF	July - June	\$
Project's Statistics Department	January - December	n.a.

- 4.4 For this analysis we have followed the reporting cycle used by Government of India (GOI) and the Project's accounts, which provide the most detailed information on expenditure. It must be recognised that data which do not refer to the stated period have been combined; for example outputs reported by the Statistics Department for January - March 1989 will be combined with Project accounts for April 1989 - March 1990 and UNICEF data on supply call-forwards (SCFs) for July 1989 - June 1990, as follows:

January	April	July	October	January	April	July
Jan	Statistics Department data		Dec			
	April	Project accounts		March		
		July	UNICEF SCFs		June	

**Treatment of Capital and Recurrent Expenditure**

- 4.5 To get a proper interpretation of expenditure on hardware, capital costs should be spread over the expected useful life of each item. This has been done by amortising the purchase price over the useful life of the item. A positive interest rate has been applied to recognise the opportunity cost of tying up resources in that investment. This approach may not be relevant from the point of view of UNICEF which, having obtained funding for a specific programme, has no alternative or competing use for those funds. However it is relevant for SIDA, whose funds could be allocated to other foreign aid activities, and for the Government of Sweden, which can choose between allocating funds to foreign aid or to domestic programmes. Amortisation gives an annualised capital cost which can then be combined with annual recurrent expenditures. The procedure is explained in detail in Appendix 7.



- 4.6 All items procured by UNICEF on SCFs have been amortised with the exception of Temephos. The number of years of useful life assumed for each capital investment is shown in Appendix 8, with the exchange rates for converting US\$ into Rupees each year. In this analysis we have used a discount rate of 12%, in line with current thinking among economists in WHO and the World Bank for investments in health programmes. The amortised amount gives an annual capital cost which is then included in each successive year's costs for the duration of the item's assumed useful life. For example, office equipment has been assigned a useful life of five years, so items acquired in the first year of the project are assumed to contribute no economic cost by their sixth year.
- 4.7 All expenditure by the Project Office has been treated as if it were recurrent, and included only in the year when it was made. This introduces some inconsistency in the treatment of construction costs, which would have been higher if they had been amortised. The useful life of the construction requires some bold assumptions, which should be based on observation; repairs to converted stepwells, handpump platforms, washing platforms and cattle troughs are carried out by the Project (see Appendix 6) indicating that the investment requires some recurrent expenditure on maintenance. However, it is not known what other expenditure is made on such repairs (eg by the community). For simplicity, none of the construction expenditure made through the Project's accounts has been amortised.

#### **The Pattern of Budget Allocations**

- 4.8 The Plans of Action for the two parts of the project have the same distribution of funding between donors and GOI/State of Rajasthan: 60% from donors and 40% from GOI and State government sources. Table 3 shows how the funding has been divided between the various agencies involved in implementing the project.

**TABLE 3**

Provision of Funding by Source and Implementing Agency (millions of Rupees)

Source of funds	Banswara/Dungarpur		Udaipur		
UNICEF/SIDA	SWACH	31.385		SWACH	41.451
	PHED	40.615		PHED	67.749
	Total	72.000	60%	Total	109.200
GOI/State Government	PHED	38.610		PHED	42.012
	GOR Proj.	9.390		GOR Proj.	25.517
				Panch.Raj	3.271
	Total	48.000	40%	Total	70.800
Total	120.000		180.000		

Source: Project Office Accounting Department

- 4.9 The Project Office's accounting department does not handle any of the financial paperwork for items procured by UNICEF (i.e. supply call-forwards). Nor does the project handle PHED accounts. This makes it difficult to track actual expenditures in a comprehensive and timely manner. It also makes it difficult to reconcile financial reports from different sources. For example a comparison of the provision in Table 3 with the provision reported in the financial statement reproduced in Table 4 shows a difference of Rupees 38.594 million (120-66.904-14.502) for Banswara/Dungarpur, and of Rupees 85.815 million (180-72.348-21.837) for Udaipur.
- 4.10 The project's financial statement showing the allocation or provision of funds referred to above also shows the actual expenditure (see Table 4). There has been considerable variation between these two figures. Overspending (a negative balance between funds received and spent) has been possible for some of the state expenditure because the Tribal Area Development Department and the Minimum Needs Programme are authorised to spend up to 10% in excess of the amount of their provision. Underspending has not entailed the financial penalty of losing unspent funds. The Plan of Action for Udaipur states that "Savings from allocations made by either or both of the GOR and UNICEF may be utilized during the period 1 April to 31 December 1992." UNICEF's funding has been from Supplementary Funds, which are donor contributions committed to a specific project; these can be held over into the next financial year, unlike funds from general resources (GR), which lapse if not used.

**TABLE 4**

Provision and Expenditure for SWACH, by Financial Year and District  
(millions of Rupees)

Year	Banswara/Dungarpur				Udaipur			
	UNICEF		State Govt.		UNICEF		State Govt.	
	Prov	Exp	Prov	Exp	Prov	Exp	Prov	Exp
1986-87	9.550	5.835	2.560	0.355				
1987-88	7.166	9.454	2.000	0.936			4.205	0.208
1988-89	5.658	7.712	1.936	1.179	7.364	7.185	4.660	5.262
1989-90	5.878	5.154	2.068	4.848	10.711	11.552	4.650	5.425
1990-91	14.351	10.591	3.468	1.782	14.253	14.538	3.579	4.620
1991-92	11.745	11.559	1.220	1.533	25.789	17.557	2.493	2.904
1992-93	12.556	13.188	1.250	2.442	14.231	20.097	2.250	2.665
Total	66.904	63.493	14.502	13.075	72.348	70.929	21.837	21.084
	+ = underspending, - = overspending				+ = underspending, - = overspending			
1986-87	+39%		+86%					
1987-88	-32%		+53%				+95%	
1988-89	-36%		+39%		+2%		-13%	
1989-90	+12%		-134%		-8%		-17%	
1990-91	+26%		+49%		-2%		-29%	
1991-92	+2%		+26%		+32%		-16%	
1992-93	-5%		-95%		-41%		-18%	
Total	+5%		+10%		+2%		+3%	

Prov = provision; Exp = expenditure

Source: Financial Statement of Share between UNICEF and Govt. of Rajasthan, supplied by Project Office Accounting Department

4.11 A comparison of funds received and expenditure within a financial year shows that the project has exercised the permitted financial flexibility to underspend or overspend.

- In Banswara and Dungarpur, there are more instances of underspending (which may indicate more funding than the Project was ready to absorb at that time) than of overspending and the final balance is positive for both UNICEF and State funds.
- SWACH's finances for Udaipur show more years when actual expenditure exceeded the allocation for that period, but again the

balance as of April 1993 was positive.

The large increase in UNICEF funding for Udaipur in FY1991-92, when the project was well under way, was not used that year (underspending of 32%) but most of the balance was used the following year.

- 4.12 It is estimated that without this financial flexibility, and assuming that SWACH was spending funds at the most appropriate rate (i.e. when they were ready), then

20% of UNICEF funding (excluding all direct procurement)  
33% of GOR funding for Udaipur and  
69% of GOR funding for Banswara/Dungarpur

would have been lost. (This calculation assumes that all underspent funds would have been lost, and that no overspending would have been possible.) Under a use-it-or-lose-it rule, the project would try to minimise such losses of funds and might embark upon activities and expenditures before it was ready. The flexibility accorded by SWACH's funding arrangements have therefore provided an opportunity to achieve greater cost-effectiveness by removing any pressure to spend the allocations within a single financial year.

#### **Profile of Annual Costs**

- 4.13 The estimates of annual costs are shown in Appendix 9 for the areas covered by the two Plans of Action: Banswara and Dungarpur (1986-1992), and Udaipur and Rajsamand (1988-1992). (The audited accounts for FY1992/93 were not yet available). The sum of these annual costs from inception to March 1992 is shown for Banswara and Dungarpur in Table 5 and for Udaipur/Rajsamand in Table 6. The grouping of line items is explained in Appendix 8.
- 4.14 The costs of construction (including drilling equipment) have accounted for 72% of the Banswara/Dungarpur costs; this share has varied between 64% and 76% over the six years (see Table 7).
- 4.15 In Udaipur construction has absorbed a larger share of total costs: 78% overall, ranging from 73% to 86% between 1988 and 1992.
- 4.16 Costs of project personnel rank second and transportation (vehicles, their operation, and travel allowances) are third in terms of percentage of annual costs. (It is possible that PHED expenditures are not accurately accounted for in these figures as PHED expenditure does not pass through the project accounts. If this is the case, then construction would absorb a larger share of total costs.)

**TABLE 5**

Summary of Annual Cost Estimates for Banswara and Dungarpur, April 1986-March 1992 (Rupees)

Cost Category (see Appendix 8)	1986-1992 (Rupees)		%
<b>PERSONNEL (Project staff)</b>		7,361,154	6.2%
Salaries, bonus, pension	6,142,494		5.1%
Allowances	1,218,660		1.0%
<b>TRAINING &amp; ORIENTATION</b>		2,628,591	2.2%
Project staff, Workshops, Seminars	377,205		0.3%
State, District, Block, PHED	236,769		0.2%
HP Mechanics, New & Refresher	229,836		0.2%
Village Contact Teams	1,103,832		0.9%
Animators, Women's Camps	433,281		0.4%
Anganwadi/School/Other	247,668		0.2%
<b>PROFESSIONAL SERVICES, CONSULTANCY</b>		3,292,179	2.8%
Payment of Professional Services	1,593,228		1.3%
Development of Trg & Commun. Material	1,492,818		1.2%
Monitoring & evaluation	206,133		0.2%
<b>OUTREACH ACTIVITIES, MOBILISATION</b>		6,625,512	5.5%
Intensive awareness campaigns	1,397,682		1.2%
Exhibitions, Health mgmt, Vol.Action	596,188		0.5%
Medical camps, honoraria (Anim & Scout)	2,942,294		2.5%
Medical items, filters & Temephos	1,689,348		1.4%
<b>TRANSPORTATION</b>		6,997,210	5.9%
Travelling allowance (per diem)	778,132		0.7%
Operation & maintenance of vehicles	3,101,549		2.6%
Vehicles (annualised cost)	3,117,529		2.6%
<b>PROJECT SUPPORT &amp; ADMINISTRATION</b>		6,752,801	5.6%
Office administration, Project	2,962,582		2.5%
Office Supplies & Equipment	2,858,045		2.4%
Miscellaneous	932,174		0.8%
<b>CONSTRUCTION</b>		85,918,117	71.9%
Construction, annual expenditures	38,304,240		32.0%
Construction Equipment & Spares	47,613,878		39.8%
<b>TOTAL</b>	<b>119,575,565</b>	<b>119,575,565</b>	

Source: Appendix 9

**TABLE 6**

Summary of Annual Cost Estimates for Udaipur/Rajsamand, April 1988-March 1992 (Rupees)

Udaipur I and II	1988-1992 (Rupees)		%
<b>PERSONNEL (Project staff)</b>		6,252,854	5.5%
Salaries, bonus, pension	5,129,352		4.5%
Allowances	1,123,502		1.0%
<b>TRAINING &amp; ORIENTATION</b>		3,046,483	2.7%
Project staff, Workshops, Seminars	172,025		0.2%
State, District, Block, PHED	148,777		0.1%
HP Mechanics, New & Refresher	296,746		0.3%
Village Contact Teams	1,313,537		1.2%
Animators, Women's Camps	708,310		0.6%
Anganwadi/School/Other	407,089		0.4%
<b>PROFESSIONAL SERVICES, CONSULTANCY</b>		776,677	0.7%
Payment of Professional Services	180,503		0.2%
Development of Trg & Commun. Material	596,175		0.5%
Monitoring & evaluation	0		0.0%
<b>OUTREACH ACTIVITIES, MOBILISATION</b>		7,351,251	6.5%
Intensive awareness campaigns	463,145		0.4%
Exhibitions, Health mgmt, Vol.Action	754,730		0.7%
Medical camps, honoraria (Anim & Scout)	2,478,886		2.2%
Medical items, filters & Temephos	3,654,490		3.2%
<b>TRANSPORTATION</b>		3,440,972	3.0%
Travelling allowance (per diem)	534,386		0.5%
Operation & maintenance of vehicles	1,406,216		1.2%
Vehicles (annualised cost)	1,500,369		1.3%
<b>PROJECT SUPPORT &amp; ADMINISTRATION</b>		3,599,905	3.2%
Office administration, Project	1,276,426		1.1%
Office Supplies & Equipment	2,172,326		1.9%
Miscellaneous	151,153		0.1%
<b>CONSTRUCTION</b>		88,796,247	78.4%
Construction, annual expenditures	51,701,047		45.6%
Construction Equipment & Spares	37,095,199		32.8%
<b>TOTAL</b>	<b>113,264,390</b>	<b>113,264,390</b>	

Source: Appendix 9

**TABLE 7**

Costs per Year for Seven Major Cost Categories

(a) Banswara/Dungarpur

	FY1986/87		FY1987/88		FY1988/89		FY1989/90		FY1990/91		FY1991/92	
PERSONNEL (Project staff)	418,446	4%	1,098,768	7%	1,297,373	8%	1,451,385	7%	1,436,240	5%	1,658,941	6%
TRAINING & ORIENTATION	413,413	4%	236,848	1%	915,799	6%	78,171	0%	563,110	2%	421,250	1%
PROFESSIONAL SERVICES, CONSULTANCY	216,258	2%	414,689	3%	1,004,268	6%	558,377	3%	619,849	2%	478,737	2%
OUTREACH ACTIVITIES, MOBILISATION	321,156	3%	796,570	5%	288,021	2%	495,012	2%	2,592,562	9%	2,132,190	7%
TRANSPORTATION	516,731	6%	969,297	6%	1,271,613	8%	1,165,712	6%	1,367,562	5%	1,706,295	6%
PROJECT SUPPORT & ADMINISTRATION	559,222	6%	891,737	6%	1,189,083	7%	1,038,867	5%	1,777,412	6%	1,296,481	4%
CONSTRUCTION	6,890,114	74%	11,518,528	72%	10,674,702	64%	15,102,870	76%	20,249,516	71%	21,482,387	74%
<b>TOTAL</b>	<b>9,335,341</b>		<b>15,926,438</b>		<b>16,640,859</b>		<b>19,890,393</b>		<b>28,606,251</b>		<b>29,176,282</b>	

(b) Udaipur

	FY1986/87		FY1987/88		FY1988/89		FY1989/90		FY1990/91		FY1991/92	
PERSONNEL (Project staff)					971,866	5%	1,536,673	6%	1,788,671	6%	1,955,644	6%
TRAINING & ORIENTATION					136,190	1%	1,747,804	7%	422,517	1%	739,972	2%
PROFESSIONAL SERVICES, CONSULTANCY					4,544	0%	271,798	1%	104,038	0%	396,277	1%
OUTREACH ACTIVITIES, MOBILISATION					863,001	4%	570,457	2%	1,628,853	5%	4,288,940	12%
TRANSPORTATION					486,845	2%	953,090	4%	927,200	3%	1,073,838	3%
PROJECT SUPPORT & ADMINISTRATION					568,271	3%	1,080,942	4%	942,301	3%	1,008,391	3%
CONSTRUCTION					18,373,051	86%	19,976,214	76%	24,685,673	81%	25,761,308	73%
<b>TOTAL</b>					<b>21,403,768</b>		<b>26,136,979</b>		<b>30,499,272</b>		<b>35,224,370</b>	

- 4.17 There is nothing inherently correct or incorrect about this distribution of costs. The large percentage devoted to hardware (drilling boreholes, installation of handpumps, and construction of a variety of related facilities such as washing platforms, cattle troughs, and drainage improvements) invites analysis of whether the investment was cost-effective. This issue is discussed in 4.26 below.

### Expenditure per Capita

- 4.18 The allocations for the two geographical areas covered by SWACH and the estimates of annual costs have been combined with data for rural populations in Table 7 to calculate expenditure per capita.

**TABLE 8**

Expenditure per Capita per Year for Major Cost Categories, and Total Project Allocation per Capita

Period covered Years of project activity	Banswara/Dungarpur		Udaipur I & II		% difference*
	1986-1992 6	Rupees/ Capita/ Year	1988-1992 4	Rupees/ Capita/ Year	
Rural Population 1981	1,470,132		2,001,840		
Personnel (Project staff)	7,361,154	0.83	6,252,854	0.78	-6%
Training & Orientation	2,628,591	0.30	3,046,483	0.38	+27%
Professional Services, Consultancy	3,292,179	0.37	776,677	0.10	-73%
Outreach Activities, Mobilisation	6,625,512	0.75	7,351,251	0.92	+23%
Transportation	6,997,210	0.79	3,440,972	0.43	-46%
Project Support & Administration	6,752,801	0.77	3,599,905	0.45	-42%
Construction	85,918,117	9.74	88,796,247	11.09	+13%
Total	119,575,565	13.56	113,264,390	14.15	+4%
Amount allocated for the project	120,000,000	81.63	180,000,000	89.92	+10%

\* Taking Banswara/Dungarpur expenditure per capita as 100%, this column shows how Udaipur's expenditure per capita varies from it (plus or minus).

Source: Appendix 9

- 4.19 The total amount allocated for Udaipur is 10% more per capita than the allocation for Banswara/Dungarpur; this might be explained by inflation. However when dividing the average amount spent per year by the population, Udaipur has received only 4% more than Banswara/Dungarpur. This difference in the average expenditure per capita is smaller than any of the differences in per capita expenditure when disaggregated by line item (see the



last column of Table 7). Much less has been spent per capita on professional services and project support, which probably reflects the early investments on these items in Banswara/Dungarpur being spread to the second project area (Udaipur). Considerably more has been spent per capita in Udaipur on training and outreach activities, reflecting the greater emphasis on mobilisation to identify and treat Guineaworm patients in the preemergent stage. Slightly more has been spent per capita on construction in Udaipur.

#### Moving to the Micro Level: Calculating Average Costs

- 4.20 Combining expenditure figures for particular items with data on physical outputs will produce an estimate of the average costs per component (eg of stepwells converted, handpumps installed). This has been done in Table 9, using expenditure data from the Project Office's audited accounts.

**TABLE 9**

Average Costs of Hardware Items in Banswara/Dungarpur and Udaipur

Line item from PO's audited accounts	Bans/Dung		Udaipur	
	Achievement	Rupees/item	Achievement	Rupees/item
Conversion of Stepwells	4,264	4,871	5,121	4,865
Construction of latrines	3,139	1,424	5,567	1,209
Installation of HP on boreholes	4,257	993	3,591	2,059
Repair of broken HP platform	1,631	894	1,357	869
Construction of washing platforms	3,327	387	4,320	428
Construction of cattle water troughs	2,850	252	3,397	247
Drainage improvement (to existing HPs)	5,539	391	10,088	565
Village piped water scheme (drainage impr.)	18	171,621	16	177,084

Source: Appendix 6 and Project Office's audited accounts to March 1992

- 4.21 There are a number of problems with the calculations of average cost per item shown in Table 9:
- the time periods covered are not the same; achievements cover one more year than the financial data on which cost calculations are based. This problem could be overcome by using data on achievements for the same reporting period as the financial data (April-March);
  - the demarcation of financial responsibility between different agencies means that the audited accounts must separate expenditure by State agencies (eg DRDA) from expenditure handled through the Project Office. Conversion of stepwells and construction of latrines are

recorded separately from the main body of project expenditure in FY1989/90 and FY1990/91, and installation of handpumps is shown as DRDA expenditure in FY1991/92. It has not been possible to disaggregate expenditure on supplies procured directly by UNICEF to the level of detail required for estimating average costs accurately. Bearing these caveats in mind, the calculations in Table 9 have put all named expenditure for a single topic in a single line item regardless of source, but it is not certain that all expenditure on a particular item has been included;

- the achievements of targets listed in Appendix 6 do not all coincide unambiguously with the line items chosen for recording project expenditures. For example nowhere do the audited accounts record separate expenditure for "improvement of India Mark II handpump." If it is assumed that financial inputs for installation of handpumps on borewells also covers improvement of existing handpumps, then the average cost per handpump (installed and/or improved) falls from Rs.993 to Rs.808 in Banswara/Dungarpur, and from Rs.2,059 to Rs.1,610 in Udaipur. Similar queries arise for reconstructed washing platforms and reconstructed cattle troughs: should these outputs be included with the amount of new construction to obtain a more accurate average cost?
- some targets (such as piped water supply to villages) involve such a heterogeneous output that the achievement represents an uninterpretable output. The project does report meters of piping laid, and this would be a better denominator to use when attempting to compare costs between the two areas.

4.22 Having identified these concerns about the basic data and its interpretation, Table 9 nevertheless highlights some interesting points for further enquiry, using more robust data.

- Why is there such a large difference between the two areas of the project in the cost per handpump installed?
- Why does drainage improvement to an existing handpump cost more in Udaipur?
- Why does construction of a washing platform cost more in Udaipur?

4.23 Average costs of stepwell conversions, repairing broken handpump platforms and constructing cattle troughs are very similar in the two areas, so it seems unlikely that inflation in the price of supplies or greater inaccessibility of the sites could explain the variation in costs. Further work using more geographic and operational detail would help to explain why such variations in average cost are found, and the explanations should make it possible to increase the efficiency of resource use.

4.24 Recognising the shortcomings of the estimates of average costs presented in Table 9 helps to clarify the importance of using appropriate data when making such calculations. If average cost estimates are to be robust enough to inform strategic choices about efficient use of resources, then they must be based on

sound operational detail. In the absence of operational detail, these calculations become more influenced by underlying assumptions as they move along the spectrum from discrete items or events (eg training sessions) to continuing activities (eg women's groups) whose "output" is difficult to measure.

- 4.25 The average costs calculated above are per unit of output but do not include any capital or overhead items (such as project staff time invested in the activity). In a more sophisticated analysis, operational information should be collected so that complete cost data can be combined with various measures of output which reflect the quality of the activities contributing to the measure. For example Guineaworms extracted in the pre-emergent phase are a higher quality output than those extracted after the larvae are released because pre-emergent extractions interrupt the cycle of transmission, save the patient many days of disability before surgery, and heal more quickly (Rohde et al:1993).
- 4.26 Estimating a sample of average costs and then indicating the operational factors and environmental conditions associated with relatively better or worse outcomes provides a way of assessing SWACH activities. This can be done with a 2 x 2 matrix with cost on one axis and output or outcome on the other. The centre of the matrix represents average cost per unit of output (or the 50th percentile; depending on the distribution). The contents of each cell describe the factors pertaining to the output of interest (drilling rigs or medical camps or handpumps) whose average cost per output falls into that category. The qualitative component is extremely important; for example if the results of the water quality assessment conducted between February 1990 and March 1991 are representative, then two-thirds of handpumps provide water contaminated with total coliforms and/or fecal coliforms. Taking safe drinking water as a qualitative output, the cost of providing potable water with handpumps is three times higher than an estimate based on purely quantitative "achievements" if only one handpump in three is actually providing safe water.
- 4.27 A matrix showing costs and outputs has not yet been worked out for SWACH, but as an illustration, Figure 2 shows the factors associated with high and low cost per child fully immunised by mobile teams in Kordofan Province, Sudan (1989). The sample was small but there was sufficient variation between the 7 Districts surveyed to provide some useful insights for future strategic planning and operational management.

**FIGURE 2**

Example of a Cost/Outcome Matrix for EPI Mobile Teams

	LOW COST	HIGH COST
LOW OUT-COME	<p><b>CASE 1</b></p> <p>Small team of health workers            Few days per round            Few rounds per year (few daily allowance payments)            Few stations are visited, with small target pop.            Low percentage of eligibles is contacted; follow-up</p>	<p><b>CASE 2</b></p> <p>Size of team exceeds that needed for the workload            Many returns to HQ for rotating staff/restocking            Many stations, far apart, with small target pop.            Low utilization            Ineffective follow-up</p>
HIGH OUT-COME	<p><b>CASE 3</b></p> <p>Days out per month is high, with few returns to HQ            Few stations with large target populations            Short distances            Small team of health workers            High utilization by eligibles            Community enumerates the eligibles and follows up</p>	<p><b>CASE 4</b></p> <p>Days out per month is high, with many returns to HQ            Many stations, far apart, with large target pop.            Kilometres (and fuel) high Large team spends time on identifying eligibles, following up drop-outs</p>

4.28 This analysis compares mobile teams within the area being studied, so better or worse performance is all relative to the specific programme, not to some absolute standard. The most cost-effective combination is found in Case 3, and the least in Case 2.

4.29 This example shows that in addition to cost estimates and measures of coverage (output), the analysis depends upon operational data for adding some interpretation to the numbers. Such information can best be gathered by site visits. Appendix 12 outlines how this approach could be adapted for analysing the cost-effectiveness of SWACH's activities, particularly capital investments in rural water supply.

**Conclusions**

4.30 Monitoring of financial inputs and physical outputs was proposed in the Plans of Action. Reports of expenditure and output have been produced regularly but the two sources of information have never been combined. Opportunities for assessing cost-effectiveness and improving those aspects of implementation which could have been altered have thus been missed.

4.31 Line items or activities which were listed separately in the Plans of Action have often been "clubbed" (aggregated); moreover the members of the club

change over time. For example expenditure on washing platforms and cattle drainage troughs is reported as a single line item in some years. This makes it difficult to monitor even such a basic indicator as average costs of cattle troughs consistently. Accounting line items and targets for physical outputs and activities should be consistent with each other to make it possible for integrated monitoring to take place.

- 4.32 New activities which were speedily introduced before a formal line item had been created were accounted for under an existing sub-head. For example when scouts and a new approach to Temephos application were introduced these payments were recorded within the medical camps line item. This reflects the rapidity with which the project's focus shifted from year to year.
- 4.33 There are some areas in which a timely evaluation of the effectiveness of particular interventions could have led to revisions of project strategy or adjustments in implementation guidelines. For example it was five years before the SWACH project commissioned an evaluation of the double filter cloth and the NICD nylon filter to establish their useful life. During this evaluation both filters were found to be ineffective at removing cyclops (the Guinea worm vector) from drinking water. Building an evaluation of effectiveness into an innovative project could save time and resources and thus improve the cost-effectiveness of the interventions. This process of review and feedback using financial and physical indicators was outlined at the outset in the first Plan of Action but does not appear to have become operational.

## **5 FOLLOWING THE WORM**

### **Introduction: Single Focus versus Multi-focus/generic strategies**

- 5.1 The most obvious tension in the SWACH approach is characterised by the single focus versus the generic. This report has already documented the extent to which, in its shifting objectives, SWACH can be considered to have been a Guineaworm eradication project, a generic water and sanitation project, and a community health project. As a result of these shifting objectives, evaluating the success of the so called 'SWACH approach' will clearly be predicated on which of the objectives is taken as a central focus.
- 5.2 The Evaluation team decided to investigate the tension between these shifting objectives by testing the hypothesis that, from its inception, the project has essentially 'followed the worm' in both its hardware and software aspects. By tracing the positioning of hardware, and the deployment of scouts and animators as key signifiers of SWACH's village level interest, it was hypothesised that we might 'map' both literally and conceptually the path of the Guineaworm, and the project's pursuit of its eradication.
- 5.3 The conclusions drawn from this hypothesis, as detailed below, were that as a Guineaworm eradication project, the SWACH approach has represented a highly effective strategy. As a district focused water and sanitation project, it presents lacunae which need to be identified and addressed.

### **Animators and Scouts as Signifiers of Changing SWACH strategies**

- 5.4 The deployment of animators and scouts can be seen as key signifiers of SWACH's changing focus. By tracing their movements, their numbers and the activities they were asked to adopt, SWACH's changing strategies in pursuit of Guineaworm eradication, water and sanitation education, and improved community health come more clearly into focus. From the outset of the project (Plan of Action 1986-990) the animator was seen as the core person at village level, identified, trained and continuously supported by the Project itself. It is therefore not surprising that animators should provide essential clues to the internal thinking of SWACH.

### **General water, sanitation and health workers 1988-1991**

- 5.5 Animators - exclusively women - were first recruited in 1987/8 in Dungarpur and Banswara. Their original role was to build on the messages delivered during the village contact drives, though it was nearly one year after the second drive before the first animators were selected appointed and trained. The first animators were relatively few in number, 44 and 71 in Dungarpur and Banswara respectively, reflecting the considerable difficulty that the project

had in selecting animators. Only 30% of the villages were covered by animators - some 600-700 villages in the two districts; moreover many animators were not from Guineaworm-affected villages.

- 5.6 As the project broadened its focus in the period 1988-1990/91, shifting into a more generic 'Swach' approach (as opposed to exclusive Guineaworm eradication) the number of animators grew to 253 in 1989 (plus 45 supervisors). By the beginning of 1991 SWACH had 306 animators. Their key responsibilities were defined in terms of health education, supervision of handpumps and arrangements for repair; observation of drainage conditions; education and supervision in the use of cattle troughs and the siting of washing platforms; the formation of women's groups for discussing personal hygiene and environmental sanitation; encouraging the use of filter cloths, soakage pits for waste water disposal, use of ORT and immunization; developing linkages with other developmental functionaries such as the ANM and MPW; promotion of latrines; and identifying Guineaworm cases and sending information to the project authorities.
- 5.7 At this stage in the project, animators covered 5-7 villages, with a population of 4,000 - 5,000. Clearly this ensured that the animators' effect, and hence the project's impact, was relatively dilute. Recognising this as a problem led to the reduction of the area of operations for an animator to a cluster of 3 villages with a population of approximately 2,000. At this concentration, animators were judged to be making an impact on the community. The evaluation commissioned by SWACH was carried out by the Department of Home Science Extension Education, at Rajasthan Agricultural University. The study came to the conclusion that the animator scheme had been successful, and that animators had played a 'significant role' in changing the knowledge of rural women as regards health behaviour. The study found that, according to preselected criteria, knowledge of the animators was judged to be either good, or very good; it was found that they had successfully implemented many technologies, such as improved cloth filters, funnel filters, handled ladles, kitchen gardens, plantations, soak pits, sanitary latrines etc. However, the evaluation also found that while there was a significant difference in the knowledge of rural women in animator and non-animator villages, and in sanitation practices, the level of knowledge and practice was still not satisfactory.
- 5.8 The evaluation recommended that changing knowledge and attitudes would take time, and that animators dropped from 'non-Guineaworm villages' should be restored. Despite the findings and recommendations of the evaluation the project took a very different direction in 1990/1991 with major implications for the role of animators.

Animators and scouts: footsoldiers in the fight for Guineaworm eradication 1991-1993

- 5.9 Annual reports indicate that by 1992 the number of animators had dropped off considerably to 96. The reports do not provide any justification for this fall off, but explanations given to the evaluation team made it clear that many of the animators were 'laid off', and that for a period of approximately five months there was very little interaction with animators at all. This period reflects the project's shift in orientation from a more general focus to the explicit Guineaworm eradication strategy that has characterised the last two years. Villages with no Guineaworm had no justification for retaining their animators, and the effectiveness of animators as a Guineaworm surveillance force was called into question.
- 5.10 The new strategy for Guineaworm eradication required a very different kind of village representative. The relatively 'soft' approach of the female animators was replaced by an increasing 'muscularisation', (and indeed masculinization) reflected in the recruitment of 897 male scouts, giving a ratio of 1:9 female animators to male scouts. Conversations with project staff revealed that male scouts were seen as more mobile (less constrained by social norms in terms of moving between villages), and more suited to the revised 'job chart' drawn up under the new Guineaworm eradication strategy. None of the fifteen proposed activities relates to more general health and sanitation activities, and some, such as keeping a 'strict vigil on all people going out and coming into the village' and visiting all households a minimum of once every week, represent a potentially invasive activity, possibly culturally more suited to a young unmarried male scout than to a married female animator.
- 5.11 The fact that the stipend that had been Rs 250 during the earlier phase of the project was reduced to Rs 150 can be read as an indication of a form of 'deskilling' of the role of the animator.

A role for animators and scouts in the absence of Guineaworm

- 5.12 As it becomes evident that the activities of the intensive Guineaworm surveillance strategy has paid off, the period requiring intensive surveillance activities by animators and scouts is becoming narrower. It is clear that the energies of animators and scouts can be channelled into more general water and sanitation activities, particularly via the strategy of creating women's groups. Thus it is not surprising to see that the balance between animators and scouts has once again shifted, from 1:9 to 1:2.5 in 1993. Similarly, the stipend has risen to Rs 200.
- 5.13 Once again, the project's requirements of the animators and scouts has changed. While still expected to carry out surveillance for a part of the year, their chief energy is currently expected to go into the formation of women's groups, since this is SWACH's key strategy. The suitability of scouts for the task of women's group formation, or its desirability, does not appear to be an



issue for the project. Just as the requirement in 1991 was for an all-out war on Guinea worm, now scouts and animators are expected to follow through the project's new objectives.

- 5.14 The lack of any participation of animators and scouts in the changing agenda of SWACH does not appear to have been commented on in SWACH documentation, despite the apparent legitimacy given to the project's 'participatory approach' provided by animators and scouts.

Animators and scouts: developmental or instrumental?

- 5.15 This endlessly shifting 'job description' suggests a somewhat instrumental view of the role of animators and scouts, particularly given their role as the key interpreters of the project at village level. While a small group of animators has been in the project since the beginning, such women are very much in a minority. The project's strong unwillingness to create 'liability' or dependency has contributed to its use of village level functionaries to serve the project's immediate purposes, rather than to taking the formation of a village cadre as an end in itself. We return to this point in the discussion of human resource development. Here the chief conclusion drawn is that eradicating Guinea worm has been until very recently, the determining factor in the recruitment and deployment of village level functionaries. As the project's only link with the village, this has meant that as the animators and scouts are perceived, so too is the project. Not surprisingly therefore we find that the project is associated primarily with the filter-cloths promoted by animators, or with Guinea worm eradication.

**Hardware: A district focused water and sanitation project or a strategy for Guinea worm eradication?**

- 5.16 The plan of action for Banswara and Dungarpur was based on the number of Guinea worm infected villages divided into five categories according to the number of cases identified in MH&FWD Search Reports (POA 1986-1990: page 6). Category I is for 25+ cases and category V is for villages with no patients now but incidence was reported in the previous two searches. The information thus omits any villages which had no incidence in the last three searches, and does not provide complete baseline data on the project area. This indicates that project planning for physical inputs was based on presence of Guinea worm in a village rather on population.
- 5.17 Appendix 6 summarises the achievements of SWACH's hardware programme to March 1993. Given the norms of PHED output, as described to the Evaluation Team by the Deputy Chief Engineer, this is a clear vindication of the SWACH approach. In pursuit of the hypothesis that the project has essentially 'followed the worm' in both hardware and software activities the Evaluation team selected four blocks, Railmagra and Sarada in Udaipur, Dungarpur Block in Dungarpur District and Kushalgarh Block in Banswara.

- 5.18 The analysis revealed some interesting trends. Taking Banswara as an illustrative example, we found that prior to the project there had been 4,287 handpumps. During the project period an additional 1,721 had been installed, while PHED installed a further 642 independently of SWACH, bringing the total of handpumps in the district to 6,651. Given the 1991 provisional population figures for Banswara, this translates into a figure of 1 handpump per 174 people, somewhat short of the new Government norm for tribal areas of 1 handpump per 100 people, but well within the norms of 1:250 operating at the outset of the project in 1986. However, within SWACH surveillance villages, only 132 extra handpumps are needed to bring the villages to within this norm. In the rest of the district 2,500 would be needed (and this figure is based on 1981 census figures, not 1991). Clearly at district level as a whole, villages with Guineaworm appear to have benefited from an increase in handpumps.
- 5.19 Taking this analysis to block level we find similar patterns emerging. We carried out some basic analysis in each of the selected blocks, examining physical installations in each village (particularly handpumps) examining the correlation between these, the 1981 census figures, the incidence of Guineaworm, and the presence of animators and scouts in each village.
- 5.20 In the case of Kushalgarh Block for example, the presence of Guineaworm, particularly multiple cases of Guineaworm (defined as more than one case in the period of the project) is a strong predictor of the number of handpumps that a village is likely to have gained **during the project period** even when population is controlled for. Guineaworm villages have been highly privileged sites for project intervention. Villages with multiple Guineaworm cases gained on average 2.3 handpumps each; non-Guineaworm cases gained only 0.4 handpumps each; thus, villages with multiple Guineaworm cases were five times more likely to get handpumps, regardless of their populations. Out of 209 villages in Kushalgarh, there were 12 with multiple Guineaworm cases; these villages represented 5.7% of the total but accounted for 23.3% of the handpumps installed. Eight of the most severely affected villages 3.8% of the total with multiple Guineaworm cases accounted for 26.5% of the handpumps installed.
- 5.21 When population totals are added to the picture, the privileging of Guineaworm villages becomes even starker. Villages with multiple Guineaworm accounted for only 5,609 people (1981 census figures) or only 3.74% of the total population. These twelve villages received 28 handpumps, giving a ratio of 1:200 population during the period of the project. The remaining 92 handpumps were distributed between 144,143 people, giving a ratio of 1:1567 during the project period. Unfortunately, without accurate data as to the handpump situation in the villages of Kushalgarh before the start of the project, the **actual** numbers of handpumps per head of population cannot be computed. As such these figures can be taken as nothing other than illustrative of an apparent trend to locate hardware, particularly handpumps, in villages with Guineaworm.

- 5.22 In fairness to the SWACH project, Kushalgarh Block may be a rather extreme example. Similar calculations for Sarada Block do not reveal such a stark contrast **when population figures are controlled for**. On the surface the pattern looks very similar; 71 villages with no Guineaworm had only 80 handpumps, while 69 villages with multiple Guineaworm had 270 handpumps, and 16 villages with one case of Guineaworm in the project period had 15 handpumps. When the population totals are taken into account however, the non-Guineaworm villages are found to have gained approximately 1 handpump per 417 people, while the multiple Guineaworm villages gained approximately 1 per 365 people, still operating in favour of those villages infected, but by no means so strongly.
- 5.23 In Railmagra Block, taken as a control since it had no Guineaworm during the duration of the project, the population gained on average 1 handpump per 743 people during the course of the project. Again, without comprehensive baseline data of the handpump situation at the start of the project, it is difficult to interpret this data. It is worth noting however that 44.68% of the villages in the block gained no handpumps during the course of the project.
- 5.24 In Dungarpur Block, Dungarpur District, the situation is a little different in that only 23 villages out of 156 villages have had no cases of Guineaworm. Consequently, the presence of Guineaworm has little validity as a determinant of handpumps or other hardware in Dungarpur, since the whole Block can be seen as suffering from Guineaworm disease.
- 5.25 The limited analysis presented above suggests that in remote and relatively inaccessible areas, where Guineaworm was sporadic rather than endemic, as in the case of Kushalgarh, the project appears to have deployed its hardware strategically in pursuit of the objective of Guineaworm eradication. In Sarada Block, villages with Guineaworm appear to have been marginally better off in gaining handpumps; the fact that Guineaworm cases are greatest in villages with the highest populations means that it has not been possible to fully separate out the 'Guineaworm effect' from the impact of siting handpumps based solely on population criteria. Overall, the absence of detailed baseline data on the number of handpumps in each block has made it difficult to compute the current ratios of handpumps per capita, though this data may become available before the final submission of this report. If so, it would enable us to gauge at block level the extent to which widespread Guineaworm, as in Dungarpur Block for example, acts as a predictor of hardware installations, when compared to blocks that had no Guineaworm at the start of the project, such as Railmagra.

## Conclusions

### The relevance, effectiveness and efficiency of the approach in meeting project goals

- 5.26 This chapter makes it clear that the relevance of the SWACH approach in 'following the worm' is strongly dependent on which project goals are identified. As a Guineaworm eradication project (see further discussion in the next section) the strategy of shifting the numbers, job descriptions, and gender of the village level workers was manifestly relevant, and indeed purposive. The scouts and animators can be seen as pawns shifted in the pursuit of a larger goal, the eradication of Guineaworm. Similarly, the strategy of ensuring that villages with dangerous drinking water sources, in terms of presence of the cyclops vector, were the first to be targeted for handpumps and stepwell conversions is obviously 'relevant' - indeed essential - to the eradication of Guineaworm disease.
- 5.27 However, if the project is defined in broader developmental terms, as a district focused water and sanitation project, as outlined in the first Action Plan, strategies such as recruiting and then dropping animators are neither relevant nor efficient, particularly in the light of recommendations made in the mid-term evaluation of the animator scheme. Instead of slowly building up a cadre of village level workers, and maintaining their training and human resource development, the project has constantly shifted its emphasis, and narrowed its focus from many thousands to 770 active and surveillance villages in 1993. In the same way, its messages narrowed from those of broadly based community health to three key points: filter your water; don't let an infected person go into a stepwell; and use handpump water if its available for drinking.
- 5.28 Again, when defined as a district focused water and sanitation project, it is clear that the distribution of development 'goods' has been very uneven. Any village with Guineaworm, particularly villages with multiple Guineaworm have had the benefit of constant attention from the project; many villages apparently more fortunate at the outset, and not suffering from Guineaworm have had little more than a couple of village contact drives, plus some hardware. Many villages have not even had that. Out of the 209 villages in Kushalgarh Block, 49 villages had no handpumps, washing platforms or converted stepwells, and while it was not possible to trace the exact deployment of animators and scouts, it seems most likely that these villages did not have the benefits of their work either. No villages with multiple Guineaworm cases had no inputs, though two villages with one case of Guineaworm each (throughout the duration of the project) had no inputs.
- 5.29 At the end of the project, active and surveillance Guineaworm villages will have had the benefit not only of hardware, but of extensive software inputs; the jal melas are largely limited to Guineaworm villages, and the 1000 women's groups are also largely confined to this group. Animators and scouts

have been active in Guineaworm villages since the start of the project. Many villages with no Guineaworm have been doubly disadvantaged, since not only did the hardware not materialise, but the software - the water and sanitation education - was virtually non-existent in non-Guineaworm villages.

The long-term sustainability of this strategy

- 5.30 Clearly the long-term sustainability of 'following the worm' is naturally limited by the success of the strategy. As Guineaworm is eradicated, the project is faced by the problem of what to do next with its efficient organisational machinery, and its considerable institutional learning. However, the strategy of pursuing Guineaworm eradication is, like any single-focused, vertical programme, not an automatic qualification for other forms of development work. As such the strategy adopted by the project is not sustainable, even though the SWACH project is making formidable efforts to re-deploy its energies. Moreover, it is far too resource-hungry an approach to be sustainable. To a considerable extent, SWACH, in its current jal mela strategy, 'buys' its visibility (for example through promises of free medical treatment at the Jal Mela). The mobilisation of resources required to provide the generators, microphone sets, tents, for 1000 melas, will cost the project somewhere in the region of \$315,000. The physical impact is certainly dramatic, but, as will be discussed later, owes more to social marketing than to long-term development planning.
- 5.31 As a Guineaworm eradication strategy, the SWACH method of 'following the worm' and allowing it to determine human and physical resource deployment has been highly effective, but the single focus has meant numerous missed opportunities to tackle other less visible health problems which would have addressed the overall goals of health improvement and community development.



## 6 ERADICATING GUINEAWORM

### Introduction: A demonstrable success

- 6.1 It is clear that by 1995, when the SWACH project winds up there will be no cases of Guineaworm in Udaipur, Banswara and Dungapur. There can be no question that the project deserves considerable accolade for this achievement. Table 10 below provides Yearwise Guineaworm cases (1984- April 1993) which indicates the dramatic impact of the project.

TABLE 10

Yearwise Guineaworm cases (MH&FWD Definition) 1984-April 1993

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
BAN	765	710	752	697	178	139	38	89	2	0
DUN	2924	4149	3263	3163	723	582	439	385	90	2
UDA	6152	3902	4192	1551	2847	1833	1169	489	71	0
TOT	9841	8761	8207	5411	3748	2554	1646	2609	163	2

Source: NICD

- 6.2 By November 1993, these three districts accounted for 5 cases of Guineaworm, following the NICD definition of a case as a post-emergent condition, with 51 cases at the pre-emergent stage, and identified and treated within the project. Of the pre-emergent cases, 5 were in Dungapur and 46 in Udaipur. The fact that these figures come from the MHFWD means that they do not account for the preemergent worms identified and removed by the project, only worms that have already emerged. This means that the post 1986 figures are a considerable underrepresentation of the actual rate of Guineaworm infection, since increasing numbers of Guineaworm were extracted before they reached the emergent phase, and before, following the NICD definition they became capable of infecting other. The pre-1986 figures may be more representative of the incidence of Guineaworm as removal of the pre-emergent worm was not widely available.
- 6.3 Looking at Guineaworm as a disease like any other, this represents a fall from 4/100,000 to 2/100,000. This would be comparable with the incidence of maternal mortality.

## Key Elements in the Success

- 6.4 SWACH has expressed considerable interest in identifying which factors have been most responsible for the decline in Guinea worm, and work is being carried out on the available data on all SWACH interventions to assess their various and separate impacts on Guinea worm incidence (extraction at medical camps, intensive drives, stepwell conversion etc.). It seems clear that the process of Guinea worm eradication has been a synergistic process, but within this, SWACH has clearly pioneered its particular combination of strategies - with an emphasis on Guinea worm extraction - and these deserve further discussion. Preliminary results of the research show that the use of Guinea worm extraction 'significantly reduce(s) the incidence of Guinea worm disease' (untitled SWACH paper).
- 6.5 Guinea worm extraction was pioneered by two ayurvedic doctors in the 1940s or 1950s, and perfected by Dr. B.L. Sharma in the 1980s using methods learned from the vasectomy technique. The number of worms extracted by this technique, and the number per ayurvedic doctor varies from SWACH document to document, but it seems reasonable to assume that between 100,000 and 200,000 worms have been extracted in the project area over the last few decades. Despite this, there is still considerable controversy about the technique within India.
- 6.6 SWACH falls under the umbrella of the Guinea worm Eradication Programme (GWEP) in India, which monitors Guinea worm infection throughout the country. In 1992, Rajasthan contributed 73% of the total Guinea worm cases in India, followed by Karnataka (15%) Madhya Pradesh (9%) and Andhra Pradesh (3%). Throughout India, GWEP follows the strategies of conversion of unsafe drinking water sources, creation of additional, safe supplies via the state PHED, while in Rajasthan, there are in addition, applications of Temephos and distribution of stainers. However, it is only in the SWACH and RIGEP areas that the strategy of removing pre-emergent Guinea worms has been a key strategy for containment, and as indicated below, is done so without the approval of the National Guinea worm Eradication Programme.
- 6.7 In the 'Proceedings of 15th Task force Meeting on Guinea worm Eradication Programme in India' held at NICD in January 1993, the recommendations for each of the 11th, 12th, 13th, 14th and 15th Taskforces are listed. In none of them is there any mention of pre-emergent worms. Rather, in the Recommendations of the 15th Taskforce, it is stated that 'The Guinea worm surveillance, both active and passive, should be further prioritized and strengthened in the entire GW endemic states in order to immediately detect any Guinea worm case (at the blister stage) for promptly undertaking containment measures to interrupt the transmission' (p.47). Similarly the Recommendations of the 11th Taskforce (January 1989) state that 'In absence (sic) of effective chemotherapy for Guinea worm, it is important that the Guinea worm blister/ulcers of patients should be constantly covered until



healing. For this purpose besides educating, patients should be assisted by providing a package of 12 gauze bandages to each needy patient for self ulcer dressing and this should be regularly monitored' (Appendix 4).

- 6.8 Most significant however, are the Recommendations of the 13th Task Force (1991) which state that

'Every effort must be made by the PHC functionaries to detect Guineaworm cases in early stages ie at blister stage or within one day of Guineaworm emergence...*The hazardous procedure of manual/surgical extraction of Guineaworm should NOT be practiced, in any area as it is not recommended under the National Guineaworm Eradication Programme*'.

- 6.9 This divergence is a matter of some importance, not least because of the view that the SWACH extraction of pre-emergent worms has been instrumental in eradicating the disease:

'The results of the procedure are...a dramatic increase in both the ease in detecting cases as well as in presentation at an early stage of Guineaworm infection, which enables improved control and containment procedures, such as isolation of patients and disinfection of open water sources to be implemented, thereby breaking the chain of transmission...and...a reduction in disease transmission attendant upon extraction of the adult worm prior to release of its larvae into the environment' (Rohde et al, 1993:76).

- 6.10 Consequently when assessing the success of the SWACH (and RIGEP) projects alongside those in other States, one is not comparing like with like. This is illustrated by the discrepancy in figures for Guineaworm cases as per the searches carried out by the MHFWD and by SWACH. While MHFWD claim that there have been 5 Guineaworm cases in 1993, SWACH claim 56. The fact that SWACH was able to eradicate 51 of the worms **before they reached a stage when they could infect others** means that the project effectively contained 91% of potential infection. Without the extraction technique, 56 cases, or eleven times the actual number, would have reached the infective stage, leading to considerably more cases of Guineaworm in 1994.

- 6.11 This analysis takes no account of the amount of human suffering prevented by the extraction technique. During fieldwork, when villagers were asked to describe Guineaworm disease, they put it in a qualitatively different category to other diseases, in terms of the pain and disability affecting otherwise young and healthy people. While there is still some debate about the number of person days of suffering averted by the extraction technique (which is outside the scope of this report) it is noted that quite aside from its merits in eradicating Guineaworm, the extraction technique, and SWACH's strategy of medical camps and prompt extraction has been of considerable health benefit to the target population in its own right.

- 6.12 SWACH's advocacy of the technique, in the face of considerable opposition, and its export of the technology to other parts of Rajasthan and to Africa, must be seen as a major achievement of the project.

#### The importance of surveillance

- 6.13 Surveillance has been, and continues to be a key project intervention, and one which SWACH appears to have perfected in the course of the implementation of the project. A system of active surveillance has been introduced and modified as the programme has developed, for the regular flow of information about Guineaworm disease, through twice-yearly searches, regular house visits by animators and scouts, and the introduction of a system of rewards for first information. A parallel machinery of the medical and health department is also operational, with emphasis on individual case detection, containment and treatment of water sources with temephos, which at times leads to competition between the MH&FWD and SWACH, and confusion over the reward system (see below, Section 6.7).
- 6.14 **Rumour Registers** are maintained at district level project officer's offices, where any information about suspect Guineaworm disease patients, from any source is entered. Immediately after receiving information, the PO tries to send a SWACH ayurved doctor, and any other project staff to verify the report. Rumour registers studied in the course of fieldwork showed them to be meticulously maintained. Only a tiny number of rumours result in the extraction of a worm, and considerable resources are pumped into keeping the system operative, but the eradication of the last worm from the project area will clearly depend on such a well-developed system.

#### Temephos

- 6.15 The treatment of water sources in the project area by Temephos application is part of the SWACH Guineaworm Eradication Strategy. Temephos ensures the provision of safe drinking water by breaking the transmission cycle of Guineaworm by killing the cyclops in the water.
- 6.16 Temephos application is the responsibility of the MH&FW Department. Normally the coordinator from SWACH and the Sanitary Inspector from the Health Department do the job. In Kolkhanda Khas village the evaluation team found that the ANM together with the animator works out a schedule for Temephos application in the villages covered by them in order to avoid duplication of effort and resources.
- 6.17 Frequency of application is 8 times a year, i.e. monthly from February to June and once in two months from July to January as reported in the Water Engineer's study report. The Dungarpur Project Office, however, reports 14 times a year. The evaluation team was told that in September 1993 it was recommended that Temephos be applied every 15 days during peak

temperatures. This recommendation was based on an assessment of its effectiveness which found that at elevated temperatures there was a 10 day period when Temephos failed to kill cyclops in drinking water sources. The project has reactivated the strategy of controlling cyclops with fish by introducing suitable species of fish to infected water sources.

- 6.18 Some measure of difficulty is experienced in calculating the correct amount of Temephos to be applied in relation/proportion to a particular body of water. While the ANMs and animators are instructed to do this as accurately as possible, the project has employed extra staff to ensure that Temephos application is properly implemented.
- 6.19 1989 to 1991 were the surveillance years. The last case reported by SWACH in Banswara was in July 91, therefore SWACH has not been applying Temephos since January 93. However, the Health Department continues to apply Temephos without the knowledge of SWACH, an example of the lack of contact between them.
- 6.20 UNICEF purchases Temephos (@ Rs.651 per litre) from Cynamide India, Balsad, Gujarat and supplies to SWACH. In Dungarpur, the Health Department was supplying Temephos during 86 to 89.

#### **The Involvement of the Medical Health and Family Welfare Department (MH&FWD)**

- 6.21 Until the start of the SWACH project, Guineaworm Eradication in southern Rajasthan was the responsibility of PHED and the MH&FWD. These two bodies remain responsible for Guineaworm eradication in all other endemic States in India. According to SWACH documents, it was the perceived inadequacies of this approach that led to the project strategy adopted by SWACH, but while from the outset staff were deputed from PHED, none were deputed from MH&FWD.
- 6.22 The tension between SWACH's approach to Guineaworm extraction, and the approach recommended by GWEP may underline the curious relationship between MH&FWD and SWACH. Given GWEP's strictures against Guineaworm extraction as late as 1991, and given the composition of the Task Force Group, it is perhaps not surprising that the relationship between MH&FWD and SWACH has not been closer. The Task Force, responsible for an annual in-depth review of GWEP, is constituted under the Chairmanship of the Director General of Health Services, GoI, and includes the Directors of Health and Medical Services of Guineaworm endemic states, and Secretaries of Health from endemic states.
- 6.23 MH&FWD only joined the project on a formal basis since joint searches began in 1992. In the five years prior to that they had virtually no formal involvement in the project. While the searches are conducted jointly, the figures are still presented separately, as discussed above, in order to adhere to

the rigours of epidemiological classification. At the pre-emergent stage, Guinea worm is not, epidemiologically speaking, a communicable disease so ipso facto cannot count as a case.

- 6.24 In the Plan of Action 1987/-1991/2 the project is booked under the major head 'Medical and Public Health', under the minor head of 'Public Health', and only in its subheading as 'Guinea worm Disease Control'. Moreover, despite the remit of MH&FWD to deal with disease, including the impact of improved water supply on waterborne disease, and despite the fact that there is an elaborate and extensive health network in the area consisting of '20 rural primary health centres, each staffed by one or more physicians and assisted by paramedical staff, and several hundred small dispensaries with female auxiliaries serving the district, these government clinics provide only topical dressings, bandages, and advice to stay away from open water sources' (Rohde et al 1993:75). SWACH has effectively created a parallel structure, using government ayurvedic doctors, to deal with Guinea worm.
- 6.25 The project's first director has gone on record stating that 'for some inexplicable reasons there has been virtually no involvement of the health department' (Singh, 1990). Attempts to clarify this lack of involvement during the consultancy were not successful. Representatives from the MH&FWD suggested that we 'ask SWACH' as to why they were originally not involved, for example in deputing staff to the SWACH project as was the case with PHED, the Department of Agriculture and the Department of Education. SWACH, when asked either claimed that MH&FWD **had** been involved, or pointed to the already considerable overloading of the ANMs/MPWs at subcentre and PHC level. The 1986-1990 Plan of Action states that despite the fact that there are a large number of programmes with voluntary or part-time workers at the village level such as Village Health Guides, Sathins, Anganwadi workers, Drug distribution Centres, etc. 'due to inadequate guidance and support or because of other preoccupations, none of these workers can at present be relied on to act as active contact persons' in the community. It is only recently that SWACH has begun to modify this view.
- 6.26 Since the initiation of joint searches, there have been other joint MH&FWD/SWACH activities. The training of field-level health functionaries, such as ANMs, MPWs, has been initiated at block level with the intention of harnessing their energies for the formation of women's groups. The concept of the 'spearhead' group is particularly important to the CBCS concept being pioneered by SWACH in Sarada Block, and by Sevir Mandir elsewhere in Udaipur district, and relies on close collaboration of all village level functionaries. The Jal Melas make use of staff from the MH&FWD. At each Jal Mela, Government doctors attend, to provide health check-ups and immunization. The evaluation team met several government doctors at these Jal Melas, and while the whole Jal Mela concept is essentially a one-off, carefully staged 'event' rather than a developmental 'process', it is nonetheless encouraging to see the active cooperation of the project and MH&FWD. However this collaboration is not without problems (see Section 6.7).

- 6.27 A further area of cooperation has been the pilot health project in Sarada Block, Udaipur District. In 1990 during the Universal Immunization Programme (UIP) Year, the Health Department of Udaipur district with the assistance of SWACH conducted a series of workshops, ranging from an influencers workshop on UIP, orientation workshops for the staff of the MH&FWD, and IEC workshops. A series of base-line data studies were also commissioned, and these data provide some of the only systematically collected data on health facilities, health behaviour and community organisation available in the project area.
- 6.28 The report on the Primary Health Centres is not encouraging, and perhaps goes some way to explaining the reluctance, or unwillingness of SWACH to utilise the MH&FWD field staff more comprehensively: 'availability of essential medicines and vaccines except for immunising agents...were inadequate....in the whole year hardly one or two deliveries had been conducted at the PHCs...Though the posts of laboratory technicians have been sanctioned, the necessary equipment is not available...similarly equipment for minor surgical procedures and neonatal resuscitation are inadequate' (obtained for MH&FWD staff in Udaipur). Similarly, while in the block there are 50 subcentres, only 34 are functional, and the staff position in these subcentres is described as 'grossly inadequate'. In conclusion the report states that 'the survey of existing health facilities in Sarada Block reveals a grim scenario'.
- 6.29 Sarada Block is one of the Blocks in which SWACH has been most active with a total of 95 villages active or under surveillance in 1993 (more than in any other single Block). It is also the Block adopted for the CBCS programme. The poor state of health facilities in the Block, and the fact that it was adopted for a pilot programme is indicative of the problems faced by MH&FWD, as well as the potential difficulties in effective cooperation in Guineaworm eradication, at least at village level.
- 6.30 On the other hand cooperation at a higher level may have had benefits both for the project, and for the MH&FWD, not least in ensuring that other water-borne diseases were a focus of attention earlier on, and in better utilising the services of government epidemiologists.

#### **Possible areas for further collaboration**

- 6.31 Further cooperation between SWACH and the MH&FWD may be more attractive given the rapid expansion of medical and health infrastructure witnessed in the project area over the last couple of years in response to National Health Policy. A number of innovative schemes have been launched in the project districts to augment service delivery and to give a boost to IEC activities. In the light of SWACH's current quest for future directions (seen for example in its espousal of health-related activities as diverse as eye camps, and anti HIV/AIDS campaigning) a number of new departures instituted by MH&FWD may provide openings for SWACH-trained village functionaries.

- 6.32 In Udaipur district, a Community Based Distribution (CBD) of contraceptives has been initiated where a volunteer couple are identified in villages of up to 500 people, and trained to supply condoms and OCPs to couples in their area. In Udaipur this project is operational in all blocks and all villages of less than 500 people which do not have any peripheral institution of the Health Departments such as a sub-centre or PHC. Nearly 3000 volunteers have now been recruited.
- 6.33 Banswara District is the first phase district chosen under the Child Survival and Safe Motherhood Programme (CSSM) in 1992. Training of field functionaries has been held, and attempts are being made to organise women in villages to boost utilisation of health interventions, and to channel community participation in enhancing child survival and safe motherhood. Under an innovative IEC project, link persons have been identified in villages who are in regular contact with the MPWs (male and female) of the Health Department. These link persons are supposed to act as a bridge between the community and formal health care delivery systems. According to information from the CMHO Banswara, more than 5000 link persons have been identified and are in touch with the front line health functionaries of the department (ie ANMs and MPWs).
- 6.34 Dungarpur District is also involved in an IEC training project being executed by the medical and health department.

#### **Problem areas in collaboration**

- 6.35 Observations made during the field visits suggested some outstanding problems:
- Though a formal decision has been made to conduct joint searches for Guineaworm disease there remains a lack of communication or considerable delays in communication between SWACH and MHD, for example on treatment of Guineaworm cases in camps and temporary hospitals.
  - The announcements of awards adds to the confusion. In Oda Falan, two messages were observed next to each other each offering rewards for the identification of Guineaworm cases. One, by SWACH offered a reward of Rs 200, and one, from the MHD offered Rs 50. During field work, one female MPW at Palsarada told the team that people tend to conceal cases when health department functionaries visit them, since the amount offered is paltry in comparison to the amount announced by SWACH. In the race to eradicate the final Guineaworms this will be even more the case, since SWACH has raised the stakes by making the reward for an unruptured Guineaworm Rs 500.

- SWACH appears to have a rather instrumental view of the MHD, using its services as a 'pull' when necessary, without ensuring that it can necessarily deliver the goods. During fieldwork at Mokampura village, for example, it emerged that when the jal mela was organised in September 1993, wall slogans had been painted informing people that all sicknesses would be treated free of charge during the water fair. The message had misfired since very few medicines for common ailments could be made available through the local PHC. Since no additional supplies were made available, the jal mela exhausted the limited stocks in the PHC. Similarly, at Mahudi village, scabies is rampant among children. During fieldwork it emerged that no medicines for scabies had been available during the jal mela. Moreover, village people complained about the brief stay of the doctor. When the MO at Sajjangarh PHC was confronted with this, he expressed his helplessness in the face of lack of prior information and non-availability of medicines. He claims he was dragged to the jal mela by project staff in their vehicle for a brief stay.
- Improved coordination is vital to improved relations, and systematic, rather than ad hoc interventions. During fieldwork, it was found that in Banswara SWACH is organising eye-operation camps. At the village of Mokhampura, scouts and animators were identifying and making lists of eye patients, which, according to the evaluation team's health consultant, was beyond their capabilities. In Dungapur, SWACH is experimenting with launching activities for spreading awareness about AIDS. Other ideas being discussed are the provision of medical kits to animators and scouts to enable them to dispense basic drugs. There appears to have been no attempt to institutionalise the mechanisms and procedures for these interventions; SWACH appears to lean on individual contacts down the line, while MH&FWD looks on.

#### **The monitoring of water-borne diseases**

- 6.36 Diarrhoea is a leading cause of death among children under 5 in Rajasthan. Going by present incidence, it is estimated to kill about 85,000 children every year, or nearly 233 every day, taking average annual episodes as 3 and a case fatality rate of 0.5%. A recent study for Banswara district conducted by the Indian Institute of Health Management Research, Jaipur revealed a high incidence of diarrhoea, but the use of ORS is limited to only 14.3% of episodes.
- 6.37 Despite SWACH's broader focus on water and sanitation, the project has, until very recently, made no attempt to monitor its impact on water-borne diseases other than Guineaworm. The absence of any systematic base-line data collection in the course of the project has hindered this process still further, since there are no figures against which progress could be monitored. There have been ad hoc attempts to gather baseline data. The 'Abstract from a Project Report on Social Inputs in Area Development' in the Bichhiwara and

Similwada Samitis of Dungarpur District provides the briefest of comments on water-borne disease: 'Dungarpur district has a very high incidence of water-borne disease, especially guineaworm, amoebiasis, worms, various skin diseases including scabies etc. due to wide-spread infestation and pollution of water sources' (Elding, undated:28).

- 6.38 In an evaluation of a parallel intervention to SWACH, PEDO's Integrated Rural Water Supply, Health Education and Environmental Sanitation Project in Bicchiwarra Block, the evaluation concluded that no adequate and reliable data about water-borne diseases (except Guineaworm) were available either with the PEDO project, or the District Health Authorities to allow any meaningful interpretation of the impact of the project on morbidity and mortality due to water-borne diseases. While the Primary Health Centres and District authorities are supposed to compile monthly and annual reports on communicable diseases including water-borne diseases, their quality is generally poor. The evaluation of PEDO concluded that no inference could be drawn from reports to indicate the trend of water-borne diseases during the last five years.
- 6.39 Attempts to gain data during the current evaluation from the Health Department in Udaipur produced the following, which is included only as an indication of the extent of underreporting via official channels. In order to put this in context it should be noted that the estimated population for Udaipur for 1991 is 2,357,000. That recorded mortality from Diarrhoea for example is between 7 and 12 annually, or 0.004/1000 indicates considerable underreporting of the disease.

**Table 11**

Cases of Selected Water-borne Diseases reported by Health Department, Udaipur 1991/2

Disease	Morbidity		Mortality	
	1991	1992	1991	1992
Diarrhoea	12,202	15,587	7	12
Cholera	5	28	1	2
Gastroenteritis	899	929	12	13

Source: MH&FWD, Udaipur

- 6.40 The rapid assessment carried out by the current evaluation team pursued this issue further. A key focus of fieldwork was a rapid assessment of the incidence of water-borne disease, with a particular focus on diarrhoea. Simultaneously,



attempts were made to retrieve information from health centres in the vicinity of the sample villages (see Appendix 10 for details). The following conclusions were drawn from the study:

- Discussions with household respondents, school children and key village informants revealed their better knowledge about Guineaworm than about diarrhoea as Table 12 demonstrates. The majority of school children, and almost all key village informants had a good knowledge of causation and prevention of Guineaworm disease: less knowledge about transmission (see Udaipur in Table X) of the causation, transmission and management of diarrhoea.

**TABLE 12**

Distribution of household respondents according to their knowledge of Guineaworm and Diarrhoea

Knowledge about:		Banswara		Dungarpur		Udaipur	
		GW	Diarr.	GW	Diarr.	GW	Diarr.
Causation	Good	68%	20%	60%		55%	15%
	Fair	17%	20%	20%		21%	29%
	Poor	15%	60%	20%		24%	56%
Transmission	Good	53%	15%	47%	13%	9%	4%
	Fair	22%	19%	5%	9%	11%	6%
	Poor	25%	66%	48%	78%	80%	90%
Prevention	Good	75%	18%	59%	7%	64%	8%
	Fair	13%	7%	10%	9%	19%	17%
	Poor	12%	75%	31%	84%	17%	75%

- Discussions of the home management of diarrhoea with social animators and a group of 15 scouts undergoing training at Kushalgarh for preventive handpump maintenance revealed significant gaps in their knowledge. No one could describe the correct composition of a homemade salt-sugar-water solution. Knowledge about use, availability and source of ORS was also very limited, though government policy of Rajasthan stipulates that all anganwadi centres are depot holders for ORS supply; all the sample villages were located in blocks where the ICDS scheme is functional.
- Key village informants were asked to rank from 1-5 a list of five endemic diseases in the area, according to their perceptions of incidence over the previous year. Malaria, diarrhoea and multiple boils

were the three most commonly cited diseases experienced by the villages in the last year. Table 13 presents the findings of the diseases ranked as number 1 by the KVIs for their villages.

**TABLE 13**

Distribution of respondents according to maximum incidence of disease in the village over the previous year

	Udaipur	Banswara	Dungarpur
Malaria	6	5	3
Diarrhoea	6	7	3
Multiple Boils	11	5	2

- Data collected from health centres in the areas in which field work was carried out provides some qualitative indication that the incidence of diarrhoea reported to the health centres does not appear to be decreasing, though no statistical inference can be drawn from these figures because they may be the result of better reporting, more efficient services improved awareness of the dangers of diarrhoea, or higher incidence:
- Investigations of current bouts of diarrhoea during fieldwork revealed that outbreaks of acute diarrhoea and bacillary dysentery are regular features during the rainy season. Shigella organisms were isolated from stool samples during an outbreak in Kushalgarh in 1992. At the time of the study, children in Kadua village at Gogunda (Udaipur district) were having frequent diarrhoea episodes, while typhoid fever was reported in Gurha village.

6.41 The fieldwork suggested that no dent has been made on the problem of diarrhoea in project villages, despite provision of safe drinking water. The seasonality of occurrence of diarrhoea is very clearly discernible from records in PHCs and from discussions with KVIs. Maximum cases are, as expected, immediately after the beginning of rains. Faecal matter present in the vicinity of water sources, especially open wells gets washed away into the sources resulting in contamination. (The contamination of water sources in the project area is discussed further in Section 10.27-10.35). Non-operative handpumps compound the problem during the rainy season, since the watertable rises, minimizing the efforts needed to fetch drinking water. Fieldwork also showed that during the rainy season, those working in fields sometimes drink from nearby ditches/depressions where rain water accumulates, again increasing their likelihood of developing a diarrhoeal infection.

## SWACH's new approach to water-borne disease

- 6.42 It should be noted that SWACH is not unaware of the lacunae in information about prevalence of water-borne diseases other than Guineaworm. The current research activity which is linked to the Jal Mela activities should provide a certain amount of base-line data, against which SWACH intends to measure the impact of the Jal Mela. SWACH have commissioned Dr. Mathur to create an elaborate questionnaire under the title 'Knowledge, Attitudes and Practice (KAP) study of families residing in SWACH project area in relation to drinking water, village and home sanitation, and prevalence of water-borne disease and common skin diseases. This new research project (at the time of the evaluation it had been piloted in 54 villages) has three objectives:
- to make an assessment of the KAP of families about safe drinking water, excreta and refuse disposal and home sanitation, with a particular emphasis on women's knowledge;
  - to find out the prevalence of water-borne disease and common skin diseases;
  - to carry out a situational analysis in the villages about the drinking water campaign.
- 6.43 The survey will be carried out in 25% of the 800 villages in which a Jal Mela will be held, and the responses to the questionnaire computed. It is not clear to the consultants how valuable much of the content of the draft questionnaire will prove to be, nor how relevant to the objectives of SWACH. To be fair to SWACH a team of expert professors had been called together to examine the questionnaire, and it may well undergo a welcome number of changes. The draft questionnaire translated for the evaluation team had 80 questions, many of which appear to exemplify the current unwelcome trend in SWACH towards rather didactic and normative approaches to issues of personal hygiene.
- 6.44 Questions to be asked include 'How often should we cut our nails?' with multiple choice answers such as 'twice a week', 'once a week', 'once a fortnight', 'once a month', 'no need to cut' with a follow-up question of 'How often do your family members cut their nails?' with the same multiple choice answers. Other question such as 'Do flies act as a carrier for diseases causing boils etc?' appear to be inappropriate questions to ask for designing practical interventions for the future. Other questions about towels, again in two parts 'Hygienically speaking should everybody have a separate towel?' and 'In your family should each member have a separate towel' - suggest a curious insensitivity to the socio-economic reality of many of the people in the project area.
- 6.45 Nonetheless it is to be hoped that the research produces some valuable data which can be put to good use, not just for designing new campaigns about clean and short nails!

## Epidemiological Issues

- 6.46 The absence of systematic epidemiological inputs via the Medical and Health Department or via any other route means that not only has the project failed to utilise opportunities for collecting data on water-borne diseases other than Guineaworm, but unanswered questions remain about Guineaworm itself which may have a significant bearing on subsequent efforts to eradicate the disease both in other parts of India and elsewhere.
- 6.47 The observation has been repeatedly made for example that more males than females are affected by Guineaworm, but very little systematic work has been done to explore this. For example, an MH&FWD 'State Report on Guineaworm Eradication Programme', prepared for the mid-year review, 1993 stated that 'Out of 77 GW cases, 41 (54%) are male and 36 (46%) are female. Similarly, 56 (72%) are adult and 21 (28%) are children which clearly indicates that adult male population (sic) is prone to GW infestation because of their higher rate of exposure' (MH&FWD, Rajasthan 1993:7). Given the fact that it is known that women are managers and main drawers of water, in the area, this does not seem the only, or even the most obvious conclusion to draw from these figures. Chris Deegan's study, Village Study on Water Use and Perception and Statistical Profile on Treated/Reported GW Patients and Villages, also notes that males account for nearly 2/3s of all patients, but also records the fact that over a three year period, there was a pattern of increased guineaworm treatment among females, particularly female children and Adivasis; while men accounted for nearly 2/3 of patients, their attendance at medical camps was found to be decreasing.

**TABLE 14**

Shows data on age and sex of Guineaworm cases provided to the Evaluation Team by project staff

Dungarpur						
Sex\Age	below 7	7-14	15-35	36+	Total	% of total
Male	3	21	24	22	70	68.0%
Female	2	13	13	5	33	32.0%
Total	5	34	37	27	103	100.0%
% of total	4.9%	33.0%	35.9%	26.2%	100.0%	
Udaipur						
Sex\Age	below 7	7-14	15-35	36+	Total	% of total
Male	14	59	179	49	301	58.1%
Female	12	86	104	15	217	41.9%
Total	26	145	283	64	518	100.0%
% of total	5.0%	28.0%	54.6%	12.4%	100.0%	

- 6.48 Deegan advances anthropological suggestions for the higher rate of infection among men. He points out that in some villages drinking water sources are most often in the village with agricultural wells further away. These field wells may be a primary source of contamination and may help to explain the high incidence of guineaworm among males (Deegan, 1990:) The project invested in developing water carriers with built in filter tops on this assumption. The greater mobility of males in pursuit of wage labour may certainly be a contributing factor, but it may not be the only factor. Since the sex differential appears to affect small children as well as adults, physiological causes may have a part to play as well. There are a number of interesting hypotheses and questions which remain; if resolved they might indicate the most effective and most efficient interventions. Further exploration of these issues should be considered in the RIGEP project to ensure that interventions are appropriately targeted.

### Conclusions

The relevance, effectiveness and efficiency of the approach in meeting project goals

- 6.49 The history of Guineaworm eradication in the SWACH area and in particular the role of extracting pre-emerged worms remains to be written, though a two volume study of SWACH has been commissioned. For the purposes of this evaluation it is not possible to put quantitative values on each of the SWACH

interventions in terms of their contribution to Guinea worm eradication. A comparative study of Guinea worm eradication in other states, such as Madhya Pradesh, where extraction was not used, might prove illuminating, though it would be extremely difficult to control for the huge number of variables in terms of habitat, water sources, social and cultural factors etc. It is recommended that SWACH and UNICEF pursue the study of the relative contribution of each intervention, since this is a matter of considerable importance to the elimination of Guinea worm in other parts of the world.

- 6.50 Since the decision to make Guinea worm eradication the priority objective of the project sometime in 1991, SWACH's approach combining extraction at medical camps, the creation of sentinel offices/clinics, the linking of hardware initiatives to Guinea worm infected areas, and the deployment of animators and scouts on a 'war' footing, has proved to be highly relevant and effective in meeting the project goals.
- 6.51 Inevitably, once the project's energies were geared up to Guinea worm eradication, more generic aspects of the project suffered. While noting its inevitability, given the adoption of a vertical Guinea worm eradication strategy, it is nonetheless noted that the project failed to strengthen district capacity within the MH&FWD either in contributing to Guinea worm eradication or in monitoring the impact of an improved water supply on other water-borne diseases. As such this was an opportunity lost, though it is noted that this was a casualty, or an opportunity cost, of the project's success.

The long-term sustainability of the approach

- 6.52 By definition, the effectiveness of the approach (ie a combination of interventions including extraction) means that it is self limiting, at least as far as Guinea worm is concerned within the SWACH area. The fact that NICD/MH&FWD refuse to acknowledge the value of the technique, in line with WHO guidelines, means that dissemination of the technique to other parts of India will depend on project advocacy and direct intervention as in the case of RIGEP rather than more formal channels, via the MH&FWD.

Lessons learnt from this aspect of the project, particularly as a pointer towards the future possibilities of the SWACH model

- 6.53 Perhaps one of the most important lessons learnt from the success of Guinea worm eradication is that via a multi-bilateral funding route, and the development of an innovative organisational structure Government departments can be empowered to act in a highly effective manner. This has obvious implications for future interventions, for example TB eradication or HIV/AIDS prevention and the MH&FWD's latest goals of eradication of acute

poliomyelitis and infant tetanus. However, the most obvious lacunae was the absence from the start of the sponsoring department supposedly responsible for the programme. It can be stated categorically that MH&FWD were not empowered by this project. Their capacity to undertake similar programmes in the future was not strengthened.

## 7 HUMAN RESOURCE DEVELOPMENT

### Introduction

- 7.1 Since 1986 SIDA has invested almost \$2 million in human resource development under the SWACH project, as detailed in Table 15. These figures have been taken from records of cash call-forwards and supply call-forwards provided by UNICEF. The titles of relevant budget heads change from year to year, and in 1991 UNICEF began using budget code 10 embracing "Health, IEC and Training". The categories of expenditure used in the last two years of the project are highly aggregated, which makes it impossible to monitor expenditure on training separately from activities such as professional services and development of IEC materials.

**TABLE 15**

Expenditure by SWACH on Human Resource Development

		\$	\$
		Dungapur & Banswara	Udaipur
1986/87	Training, orientation and health education	87,323	-
1987/88	Training, orientation and health education	125,000	-
1988/89	Training and support activities (grassroot workers, state/regional/district officers)	143,000	145,000
	Support to the voluntary sector	40,000	26,000
1989/90	Training and support activities	223,500	155,000
	Women's development programme (staff support to DWDA and IDARA)	30,000	
1990/91	Women's development programme	19,645	
	Training and orientation	20,000	79,000
	Production of training materials	47,054	19,510
1991/92	Health, IEC and Training	128,000	341,836
1992/93	Health, IEC and Training	136,000	177,500
<b>TOTAL</b>		<b>1,943,368</b>	



- 7.2 This is a very considerable expenditure, and the issue of what, out of this investment, will survive beyond the 10 years of the project is a matter of some importance. Clearly, much of the human resource development has been instrumental, and directly targeted to the particular objectives of the project at any given point, as in the case of the deployment of animators and scouts (see discussion in 5.2).
- 7.3 Some aspects of human resource development have been more concerned with capacity building. SWACH has entered into a series of patronage-type relationships with academic institutions within Udaipur, which have provided opportunities for research on the project. In the project accounts these are included under the line item for Payment of Proposal Services (see Appendix 8). Similarly, relationships with organisations such as the Bhartiya Lok Kala Mandal have been to the advantage not only of SWACH but the institution itself.
- 7.4 Other aspects of human resource development have been concerned with the development of village and block level capacities, particularly in the form of training village functionaries, and members of line departments. Over the ten year period, a range of NGOs have also come into contact with the project, and these relationships raise a number of issues to do with government interactions with non-government organisations.
- 7.5 This chapter looks at the range of SWACH's involvement in human resource development, including the development of its own staff, arguing that in this area SWACH has had mixed success.
- 7.6 SWACH's own statements about human resource development indicate the importance that the project attaches to this activity. The 'project emphasizes human resource development at all level of functionaries directly involved with the project as well as people of the area (sic). Community involvement is considered important to support the organisation and implementation of the programme' (Implementation Guidelines for Human Resource Development: Orientation and Workshops, undated, preamble).
- 7.7 SWACH's own internal reflections on human resource development are contained in their publication 'Implementation Guidelines for Human Resource Development: Orientation and Workshops'. This contains not only an outline of all the regular orientation and training programmes carried out by SWACH, but also details SWACH's approach to the issue of adult learning. Much of the rhetoric bears little relation to the sessions of 'adult learning' as witnessed by the evaluation team. For example, it is stated that: 'For us who are working with human beings, has to consider (sic) an HRD training as a process of change, of growth, of discovery, a process which helps trainers and trainees to understand the learning objectives clearly together, processing the issues through their past experiences and to arrive at new learnings. This process

creates a partnership not only in acquiring the knowledge or skill, but 'learning how to learn' - a process of reflection, action, and further analysis. This process creates high commitment to such a knowledge or skill, and that it becomes part of the people involved (sic)' (Chapter 1, unpagged).

7.8 To be fair to SWACH, the training and orientation that the evaluation team visited may well have suffered from a process of 'routinisation', particularly since most of the training is now handled by District Training Teams. Conversations with SWACH staff about the original animators training indicated that this was a time of excitement and discovery for staff and trainees alike. Unfortunately, the three or four training sessions attended by the evaluation team were more reminiscent of a rather tired class room situation - a monologue from the front - rather than a process of 'change, growth and discovery'.

7.9 The Guidelines contain the outline notes for the following sessions:

**Orientation**

State level officials

District level orientation

Block level officials

Village level elected heads orientation

Project staff orientation

Grass-root functionaries orientation

School sanitation training

**Training Programmes**

Animators foundation training course

Training male handpump mechanics

Women handpump mechanics training

**Refresher Courses**

Animators refresher training course on kitchen gardening

Animators refresher course on immunization and prevention of diarrhoea

Refresher training for handpump mechanics

7.10 This list is not exhaustive; SWACH have run training courses in addition to those listed here. In total the evaluation team collected data on 35 separate training activities. Given that it was not possible to evaluate each of these activities (most being time bound in nature), it has been necessary to be somewhat selective. The following discussion focuses on the trainees about whom it was possible to gather evaluative data during the course of the mission.

7.11 The aggregate figures for training indicate that SWACH has trained large numbers of people in the course of its 8 year history. Project records up to March 1993 indicate an approximate figure of 615 training sessions, with some

22,102 participants, excluding women's awareness camps, school sanitation programmes and mobile exhibitions which involve many more people, but which are less easily classified as human resource development or training.

### Voluntary Cadres

The issue of legitimacy

- 7.12 Animators and more recently scouts are key functionaries within the SWACH project. They are, as discussed above, the project's prime link with villages, and as such raise a great many questions which are by no means exclusive to the SWACH project. One of the key questions asked during the evaluation was 'who do the animators 'belong' to? From where do they get their legitimacy, and what impact does this legitimacy have on the issue of human resource development? Clearly from the project's point of view, the animator (and/or scout) is first and foremost a member of the community. Her legitimacy comes solely from her authentic membership of the community that the project wishes to reach. In the words of SWACH, the animator is the 'catalyst in the 'bottom up' approach adopted by the Project' (SWACH, 1989:1)
- 7.13 It is the role of the animator to interpret the village to the project, and the project to the village, as a member of that community. The perspective of the village itself appears to be different. Field research indicated that villagers see the animator as part of the project - an identification which for example in the case of scouts, is reinforced by the SWACH T-shirt. The research carried out by the College of Home Science found that animators were seen as the only contact person of the project always available and easily approachable for health and sanitation information.
- 7.14 The animator is, as Parvinder Singh, the first Project Director aptly expressed it, a 'fragile functionary'. The tension that the project has constantly had to manage is that between providing animators with a stake, or an anchor in the project - a desirable identity - without making them a part of the project bureaucracy and creating 'liability'. From the project's point of view this means ensuring that to the village they are seen to have the backing of the project, while on the other hand ensuring that they are not simply sucked into the project as subordinate staff. Maintaining this balance is highly complex, and it is not clear that SWACH have always achieved it.
- 7.15 We were concerned to investigate the perception of the animators and scouts themselves, and found that they viewed themselves essentially as trained and paid field workers who, while they followed their agreed schedule of activities, were given instructions from above and acted accordingly. For example, an animator would arrange a women's group meeting on receiving a message that the DTT member was visiting her area on a particular date. She would then conduct the meeting with his support but he would focus on his own agenda,

record the minutes in the Register and list the members of the Savings Scheme. In one instance, the minutes and list had been removed from the register to be handed over to the APO.

Gomti is an animator in the Karmatalla section of Nathara village. She is still at school in the 8th standard and did not paint a cheerful picture of her work: 'there is no fun (maja) in doing my job. It is dull and tiring. The women don't understand and they always forget what I tell them'. She expressed a sense of frustration at having to repeat the same messages related to health and cleanliness, and not achieving much as evidenced by the lack of recall. Gomti was involved in other animator's activities such as initiating kitchen gardens, garbage and soakpits; her complaint that the women did not listen was perhaps related to her youth and single status - the women listened to her mother instead of her. Gomti's view was that women were not ready for mahila mandals or saving schemes, but arguably Gomti herself is not motivated enough to persuade the women. She is in touch with Sita, the animator from Banmaniya section and suggested that colleagues such as Sita have similar problems.

Dhuli, an animator in the village of Gamri, and ex-animator in the village Nimmboda where she worked from 1988-92, presented a different picture. She enjoyed her work and meeting other women. The positive response of the villagers met during fieldwork who were found by the team to be articulate and informed, the support of village elders, and the visits by Alka, APO Education, based in Udaipur, had helped to build her acceptability. Gamri is a relatively progressive village of fisherfolk, with an assured income, and with inputs from the NGO Jagran, who have formed a women's Samiti. Dhuli claimed her work emphasis changed from time to time, from kitchen gardens and handpump plantations, to making cloth filters and calling meetings. She is currently not required to work as an animator; she would like to work again however, as her husband and family have no objections to her earning extra money.

- 7.16 The evaluation found that the animators are often viewed by the village community as the instruments of service delivery and the carriers of goodies like funnel filters and ladles, on whom demands can be made for further support and services e.g. construction of latrines and income generating opportunities. They are seen as representatives of the company (SWACH) in the village and as such are expected to perform the role of valuable contact persons, liaising with the SWACH office and negotiating (bargains?) for the villagers. Animators are seen by other village women as privileged and paid

for their work/time (mahila mandal members feel that while animators are paid for organising meetings, the members have little to gain by attending meetings).

In Khas Kol Khanda, Dungarpur District, the team met with a case of centralisation of work by the SWACH Dungarpur office which, in the view of the animator Savita, detracted from the role and responsibility of both her and the scout Rachorebhai (previously a coordinator), who played a subordinated role in calling meetings when instructed to do so. The SWACH office team supervised even the temephos application in the villages, and there was some confusion and duplication of effort on the part of the ANM, the scout and Savita. Savita had little understanding about why she was promoting activities like soap making, and claimed that she was 'following orders' and implementing what she had learnt at her CBCS sponsored training on women's group formation, offering the promise of economic activity as an incentive for attending meetings. When asked about her plans for the future she replied: 'the orders will come from above.'

- 7.17 This issue of legitimacy has importance for the question of the future of animators and scouts in the future. To whom will they 'belong' when the project is over? Will they perceive themselves as being primarily motivated by their membership of their village community or by opportunities to 'escape' their village identity and to establish membership within a different cadre, whether NGO or government?

#### **Human resource development for animators and scouts**

- 7.18 It is clear that SWACH has taken the role of the animator very seriously. The selection and training of animators was, at the outset of the animators scheme, a carefully considered and well executed aspect of the scheme. Indeed the rigour of selection procedure itself may have been instrumental in building up unrealistic hopes. Recruitment camps lasted a day, and candidates were assessed on the basis of a variety of tasks, from essay writing, carrying out a survey, singing songs about health, interviews, group discussions etc.
- 7.19 Selection was followed by training, in the form of an orientation camp, lasting one day, and a foundation course, an in-depth four day residential course. Refresher courses were also provided, but it is not clear from project documentation how often animators were expected to attend refresher courses. Animators were kept in touch with the project via a quarterly newsletter, SWACH SANDESH, which they were invited to contribute to, and via their supervisors. The initial plan was to place two supervisors in each block, with responsibility for supervision of 18-20 animators on a regular basis (fortnightly). Each district also organised an annual 'meet' for animators, at least in the project's early years.

- 7.20 The evaluation of the animators scheme referred to above drew several conclusions illustrative of the problems inherent in human resource development of voluntary cadres. They found a communications 'gap' between the animators and the programme, and evidence that the monitoring of animators' work needed strengthening. The report also recommended that the animators should be 'visualised as members of the SWACH team'. Interestingly, this recommendation was dropped from the summary of findings and recommendations from the evaluation as printed in SWACH's annual report. It appears not to have gained the approval of SWACH!
- 7.21 A study of the yearwise training schedule for animators and scouts indicates that the training programme has been reasonably comprehensive for animators and scouts. For example, between 1990 and 1992 there were 104 kitchen garden training sessions carried out with 3,093 participants. Between 1988 and 1992 there were 41 animators selection camps, attended by 1,643 participants, of which 559 were selected. These were followed by 22 animators foundation courses, training 656 participants. 292 animators attended 6 training sessions on immunisation and diarrhoea disease control, while 76 attended 4 training sessions on smokeless chulhas.

#### Liability and the future of animators and scouts

- 7.22 Clearly it is not possible to predict what the future holds for animators and scouts, but while some are likely to get jobs with NGOs and government there may be others who will be inspired by the CBCS to work towards women's organisation and entrepreneurship schemes, linking these at the Panchayat level with WDP and DWCRA income generating programmes. With the impending reinstatement of the Panchayati Raj in Rajasthan in April 1994, and relatively direct access by members of the village community to funds, the prepared workforce of animators may provide a valuable human resource base to be tapped for investment of Panchayat funds. Some animators may find a place as resource persons in the RIGEP Project in nine more districts of the state but the logistics of movement/travel may minimise the likelihood of such a gain.
- 7.23 SWACH's anxiety about creating liability is very real; Government employment legislation means that employees rapidly gain employment rights. Hence the constant trend to casualisation in recruiting labour for the project (see discussion in chapter 9 below). In the case of animators and scouts, SWACH makes it clear that within the parameters of the project there is no opportunity for long-term employment. Anecdotal evidence suggests that for many animators the project has in fact proved to be an excellent stepping stone into further employment, in the form of further training such as ANM training, anganwadi work, handpump mistry work etc. Unfortunately the project has not kept systematic records of the drop-out rates of animators and it was not possible to analyse either the number of drop-outs, or the reasons. If SWACH could have demonstrated that a significant number of their village level workers had moved onto further recruitment, it would have been a strong

vindication of their policy of human resource development, without creating an attendant liability.

### **Line functionaries**

- 7.24 Despite the fact that SWACH has carried out a significant number of training sessions with line functionaries, there appears to have been no formal evaluation of the training; certainly no evaluation reports were made available to the evaluation team. In this category we are including orientation of State level and district level officials, training of district level functionaries, orientation of block level staff, training of anganwadi workers, training of adult/non-formal education workers, training of ANM/MPW, orientation of PHED staff and training of teachers in Guineaworm infected villages. To put some figures on these training sessions, project records indicate that approximately 200 training sessions had been held for these functionaries between 1989 and March 1993, with some 7,300 participants.
- 7.25 Given the importance of these functionaries to the future sustainability of SWACH's achievements, the absence of any formal evaluation of the training seems unfortunate. Parvinder Singh comments that 'such massive training was not very effective on account of poor training, low motivation and poor understanding of the issues by the Master Trainers (Singh, 1991) but provides no evidence to substantiate his claim.
- 7.26 Evidence from the consultancy visit was not encouraging. In a visit to the training of field functionaries held at Block level, which was billed as a programme to orientate the functionaries towards women's groups, the trainer had to be asked by the Project Officer to begin the discussion of women's groups. The fifteen or so minutes observed before the interruption were spent entirely on a discussion of water and sanitation issues, such as the need to use a long-handled ladle. Given the audience of largely ANMs and MPWs, this did not appear to be particularly appropriate or satisfactory.
- 7.27 It is strongly recommended that SWACH addresses the issue of evaluation of training, particularly of line functionaries, with some urgency, particularly in the closing phases of the project. It must not be assumed that a training session *per se* motivates and informs those who attend. It must certainly not be assumed that it will automatically alter their behaviour or affect their practices. It is vital that those responsible for training follow it through with monitoring and evaluation; far too many training programmes are a waste of time, money and space.

### **An Analysis of Training**

- 7.28 The evaluation concentrated on attempting a brief analysis of the various training and orientation courses. The trainees can be categorised into two

distinct groups : (i) direct Project staff and key persons/implementors like animators and scouts, District Training Team (DTT) and Village Contact Drive (VCD) team members, and (ii) State, District, Block, Panchayat and village level functionaries, including grassroot level functionaries of ongoing government development programmes like ICDS, WDP, NFE, etc. The following conclusions were drawn.

- 7.29 While the various training inputs are described as Training, Orientation, Foundation and Refresher Courses, the course content does not necessarily reflect the differences except in the case of Refresher Courses for specific subjects like kitchen gardening, women's group formation, etc. The Handpump Mistry Training Course is a discrete course with a largely technical input and no software component dealing with community participation in the maintenance of handpumps or the formation of user groups.
- 7.30 DTT members are retrained, along with new members, when they are re-employed for the second/third time. Some of the DTT members interviewed pointed out that the difference between their two trainings was mainly a shift in emphasis from a single focus on guineaworm eradication and personal health and hygiene to a broader focus which included fresh inputs on community health, environmental sanitation, and organisational and institutional work e.g. formation of women's groups. In the later training the concept and practice of PRA and community participation in Operation and Maintenance and management of water systems like handpumps, wells, drains, etc. was introduced.
- 7.31 Most training is driven and generated by the need to respond to the demands of new and an increasing number of activities linked to shifting foci and to achieving changing objectives. The training receives its impetus from the need to keep pace with Project activities which are geared to the achievement of targets.
- 7.32 SWACH training and module design is in general task oriented rather than inspired by the aim of skills development and capacity building. Training serves the immediate, short term objective of completing tasks and achieving targets, rather than a long term one of empowerment through capacity and confidence building.
- 7.33 Methodology is one where trainees are taught, or instructed, what to do and how to do it without always being encouraged to think for themselves, understand and question, and to go through a process of analysis leading to a better grasp of the subject.
- 7.34 Trainees are often overburdened with tasks without being equipped with the skills to handle them and implement them systematically. Animators and scouts are expected to perform multiple functions and have many responsibilities requiring considerable training.



- 7.35 The method of training is top down with an instruction and lecture focus. The content of the DTT's course shows a lack of sequential planning and one of the reasons for this may be that the sequence of topics is dictated by the availability of resource people who are not identified early enough.
- 7.36 The batches of trainees comprise motley groups of old and new DTT members, unemployed graduate youth, retired school teachers and village level workers recruited in response to the advertisement mentioned earlier, so there is the problem of dealing with different levels of perception, experience and knowledge and designing the training to ensure that all the candidates learn a reasonable amount. Staff deputed from the education department design training courses and modules. Consequently there appears to have been a fall off in appropriateness and quality from an earlier period when NGOs like Sewa Mandir and Astha conducted training for SWACH with an emphasis on motivational training using a participatory approach and case study method.
- 7.37 One of the major problems anticipated in assessing and evaluating the quality of SWACH training is the fact that there is little or no provision or mechanism for feedback from and followup of the trainees/beneficiaries who are casual employees and difficult to trace. For example, in Dungarpur when information was sought on the whereabouts of the women handpump mechanics (an innovative and high profile training strategy on the part of SWACH) who had received an extensive and impressive training of 3 months' duration in the theory and practice of handpump repair and maintenance, the APO said he would need to get a list from the Panchayat Samiti of those who had been employed by it. There was no mechanism in SWACH for following up employment in other government programmes or by NGOs, or on whether they were repairing handpumps in a private capacity, or were unemployed and not utilising their training.

#### **Non-Government Organisations**

- 7.38 NGOs have themselves been instrumental in human resource development within the SWACH project, as well as being the recipients of funding and inputs which may themselves have contributed to capacity building within the NGOs themselves. At the outset of the SWACH project NGOs were seen as the natural interface between SWACH and the villages in which SWACH proposed to work. The involvement of NGOs was seen as a strategic way of ensuring that 'the people's' involvement in both the planning and implementation of the project, which in turn would ensure community participation in use and maintenance of facilities created by the project. The Village Contact Drive was the first point at which NGOs actively participated with SWACH. The Village Contact Drive was essentially designed by Om Srivasta and colleagues from Astha, and was intended to initiate a process of establishing contact between the community and the project, to ensure community involvement in planning and executing SWACH activities.

- 7.39 Following the Village Contact Drives, NGOs were used for staging women's awareness camps, an activity that continued between 1989 and 1992. In total 158 awareness camps were held by NGOs attended by 6,500 women, though SWACH itself held considerably more than this - 521 between 1990 and 1992 in Udaipur alone, with over 20,000 participants.
- 7.40 The divergence of NGOs and SWACH has been documented elsewhere in this Report (see Chapter 9.3). In terms of human resource development, the split with NGOs represents a lost opportunity for both SWACH and for the NGO community. For SWACH, maintaining links with NGOs would have ensured a stronger developmental orientation, which would have served the project well in its current shift towards women's group formation. Closer links with NGOs would have challenged the project's assumptions about development process, and perhaps have tempered the growing tendency within SWACH towards social marketing as a substitute for a slower, bottom-up process of development. On the other hand, SWACH diverged from NGOs precisely because it wished to pursue its own agenda. SWACH sees its strengths as taking off from the limitations of NGOs. While NGOs can only form and sustain 90 women's groups, government must demonstrate its ability to take over and create a thousand. SWACH believes in scaling up on a grand scale.
- 7.41 For NGOs the loss of working with SWACH has been precisely the loss of opportunity to work on a larger scale, and with the additional resources provided by a multi-bilateral project. It has already been noted that SWACH has invested almost \$2 million in human resource development. \$2 million represents an enormous amount in relation to the majority of NGO budgets. Representatives from both Sevir Mandir and Astha commented on the sense of lost opportunity in diverging from SWACH. Om Shrivasta made the point that, following on from involvement in the Village Contact Drives, many of the NGOs that had taken part wanted to do more, and found the collaboration between Government and NGOs stimulating and fruitful. SWACH declined their offer.
- 7.42 It is interesting to note that the Dungarpur Integrated Wastelands Development Project has not followed SWACH's lead in abandoning relationships with NGOs, but has actively sought to develop working relations, particularly in the area of human resource development. For example, a three month long Master Trainers' Training Programme was held in the PEDO campus. Among topics covered were cooperation between government and NGOs, the role of lead NGOs etc.
- 7.43 As a result of the divergence between NGOs and SWACH a lacunae was created in terms of resourcing training; this led to the growth of the District Training Teams which, in the opinion of the evaluation team has proved to be a developmentally weaker approach to human resource development.

## District Training Teams

- 7.44 DTTs, now numbering some 100 individuals, play a central role in the activities of SWACH. Observations of DTTs in action, and indepth interviews carried out in the course of fieldwork with eight DTT members provided insights into the nature of their recruitment, training and subsequent activities. All were under thirty, or had been at the time of their work for SWACH. Some of this material is presented below in the form of case studies.
- 7.45 DTTs were originally recruited from NGOs and subsequently via newspaper advertisements, and employment agencies. Typical adverts request unemployed graduates, retired school teachers and village workers willing to work for a daily honorarium of Rs.75 in rural areas in 'various awareness raising and social mobilisation programmes.' Preference is given to women, though women are by no means in the majority.
- 7.46 DTTs were originally recruited to take part in the village contact drives; at present they undertake all SWACH programmes, women's awareness camps, women's group formation, jal melas, Guineaworm intensive drives, and all SWACH's other training programmes. The amount of contact with SWACH varies; some DTTs are called back again and again; others, particularly those recruited via NGOs, have had only one exposure to SWACH work. The most days of employment gained by DTTs interviewed by the evaluation team was 99 in a year (including training days); the least was 6 days, with most of the other DTTs interviewed working for between 30 and 50 days a year. At Rs 100 a day (daily honorarium plus travel allowance), most DTTs are not able to make a living from the work.
- 7.47 While it was clear that on an individual basis DTTs gain experience from their involvement with SWACH, and indeed a few DTTs had been offered work in NGOs in the area, as a capacity building exercise the use of DTTs is very unsatisfactory. While DTTs appeared to enjoy their work, its highly sporadic nature, the lack of continuous contact with a team, the uncertainty about future opportunities, could not be construed as a satisfactory process of human resource development.
- 7.48 The following points emerged from the study:
- DTTs are expected to undertake tasks requiring considerable skill with a minimal amount of training. The case study of twenty-five year old Ashok Gupta below indicates that after a week's training, and with no developmental background, he was expected to hold 30 women's awareness camps, and to conduct 10 intensive drives. His role at the women's awareness camps was to arrive at a predetermined time and place, use flipcharts, and to impart information about Guineaworm eradication on the basis of information given during his training.

- DTTs have no forum for feeding their experiences back into SWACH; two DTTs contacted by the evaluation team had been involved in VCDs in 1988. They claimed that the interview conducted by CDS was the only opportunity for feedback extended to them, and expressed their surprise that the programme had not been evaluated before.
- DTTs have little choice about the nature of their employment. The unemployment rate for graduates is such that any opportunity to earn money is perceived as better than nothing. Consequently, DTTs are in a very weak position to try and gain a better deal for themselves. Many DTTs are involved in higher education, in the hope that additional degrees will improve their chances.
- There were some serious shortcomings in the interpretation of bottom-up participation expressed by some DTTs. One DTT stressed his enjoyment of the 'sense of power' when he is looked up to by the animators/scouts and other field functionaries, while he liaises with Block level officers. This confirmed a view gained in watching some DTTs involved in women's group formation. DTTs led from the front in a highly pedagogical style, often standing, while the women sat, and treating them as pupils rather than equal participants in a development process.
- Some DTTs had little understanding of the processes they were initiating, reflecting a form of training that is task oriented, presenting DTTs with information to impart and activities to undertake, rather than leading trainees through the process of animation and consciousness raising. Discussions with DTTs gave the impression that in their training they were seldom encouraged to understand the why of what they were taught.
- DTTs did not always appear to be the most appropriate people for some of the tasks expected of them. Young, male, urban graduates did not appear to be the most obvious people to act as key trainers in women's group formation, particularly when their only training had been brief, and at district level.
- The nature of their contracts with SWACH means that DTTs cannot be expected to have the kind of commitment required for the process of social mobilisation or animation. While training can be useful to an extent, it cannot compensate for the kind of grounding in developmental thinking needed for effective animation and group formation. Consequently, much of the work of DTTs with women is reduced to following a syllabus or a preset agenda, rather than a process conducted with any real understanding of the dynamics of social development.

Ashok K. Gupta is 25 years old, and is studying for a Ph.D. in Agriculture at Udaipur University. He was trained in November 1992 in a 7 day course for DTTs when a batch of 90 selected candidates underwent the training in two groups. Approximately one third of the trainees were women. More women had appeared at interview, but he assumes that many women dropped out because the training was at a residential centre 20km from Udaipur. After his training, Ashok's first work as a DTT was to hold 30 Women's Awareness Camps between November 1992 and January 1993, and to conduct 10 Intensive Drives. Further involvement with SWACH has been a 3 days refresher training; conducting four days primary school teacher's training course; four days Intensive Drive in Sarada Block; 7 days CBCS training in July 93 with an emphasis on women's group formation; 7 days training of animators in Sarada Block as part of the CBCS programme; 10 Women's Awareness Camps in October 93 in Jhadol Block; and a KAP study in 4 villages, over 8 days in November 93; training women's groups in five villages for 3 days each, also in November 1993.

Ashok Gupta sees his work for SWACH as essentially a job for which he gets paid, though he admits to gaining a fair amount of experience which he hopes will stand him in good stead in the future, though he has turned down offers of jobs from NGOs, and is not interested in working in development as a permanent career.

### Conclusions

The relevance, effectiveness of the approach in meeting project goals

- 7.49 Human resource development in SWACH presents a mixed picture. On the one hand, considerable numbers of people have attended training courses, and the project has had a large cadre of human resources on which to draw. On the other hand, the analysis presented above suggests that not all the training has been as effective as it might have been, and that some of it has grown from a narrowly defined and somewhat instrumental view of human resource development.
- 7.50 At best, SWACH's human resource development has been a strong feature of the programme. The ability of the programme to retain the services of those deputed to them, and to present them with opportunities quite outside the range of those normally expected in government service is an indication of the project's strengths. Members of the evaluation team were most impressed by the calibre of staff working for SWACH, indicating that SWACH has developed not only relevant, but effective approaches to human resource development.
- 7.51 In the earlier days of the programme, the recruitment of animators, and their training clearly involved the setting of highest standards of activity. The use of NGOs for the development of VCDs reflects a similar commitment to the

Nalini Kavariya is aged 28 and was trained as a DTT in 1992. She graduated with an MA in sociology from Udaipur in 1986, and is single. She has been unemployed since 1987, except for one year in which she worked with the FPAI as surveyor. She was recruited by SWACH, via a newspaper advertisement, attracted by the idea of work in villages. Her involvement with SWACH to date has been 13 women's awareness camps in November and December 1992; 5 days Intensive Drive training in February 1993; 7 days women's group formation (probably via CBCS); 15 days work in October 93 for formation of five Mahila Mandals.

Nalini Kavariya was called for 6 more days of work from 11-16 December, when she was required to initiate the formation of 2 groups in Salumber Block. She had a problem with recalling her training content, and her involvement with work, and gave the impression of lacking confidence. She perceives her work essentially as a part-time job, and does not appear to have many expectations for its future. She did not seem to be excited by the potential of collective action by women members of mahila mandals. The concept and purpose of forming such organisations did not seem to be important for her, and she viewed Mahila Mandals in limited terms as savings groups with incentives for economic activities like the famous foursome of soap, candle and incense making and sewing.

highest standards, and was clearly innovative for a government programme. The gradual erosion of the position of animators, the shift away from NGOs, the growth of DTTs, the intense focus on Guineaworm surveillance, and the target-oriented approach which has characterised the programme in recent years, appears to have led to a more task-oriented view of human resource development. It is not viewed as an end itself. Rather, it is a crucial part of the strategy for guineaworm eradication, and more recently, for the staging of 800 jal melas, and the creation of 1000 women's groups.

The long-term sustainability of this strategy

7.52 This policy of human resource development has led to a degree of casualization and deliberate non-sustainability. SWACH does not wish to have the problem of dependent scouts, animators, or DTT members at the end of project funding, and in the process of limiting its own responsibility, has inevitably raised question marks over the sustainability of aspects of the project. No-one expects the DTTs to continue beyond the end of the project period, yet they, as indicated above, have borne the greatest part of conducting human resource development. It is difficult to see how the experience they have gained can be institutionalised.

7.53 The question of village-level workers, scouts and animators, is vexed. The

analysis provided above indicates considerable tensions in the question of 'ownership' which does not augur well for the future of the scouts and animators, in terms of a sustainable role within their communities. On the other hand, the experience of public life, the skills gained in intra-village dynamics and the confidence resulting from the opportunities for earning an income are likely to 'mark' animators and scouts and encourage them to pursue similar roles through other programmes and projects. As such, the skills gained through SWACH will remain a legacy in SWACH villages.

7.54 Lessons learnt, as a pointer towards future possibilities of the SWACH model

- The curtailment of relations with NGOs led to a diminishment of learning and experience for both SWACH and the NGOs concerned, and the alternative strategy, the casual employment of DTTs, did not prove a developmentally sound strategy, and has serious flaws as a strategy of human resource development
- Tying recruitment and training too closely to single project objectives can lead to a rather instrumental view of human resource development. While it is essential that human resource development serves the needs of the project, the way in which animators were recruited and dropped raises questions about the integrity of SWACH as a general development project. While, in the light of revised objectives, this strategy was probably inevitable, it was nonetheless unfortunate for the animators and villagers affected by the policy.
- Training needs to be evaluated more thoroughly so that redundant exercises are not allowed to continue. SWACH training appears to provide few mechanisms for feedback from both trainers and trainees. SWACH has made efforts to evaluate the impact of some training in the field, but in a programme that relies so heavily on formal training sessions, more evaluation of training sessions themselves needs to be carried out.

## 8 A GENDERED PERSPECTIVE

### The Context: The situation of women in Rajasthan

- 8.1 The terms of reference provided by SIDA for the evaluation request a specific gender evaluation of the project. This Report has sought to ensure that gender considerations are integrated into the report where ever relevant. However, it was also felt that a separate chapter explicitly addressing gender issues within SWACH would give an opportunity for a more focused discussion.
- 8.2 Rajasthan is one of the States of India in which the indicators for women's economic and social well-being are poor. One of the crudest indications of well-being, the sex ratio, provides a proxy indicator for the quality of life-chances available to the girl child. The 1991 census indicated a sex ratio for Rajasthan as a whole of 913 women per 1000 men, one of the poorest in India, as Table X makes clear.

**TABLE 16**

Selected Socio-Economic Indicators

<u>Indicators</u>	<u>Raj</u>	<u>Ker</u>	<u>Mah</u>	<u>Karn</u>	<u>Oris</u>	<u>India</u>
Sex ratio	913	1040	936	960	972	929
Literacy (female)	20.84	86.93	50.51	44.34	34.40	39.42
Age at marriage	16.09	21.85	18.76	19.20	19.04	18.30
% employed in formal sector	10.50	35.10	11.30	13.30	7.30	-

Source: (GoR, 1991:8)

- 8.3 In the three districts in which the project operates, the following data were recorded:

**TABLE 17**

Number of Females per 1000 Males, and Percentage of Tribals in the Population

	<u>1981</u>	<u>1991</u>	<u>Percentage of Tribals</u>
Banswara	984	969	72.6%
Dungapur	1045	996	63.4%
Udaipur	977	966	43.3%



- 8.4 In each case the sex ratio appears to have deteriorated over the decade, and while there has been considerable discussion as to how the extent of deteriorating sex ratios should be interpreted (ie as an indication of worsening life chances or an artificially created effect of the census collection techniques) there can be no doubt that women and girl children in Rajasthan are in a minority, and that this minority is attributable to forms of discrimination that are perpetuated from early infancy to old age.
- 8.5 In the three districts covered by the SWACH project, relative to the rest of Rajasthan, the sex ratio is less imbalanced, reflecting the fact that this is a tribal belt. Dungarpur, with a population of 63.44% of tribals had a positive sex ratio in 1981, though the most recent census has reversed this. In Udaipur and Banswara, the percentage of the tribal population does not appear to significantly affect the sex ratio. Banswara, which has the highest percentage of tribals, at 72.63% of the total district population, has a sex ratio only three points higher than Udaipur, which has 43.33% of tribals to the rest of the population. These figures bear out the claim that **relative to other districts in Rajasthan**, tribal areas can be interpreted as reasonably equitable. In districts such as Sawai Madhopur, Bharatpur, Jaisalmer and Dholpur, strongholds of traditional values, the sex ratio varies between 857 in Sawai Madhopur, and a very poor 796 in Dholpur. In **absolute** terms however, the sex ratio in the three SWACH districts is still poor.
- 8.6 The sex ratio is a powerful indicator of discrimination against girl children because, all things being equal, the sex ratio usually works to the advantage of girls. Despite the fact that more boys are born, the sex ratio, in most countries of the world is 1000 men: 1016 women. In Rajasthan, a number of factors have been cited as factors in the poor sex ratio:
- **Son preference:** A comparative index of son-preference among the States of India shows 31.3 as the index for Rajasthan, the highest in the country, while the figure is 20.2 at the national level, and 11.5 for Tamil Nadu (GoR, 1991:12). In situations of poverty, son preference can push a girl-child into a hazardous, marginal position. While only limited data area available from assessments carried out by the Food and Nutrition Board, Ministry of Agriculture, GOI, the state has a low per capita intake of calories, Vitamins A and C, while consumption of protein and iron is adequate. The intakes of vegetables, roots and tubers, fats and oils, sugar and jaggery is far below the national average. Where supplies of nutrition are limited, son preference acts powerfully in favour of the nutritional demands of boys, and against the interests of girls.
  - **Lack of schooling:** While we would resist the view that education for girls is 'the magic word that is supposed to bring to her all that she is deprived of' (GoR, 1991:17), there is evidence to suggest that school, as an institution, can be a forum for change, challenging the cultural

values that devalue girls children. The report of the Department of Women and Child Development, Jaipur, provides a good summary of factors that prevent girls from attending school:

- Generally the number of schools are far less in rural areas than in the cities, and there is an extreme shortage of girls' schools in rural areas
- Middle schools are distantly located and few in number
- Poor enrolment of girls leads to girls' schools being converted within a year or two into boys' schools
- There are few women teachers in rural areas - a result of low rural female education and the refusal of urban teachers to accept remote rural postings
- Inaccessible location of schools and rigid school timings in isolated remote rural areas inhibits girls from joining them
- The curriculum bears no relation to the real-life activities, interests and needs of rural girls.

8.7 While in terms of numbers Rajasthan has made substantial progress in education over the last thirty years, absolute figures disguise the rural/urban divide. The position of girls' education in rural areas is described as 'pitiable and the problem...more acute in tribal, hilly and desert areas, particularly among scheduled castes, scheduled tribes and linguistic minorities.' (NCERT,1989). Taking Rajasthan as a whole, of 2.5 million girls eligible for entry at primary school, less than 50% (49.66%) were enrolled, a figure dropping to 16.6% at middle school.

8.8 In the context of low enrolment, high drop out rates, difficult locations, and the demand for the labour of children within the family, the importance of non-formal education programmes, and the Shiksha Karmi Yojna programme is considerable.

- **A double working day:** Official data notoriously underestimates the extent of women's labour force participation in India. As the World Bank's report Gender and Poverty states, 'a statistical purdah' imposed by existing methods of measuring labour renders much of the work done by women 'invisible' (World Bank, 1991:xv). Aside from agricultural work, in which, in the SWACH project area, women are the primary labourers, they are also primary gatherers of fuel, fodder and water. Anecdotal data gathered during fieldwork in the project area showed that women expected to work between a twelve and fourteen hour day. Girl children are socialised very rapidly to participate alongside their mothers in domestic or reproductive labour. One study computed that the labour that a girl contributes through the years to her home, until she reached the age of twenty, when estimated in terms of wages would be equivalent to Rs.40,000 (Cited GoR, 1991: 35).

- **Early marriage and early childbearing:** Early marriage and childbearing perpetuates the cycle of marginal health and diminished well-being among women all over India, but in Rajasthan, the tradition of young brides provides an important key to the poor sex ratio and high rates of infant mortality. High rates of maternal mortality are indicated in the sharp upturn in female deaths between the ages of 15-19. Even in the tribal belt of the SWACH project area the majority of girls are married between the ages of 15 and 17. Girls who begin childbearing when they are 15 are denied the advantage of better growth and development that would have occurred if they had been able to postpone pregnancy for another four years. The WHO standard for high risk pregnancy uses a cut-off of 145cm height and 38Kg bodyweight. A study in Kerala showed that as many as two-thirds of 15 year olds were below this. Child marriage is practised less in the project area than in other parts of Rajasthan, but nonetheless is not unknown in the SWACH villages. Child marriage is a strong indicator of anxiety over dowry and the general expenses incurred by a marriage.

#### The tribal factor

- 8.9 It was frequently stated by project staff that Bhil women enjoy more freedom than the women of mainstream Hindu society, a stereotype reinforced by the evident free mobility of Adivasi women, and the relative ease with which they can break or establish marital or extra marital relations. However, the important term to stress is **relative**. As we have seen above, the sex ratio for women in Banswara and Udaipur, and to a lesser extent Dungapur, is still negative, even though it is considerably better than that in other parts of Rajasthan.
- 8.10 It is perhaps not surprising therefore that research done among Bhil women by colleagues at the Centre for Development Studies, Swansea, as part of a dryland farming programme based in Dahod, suggests that the picture of 'free' tribal women is an over-simplification, and may disguise major problems in women's participation. This British ODA bilaterally funded dryland farming project is located in Panchmahals in Gujarat, Banswara in Rajasthan, and Jhabua in Madhya Pradesh, and CDS had four years experience of working in what is essentially a participatory project, with a number of parallels to SWACH. One of the most important observations drawn from this experience has been the minimal participation of women in exercises, such as PRA, explicitly designed to seek their opinion.
- 8.11 In PRA exercises, very few women attended, their involvement was discontinuous, and they did not have a role in the round-up and planning sessions with which PRAs often concluded (Mosse, forthcoming:10). Despite the supposedly 'participatory' nature of PRAs, it was found that they did not provide an appropriate context for the articulation of women's perspectives. PRAs for example assume that women would be available collectively at central locations for continuous periods of time. But these requirements of

time, location and collective presence were incompatible with the structure of women's work roles (Mehta 1992, cited Mosse op cit). It was found that women are rarely free of work responsibilities for substantial lengths of time, and it was hard to find times when women would be available collectively. More importantly for the present discussion, it was found that women faced a number of social constraints to participation. PRAs usually took place in public spaces, and in the presence of outsiders. It was found that 'Bhil women are typically (explicitly or implicitly) excluded from such public spaces and activities. This exclusion of women is 'so normal and 'naturalised' that it is rarely noticed or questioned. In fact, the presence of women causes remark while their absence goes unnoticed' (Mehta, 1992, and Mosse op cit:12).

- 8.12 This view that Bhil women face a number of constraints to participation is also the conclusion of Madhu Sarin and Chandrika Sharma. Citing a list of indicators as to why the position of Bhil women might be seen as superior to that of Hindu women, such as bride price rather than dowry, lead role in all aspects of the agricultural cycle (except ploughing), they write: 'one would think that in such a situation, the status of tribal women would be far superior to that of mainstream Hindu women. In reality, as we discovered though years of working with local women, it is little different, if not worse' (Sarin and Sharma 1991:4).
- 8.13 Sarin and Sharma conclude that Bhil society is strongly patriarchal with a strong preference for male children. Ownership of all immovable property such as land and housing is vested in men, and the only property considered to be women's is their jewellery. They cite the strong cultural resistance to giving even a part of the family's land to women, arguing that a family without male offspring considers it a great misfortune to have to transfer its land to the daughters. They claim that 'this cultural attitude principally determines women's status in society, leaving them completely dependent on the whims of men, be it father, husband or son. Despite the tradition of bride price, the money is controlled by men. If there is any conflict in the family, the woman has few options to move out as she has neither land nor house. She either must find another man to give her shelter, or go back to her parent's or brother's house. This is a context where domestic violence, alcoholism, bigamy and desertion are common among men' (Sarin and Sharma, op cit:5).
- 8.14 Of particular importance for the current evaluation, both Mosse et al, and Sarin and Sharma note the traditional division of labour between men and women which bind women 'more intimately to the natural resource base' (Sarin and Sharma, *ibid*). Women therefore have a powerful need for involvement in decision making about natural resource management, whether water management, as in the case of SWACH, or dryland farming practices. The lack of decision-making over basic natural resources, particularly land, is a further element in the gender-determined structural weakness in women's position.

- 8.15 As with any discussion of gender it is important to state at the outset that caution is needed in treating 'women' as a single group. Women's access to participation varies with age, marital status, religion and class. Equally, inevitably significant cultural differences in a geographical area the size of the SWACH project, which we are unable to document. We gained some insight into some of the mechanisms of this during the evaluation. At several meetings we attended, there were very few younger women present. On being asked, we were told that the young 'bahus' were kept at home by their mothers-in-law. We cannot assume that the interests and needs of all women are the same.
- 8.16 This then is the context in which the SWACH project locates itself with its broadest objectives of improving quality of life and socio-economic conditions in tribal areas with particular reference to women and children. It is clear that SWACH has had to confront considerable difficulties in seeking the participation of women, and that its persistence, documented in the next section, is a considerable achievement.

### **Integrating Women: A WID Approach**

- 8.17 There can be little doubt that SWACH has taken the approaches that characterise a 'women in development' or 'WID' approach very seriously. The central role that women **already** play in the management of water and sanitation has been understood, internalised by the project, and acted upon. From the project's entry point in the village contact drives, where VCTs tried to persuade women to help them select the best sites for handpumps, through to the current activity of the formation of women's groups, women have been a key target for project interventions.
- 8.18 Statements made in project documents make the SWACH position on women's participation clear. The Plan of Action 1986-1990 states that 'All interventions must be planned and executed with the active participation and consent of the community, and in particular the women.' It also states that the animator will be 'encouraged to mobilise the women and assist in articulating their needs and interests with respect to the Project activities. This will be a continuous process safeguarding the bottom-up approach necessary if the project is to succeed' (GoR/UNICEF 1986: 3 & 12).
- 8.19 The key strategies for involving women in the project have been via women's awareness camps, and through one to one contact with animators. Village contact drives particularly in Guineaworm surveillance villages have been an important reinforcement of SWACH messages. More recently the strategies of jal mela and women's group formation are explicitly directed at women.
- 8.20 While SWACH has from its inception sought ways of involving women, the assumptions behind its strategy have rarely, if ever been explicitly spelt out. The closest project documents come to providing a theoretical framework for the SWACH strategy is in the project report Women Awareness Camps: An impact study, by Gupta and Singhal of the Department of Home Science

Extension, though this cannot be taken as an internal document. Nonetheless, it has the SWACH stamp of approval on it, in that it is in the SWACH document series, and for the purposes of this evaluation is taken as representative of SWACH's view.

- 8.21 A clear assumption that comes out in the study is the centrality of women in relation to family health: 'Women have a pivotal role to play in shaping the health of the family. They are the frontline health workers on duty around the clock. Each mother cares for her child and other members of her family. She is concerned about the health and takes immediate action, provided she understands the problem and has means to treat it. There can be no question about her motivation or willingness to do so.' Consequently, 'women require knowledge about nutrition, which they can apply with available resources, in feeding their children and caring for their nutrition during pregnancy and lactation. Management of drinking water is the responsibility of women, hence they should know about importance of safe drinking water. She also needs information about keeping the house and its surroundings clean, proper child care and care during pregnancy and lactation' (Gupta and Singhal, 1989:4-5)
- 8.22 It is in this context that women's awareness camps were, and are still being held. Given women's central role, and lack of formal education, ways needed to be found to improve their information, and thus their ability to manage this central role.
- 8.23 The four key categories of information passed on to women at awareness camps have been:
- environmental sanitation
  - general awareness camps (immunization, ORT; water-borne diseases; safe drinking water)
  - kitchen gardening
  - dai training
- 8.24 In other words, the project targets women in their dominant reproductive role and seeks to maximize the impact of the project by targeting information and technologies (filters, ladles etc.) at women.
- 8.25 Certainly in terms of numbers, SWACH has succeeded in mobilising many women. Women's awareness camps, mounted either by SWACH or by NGOs involved almost 35,000 women between 1989 and 1992. It is likely that these are the same women who will have been targeted through contact drives (other than the initial drives, in which many more women were reached), and who will be targeted in the formation of women's groups and through jal melas, since we have already noted SWACH's strategy of intensifying its efforts in 770 or so Guineaworm surveillance/active villages.
- 8.26 The WID approach of SWACH, essentially integrating women in their traditional roles into the project exemplifies what has been called the 'efficiency' approach to women and development. The emphasis is less on

women themselves as the focus of concern, than on using their energy and resources to ensure that the project is not simply time and money wasted. By and large their participation is viewed instrumentally, primarily as a way to achieve better project functioning, rather than as a way of meeting women's needs themselves. This is exemplified in the concern, expressed in the Village Contact Drive Guidelines, that in other water and sanitation projects, field results had been poor because of a conceptual gap between people and planners.

8.27 In the case of SWACH, the conceptual gap is to be minimised by emphasis on women. Women are the favoured target because development project have demonstrated over and again that women are more reliable targets, show greater commitment in ensuring that services are maintained, and, if it appears that the initiative will benefit their families, are prepared to put considerable resources, particularly of time, in ensuring the project's success. The project depends almost entirely on village women for disseminating its software messages to the community, which in turn raises important questions about time.

8.28 SWACH exemplifies an efficiency approach to WID in its assumptions of the elasticity of women's time. Despite the fact that on one level, project staff know how inelastic women's time actually is, there is little questioning of the context of their availability. It is taken for granted. This leads to a certain tension; on the one hand, SWACH staff appear to be strong advocates for recognising women's productive as well as reproductive labour (women were often referred to as the 'breadwinner' for example); on the other hand, the SWACH approach to social mobilisation and communication is predicated on the unpaid, so called 'free' time of women. We found that the women themselves were less sanguine than the SWACH staff about how long they are likely to continue to donate their time. At one women's meeting the evaluation team attended, a woman expressed this view strongly:

Now there is no worm, and I've wasted a whole day. Why call me to talk about a worm? We are so poor that our need is for daily labour. If we aren't going to benefit, why call us? How will I cope now. It is almost evening, and I haven't cooked anything. Give me Rs.15 since I've wasted my day for you.

8.29 The efficiency approach to women's development is particularly demonstrated by the formation of women's groups (see section 8.5), where they are seen explicitly as "a step towards institutionalising SWACH philosophy at the grass root and then will facilitate better implementation of any village development programme". (Plan of Action 1993-1995: page 23). There is no mention of women's groups existing for their own purposes rather than SWACH's purposes.

## **Women Handpump Mechanics: Efficiency or Equity?**

- 8.30 SWACH's training of handpump mechanics mistries provides another example of the use of a WID approach to the issue of women's participation. SWACH was not the first organisation in India to train women mistries, but has used their training and deployment to attract considerable PR. The decision to train women handpump mistries perfectly demonstrates the efficiency approach to WID: 'In an attempt to improve handpump maintenance, SWACH began an innovative scheme to train women as handpump mechanics. This was done with the belief that women, as the prime users of handpumps would be more committed to maintaining the pumps and that women mechanics would be more accessible to rural women' (Mehta et al, 1993:4).
- 8.31 The decision to train women mistries was also seen as an opportunity to challenge the gender status quo, and to 'generate a sense of self-esteem among rural women and to have other linkage effects to alleviate women folk' (sic)(Mehta et al, ibid). Given these parameters, and the observation already made that women are indeed more efficient and committed than men, it is not surprising to find that the women mistry scheme has been very effective in attracting women who have completed their training and now work with considerable dedication. The evaluation by Mehta et al was generally very positive. For example, the drop out rate was 16.67%, but this tended to reflect the changing status of mistries once they married: some had found they were no longer able to do this work once married.
- 8.32 However, the evaluation raises some interesting questions. Mehta et al speculate for example about the 'other linkage effects, women upliftment (sic), attitudinal changes, inculcating of technical expertise, self-esteem and sensitivity towards the plight of women during the period of handpump out of order (which) are some of the other important benefits which accrue as a result of introducing women handpump mechanics' (Mehta et al, op cit: ). Yet Mehta's study, an empirical, questionnaire-based survey provides no measurable indicators for assuming any of these linkage effects.
- 8.33 On the contrary, the study demonstrates how gender differentials have been overlooked in the training and deployment of women mistries. It is stated, for example, without any comment, that the 'average remuneration received by women and men mechanics was Rs. 2089 and Rs. 4875 respectively. This accretion in income for women mechanics has helped the families to survive. Without this, it would have been difficult to make both ends meet' (Mehta et al, op cit:76). The fact that women earn a mere 43% of men's earnings, in a socio-economic context in which women's productive labour is essential to household survival seems a matter worth discussing.
- 8.34 Women handpump mechanics met during the course of field visits were very vocal about the gender inequities they experienced in their terms and conditions. Moreover, one of the women met was a widow, and the main provider of income for her household. Women are expected to work in teams of three, sharing one tool kit, while men work as singletons, and each have



their own tool kit. Similarly, women are expected to maintain only 30 handpumps a month (or 10 each), while men have forty handpumps alone. Consequently the earnings that women can make are artificially limited by limitations imposed on them by initially SWACH and subsequently by the Panchayat Samitis.

8.35 The women handpump mistries made the following comments:

I wanted to do something not very common, things which men did earlier. Even if we are only caretaking 10 handpumps each it gives us a lot of benefits, but I would feel much better if I had more. I could look after 20-30 handpumps and I would then earn more. We have raised this issue two or three times in women's meetings, but the answer given is that women can't do more as they have too much work to do...If the tool kit is heavy I take one of my children to carry it. We all three of us have bicycles. Travelling is not the problem. We have heard that in the next year men will get Rs 1200 for handpump maintenance. Is this true? Why aren't women going to get a raise too? If you give us Rs 1200 as well, we can accept the challenge and do more work.  
Hantok

I feel very sure that we could do a lot more work. We are happy to work on our own also, but we have only one tool kit. My husband is happy that I am doing this work, and also that I am a supervisor in SWACH. Women feel that they should work and do all sorts of things. We feel very happy that we've learnt something worthwhile in our lives. Education is not very important (for being a mistry). All you need is a good understanding of what things they've told you. I have a team mate who is absolutely uneducated, but knows all the parts in English. She could not sign her name, though I am now teaching her to do it.

We are committed to providing safe water to the people, and don't do it just as a job. When people depend on a male mistry, the pumps don't get mended for two months. We take immediate action. We are totally committed to safe water. But we want to do more work. I could easily maintain 40 handpumps on my own. Bhagwati

- 8.36 It is difficult to see the limitations imposed on women mistries as somewhat undermining of the symbolic importance attached to training women handpump mechanics in the first place. When asked, staff members of SWACH claimed that the deployment of women mistries is no longer their responsibility, but that of the Panchayat Samitis. On the other hand, it is SWACH who provides the training and the tool kits, and who undertook an advocacy role on behalf of the mistries in the first instance. SWACH's advocacy on behalf of the women mistries may be needed again, though supporting the women mistries themselves in a struggle for equal terms and conditions to their male colleagues would be an alternative strategy.
- 8.37 A further unresolved issue is the failure of Panchayat Samitis to recruit SWACH-trained handpump mechanics at all. Field research showed that in a number of cases women had been trained, and given a tool kit, but subsequently not employed by the Panchayat. This included at least one woman who featured in SWACH's film about women mistries, who found herself in the unfortunate position of having her toolkit retrieved by SWACH, denying her even the opportunity to operate as an entrepreneur for which there would have been plenty of scope. For some women, attending training is a step that requires considerable self-confidence to challenge the opposition. To then remain unemployed, and lose the tool kit is a most unfortunate outcome.
- 8.38 The PRA study found that in some villages trained women handpump mechanics were only provided with tools which could deal with the upper section of the handpump. They are not therefore equipped to deal with repairs. Hence Panchayats are reluctant to put them on the job.
- 8.39 The issue of the women mistries leads on to a further consideration, which is the extent to which, by focusing on a WID strategy for reasons of efficiency, SWACH has avoided addressing wider gender issues within the project.

#### One woman, all women?

- 8.40 A further aspect of a WID approach is its frequent failure to identify the different interests and needs of different groups of women. The example of young newly married bahu being kept back from women's group meetings by their mothers-in-law was cited above. Aside from references to caste and adivasi women in project documentation, SWACH has made no systematic study of the different interests and needs of women in its target groups. Field research revealed that women had a number of opinions about the divisions between themselves, and the inequities perpetuated by the project through its failure to perceive or act on the fact that women are not a homogeneous category.
- 8.41 In a focus group discussion in Mokhampura village, Bhil women were asked what work was being done for women in the village. They replied: 'Whenever there is a meeting of the women, only the educated ones are called for it; we're not called for meetings. Now today, you are here and you called us to

talk to you. Nobody ever visits us personally to talk to us. We don't know what is happening in the village...The government sanctions help for the adivasi women, but the beneficiaries are the upper class women. They take all the benefits and start their work. We don't get anything.'

- 8.42 This theme occurred in several focus group discussions. In Kupra village, the Brahmin women do not appear to interact with the adivasis, who claim that interventions like piped water connections and covered drains have been concentrated in Brahmin areas as there is nobody to speak for the adivasis.
- 8.43 The view of SWACH is that selecting influential women for women's groups who will be able to communicate SWACH messages to the rest of the village women is a efficient way of disseminating information. SWACH also tries to ensure that women from all communities are represented in the groups it forms. However, without specific work to challenge deep-seated inequities in access and resources, it cannot be expected that these groups will automatically run on democratic principles, and this is an issue that SWACH will need to focus more attention on in the future.

### **Gender and Development in SWACH**

- 8.44 SWACH's approach to women's participation has been based on both a quest for efficiency, and the desire to meet what has been termed a 'practical gender need' - in this case, the need for clean water and improved sanitation (Molyneux, 1985). As such, it can be argued that the project has to some extent worked to preserve, and even to reinforce the sexual division of labour within the project area, since it seeks to enable women to perform their traditional gender roles more effectively, failing to challenge the assumptions of what in fact it is a woman's task to do. Far from addressing existing gender inequalities, such an approach may even reinforce them - tantamount to propping up the system.
- 8.45 Despite the fact that SWACH has set itself the wider objective of improving the socio-economic condition of people in the project area, particularly women, it has never sought to address the broader issues of gender dynamics, or the gendered power structure within which women's activities are organised, nor has it attempted to address the traditional division of labour between women and men, which binds women more intimately to issues of water and sanitation. Rather SWACH has taken what is given - the traditional division of labour - and sought to work within it, on the grounds - explicitly stated to the evaluation team - that the stage for tackling 'gender in development issues is not yet set'.
- 8.46 Despite the rhetoric in Mehta's report of the need to empower women, and the discourse of 'bottom-up' development, the project has not pursued any analysis of the existing gendered power relations within the project area that structure all areas of life, not just water and sanitation issues. Consequently, while SWACH can be said to have succeeded as a 'women in development project',

it cannot be described as an effective 'gender and development' project because it has neither identified or chosen to focus on gender relations.

- 8.47 This may have important implications for the future of the project, and its long-term impact. The failure to engage the energies of men, other than as scouts, and to challenge their lack of involvement in water and sanitation issues, may mean that the gains of the project are vulnerable once SWACH leaves the project area. While questions remain over the sustainability of women's groups post SWACH, at least for the time being, many women have been fully involved. Men are left entirely out of the picture. Women's traditional linkages to water are reinforced by the whole concept of the Jal Mela, in which waterpots are distributed to women. Men are offered archery contexts, which while undeniably an attraction in a Bhil area, have no relevance to SWACH objectives. Men remain peripheral, onlookers at a water drama in which they are not even bit players.
- 8.48 SWACH will need to decide whether it wishes to identify and address relevant gender issues in the remaining years of the project. Clearly there is a fine line to be drawn between disempowering women by undermining areas of their lives in which they take primary responsibility, and supporting them in a quest for greater equity. Nor is it simply a question of seeking men's involvement in areas which are traditionally women's responsibility. Rather it is to examine the broader issues of gender dynamics within the project area that discriminate against women and girl children. Obviously this a long and slow process, and SWACH may well feel that it is justified in leaving this process to other agencies, having already achieved considerable success in women's participation to date.

### **The impact of the project on women: the findings of the field research**

#### **The impact of the project on women's time**

- 8.49 A key area of fieldwork was the impact of the project on women's time, particularly the impact of handpumps in place of stepwells. We tested the hypothesis that handpumps would save women time, which they could then use for other activities. In the main, women confirmed the fact that collecting water from a nearby handpump was less time consuming than collecting it from a stepwell. However this was qualified by the following points:
- women often had to queue and wait their turn;
  - in summer the water table falls and women have to pump for longer
  - handpumps fall into disrepair
  - women use more water, so may spend almost as much time collecting more water.
- 8.50 In cases where time had been saved, most women spent it on improving the quality of their household chores. Few women had views on constructive/productive use of spare time as they had little access to alternative activities. As a woman from Kushalmagri replied when asked what she did

in her spare time replied, 'I work in the fields, go for collecting fodder, or for herding the animals and also I have to grind the grain.' 'But didn't you do the same things earlier?' 'Yes, but I could not attend to my household chores much. I also had to get up very early.' Slightly more sleep may be one of the most important benefits of an improved water supply.

- 8.51 In Mukhampura village women said that additional water meant they could cultivate the fields. No water meant no agricultural work so they had to look for wage labour in Ratlam and Kota.
- 8.52 Informants had a number of comments to make on the time they spent attending meetings in pursuit of SWACH goals (see discussion of women's groups below). Meetings that hold the promise of economic activity are a high priority for women, and they will make time to attend. Income generation is associated with improvements in image in the eyes of both members of the family and the larger community. In some villages, for example Kolkhanda, there appeared to be some tension over remuneration for attending meetings. The animators and scouts were told 'You're getting a salary, but we are not getting anything for the hours that we spend with you'.
- 8.53 Another interesting reflection emerging from fieldwork was the negative impact on women's time of sending daughters to school, a practice strongly encouraged by the project. Many women commented on the additional chores they had to undertake as a result of schooling their daughters, but believed that the long term economic benefits for their daughters were a price worth paying. For example, an adivasi woman in Kupra argued that when girls 'go to school they become smart, they mix around with the others, and they cannot be duped. If they study more, they might get good jobs and earn well for themselves'.

#### **The Impact of the project on gender relations**

- 8.54 Field research provided many interesting reflections on the division of labour between women and men. The impact on gender relations had been mixed. In some cases, particularly in villages where SWACH has had a presence for some time, women had positive experiences. In a focus group in Bagayancha, women were asked whether family members cooperated when they had to attend meetings. One woman replied: 'Yes, the husbands are very cooperative and they willingly mind the children and even cook the food sometimes. When we get back home, they ask us what was discussed at the meeting'.
- 8.55 The additional money brought home by animators proved to be an eloquent advocate for pursuing the work. In Pal Sarada, the animator Shantabai said of her husband, 'He doesn't say anything. He knows I have taken up this work, and will have to do everything, even travelling to other places. Moreover doing this work, I bring home some money, so he doesn't object.'

- 8.56 Other animators faced considerable opposition from both husbands and other women, which even the additional money could not compensate for. In Gurha village, an ex-animator discussed the ill-will her position had generated among women in the village and between herself and her husband, who particularly objected to time spent attending meetings, and to visitors coming to the house: 'Things had become so bad with my husband, that I ultimately gave up this position...I worked for about one year.'
- 8.57 In the main, the field research found greater changes in perception of conventional gender roles in SWACH villages than in the control villages. SWACH has clearly had an impact on women's views in the villages in which it has worked. In one of the control villages, Suther Madra, women expressed highly conventional views of the role of women which were rarely matched in SWACH villages. When asked whether men should help with activities such as filling water and teaching good habits to children, one woman in a focus group discussion replied: 'Why should the men do all these things? They've married us and brought us home to do these things - why would they marry otherwise? We are supposed to cook the food, look after the children, wash clothes and collect the water'.
- 8.58 Field research suggested that the changing relationships between some animators and their husbands may have a wider impact on other women's expectations. Several animators commented on the fact that their husbands were prepared to cook food and do other domestic work - often in exchange for the wages of their wives. Nonetheless, the fact that some women have entered public life, and organised their lives in ways to make this possible, is at least a pebble in the pond of conventional social relations.

### **The formation of Women's Groups**

- 8.59 One area of the project which clearly exemplifies the tensions between a WID and a broader gender approach to the project is the current strategy of forming 1000 women groups. The draft Plan of Action 1993-5 outlines the formation of the women's groups as a key activity for the coming two years:
- "SWACH with the help of scouts and animators will identify 30-40 people from each village who will be trained on issues related to social development. These groups will be so groomed that they become capable of playing a crucial role in social mobilisation and community support in all development activities". (page 23).
- Women's groups are seen as a strategic way of consolidating the gains made by SWACH, with the assumption being made that when SWACH ceases to exist, these groups will be able to carry on SWACH activities in sanitation, water and community health care. The groups are also designed to be the nodal point for future village development activities, and to continue the process of social/community mobilisation. The intention as of March 1993 was to form groups with carefully selected women, and to form 300, 500 and 200 groups in the respective years 1993-5.

- 8.60 Indeed, arguably, the term women's group is a misnomer. The groups are not women's groups in the generally used sense of the term; they are rather training events.
- 8.61 At the time of the evaluation, the intensive Guineaworm Surveillance phase for the year was over, and considerable energy was being put into group formation. The process follows a predetermined pattern. The scouts or animators of village selected for a women's group are asked to call the women of the village together. SWACH staff and DTTs attend, and explain the purpose of the proposed women's group. After several general meetings, the process of selecting women for the group takes place, with the objective of selecting as representative a sample as possible of village women. Once the members have been selected, training takes place over a two day period, which is done primarily by DTTs. The women's group is then given a dhurri and a drum, and is expected to meet twice a month, at times selected by themselves. At the time of the evaluation the women's groups that had been formed were meeting regularly, and meetings were still controlled by the project: all meetings were attended by SWACH staff, and/or DTTs, as well as the animator/scout/supervisor.
- 8.62 At present, the women's groups are not seen as autonomous, but are very much a part of the project's design. Agendas for example are prepared in the district office before each meeting; on receiving the minutes of one meeting, the next is prepared. SWACH has a clear information-based agenda that it wishes to convey to the women's groups, largely focusing on water, sanitation and preventive health messages.
- 8.63 In effect, SWACH is utilising the same vertical machinery that proved so effective in eradicating Guineaworm to create women's groups. A carefully conceived blue-print for the formation of women's groups has been drawn up (much like the Guineaworm eradication strategy), and the highly efficient project team is now implementing the blue-print. Staff, who were recruited to eradicate Guineaworm, are now creating women's groups. It does not seem to cause undue concern to SWACH that the two tasks are wholly dissimilar, and that the project personnel so effective in one task might not be the most apposite for the other. Many scouts are very young, the majority of DTTs are also young and male, and are one step further removed from the village context by dint of higher education.
- 8.64 From the point of view of the norms developed by the NGO community, this practice of women's group formation would appear to be highly top-down, despite parading in the rhetoric of bottom-up. It also exemplifies the differences between a WID approach, and a gender-sensitive, 'empowerment' approach. SWACH's approach owes more to the discourse of social marketing than to the discourse of empowerment (see Chapter 10). Rather than encouraging group formation via a 'soft' process of consciousness raising, and animation, SWACH has opted for the 'hard' sell, seeing this as more appropriate to a government-implemented process.

- 8.65 This comes more clearly into focus when SWACH's targets are compared to the norms of women's group formation experienced by NGOs in the area. According to both Sevir Mandir and Astha, both based in Udaipur, formation of functionally autonomous women's groups is a very lengthy process. Astha for example, has facilitated the growth of 80 women's groups over a period of 5-6 years. Astha had intended to begin the process of withdrawing support from the groups in order to 'wean' them, but an independent evaluation recommended that even after 6 years, the groups were not yet ready to stand alone.
- 8.66 When confronted with these norms of group formation SWACH was quick to point out that their own approach is a conscious strategy, deliberately ambitious, rather than naively so. According to the present Project Director, precisely because this is a government programme, a scaling up of activities is to be expected. The norms of the NGO community should not dictate the scale on which government works. In his words:
- 'At some point of time, this (ie large scale replication of women's groups) has to be done'.
- 8.67 This of course raises the important question of what kind of women's groups SWACH will succeed in creating. At this point of time, in the view of the evaluation team, it appears unlikely that SWACH's groups will be anything other than passive recipients of government services, and if these do not materialise the groups are unlikely to hold together for long.
- 8.68 The experience of NGOs throughout India is that group formation, mobilisation and animation cannot be rushed. Moreover, for effective group formation, the group must have a reason of its own for coming together. Experience gained during the field trips suggested that the women's groups are already restless with the SWACH agenda. The messages expressed to the evaluation team were explicit. The agenda around which women wish to mobilise is not water and sanitation but poverty, and the need for economic activity. Scouts and animators also expressed their anxiety that women will not keep coming to the meetings unless their needs are met, a matter of considerable concern, since the animators and scouts appear to see themselves as personally liable.
- 8.69 At every women's group meeting we attended, numbering approximately twelve, the same points were raised again and again. Water and sanitation is seen as useful and important, but not the issue that women wish to discuss. What they do wish to discuss is some form of income generating activity that will reward the time they have spent coming to meetings. Their participation appears to be contingent on some kind of economic gain.
- 8.70 Unfortunately, and this is perhaps the reason why SWACH's approach to group formation appears doomed, the provision of economic activity and other developmental 'goods' was invariably seen as the direct responsibility of SWACH. SWACH has provided in the past - handpumps, filters, washing platforms - and the expectation is that SWACH will continue to provide. The



SWACH district office appeared to feature in the consciousness of village women as a source of considerable developmental resources. Women spoke of writing letters stating their needs which would go from the animator to the DTTs, and from the DTTs to the project officer, and from the project officers at district level all the way to Udaipur.

- 8.71 There was little or no indication given by these women's groups that they appreciated the effort required to define, and then pursue their own agenda. In the opinion of the evaluation team, much more work, and indeed a different kind of work, will be needed to shift the perception of these groups from the position of passive recipients to that of active partners.

### **Opportunities for Economic Activity**

- 8.72 Poverty is the greatest problem facing people in the SWACH project area. While poverty can be broken down into components, which include lack of access to safe drinking water, inadequate sanitation, poor health education, high rates of water-borne disease etc. the fact of inadequate resources (including infrastructure) at individual, family, and community level was a prime concern expressed to the evaluation team. In the words of one scout: 'We have nothing here, no school, no shops. If you want to buy anything you have to walk six kilometres...there is hardly any electricity, no health care to speak of, no jobs. Nothing'.
- 8.73 It became very apparent to the evaluation team that the agenda around which women in the area wished to mobilise around was not water and sanitation but economic activities. The need-based agenda lacking in the current approach to the groups centres on poverty and the lack of opportunities for women to engage in the cash economy. Clearly, this is a far more difficult agenda to address than water and sanitation.
- 8.74 At present government programmes for economic activity among women's groups are confined to those provided by DWCRA (Development of women and children in rural areas). The DWCRA programme is district focused, with an APO in each district responsible for activities within the district, with training support provided by TRYSEM (Training for rural youth for self-employment). The programme is administered at State level through the Women and Child's Welfare Department.
- 8.75 The evaluation team visited the DWCRA office in Udaipur and met the APO as a way of gauging the likely support available to the SWACH women's groups in establishing economic activities. Taking Udaipur as an illustrative example, it is clear that the DWCRA programme has only limited capacity for feeding into the SWACH programme. One hundred and fifty women's groups have been formed by DWCRA so far, of which 76 are active. The APO expressed the view that 150 was an appropriate ceiling for the project in one

district, at least with the resources currently available to DWCRA. Targets are given by the Women and Child's Welfare Department each year: this year no targets were given for the creation of more groups.

- 8.76 Clearly SWACH will need to address this question of economic activity for its women's groups urgently. It is imperative that women's groups do not develop unrealistic expectations of what SWACH can and cannot be expected to do. If public sector resources for income generation in the State are limited to DWCRA, alternative avenues may need to be explored. It appeared to the evaluation team that SWACH has not thought beyond the immediate term in its strategy for women's groups, and that additional strategic planning is urgently needed, particularly in relation to economic activity.

### Conclusions

The relevance, effectiveness and efficiency of this approach in meeting project goals

- 8.77 The discussion above indicates that for reasons of efficiency, targeting women as primary beneficiaries has proved to both a relevant and effective strategy for ensuring that the project's software messages received wide dispersal. Women are the prime water and sanitation managers of their communities, as well as those taking primary responsibility for transmitting norms of hygienic behaviour to the next generation. As such, targeting them is the most logical strategy for seeking to bring about rapid behavioural changes.
- 8.78 However, when equity is also brought into the equation, targeting women alone does nothing to challenge the status quo in which women are already heavily burdened with both productive and reproductive responsibilities. Greater attempts to involve men in the project would have been welcome, even though the project has decided to avoid addressing the larger social equity issues evident within the communities in which SWACH works.

The long term sustainability of this strategy

- 8.79 Women's role in socialising their children and transmitting norms of personal and environmental sanitation means that persuading them of the need to change is crucial for long-term change. However, while women are primarily responsible for socialisation, male attitudes and practices may be equally if not more influential on which practices gain adoption within the home. Long-term sustainable change will need the cooperation of both women and men.
- 8.80 Lessons learnt from this aspect of the project, particularly as a pointer towards the future possibilities of the SWACH model
- Strategies for involving men as well as women in project activities need to be considered, even though women may have a primary role in water and sanitation.

- The needs of women from different communities should be addressed. The project should not assume that all women in the same project area share needs and resources in common.
- If the project builds on women's conventional roles it may reinforce gender inequities and a division of labour that absolves men of responsibility for crucial areas of family life. This possibility needs to be addressed before SWACH proceeds further.
- While targeting women may be a more efficient approach to development, the project needs to guard against inequities that can be created through its own activities. The case of the women mistries is highly educational as a lesson in gender inequity.

## **9 THE DEVELOPMENT OF A CONTRACT CULTURE**

### **Flexibility and the casualization of employment**

- 9.1 One of the features of the project has been its flexibility, associated with a particular organizational relationship to government. This organizational form obviously provided the project director with the opportunity to deploy personnel and finances in ways not open to normal line ministries. The numbers of sanctioned staff was generous, and reflected the nature of project funding. Deputed staff came from a variety of line departments with central interests in the activities of the project. By combining them in new ways it was hoped that a new form of integration might be forthcoming. The Public Health and Engineering Department and the Department of Agriculture provided the 'hardware' inputs, and the 'software' inputs came from the Ayurved Department and the Department of Education.
- 9.2 As the project has developed, the flexibility accorded to it has involved the gradual increase in the employment of more casually recruited workers. As deputed government officials have returned to their line departments, after 4 or 5 years service, or have moved on to positions in other projects, such as RIGEP and PAHAL, they have been replaced by contracted staff who have either retired or are on short term contracts. There has been an increase in what might be termed the 'casualization' of employment.
- 9.3 This is not by any means unique to SWACH but rather reflects a tendency throughout both the developed and developing world, as contracts for employment for particular purposes become increasingly common and 'jobs for life' associated with government service become less easy to obtain. In the west this is becoming known as 'the contract culture' as government tries to reduce its tied expenditure on public services and contracts out to the private sector many activities which were formerly undertaken by government. A related aspect of this contract culture is the devolving of responsibility for financing and maintaining public assets onto the consumers, or users of those assets. The contract culture begins to take root in the interests of greater efficiency and cost effectiveness.
- 9.4 Restrictions on the creation of further government posts, together with this changing emphasis has resulted in an increasing number of vacancies amongst sanctioned staff within the project. This is particularly noticeable in Dungarpur where only two of the ten deputed posts remain occupied. Additional staff are recruited on short term contracts for particular purposes when required.
- 9.5 This increased casualization and short term contracting has involved the recruitment of retired government staff who have had former associations with the project and who are thus familiar with project activities and personnel. It has also involved the short term recruitment of recent graduates awaiting more permanent employment. Some of these interviewed by the evaluation team saw

their involvement with SWACH as a short term one en route to something more formal. These young graduates would seem to provide the core of the District Training Teams (see Section 7.44-7.48).

### **Casualization and the problems of maintenance**

- 9.6 At the village level the issues of flexibility and casualization have major implications for the involvement of village level functionaries, and for the participation of villagers generally. They are likely to undermine strategies which involve voluntary contributions aimed at increasing self reliance as villagers come to expect remuneration for work that they undertake and as expectations of rewards determine the intensity and variety of 'grass-roots' participation. At women's group meetings for example the only people not rewarded for attendance are the women themselves. It is not going to be very long before they also will demand rewards for attendance. As indicated in the last chapter, unless these women's expectations for economic rewards are met, there is a limit to the amount of time they will be prepared to give.
- 9.7 The project has also been viewed as offering a variety of goods, from converted stepwells to plastic filters. These goods are viewed, and have been dealt with, as discrete products. Rather than parts of a total package they have changed from year to year as the project's emphases have changed. As one animator said: "The work would keep changing from time to time. Sometimes the emphasis was on kitchen gardens and handpump plantations, at other times on making cloth filters."
- 9.8 A common perception and expectation, that those who create the assets should be responsible for their maintenance, underpins attitudes to externally conceived and sponsored interventions, and undermines attempts to develop sustainable maintenance strategies. If villagers perceive the maintenance of the handpumps as government's responsibility then their participation in thinking through their own roles in more general development work is likely to be low. Marrying the technology to the economic circumstance prevailing in the project areas is not easy, but it is of central importance if sustainability is to be achieved. For all the supposed physical benefits provided under the project analysis of the beneficiaries' willingness to pay, and of the networks needed to ensure continuity of supply, need to be undertaken. If, for example, the filter on the plastic funnel cannot be easily and cheaply replaced then its value in terms of the ongoing struggle against water-borne diseases is minimal. Willingness to pay implies that villagers themselves value the inputs.
- 9.9 From even a cursory examination it is quite clear that villagers are prepared to make their own arrangements. This willingness to pay is evident for example in the remuneration given to handpump mechanics in addition to any remuneration given to them by the panchayats. These arrangements supersede the current inefficient maintenance system. The best maintained handpumps would appear to be those which benefit particular influential families with specific interests in ensuring continuity of supply.

- 9.10 Ways of effectively transferring ownership and some responsibility to the community remain to be elaborated but innovative contractual arrangements between local government and the users, which specify obligations and ensure adequate rewards might be pursued. Attempts to address this issue through the development of user groups is one way of doing this, and experiments in hand, as well as the results of comparative experiences from other states, still need to be investigated.
- 9.11 The issues surrounding the ownership and maintenance of assets extend into the 'software' components of the project, as the processes associated with long term attitudinal and behavioural changes are translated into discrete inputs, on the questionable assumption that 'training' packages effectively deliver lasting benefits. Little research has been undertaken to date by the project on changes in knowledge, attitudes and practices associated with the health and sanitation issues. Chris Deegan's study on water use and perceptions prepared at the end of 1990 is a notable exception. It is not obvious that lasting attitudinal changes have actually been made, and the instrumental nature of implementation of project activities has precluded a major focus on such changes. Shifting foci as well as targeted interventions have prohibited the retrospective analysis of such changes until the end of 1993 as the project has progressed.
- 9.12 An increased emphasis on 'events' (contact drives, water fairs etc.) and on particular products has meant that various interventions in the name of development are in danger of becoming ends in themselves, rather than parts of a more holistic strategy. As indicated earlier in the study, great pains are taken to record outputs in the quantitative monitoring and accounting formats. These atomize the multiple and complex dimensions of the project into discrete boxes. There is a consequent tendency to fragment and take as separate the various items that have become part of an expanding repertoire of 'outputs' to be provided to villagers, and mixed in an appropriate combination to produce the 'right' results. The social marketing of the project is dealt with in the next chapter.
- 9.13 Agencies, such as the Bhartiya Lok Kala Mandal which has responsibility for training puppeteers, are contracted to develop different products. Their emphasis is on the regeneration of cultural traditions. Being peripheral to the project they have only a partial view of the many facets associated with SWACH. A knowledge of the whole is only retained by the small and decreasing core team. Because the activities are orchestrated by this core team there is a danger that the nuances of interpretation that build from an in-depth historical knowledge of the place of the different 'outputs' in the overall development of the project are not sufficiently understood. At the other end of the spectrum there is a danger which appears to have emerged in the minds of some villagers (although how widespread this actually is unknown) where the project is only known for one of its many facets; the project is perceived as a Guineaworm project and the officials associated with it are known as 'naruwallas', people who provide double filter cloths.

## The changing involvement of NGOs

- 9.14 Longer term changes have been a feature of NGO objectives and activities in the project area for some time. In the early days of the project they were perceived as the 'natural implementors of project objectives' - able to more effectively reach the local populations in ways in which the 'top-down' governmental systems could not. The innovative structure of the project supposedly provided a way of linking these structures with those of government. Various local NGOs (in particular Seva Mandir) took responsibility for various aspects of training and implementation in areas where they already had a significant presence. This the project encouraged. Indeed in Bhichhiwarra block of Dungarpur district PEDO took total responsibility in the early days and that block was excluded from SWACH plans for Dungarpur.
- 9.15 A feature of NGO activities is their wide ranging involvement in integrated strategies for local level development, perceived in holistic terms. The project hoped to be able to build on this. Such a long term view of the nature of development came increasingly into conflict with the targeted strategies which came to characterise SWACH. The NGOs were unprepared or unable to sacrifice or reorient their long term goals which were not easily measurable in terms of reportable outputs, and they gradually became dissociated in any central way from the achievement of project objectives. For the past two years they have had minimal involvement in SWACH as the project has re-asserted its pre-occupation with Guineaworm eradication. While 1993 saw the re-emergence of a wider focus by the project, SWACH has not yet re-established the links that were originally constructed with NGOs. The lessons learnt from experience with NGOs do appear to have been incorporated into the Dungarpur Wasteland Development Project as SIDA too appears to have shifted the focus for its experimental interventions in the area.

## 10 SOCIAL MARKETING AND COMMUNITY MOBILISATION

### Introduction

*'By keeping clean there are no diseases, and there is general prosperity in the household'. Village informant*

- 10.1 Social marketing as a project strategy is not discussed in any project document initially made available to the consultants. During the evaluation however, it became apparent that what we were witnessing, particularly in the most recent project activities, was a highly efficient demonstration of social marketing. Once the paradigm of social marketing had become visible, a number of project features fell into place.
- 10.2 Social marketing was apparent in the central control of the project's messages: from the slogans painted on walls during intensive drives - eg 'Filter your water and then you will live happily' - to the songs composed for the project and taught to women's groups, to the scripts prepared and acted out at Jal Melas by the project's puppeteers, the 'clean' concepts of SWACH are packaged and communicated to villagers in a carefully orchestrated form. Nothing is left to chance.
- 10.3 The messages of SWACH come from the top in a sophisticated campaign designed to 'sell' the messages of pure water, clean living and a Guineaworm-free existence to a population who, for all the rhetoric of bottom-up planning and implementation, are essentially the passive recipients of the information and services provided for them by the 'company', a term frequently used by informants when referring to SWACH.
- 10.4 The consciousness of this strategy was confirmed by the SWACH director and other project staff. Extracts from Philip Kotler's 1978 study Marketing for Non-Profit Organisations have been circulated to Project Officers and Assistant Project Officers, while a paper by the Project Director and made available to the evaluation team provides insights into the current thinking of the project management.
- 10.5 The strategy adopted aims to shift the beliefs, attitudes, values and behaviours of the people in the project areas. While project management considers that the project has, to date, been successful at shifting beliefs, attitudes, values and behaviours in relation to Guineaworm, it believes that much more work is needed to shift these attitudes in relation to personal and environmental sanitation, and in the use of water.

### Bottom-up/Top-down

- 10.6 Social marketing, while sometimes described as a bottom-up approach, cannot be seen as such against the norms of contemporary development thinking in India. Key social marketing techniques of the project indicate that the strategy



owes more to marketing than to development thinking, though there are obviously overlaps between the two discourses.

- 10.7 This becomes clear if we take each of the social marketing techniques used by the project. The process of 'problem' formation has been centralised, and the problem defined by SWACH. Now that Guineaworm is receding, the 'problem' has been redefined in terms of water and sanitation practices.
- 10.8 Goal setting is evident in the project's commitment to targets, which have characterised the project from its inception, and is set to continue; for example, 800 Jal Melas, and 1000 women's groups established.
- 10.9 Target market segmentation also characterises the SWACH approach; children are catered for via school competitions; women through women's groups and through their perceived gender interests in health and water.
- 10.10 The target market segmentation strategy of the programme can be criticised within the terms of its own discourse, in failing to sufficiently disaggregate its main target group, or to devise strategies for men. Women are not a homogeneous category within the project area; young 'bahus' do not have the same access to resources (including time) as their mothers-in-law and may be denied attendance at women's groups and other women's functions. Men are conspicuous by their absence in SWACH's social marketing strategy, though the recent introduction of archery contests at Jal Melas is seen as a strategy for appealing to men's interests, and therefore attracting them to the Jal Melas.
- 10.11 Consumer analysis has been carried out, to some extent at least, via PRA exercises, though questions remain as to how effectively the project has used PRA other than as village mapping exercises to generate information for the project. PRA was discussed with a DTT member who had been trained to conduct PRA exercises in villages. The DTT had little idea about the purpose of PRA, and had to be 'rescued' in the interview by a staff member who explained that PRA was to extract information and fill the existing gap in baseline data. As a substitute for full participation in project planning, this seems a rather token gesture.
- 10.12 Finally, SWACH has made use of the idea of key channels of influence within the project area, for example by using village level functionaries and influential figures within village communities to legitimise and communicate ideas.

#### **Context-specific Strategies**

- 10.13 The strength of the SWACH approach lies in the clarity of its perception that in order to achieve, or to market this concept of improved health through improved hygiene, the methods of communication must be context specific. The use of the services of the Bhartiya Lok Kala Mandal for example to train puppeteers has proved a highly effective strategy for providing educational entertainment at Jal Melas. The transmutation of the concept of the Kumbh

Mela into the Jal Mela is a powerful marketing strategy. Pure SWACH water is identified with powerful Ganges water. By dint of association, the messages of SWACH achieve validation, and are touched with the same sakti (power) associated with the Kumb Mela. The fact that some women adopt the same trance-like state when carrying SWACH water in procession, as when carrying Ganges water in the Kumbh Mela is seen as validation of the strategy by the SWACH team.

- 10.14 It could also be argued that the project has engaged in the commoditisation of ritual and the manipulation of cultural traditions in ways which are suspect.
- 10.15 While seeking to be context-specific in order to remain relevant and effective, social marketing highlights the perennial tension within the SWACH project. How far can a project utilising social marketing techniques which take little cognisance of the complexities of the social worlds in which people live, other than for the borrowing of idioms, succeed in being genuinely developmental?

#### **A resource hungry-process**

- 10.16 It is equally clear that social marketing is a resource-hungry process. According to the Third Action Plan, 1993-95 budgeted software for the current phase of the project comes to about 64% of the total. This is a clear indication of the shifting priorities of SWACH in the final years of the project; in the absence of Guineaworm, and with hardware targets more or less completed, almost two-thirds of the project's resources are going into the marketing of the SWACH concept of pure water and environmental sanitation.

#### **Whose Agenda?**

- 10.17 The social marketing of the SWACH concept raises the question of whose agenda the project is following. Social marketing presupposes that the concepts being marketed are not already a part of cultural practices and that they need to be introduced by an external agent in order to 'create demand'. This view may blinker the implementing agency to what is already the case, and what is determined not by 'wrong' beliefs, but by economic or physical constraints.
- 10.18 Both of these were illustrated during fieldwork. A young DTT member interviewed an elderly couple about their personal hygiene. On being asked how often they washed, the woman replied that their daily practice was to get up, say their prayers, wash, clean their teeth with neem twigs and change their clothes. The man proceeded to turn the tables on the DTT with a discourse on the importance of water, which indicated that he was well aware of issues surrounding personal hygiene and did not need a lecture from someone half his age!

- 10.19 Another example from fieldwork illustrates how physical constraints result in less than optimal practices, in the view of the informants themselves. One woman explained: 'Earlier (ie before the arrival of the handpump) it was difficult for me to wash all the utensils after every meal. I would tell my children to share the same plate since I had to fetch water from far away and at night I would leave the utensils as they were without cleaning them'.
- 10.20 Social marketing also raises questions about the integrity of some of the messages that are being conveyed to project beneficiaries. Cleanliness sometimes seems to take on a moral and economic dimension. Explicit messages are given that keeping a clean 'neat' house, wearing clean clothes, washing regularly will result in improved health. We were told by SWACH staff that, for women, time spent in learning these messages at women's awareness camps and women's groups, will be translated into less time spent in looking after sick family members; hence attendance at meetings will eventually be translated into economic gains. Such assumptions are highly questionable.
- 10.21 While explaining the fecal-oral route of disease transmission is a valid message, the issue of keeping neat houses and changing clothes is highly correlated with socioeconomic and other culturally specific concepts of cleanliness and dirt, which cannot be translated simplistically into disease reduction and economic benefits. What begins as an objective reality about water-borne disease and fecal-oral transmission appears to be transmuted in the project by a sleight of hand into a moral imperative towards cleanliness, and the benefits that accrue to being 'clean' as defined by SWACH.
- 10.22 Experience from water and sanitation projects elsewhere in the world suggest that people are rarely motivated by health considerations to be involved with water and sanitation issues. With the decline of Guineaworm, the need to establish an issue based agenda that addresses felt needs is crucial. At the end of the day people may not wish to mobilise around water and sanitation alone, however attractively packaged in the form of the Jal Melas.
- 10.23 The lack of convergence between SWACH's current agenda and the issues expressed in women's group meetings attended by members of the evaluation team suggests that the rationale for SWACH's existence is rapidly being eroded. While community mobilisation may be effective around something as visible and painful as Guineaworm, community mobilisation around diarrhoea and other water-borne diseases is a different proposition. As such, SWACH's current strategy of social marketing may have a relatively limited lifespan.

#### **The creation of consumer groups**

- 10.24 The formation of women' groups highlights the conflict between social marketing and community mobilisation par excellence. Taking the social marketing idiom further, women's groups can be interpreted as the project's attempt to create a 'consumer' or demand group at village level which will act

as a focal point for service delivery. Through their mobilisation, the project aims to create a natural interest group to which field functionaries such as the SWACH animator or scout, ANM, anganwadi worker, MPW, etc can 'sell' their particular services or products, whether they be immunization, family planning, or messages about clean water and environmental hygiene. As such, the women's groups are not currently conceived of by the project as autonomous groups with the power to create their own agenda.

- 10.25 As discussed in Chapter 8, the finding of the fieldwork was that women were already restless with this agenda, and wanted to mobilise around their own agenda of economic activity. Unfortunately, the social marketing strategy turns individuals into consumers. The services - the women's groups, the handpumps, the Jal Melas, the funnel filters and camps - have all been provided. But no one is about to provide economic activity which women can passively adopt. The project's system of social marketing may well have let these women down, since, in the case of economic activity, the "company" cannot provide. The struggle for improved incomes is not so easily achieved as Guineaworm eradication, and for generating income a radically different strategy is needed.
- 10.26 SWACH has an obligation to begin the process of development education with the women's groups; or at the very least it has to ensure that they understand the limitations of the SWACH approach.

#### **Impurities in a campaign for pure water**

- 10.27 The effectiveness and ethical justification of social marketing is predicated on the value of what is being marketed. In the case of SWACH, the role of 'clean' and pure water is essential to the integrity of the messages being marketed. The essential property of the 'swach' water in the clay pots paraded in the Jal Melas is its purity, both physically and spiritually.
- 10.28 As such, the evidence that the water in some of the handpumps installed by SWACH is contaminated assumes a peculiar importance. The study undertaken by the Department of Limnology and Fisheries at the Rajasthan College of Agriculture found that of 76 handpumps investigated only 28, or 36.8% had no fecal or total coliforms, 20 (26.3%) were contaminated with total coliforms, and a further 28 of the handpumps (36.8%) were contaminated with both fecal and total coliforms. Thus 63% of the handpumps tested in that study provided contaminated water.
- 10.29 The presence of the coliform values indicates the widespread seepage of organic matter or sewage laden surface water into the ground water. The study concluded that the matter needed urgent attention, in the form of removing garbage dumps, latrines, and cattle sheds away from the vicinity of drinking water sources.

- 10.30 SWACH is in the process of commissioning two further studies on the quality of handpump water. Aside from special studies, however, SWACH does not conduct any kind of water quality testing in borewell water, nor does PHED. It only executes the task of drilling/handpump installation.
- 10.31 A few rapid water testing kits originally devised by the Defence Laboratory, Jodhpur and later modified suitably by others were given to SWACH by Professor V.C. Dhurve. The tests are able to confirm the presence of harmful bacteria in the water, but are not currently in use by SWACH.
- 10.32 The current evaluation also tested water quality in the sample villages by using these field kits. Bacteriological analysis was carried out by the team at 31 drinking water sources: 7 bore wells and 24 stepwells. The testing showed that borewell water was safe in 6 out of 7 cases, but step well water in 19 out of the 24 stepwells was found to be contaminated (see Appendix 11). Out of 57 handpumps examined, animal waste was found dumped within 50 metres of 22 of them.
- 10.33 Until SWACH's planned, comprehensive study of handpump water quality is undertaken, the full extent of the problem will not be known. Meanwhile, the poor quality of water in the thousands of stepwells in the project area is an additional problem that has not yet been addressed, beyond the concern with the cyclops vector.
- 10.34 Durve and Sharma's study also showed significant levels of contamination in the stepwells, a finding confirmed by the current evaluation where almost 80% of the stepwells sampled were contaminated. At present, other than by teaching villagers to filter stepwell water, covering of some stepwells, and ensuring applications of Temephos, the project has made little impression on the quality of stepwell water.
- 10.35 Chlorinating stepwells is the responsibility of the MH&FWD via a superintendent at Block level. With approximately 30,000 stepwells spread among 28 blocks, this would seem to be a daunting task, and not surprisingly, evidence collected during the evaluation suggested that most of the wells had not been recently chlorinated. Developing effective community structures for keeping stepwell water clean may be a strategy for SWACH to consider in the context of developing water user groups.

### **Conclusion**

- 10.36 In the context of SWACH's shifting goals, its social marketing strategy has clearly served it well. Given the scale of the project, the sizeable geographical area, the number of villages, and the need for a consistent approach that could maximise project resources, the social marketing strategy has ensured considerable achievement of project goals. Indeed it is likely that without a consciously conceived marketing strategy the project would not have succeeded in eradicating Guineaworm as effectively as it has done.

- 10.37 When conceived of as a government-implemented project designed to have maximum impact over a wide area, and as a conscious scaling-up of NGO-style activities, the experimentation with social marketing within SWACH makes good sense. The evaluation revealed that in the main, people in the project area have internalised SWACH ideas, vindicating the use of the strategy.
- 10.38 The analysis above has also indicated ways in which social marketing and participatory development are not synonymous, and indeed are divergent. The example of women's groups demonstrates the shortcomings of the social marketing strategy, because social marketing cannot attempt the processes of animation, or consciousness raising and social mobilisation required; rather it determines in advance what it thinks the consumer wants, and aims to provide it. The process of women's group formation is rarely amenable to this approach. In the words of the director of one of the NGOs working in the project area: 'SWACH calls a meeting of women....opens a register and a saving scheme and claims that a mahila mandal has been formed which will meet twice monthly'.

## 11. VILLAGE IMPACT STUDY: THE FINDINGS OF THE PRA EXERCISE

- 11.1 The Participatory Rural Appraisal carried out as part of the current evaluation was specifically aimed at providing an understanding of changes in knowledge, attitudes and practices in relation to water and sanitation, and of how villagers felt about the various SWACH initiatives. The three 2-person appraisal teams visited 15 villages during December 1993. The villages were chosen according to criteria described in chapter 1. The location of these villages was not known to SWACH management prior to the visits of the team. Considerable importance was attached to this. The aim of the exercise was to provide opportunities for villagers to discuss the project in a manner that would encourage their participation. Prior to the exercise a detailed workshop was conducted in order to ensure that all members of the teams shared a common purpose and were getting the same sorts of information from different villages. Samples of questions asked of the villagers are given below.

1. When did the SWACH Project Start?
2. What do you understand by the SWACH Project?  
What is it about?
3. What do you understand about the objectives of the SWACH Project?
4. In your perception/view have the objectives been achieved. Yes, No, Some/Partly?  
If not, then what is the reason for the inability to achieve the specific objective?
7. Do you use the facilities provided by the SWACH Project? Yes, No?  
If Yes, then what purpose do you use it for?
8. Has access to and use of water had an impact on women's lives?
9. As a result of the impact of access to water on the lives of individuals, specially women, and the family, has it brought about any change in the status of women?  
If so, then what is the change and how did it improve women's status.

### **The distinctive nature of the SWACH project**

- 11.2 SWACH has made a point in its Plans of Action (and in putting forward a distinctive operational strategy) of involving people in all aspects of the implementation process. A major feature distinguishing SWACH from other programmes was to have been this participatory focus. Villagers, particularly women, were to be involved in the initial selection of sites for handpump construction on the assumption that they were the major users and that they would thus be more knowledgeable about where handpumps should be placed. The Appraisal teams found little evidence to suggest that the selection process was really any different from that traditionally followed, except in one village (Kupeda, in Banswara) where the village Vikas Committee was involved in the selection. In all other 14 villages site selection was influenced by prominent local people. Circumstantial evidence gathered during the field visits by the Swansea team and suggested by earlier reports would seem to suggest that there was little community involvement in site selection. There is also some evidence from the appraisal reports that in some villages women

resented their exclusion from site selection and felt that their involvement might have changed the decisions that were made. A lack of involvement seems to be not just the result of local influential people being able to monopolise decision making, but also to the fact that villagers themselves did not take up or were not aware of opportunities for involvement. Even in Kupeda, villagers reported that women were not involved in site selection..

- 11.3 Because PHED are responsible for installing handpumps and villagers see the responsibility for their maintenance resting with the Panchayat Samitis, they do not associate handpump installation necessarily with SWACH and they expect maintenance to be undertaken by government. Villagers did, however, report a number of problems associated with accessibility and handpump maintenance.
- 11.4 Criticisms by villagers of the stepwell conversions suggests that the selection of those to be converted was not systematic and at times contributed to decreasing people's access to water.
- 11.5 There is some indication from the appraisal study that the overall benefits from SWACH accrued differentially to particular sections of the community. While little systematic evidence is available it would appear that, despite SWACH's stated intention to reach the most marginal areas, it is just those areas that remain on the periphery of SWACH activities. (Mokhampura in Banswara and Jalpaka in Udaipur)
- 11.6 The importance attached to health and sanitation issues by village informants remains low. Priority is given to livelihood and food security. While Guineaworm was an obvious threat it achieved priority status, now that the threat is no longer evident, the priority accorded to water and sanitation issues has decreased.
- 11.7 Villagers appear to differentiate between water and sanitation issues. Their perception of water is not confined to drinking water. They look on it as a source of livelihood because it is critical to irrigation, to livestock rearing and to fishing. As a source of livelihood its availability has considerable priority. But as an element in personal cleanliness it does not appear to have the same significance. The water used for septic tanks, for cleaning drainage systems, or for taking baths or washing clothes is of lesser importance. Until the requirements for water necessary to achieve an adequate livelihood base are met it is unlikely that 'higher order' uses will be given greater importance, despite the various educational initiatives that have been undertaken. This appears to be borne out in the study of the 15 villages where evidence of the widespread use of latrines was confined to those villages where water was more readily available (Mokhampura and Kupeda in Banswara district).
- 11.8 Little material appears to be available about attitudes to defecation generally from project documents. It is an impure act for adults and should take place away from the house. In areas where population densities are low (which includes much of the marginal areas covered by the project) contamination



consequently remains low. For small children however, defecation is seen as natural and the stools harmless - neither a source of impurity, or of infection, hence disposable in the vicinity of the house.

- 11.9 Villagers discussed the issues surrounding personal cleanliness (bathing and handwashing) and indicated that a gradual awareness of the importance of attending to personal hygiene had grown in all of the SWACH villages visited, but they generally accepted lapses and accounted for them in terms of bad habits or as part of what Brahmmins describe as 'sanskara'.
- 11.10 An important result of the appraisal exercise was to highlight the fact that in most of the villages people did recognise that their health practices were changing. They appeared to be moving from a reliance on traditional methods rooted in superstition. In some villages women's perception and knowledge with respect to ORS and immunisation was impressive.
- 11.11 Women indicated that while SWACH had not contributed to the increased availability of water, it had certainly improved the quality of the water they are now using. In particular the enhanced proximity of handpumps for women was appreciated. Savings-in-time which women say they have obtained from this enhanced proximity have been diverted into housework and child care, an ability to contribute more to subsistence agriculture and a move into poultry and small ruminants.
- 11.12 The self confidence of the women in SWACH villages visited would seem to have been enhanced, but there is no evidence of any dramatic transformation in their status within the family or within the community. This issue has been dealt with in more detail in Chapter 8. Decision making remains male dominated. Small things, such as gaining additional information and being given opportunities to interact with each other, have helped in building their self-confidence. Despite the fact that many women indicated that the consent of husbands or male members of the household were required prior to participation, they saw this as normal. There was a unanimous expression of appreciation for the women's meetings and training. They were determined to hold on to what they had achieved and are anxious to gain new skills which will help in their search for a more secure livelihood. In other discussions with women there was some evident frustration with the fact that SWACH was not able to deliver tangible economic benefits to them and that attendance at meetings had a time cost that was increasing.
- 11.13 Attitudes to SWACH personnel and SWACH representatives in the villages seems on the whole to be positive - they are well respected and liked, but villagers commented on the lack of continuity and frequent changes of personnel. The comparison with other village level functionaries was quite difficult because villagers saw them as rather different sorts of people. Their perceptions were guided by the character of the functionary rather than by the function. Women in particular appreciated the project's attempts to train

female handpump mechanics, but were disappointed with the fact that their services were not taken up adequately either by SWACH or by the Panchayats. Little evidence of their services being used was available in the 15 villages visited.

- 11.14 Handpump maintenance emerged as the biggest challenge. In the absence of any single point of reference in terms of responsibility for repairs, villagers are cynical and frustrated. While villagers cope with the situation in different ways, there is a call for a more lasting solution to this important problem. Women handpump mechanics have only been provided with the tools to deal with the upper parts of the handpump and are thus not really equipped to deal with repairs and some of the sets of tools given to the women mechanics on graduation have been taken back by the project because of the lack of an effective system whereby their skills could be effectively utilized. They are caught in a double bind; they do not have the tools to carry out effective repairs, and because of that they are not employed by the Panchayats.
- 11.15 The findings of the PRA exercises are summarised in a series of 10 case studies below:

#### **CASE STUDY 1 - Mokhumpura, Kushalgarh Block, Banswara District**

- 11.16 This village is the headquarters of the Panchayat Samiti. It has a population of 150 households. It has one school, an Anganwadi Centre, a DWCRA group and a Mahila Mandal. Of the five handpumps, three were installed by SWACH. There are 40 latrines. The handpump platforms in the village were not linked to any drainage system and created unsanitary conditions around the pump. 14 women and 2 men were interviewed by the appraisal team. The women were particularly proud of the DWCRA group and the Mahila Mandal. Many of the village level functionaries lived close to the road and were not only related but also neighbours. SWACH was seen as a popular programme but it appeared that awareness and enthusiasm was linked to the main road and that occupants of the interior were left out of the development process. The project was identified as a Guineaworm Control Programme which emphasised the use of handpump water for drinking, the need to cover stored water and to filter that water before use. In addition the project was also seen as a programme for cleanliness and general health. The importance of attending meetings was highlighted. It was felt that the project had achieved a great deal - Guineaworm had been eradicated, there was a substantial increase in the use of handpumps and of funnels and strainers, and people recognized the need to chlorinate the water, although they could not indicate when and how such chlorination should take place. This, together with maintenance, was the responsibility of government. In theory at least wells used for drinking water are supposed to be chlorinated by the Mahila Mandal under the supervision of the Animator.

- 11.17 It was suggested that about 60% of the population now used strainers, but only in the home; when in the fields they would drink water from the well used for irrigation. The changes wrought by the project enhanced accessibility to water and there was a general impression that there had been a decline in illness and improvements in personal hygiene. The group indicated that a very small number of villagers now used traditional healers and most preferred modern medicine.
- 11.18 Those interviewed as a focus group felt that their involvement in village affairs had increased, but they were not campaigning for radical changes to the status quo. Now that they had women's groups in the village they expected to be able to have a greater involvement in issues that concerned them. There was some resentment that they had not been consulted about the location of handpumps and about the conversion of some private stepwells while others remained unconverted. This had resulted in some tension in the village. The group felt that all stepwells needed to be converted and looked to SWACH to help them do so. They were enthusiastic about the prospect of 4 women from the village going for training as handpump mechanics.

#### **CASE STUDY 2 - Suliya/Malpada, Kushulgarh Block, Banswara District**

- 11.19 This village is not covered by SWACH and consists of two hamlets with 65 and 20 households respectively. It is 4 kilometres from the SWACH village of Banghecha and is accessible only by foot. A team of 20 people were interviewed including the teacher, the Anaganwadi worker, the ward Panch, the Shiksha Karmi and the ex-Sarpanch. There are two handpumps which people are not using because of bad location. One well with a wooden ladder is used mainly for drinking water. People had one recollection of staff from the PHC coming to chlorinate the water. Guineaworm was prevalent some years back but currently its incidence has decreased. There was one case in 1992. Villagers believe that Guineaworm is caused by a white thread-like spiral insect present in river water: they believe that now that they have started removing the insect while collecting water the incidence of the disease has declined. More than 80% of villagers drink water without filtering it. Some filter the water with the cloth that they use to wipe their bodies. Two years ago some people distributed a special cloth for filtering water.
- 11.20 Diseases like diarrhoea are prevalent among children. While recognising the need for fluids to treat it they mostly depend on home remedies. The village is quite isolated and sick people have to be carried 12 kilometres to Kushulgarh. One Shikshakarmi school was initiated recently but is the only government programme running. The group was unaware of any effort by government to eradicate Guineaworm, although some knew of well construction by government nearby and of the activities of SWACH in Baghecha. The group insisted that the appraisal team tell SWACH to learn to walk away from the roads. "SWACH travels by road only and since we do not have that here, there is no possibility of having that programme even in our life time". While they recognize certain needs they are unable to satisfy

them. They indicated that knowledge about personal hygiene was absent and there did not seem to be any recognition of the special nature of women's requirements.

### **CASE STUDY 3 - Bhalun Guda, Kerwara Block, Udaipur District**

- 11.21 Bhalun Guda is a village of 18 Rajput families and 27 tribal families with a total population of 213. The village is situated on the road to Kalyanpur and has a primary school with 40-45 pupils. There is also an Anganwadi Centre in the village. SWACH surveyed the area in 1987-8 to count the number of open wells, the number of handpumps and numbers of people affected by Guineaworm; 10 cases were detected. No further SWACH activities were initiated after these initial visits although some things were learned from the SWACH scout during the survey itself. Because of the women's meetings in the Anganwadi Centre villagers are aware about the need to consume clean water and of the need to immunize children. They show a keen awareness of personal hygiene from work done by Seva Mandir. The question of the maintenance of two handpumps has been solved by putting them near the houses of the local influential rajputs. The handpump near the Anganwadi Centre is seen as belonging to that centre. While there are two additional handpumps nearby, one is out of order and 50 families have to travel at least one kilometre to collect drinking water. The local handpump mechanic, trained by the Panchayat Samiti, charges between Rs 2 and 5 to each family for repairs. The handpumps are considered to be the property of government.
- 11.22 While the village had always suffered from Guineaworm, once villagers started consumption of handpump water the disease stopped. In discussions with a worker from Seva Mandir it was indicated that more than half the villagers filter their water. While theoretically aware of the importance of personal hygiene and cleanliness, they failed to translate the knowledge into reality. Because most of the village have some education they are aware of the need to immunize children, to use clean water and consider these important.
- 11.23 So, although this village has not received any SWACH benefits, there is some awareness of basic health and hygiene, about water-borne diseases and about immunization. This is attributable to the educational level of most of the residents, the Anganwadi programmes and the activities of Seva Mandir.

### **CASE STUDY 4 - Village Kupera, Banswara District.**

- 11.24 This village is in Panchayat Samiti Talwara, 8 kms west of Banswara, with a population of 450 households. The village comprises of Yadav, Brahmin, Mahajan and tribal households situated in different pockets.

- 11.25 The arrival of the PRA team was well received in Kupera as there were 3 villagers who had been trained by one of the team members and were happy to offer assistance to their trainer. The result was that 41 people (including 15 women) collected for the exercise.
- 11.26 The village has 6 handpumps, piped drinking water supply, and 2 wells which are still in use. The handpumps are distributed in three community clusters and places of public importance, and 300 houses have piped water connections. There is an old stepwell which has been abandoned. There are 33 latrines in the village of which 22 were constructed with the support of SWACH and 8 through the Jawahar Rojgaar Yojana. However, 7 latrines are unusable as they do not have doors. During conversation, it emerged that several women received training as masons for latrine construction.
- 11.27 Kupera village has the distinction of having a Village Development Committee (Vikas Committee) with its own fund. It has worked towards creating a drainage system and has employed persons to clean it every day. SWACH's animator cooperates in cleaning and maintaining this drainage system. This Vikas Committee is elected for a period of two years and follows a practice of periodical review of its activities. Members of this Committee were appreciative of their experience with SWACH. They claimed it had been helpful in creating an environment which motivated the villagers to take responsibility for clean water and sanitation in the village.
- 11.28 The people in the group were appreciative of camps and plays organised with the help of SWACH. Such activities, together with school competitions on Guineaworm were ranked highest by the group in terms of long term impact.
- 11.29 The understanding of SWACH objectives seemed to be reasonably clear and these were described as the eradication of Guineaworm and the transformation in practices related to personal and community hygiene. Members of the group emphasised extending the Guineaworm objectives to include broader development schemes related to women and child development and education. The role of the Village Committee and the involvement of women is seen as the most critical factors for the success of the programme. They rank their village high in terms of achieving the objectives set by SWACH, while considering it as their achievement.
- 11.30 The group claimed that SWACH's interventions for the last 8 years in Kupera had resulted in an increase in levels of information and knowledge, improved articulation, rise in self esteem and confidence, enhanced literacy levels, more effective use of government facilities and programmes, concern for child development and improved childcare practices, opportunities for employment, and a decrease in superstitions and questionable social practices. A walk round the village validated the group's claims. The village has a functioning water supply and sewage system in evidence. The slogans and awareness raising messages of the SWACH Village Contact Drive campaign were visible - neatly and strategically painted with the Village Committee's name and the date imprinted thereon.

- 11.31 The village group suggested that the following activities be pursued : 1) the Vikas Committee include women as members in recognition of their contribution, 2) incomplete latrines in tribal localities be completed on a priority basis, 3) backward communities i.e. Yadavs and Harijans, be enabled access to educational facilities, 4) SWACH consider handing over greater responsibility to the Vikas Committee.
- 11.32 In more than one way the PRA team felt that this was an example of a highly successful project intervention.

#### **CASE STUDY 5 - Village Mahuri, Tehsil Kushalgarh, District Banswara.**

- 11.33 Mahuri village panchayat is in Sajjangarh Panchayat Samiti. The village population consists of 200-350 families. This tribal village is situated on the bank of the river Anas. Agriculture is the main occupation of the villagers, with some of the inhabitants working as government servants. The Gram Panchayat headquarter has one middle school, one health subcentre and two Anganwadi Centres.
- 11.34 The information collected indicated awareness of SWACH's programme in the village - Guineaworm eradication drive followed by awareness raising through camps and meetings about hygiene and immunisation. In spite of the lack of scouts and animators, women took active interest in the project activities and came together (though their participation in handpump site selection was not evident). Handpumps had been erected near the houses of both the former Sarpanchs and one handpump was situated in a cluster of 3-4 households. All the handpumps were found to be in working order. As only some of the wells have been converted, the impression conveyed was that only those with connections in the Panchayat Samiti can get their work done.
- 11.35 In Upala Phala, a Patel section, the former sarpanch does not allow people to draw water from the handpump near his house so the women have to collect water from a converted well situated away from their dwellings. Nichala phala, the lower section of the village, is farther from the main village on the lower bank of the river and it consists of 56-60 households, with 4 handpumps and 7 private wells in this area.
- 11.36 Straining water is a sporadic practice depending on whether the women remember to carry their funnel filters to the water source. Earlier women had to walk 1.5 to 2 kms to the river Anas to fetch water. Access to handpumps has contributed to saving of women's time and less fights in the family previously caused by delays in bringing water. Now the women can work for longer hours in the fields without being bothered about fetching water from distant sources. The eradication of Guineaworm from this area is attributed to the availability of clean drinking water. Most women are aware of the water-borne nature of this infection.

- 11.37 Women are interested in livelihood opportunities if some work can be made available for them in the village itself. Men usually go out in search of work. Generally women are aware of the value and importance of education and expressed interest in being literate as they felt this would enhance their chances of augmenting their family incomes. Many girls from the village go to school and 3-4 women of the village are educated up to Class VIII and X. The latter felt it helped them to manage their affairs specially in the absence of the men. They sought help in finding resources to tap the river Anas water for irrigation and agricultural purposes.
- 11.38 The women would organise meetings of 3-4 villages periodically but the response in terms of number of participants was far from encouraging.
- 11.39 Although the animators and scouts could not be contacted by the PRA team, the women were ready to have a meeting with the team and expressed confidence in the animators who had established credibility and whose services were valued.
- 11.40 The villagers were of the view that the maintenance of handpumps was the responsibility of the government who owned the handpumps. They also regarded the SWACH project as a government programme but the Guineaworm eradication programme had changed their attitude towards SWACH and they identified more closely with the project.
- 11.41 The PRA exercise observed that the number of women participants in the programme is good, people are aware of the importance of cleanliness, latrines have been constructed but are unused or underused due to scarcity of water, women have started coming together on a single platform, and there is a gap in services as there is no handpump mechanic in the village.

#### **CASE STUDY 6 - Jalpaka Village, Tehsil Kherwara, District Udaipur.**

- 11.42 This tribal village with a population of 85 households is not easily accessible as these are spread over small hamlets located on distant hillocks. The 525 inhabitants live among the hills, rivers and dense forests. There is a primary school attended by 100 students with a school teacher from Juthri village resident in Jalpaka. Devoid of all facilities, this village has 13 handpumps of which five seem to be perpetually out of order.
- 11.43 SWACH started its Guineaworm eradication programme here in the year 1986-1987 with Kalu Lal the scout, when Guineaworm was endemic. Guineaworm infested wells were closed down and disinfected. The villagers were taught to strain drinking water and personal and environmental cleanliness was emphasised. Funnel and double cloth filters were distributed to affected families, but those families without filters did not routinely strain their drinking water, inferring that the message was lost in cases where it was not supported by service provision. The 'dandi ka lota' does not seem to be commonly used either. The washing platforms were not being used as 2

handpumps' platforms had been constructed in residential areas which were not within reach of the distantly located houses. Although it appeared that the siting of handpumps had to a large extent been done in consultation with the villagers, the above mentioned two handpumps were located near the residence of locally influential people, thus limiting their use to the two families. It is interesting to note that the responsibility for the repair of the 5 ailing handpumps was taken over by the village. A trained Panchayat Samiti mechanic from Juthri village, 14 kms away, was called to help at the cost of Rs.150 per handpump. The women expressed the need for a woman handpump mechanic.

- 11.44 The level of awareness among women regarding the cause of Guineaworm and its prevention by straining water, disinfecting wells, using handpump water and improved sanitation measures can be largely attributed to the work of the scout, Babulal Meena, who is educated to Class VIII. Under the SWACH project 20 -25 wells had been disinfected and people valued this contribution of the project.
- 11.45 With the provision of a handpump in each hamlet, women save time previously spent in fetching water from distant sources. Also, due to an increase in irrigation facilities in the recent past, women, who are relatively free during the 3-4 monsoon months, do not face the pressure to migrate for livelihood, resulting in the release of further time. This available time is viewed as an opportunity for skills training for the women, though it is not clear where training opportunities will come from.
- 11.46 The residents of this village do not seem to be inclined towards education for girls. The local teacher informed the team that only 18 of the 80-100 students were girls and their attendance was not regular.
- 11.47 In this village it may be concluded that SWACH is viewed primarily as a Guineaworm eradication programme. It is to the project's credit that its interventions have reached this group of remote, isolated households where no government programme have currently reached. This achievement is again mainly attributable to the efforts of the scouts' work.

#### **CASE STUDY 7 - Suthar Madra village - Udaipur District.**

- 11.48 This is a roadside village situated about 3 kms from Jaswantgarh on Nandeshma road, with a population of 500-600 (80 households) consisting of 30 Brahmin families, 20 families of potters, 4 of Meghwals and 26 of Gametias, all tribals except the Brahmins who live in the centre of the village whereas the tribals live on one side. While there is no major tensions between these communities, feuds exist between some families. There is one primary school in the village. This village has not been covered by SWACH interventions although a village contact drive was held two years earlier. One Brahmin woman appeared to be aware of SWACH activities.



- 11.49 The team received cooperation from Chenni Bai and her husband in calling men and women of the village to a meeting, and within 15 minutes a group of 10-15 people collected. They met five women who had studied up to Class 6. Information was gathered from people at the meeting through community mapping.
- 11.50 There are 3 handpumps in the village dug by the Panchayat Samiti and a few private open wells. One of the handpumps went out of order two years after installation when two long pipes were removed. Currently this handpump does not have enough water - only 2 to 3 pots of water can be collected in 24 hours. The villagers have reported this to the Panchayat but until the two pipes removed earlier are replaced the problem cannot be solved. Another handpump located near the school provides the source of water for 12 families. The third handpump is located on private land. It was dug 4 years ago. The water does not taste palatable and there is no easy access to this handpump. When the villagers began to use this downgraded water for bathing and washing clothes the landowner prevented them on the grounds of the drainage problems created near the handpump. Women were not involved in the site selection of these handpumps. Rather it was prominent Brahmins who decided where the handpumps would be installed. Presently, only 13-15 families use the handpumps while the rest walk one kilometre to fetch water from a stepwell.
- 11.51 It was reported that there has been no case of Guineaworm in the village for the last 5-6 years. The 5 open wells which were deemed to be the carrier of Guineaworm were submerged when the Nandeshwar Dam was built. Only 7-8 Brahmin families filter water in the village. Only one woman, Gulab Bai, who comes from a village near Udaipur, was given a dandi lota (ladle) though she claims to have shared the knowledge about ways of ensuring clean drinking water with the village women. Some women have seen funnels and heard about conversion of stepwells by SWACH in the neighbouring villages and have demanded these facilities in their own village.
- 11.52 Women stated that they expected men to make community level decisions. While family decisions are taken jointly and women can decide about matters relating to themselves, the husband's consent is still required. Women are not called for any village meetings. There is a clear division of labour between men and women whose tasks are limited to water collection and all household chores. The impact on women's time is difficult to assess as SWACH is not working in this village. Many women continue to spend almost one and a half hours daily in fetching one large and one small pot of water from the well as the handpumps installed by the Panchayat Samiti are not accessible to the entire community and the problem of water shortage still exists.
- 11.53 There is no women's group in the village. No government programmes in the area have involved the five educated women in any capacity, nor have they encouraged them to form women's groups around any activity. There is no Anganwadi Centre or PHC in the village. About 13-15 girls are studying in the school.

- 11.54 Prem Singh, from a neighbouring village, is a handpump mechanic. He was trained by the Panchayat Samiti in 1983 for three months during which period he received a stipend of Rs.150. He is educated to Class 7. He was provided with an incomplete toolkit and had to spend Rs.1800 to purchase his own tool case on completion of the training before he was selected by the Panchayat Samiti as a handpump mistry at a salary of Rs.400 per month. He was required to repair 50-60 handpumps per month, and to report at two Panchayat Samiti meetings a year. He told the team that there were 5 trained women handpump mechanics from the nearby villages who were not employed by the Panchayat Samiti.
- 11.55 The team observed and noted the lack of inputs in this control village.

#### **CASE STUDY 8 - Kundau village, Udaipur District.**

- 11.56 This is an interior village situated on the Bagdunda-Thadol route about 4-5 kms off the road. There are 13 phalas or sections in this village with a total population of 92 households of which the majority are Gametis with about 13 Rajput families living in the main section of the village.
- 11.57 Information was gathered through social mapping which was done at a meeting attended by about 10 women and 8 men. There is only one handpump in the village which is located in the centre where the Rajputs live. This handpump services the needs of 13 Rajput households and some of the others in the distant phalas. As this handpump was out of order everyone was collecting water from existing traditional wells. Five phalas are located on the left of the village where there are no wells thus for about 38 households drinking water is not available in their own sections and they have to walk quite a distance to fetch water. The map was an eye opener for the villagers when they realised that the school, the handpump, the road, and most facilities are located near the Rajput households. Decisions are also taken by the Rajputs who represent the community in the Panchayat Samiti.
- 11.58 The seasonal analysis indicated that women are usually free when there is no or little work on their farms. Gameti women go for daily wage labour when it is available in or around the village. Women's wages are less than those of men.
- 11.59 It was reported that male dominance prevails in every aspect of village life. Women continue to spend most of their time in collecting water and on all the household chores and do not have time for themselves.
- 11.60 Guineaworm cases had been experienced in every household in this village. One child had had as many as 32 Guineaworms in his body.

- 11.61 Jagdish Gameti, educated to Class 5, was a scout in the village since 1991 but his services have been terminated. The villagers claimed he helped the community to understand the value of cleanliness and to keep the village clean.
- 11.62 Ubeshwar Vikas Mandal, an NGO working in a neighbouring village, has also intervened in Kundau to motivate villagers for plantation activities. This has helped in regenerating the land and forest area. A women's group has been formed by the above NGO and meetings are held twice a month but the Gameti women do not attend regularly.

**CASE STUDY 9 - Kushal Magri village, Tehsil Dungarpur, District Dungarpur.**

- 11.63 This village is only 2 kms from the District Headquarters at Dungarpur. 3-4 inhabitants of this tribal village are employed as government servants and live in 'pukka' houses while the rest of the villagers work as daily wage labourers. They earn some money by catching and selling fish from the village pond. Most of the men work as masons while the women work in the fields.
- 11.64 The village has been provided with handpumps with electric motors. If one handpump is out of order the villagers fetch water from other accessible handpumps without much problem. Five to six years back when there were no handpumps they had to cover a distance of 1-3 miles to fetch water. Women save some time now which is used on completing all their household chores and in small livelihood work.
- 11.65 Malaria workers visit the village and charge Rs.10 per injection which is not of much use as in Dungarpur people have to pay Rs.2 for the same.
- 11.66 The village does not have a school but there are schools in the vicinity in Dungarpur to which the children go. Although the villagers send their girls to school they do not consider it a worthwhile exercise.
- 11.67 It was reported that SWACH workers have been coming to the village for the last 2-3 years. They enquire about Guineaworm cases and educate the villagers about the importance of hygiene. It was claimed that Guineaworm had been eradicated and that there was awareness regarding immunisation, but the villagers did not show a high level of awareness about sanitation. Since the start of the SWACH programme in the village the peoples' sense of hygiene has improved as was evident in their practice of personal and environmental cleanliness.

**CASE STUDY 10 - Palwasi village, Panchayat Bassi, District Dungarpur.**

- 11.68 Bassi, which is the main village in this area, is situated 20 kms from Dungarpur. There is only one kilometre length of metal road in this area and the village hamlets which are spread over the hillocks are accessible on foot.

The total population consists of 500-550 households of tribal (Meena) community. Bassi is dominated by a population of Brahmins, Jains, Kumhars (potters) and Yadavs. One segment of this village with about 200-250 households is known as Mahabavji and is 3 kms from the main village of Bassi. Mahabavji is a scattered settlement of tribals with clusters of 3-4 houses. The village has one primary school and an Anganwadi Centre and for further education the students have to go to Bassi. The ANM visits the Anganwadi Centre.

- 11.69 Animal husbandry and agriculture is the main occupation of the villagers while 2-3 people are employed as government servants. Some men migrate to Ahmedabad and other cities of Gujarat to work as labourers. Women work mainly in the village and venture out only when work is available in nearby villages.
- 11.70 It was reported that before the 8-9 handpumps were installed the villagers drew drinking water from the wells and well water was also used for irrigation purposes. All the handpumps were in working order.
- 11.71 SWACH workers are generally recognised as Guineaworm eradication programme workers. According to the villagers the Guineaworm eradication drive was started 8-10 years back and they have been informed and educated about sanitation and hygiene for the last 3 years. Wells have been converted, handpump platforms have been built and funnel filters have been distributed as part of this drive.
- 11.72 The team members did not see much evidence of, or collect much information about peoples' participation in the SWACH project activities, or their involvement in village matters and events. The villagers were not aware of the facilities available for them and were not involved in the selection of handpump sites or of wells that were converted. It was reported that Guineaworm had decreased in the last 5-6 years and had almost been eradicated. People were aware that Guineaworm was transmitted via contaminated water and that the danger of drinking contaminated water was minimised with the installation of handpumps and conversion of stepwells. Most of the women understood the importance and value of straining drinking water and storing it in a clean, covered pot. It was observed that there had been an improvement in personal hygiene practice and that families who had handpumps near their houses appeared cleaner than those living further away from handpumps. The villagers do not consider it their responsibility to maintain and repair handpumps as they think it is the Panchayat's job to do so. The handpumps installed on private land do not pose too much of a problem as they are taken care of by the 2 families who use them.
- 11.73 Women had started coming together in groups of 10-15 for discussions and it was reported that they appeared to be more confident and more extrovert. Earlier they had to walk long distances to collect water but now they saved time and could sit together. But it was stated that there was no visible change in their attitude towards girls' education.

11.74 The animator and scout are respected and appreciated by the villagers and 10-15 women turning up for meetings was considered an indicator of their acceptance of these workers. But the women were totally dependent on the scout and animator for the meetings and did not take the initiative. The free distribution of funnel filters have also made people dependent and they expected to get things free.

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