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2006 Impact Evaluation Study

FINAL REPORT

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1 INTRODUCTION

1.1 Poverty and Development in Yemen

Yemen is one of the lowest ranked countries in terms of human development (ranked 150 out of 177 countries in 2006 (HDI = 0.492). Yemen has high poverty levels, insufficient basic economic and social infrastructure and weak development institutions. Life expectancy at birth is 61.1 years, with a GDP per capita (PPP) of US$879, and a human poverty index of 40.6%. Population was about 19.8 million (2004 Population Census) and could double by 2025 due to its high population growth (3%) and a total fertility rate of 6.1 births per woman (Yemen 2005 Statistical Yearbook). Health conditions in Yemen are poor, with 46% of children (0-5) underweight for age. Among the most widespread and serious diseases in Yemen are diarrhoea, malnutrition, severe respiratory diseases, malaria, schistosomiasis, liver diseases, and tuberculosis, and increasing incidence of AIDS. Only 49.3% percent of Yemen adults are literate and the gross enrolment rate for basic education is 64% (2004 Population Census). All of these indicators are worse in rural areas, and there are strong inequalities in gender. For example, only a half of all girls of primary school age and less than a quarter of rural girls attend school. In 2000, the rate of women participating in economic activity was about 23%, compared to 69% for men.

Yemen's mountainous topography, dispersion of its population and other natural conditions are formidable obstacles to improving access to basic infrastructure, such as water and sanitation, electricity, and roads. About 33% of the population has limited access to water (2006), and half of the population has no electricity. Only 10% of the road network is paved, limiting the access of rural people to markets and services. The country suffers from institutional weakness which limits its capacity to guarantee effective, efficient, and equitable delivery of social services (SFD, 2003: 5).

The Yemeni government has engaged in a variety of initiatives to help improve the social and economic development of the country, including Yemen's Second Five-Year Plan (2001-2005), the Yemen Poverty Reduction Strategy Paper (PRSP, May 2002), and the Third Development Plan for Economic and Social Development for Poverty Reduction (2006-2010). These three instruments contain specific policy objectives to reduce poverty.

1.2 The Social Fund for Development

The Social Fund for Development (SFD), was created in 1997. The development objective of the SFD is to improve access to basic social services for low income groups, and also to provide an example of an effective, efficient, and transparent institutional mechanism for providing social services in Yemen by (i) refining social service delivery approaches and (ii) empowering local communities and councils to take charge of their local development. The SFD aims to achieve its goals through three main programs:

- The Community Development Program aims to increase access to social and economic basic infrastructure;
- The Capacity Building Program helps build the capacity of local partners, including communities, NGOs, government agencies, consultants and contractors;
- The Small and Micro-enterprise Development Program provides microfinance services, by means of intermediaries such as NGOs, and develops financial and non-financial services for small entrepreneurs.

The SFD is structured as an administrative and financially autonomous agency, governed by a Board of Directors under the chairmanship of the Prime Minister. The Board is comprised of representatives of the Government, civil society and the private sector, and is responsible for defining SFD strategies and general policies, and monitoring their implementation and overall performance.

The SFD has operated in three phases to date. The First Phase (1997-2000) had a total investment of US$90 million, and the Second Phase (2001-2003) amounted to US$175 million. The SFD's is now its Third Phase (2004-2008).

Each of these phases has been carefully monitored and evaluated to measure the impact of SFD interventions, through the following activities:

- Impact evaluation surveys of all SFD's programs are conducted every three years;
- Systematic monitoring and evaluation activities are carried out continuously by each program unit and lessons learned are documented;
- Capacity building in monitoring and evaluation has been undertaken for the Programming Unit, the program units, and respective branch offices;
- Participatory monitoring and evaluation is undertaken for selected activities;
- Periodic external evaluations are conducted by sector specialists; and
- SFD's success stories are actively communicated.

1.3 The 2006 Impact Evaluation Study

The first impact evaluation study was undertaken in 2003, to measure the impact of projects implemented between the SFD's inception in 1999 and 2003, and to gather baseline data for communities where activities would be carried out during 2003-2006. The study collected data on 97 projects (2,028 households) completed between 1999 and 2002 (project set 1), and collected baseline data on 101 projects in the SFD pipeline (project set 2), to provide the basis for the second evaluation. Because no 1999 baseline had been collected, the first evaluation could not compare the 2003 findings with the ex-ante situation in those communities. Rather, conclusions were drawn from a comparison of the ex-post conditions in project set 1, with the baseline conditions for project set 2.

This report presents the second impact evaluation study, measuring the impacts of SFD projects up to 2006. It explores both the short and long term impacts of SFD projects, through observations of the impacts of two sets of project cycles (1999-2003 and 2003-2006). It draws conclusions from data collected for three sets of households:

- **Baseline** data was collected for those households where projects will be implemented in the following project cycle, to be evaluated in the 2009 assessment;
- **2006 ex post** data was collected for those projects that were implemented during 2003-2005 (project set 2); and
- **2006 return visit** data was collected for those 1999-2002 projects that were already evaluated in 2003 (project set 1).

The report offers the following analysis:

- A before / after analysis, which compares the 2003 baseline data with the 2006 ex post sample for a representative sample of the SFD's projects implemented in 2003-2006. The 2003 baseline identified and surveyed 101 pipeline projects, predicted to impact 2,029 households. The 2006 ex post survey was able to re-visit and gather complete information from 91 projects and 1,782 households.

- A return visit analysis was conducted of projects from implemented in the 1999 to 2002 period, originally evaluated in 2003, to see whether the SFD's impacts were sustained in the medium term (2003-2006). This type of follow up analysis has rarely been conducted, so that little evidence exists on the medium term impacts of social funds. The 2006 return visit survey gathered information on 81 projects and 1,646 households originally covered in the 2003 ex-post study.

A new set of household baseline data was also collected for a sample of communities where projects are programmed for implementation in the 2006-2008 project cycle, to be evaluated in the 2009 assessment.

1.4 Structure of this Report

Chapter I contains a summary of the methodology. A detailed methodology can be found in the SFD`s Monitoring and Evaluation Manual (*Annex 1*) and the Design of 2006 Impact Evaluation Survey (December 2005), a brief of which is presented in *Annex 2*.

Chapter II presents the study's findings regarding the SFD`s operational efficiency, including the number of projects funded and their respective investment, project beneficiaries reached, and the time taken in the project cycle. A second part of this chapter analyzes cost efficiency from the perspective of costs per beneficiary.

Chapter III uses the benefit-incidence approach to analyse the impact of SFD projects on outcomes at a household level.

Chapter IV documents the process of consultation and participation in SFD projects at the community level and the resulting impacts on "ownership" and on social capital.

Chapters V to VII review the outputs and impacts of the SFD's main programs: the Community Development Program (Education, Health, Water, and Rural Road projects), the

Small and Micro-Enterprise Development Program, and the Capacity Building Program (Special Needs Groups, Organisational Support and Training projects).

Chapter V reports on the provision of services by Community Development projects. It includes detail on the sustainability of projects, SFD`s contribution to the national stock of infrastructure in the respective sectors, household level evidence on the impact of the SFD investment on key development indicators such as educational enrolment and attainment, the take up of health services, vaccination status, access to water and sanitation services, and building or improvement of rural roads. The chapter also presents direct comparisons between the two project cycles (1999-2003 and 2003-2006) to provide both a short and long term view of impacts.

Chapter VI provides evidence of the impacts of the microfinance using information from a special survey and beneficiary assessment. The chapter evaluates the situation in 2006 of projects also included in the 2003 Impact Evaluation Study to provide a medium term view of impacts.

Chapter VII describes advances of capacity building programs, based on evidence gathered from the beneficiary assessment (project and household level surveys were not conducted for these projects).

Chapter VIII contains conclusions and recommendations based on the findings.

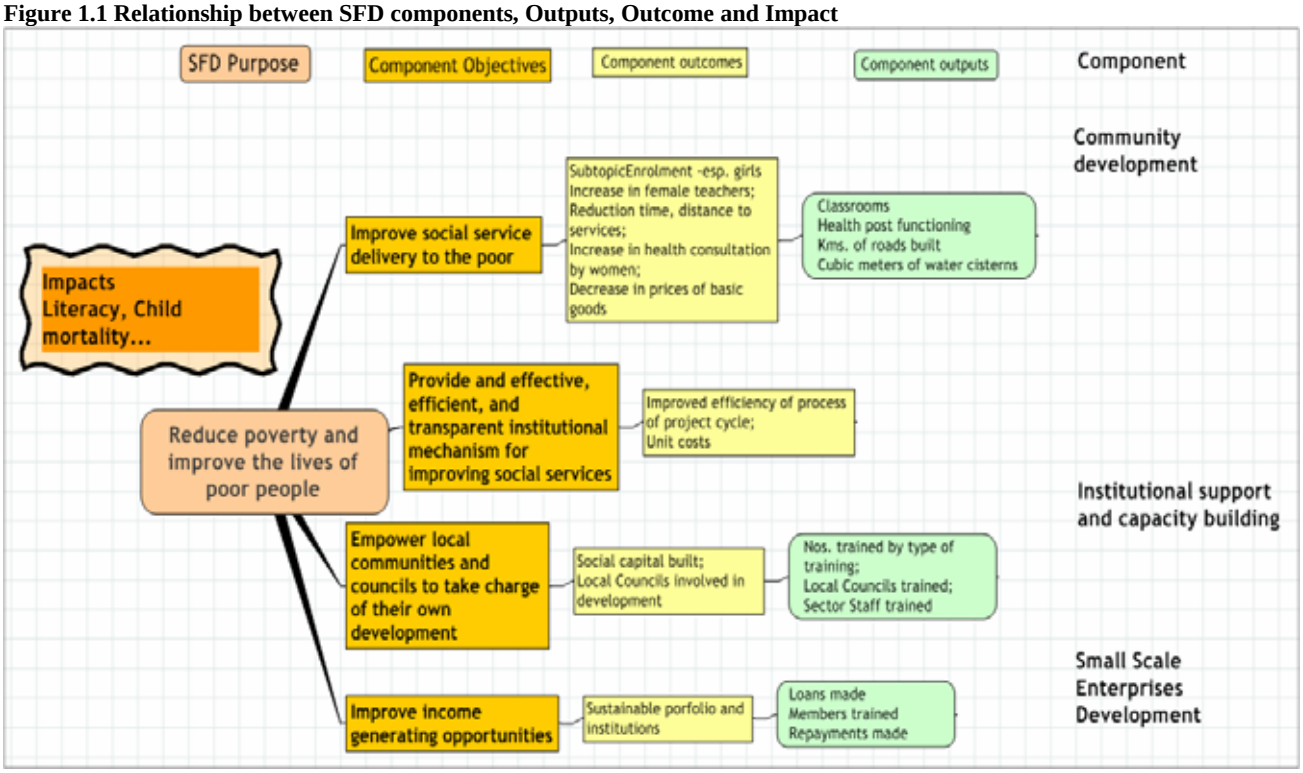
I METHODOLOGY

1.1 Background

The SFD's objective is to reduce poverty, improve the lives of poor people and be a model of an institutional mechanism for the effective, efficient and transparent provision of social programs in Yemen. As described in the Introduction, the program has three principal components: Community Development, Institutional Support and Capacity Building; and Small Scale Enterprise Development.

The SFD's Monitoring and Evaluation System identifies the proposed objectives, outcomes and outputs for each component, as illustrated in Figure I, which also provides an overview of the present impact evaluation's rationale.

Figure 1.1 Relationship between SFD components, Outputs, Outcome and Impact



The methodology for the evaluation is laid out in detail in the program's Impact Evaluation Manual, which was first developed in 2002 and was revised in 2005.

1.2 The Impact Evaluation Study

1.2.1 Surveys

According to the Manual (Section 6.3), the SFD has to carry out a rigorous impact evaluation study every three years, to generate data for the evaluation of its impacts according to its Results and Development Goals at the household level.

In addition to the SFD's Management Information System (MIS), national censuses and household surveys, and Ministerial information, this study is based on a sample of households that are real or potential beneficiaries of the projects in the annual project survey. The survey components include:

- a facility or project survey; and
- a survey of (real or potential) beneficiary households of the sampled projects.

1.2.2 Beneficiary assessment

At the same time as the tri-annual household and project surveys are conducted, a beneficiary assessment is carried out in a sub-sample of 33 of the surveyed projects. This exercise uses qualitative evaluation techniques including in-depth interviews with key informants and focus groups in order to document the responses of the community to the project, to gain a deeper understanding of the causes of the success and failure of projects, and to identify problems and recommend solutions.

The survey and beneficiary assessment forms used for these exercises are presented in the Design of the 2006 Impact Evaluation Study.

1.2.3 Study design: the "control group" problem

The SFD's Impact Monitoring and Evaluation System seeks to determine the difference that has been made by the program's interventions. This involves the specification and measurement of a "without project" scenario that in fact, does not exist. The specification of what would have happened without the intervention is known as the "counterfactual" statement.

Ideally, an impact evaluation design should specify a fully-fledged "control group" for which both baseline and ex-post observations are taken in parallel with the observations on the "intervention group" (communities and households that have benefited from the project's intervention). However, in the case of the SFD, it would be difficult to do this, for two reasons:

- Firstly, there might be problems of "control group contamination"- i.e. the possibility that other programs (such as the Public Works Program, Basic Education Expansion Program and others) might intervene in similar ways to the SFD in communities that do not get SFD support.

- Secondly, there are also political and ethical difficulties with deciding to exclude some otherwise similar communities from SFD support, simply in order to provide a control group for impact evaluation purposes. This would run directly contrary to two principles of the SFD's operations: a) that geographical targeting should be equitable (so that similar communities should get similar resource assignments) and b) that communities should be able to demand the type of investment that is most important from their point of view[1].

To provide meaningful points of comparison for evaluating the SFD's impact without attempting to define a fully-fledged control group, the Impact Monitoring and Evaluation System has been planned to generate three sorts of observations:

- Baseline data for a group of sub projects that have been programmed by the SFD, but not yet completed.
- Ex-post data for a group of finished projects for which baseline data were collected previously; and recall data on ex-ante conditions for variables for which baseline data are not available.
- Ex-post data of the ex-post sample from the 2003 survey, in order to evaluate the medium term sustainability of the benefits which were observed at that point.

The exercise was thought to permit a systematic comparison of conditions relevant to the SFD intervention before and after the intervention takes place, through two sets of comparisons: (a) the conditions in beneficiary communities before the SFD intervention, and approximately two years after the intervention; and (b) the conditions in SFD beneficiary communities that have already had the investment, compared with those in the program "pipeline" that are to benefit from similar investments.

If it is found that the SFD's interventions improve conditions in the beneficiary communities on the before and after comparison; and that at any point in time the conditions in pipeline communities are inferior to those in recent beneficiary communities, it will be reasonable to conclude that SFD is making a difference. *Table 1.1* summarizes the proposed system.

[1] These mentioned difficulties would make it difficult for the SFD to use a cuasi-experimental approach to define a comparison group of similar communities without an SFD intervention, based on national dataset. The term cuasi-experimental approach is used to describe methodologies, including Propensity Score Matching and Regression Discontinuity, to produce statistically rigorous measurements of impact for programs which were not randomly assigned. Given the considerable political, ethical and operational difficulty of designing social programs around their impact evaluations, the development of such methodologies is very important for the strengthening of evaluations and promoting evidence-based policy making.

Table 1.1 Baseline and Ex-post surveys for the SFD impact evaluation system			
Year	Finished projects	Pipeline projects	Analysis
Pre-2003		Baseline data collected as part of the 1999 NPS for 117 projects and their beneficiary communities (Survey group 1).	Targeting was analyzed comparing the characteristics of the communities to the national distribution of communities and households.
2003-2004	Ex-post data collected for 100 projects between 1999-02 and their beneficiary communities, the baseline for which come from the 1999 NPS (Survey group 2)	A new set of Baseline data was collected for 101 new projects and communities in the SFD pipeline (Survey group 3).	1. Targeting was analyzed for the new pipeline group to see how it compared with the previous pipeline group. 2. The ex-post situation and the baseline situation for Survey group 1 were compared. 3. Conditions in Survey group 1 and Survey group 2 were compared. Multivariate analysis was used to correct for systematic differences in household conditions not related to the SFD intervention.
2005-2006	Ex-post data collected for Survey Group 3 (Survey group 4E)	New Baseline data was collected for a set of projects in the pipeline (Survey group 5).	1. Targeting has been analyzed for the new pipeline group to see how it compares with the previous pipeline group. 2. The ex-post situation (Survey group 4E) and the baseline situation (Survey group 3) have been compared. 3. Multivariate analysis has been used to correct for systematic differences in household conditions not related to the SFD intervention.
	And data from a return visit to completed projects collected for Survey group 2 (Survey group 4EE)		The return visit situation (Survey group 4EE) has been compared to mid-term (Survey group 2)
2009	As above every 3 years.		

1.2.4 Weighting by project value

To avoid a misrepresentation of the impact of SFD's overall portfolio of investments, some parts of the analysis are weighted by project value, in line with the methodology prescribed in the Monitoring and Evaluation Manual.

1.2.5 Multivariate analysis

In the absence of a randomly distributed project intervention, it is not possible to select a control group which will be certain to provide a perfect match for the intervention group. As a result, there is a risk that differences observed at household level for indicators such as enrollment rates or vaccination rates might really be attributable to factors other than the SFD project intervention. For example, independently of SFD's intervention, demand for basic

services might be expected to vary as a function of per-capita income and education levels of the head of household, and there might be systematic differences in these variables between the intervention and "pipeline" groups.

To correct for this possibility, multivariate statistical analysis is used (per instructions in the Monitoring and Evaluation Manual) in order to establish the best available comparison set against which to compare the situation observed in the "intervention group".

1.2.6 The pipeline sample as a comparison group

In the absence of a control group, the SFD's Impact Evaluation Manual proposes the use of the pipeline of SFD projects, which have been identified but have not yet been implemented, as an additional comparison group. In each round of the SFD's evaluation surveys (normally about three years apart), baseline data is collected from a set of projects which is still in the program's pipeline, as well as for a set of completed projects. In the subsequent round, the projects which were in the pipeline sample for the previous round are revisited, to generate an "ex-post" dataset. To the extent that the program's procedures for selecting beneficiary communities and projects remain stable over time, the conditions in the "pipeline" group could be expected to be broadly representative of communities in Yemen which have still not benefited from this type of SFD intervention. This approach was used for the definition of a comparison group in the 2003 impact evaluation study, when there was no baseline data set available.

However, an inspection of the pipeline data set for 2006 shows systematic differences in socio-economic conditions, compared with those that existed in the 2003 baseline and with those which presently exist in the 2006 ex-post dataset. These differences mean that, in the opinion of the study team, the 2006 pipeline group does not constitute a valid comparison point[1], particularly to carry out the comparison (b) indicated in section 2.4 above. Instead, when reporting the statistical findings for higher-level impact variables, the report contextualises the "before and after" comparisons with a discussion of the national context and the findings from the facility surveys, in order to provide a "common sense" check on the coherence of the numbers. If the changes observed in the intervention communities are large, relative to changes observed in Yemen as a whole, it is likely that they are in good part attributable to the project.

1.2.7 Innovating the analysis: Focus on sustainability

An important and innovative aspect of the methodology for the 2006 study as it incorporated data regarding *the sustainability of impacts which were first observed in the 2003 study*. The report presents findings from re-visits to a sample of the projects and communities in the ex-post

[1] To overcome such problems, some modern impact evaluation strategies are based on a random assignment of program roll-out– thus assuring that the pipeline and intervention communities will be comparable. However, this approach would be incompatible with the SFD's programming rules.

sample from the 2003 evaluation. It is unusual for a Social Fund evaluation process to return, several years later, to communities which were studied in a previous impact evaluation. There is thus a dearth of data on the medium and long term impacts of such programs.

This is an important hiatus, since it is quite plausible that projects such as new water systems or upgraded rural roads might produce a surge of benefits in early days and then quickly deteriorate, due to the lack of adequate institutional arrangements for their sustainable operation and maintenance. This might lead to an overstatement of the estimated benefits, if economic analyses are based on observations taken soon after construction.

On the other hand, an overly early evaluation of impacts might also underestimate program benefits in many cases. For example, if the private costs of connection to a water or sanitation system are high, or if large private investments (such as buying a vehicle) are needed to take advantage of public road infrastructure, there may be lags in the materialization of benefits from network infrastructure projects. Similarly, the benefits from new health posts and schools, may take time to materialize, due to delays in the assignment of staff and operating expenses by line ministries. This might arise if Social Funds build infrastructure in response to local demand, without adequate institutional capacity of the relevant line agency to honour its commitments in providing the necessary staff and budget. However, once a facility has been built, its mere existence becomes a point of political pressure on the ministry to budget for the operating costs. This might lead to a lagged emergence of the benefit. In such cases, an early evaluation might be expected to under-estimate the benefit of a social fund's intervention (e.g. if data is collected before a unit has been staffed).

The findings presented here thus break new ground in the social fund evaluation literature on the related themes of lags in the emergence of benefits and the sustainability of benefits once they have emerged.

1.2.8 A multi-disciplinary approach

Finally, the multi-disciplinary approach to the SFD evaluation (combining representative household surveys with facility surveys, and qualitative and institutional studies) should be noted. This has allowed the study team to avoid reporting the evaluation results as a "*deus ex maquina*" from its statistical methodology, and to ask whether the findings make sense, given what is known about the program and the context. For example, the existence of data on the characteristics of service supply (from the facility survey) allows the analysis of household level impacts to take into account the variance in factors such as staffing and equipment (which are not directly the responsibility of the SFD, but whose presence is clearly needed for there to be any impact from many types of service). These aspects of the study methodology permit it to throw new light on the dynamic trends in the synergies between the SFD and the other agencies involved in service production – thus contributing to the ongoing debate about the appropriate division of labour between social funds and line ministries in rural infrastructure development and coverage expansion.

1.3 Study implementation and fieldwork results

The evaluation is based primarily on the following three sets of data, each requiring its own sample design and field work implementation, described in *Annex 2*.

- **2006 ex-post and 2003 ex-ante household and project surveys:** Permits the comparison of conditions before (2003 pipeline group) and after (2006 ex-post group) the SFD intervention. The final dataset used for the analysis includes 79 projects and 1,464 households. The projects covered include: Education (27 projects), Water (20), Health (21), and Roads (11) and about 18-19 households were surveyed in the area of influence of each project.

- **2006 return visit, or follow-up survey:** Documents conditions in 2006 in the communities where SFD projects had been implemented between 1999 and 2002, to show the medium term impacts. The final data set for the analysis includes 81 projects and 1,492 households. The projects covered include: Education (30), Water (16), Health (21), and Roads (14). Additionally, in the Microfinance sector 9 projects from the 2003 Ex-post sample were re-visited, but in this case, different households were studied, as the clients rotate, so it is difficult to track beneficiaries over time.

- **Beneficiary Assessment:** This study component – conducted within a sub-set of the 2006 ex-post survey sample plus a small sample of Special Needs, Organizational Strengthening and Training projects - documents opinions on topics such as community participation, use and quality of the service provided, and perceived benefits on people's life. Qualitative instruments included in-depth interviews and focus groups. Thirty three projects were purposely selected: Education (8), Water (4), Health (4), Roads (4), Microfinance (4), Special Needs (3), Organizational Strengthening (3). In most projects, two 2 focus groups were organized (one for Women and one for Men), with an average of 8 attendants. Also, 2 in-depth interviews (with the project director or staff) were carried out for each project.[1]

[1] For details on the methodology see the 2006 Beneficiary Assessment Report.

II PROGRAM EFFICIENCY

The SFD is no longer merely an effective service delivery mechanism rather it has become a model agency of best practice…
(The World Bank, 2004:2)

This chapter looks at the efficiency of SFD programs at maximising their intended development improvements. Two measures of efficiency are used – the operational efficiency, as well as the cost-efficiency of SFD programs. The chapter is followed by two chapters which address the effectiveness of the SFD through a different lens – the first uses beneficiary assessment to evaluate the effectiveness of SFD at targeting poverty reduction outcomes, and the second evaluates the effectiveness of SFD at empowering and including local populations in decision making.

2.1 Operational Efficiency

2.1.1 Number and type of projects/amount of funding

As of October 2006, the SFD has committed a total of US$493 million in 5,973 projects since the SFD's inception in 1999. Of these, 4,189 (US$284M) have been completed, 1,600 (US$187M) are under implementation and 184 (US$21M) have been approved pending implementation (*see Table 2.1).*

Table 2.1. Universe of projects: SFD investment by sector up to October 2006

	Number of projects				Budgeted value of investment					
Sector	Ap-proved	Under-Way	Comple-ted	Total	Approved	Under Way	Completed	Total	% of **completed** projects	% of the **completed** investment
Agriculture	0	3	5	8	0	330,000	64,516	394,516	0.1	0.1
Business Development Services	0	7	2	9	0	528,101	7,106	535,207	0.2	0.1
Cultural Heritage	17	95	38	150	2,061,300	15,311,661	4,912,305	22,285,266	2.5	4.5
Education	55	698	2,081	2,834	9,295,790	95,451,389	162,811,798	267,558,977	47.4	54.2
Environment	4	38	98	140	704,329	5,130,260	11,102,210	16,936,799	2.3	3.4
Health	5	124	331	460	383,153	15,588,132	21,095,563	37,066,848	7.7	7.5
Integrated Intervention	20	19	30	69	2,587,073	1,928,901	1,466,588	5,982,562	1.2	1.2
Micro Finance	1	30	72	103	256,410	3,432,160	5,813,541	9,502,111	1.7	1.9
Organizational Support	3	51	279	333	361,873	2,320,385	8,423,488	11,105,746	5.6	2.2
Roads	12	127	129	268	1,626,927	21,500,616	14,181,780	37,309,322	4.5	7.6
Small Enterprise	0	14	12	26	0	2,839,294	339,889	3,179,183	0.4	0.6
Special Need Groups	2	100	221	323	24,500	6,592,815	13,375,966	19,993,281	5.4	4.0
Training	0	72	304	376	0	1,078,309	4,945,534	6,023,843	6.3	1.2
Water	65	222	587	874	4,597,464	15,510,233	35,782,419	55,890,116	14.6	11.3
Total	**184**	**1,600**	**4,189**	**5,973**	**21,898,819**	**187,542,255**	**284,322,703**	**493,763,778**	**100.0**	**100.0**
	3.1%	**26.8%**	**70.1%**	**100.0**	**4.4%**	**38.0%**	**57.6%**	**100.0**		

Note: Budgetd value is the estimated projects costs in the MIS
Source: SFD-MIS

Since the assessment in 2003, US$280.2 million and 2,939 projects have been implemented or approved.

Education projects continue to be the largest share of the SFD's total investment commitments (54%), followed by water projects (11%), health projects (7.5%), and roads (7.6%). These four categories represent 80% of the program's total investment portfolio, with the rest going to projects for special needs groups, environment, cultural heritage and other categories (as listed in Table 2.1).

2.1.2 Number of beneficiaries

A simple way to assess the impact of a program is to look at the number of persons who benefit from the program. Data on the number of beneficiaries is collected by the SFD's Management Information System using project appraisal forms.

Table 2.2 summarizes the number of direct[1] and indirect[2] beneficiaries of SFD projects by type of project and year of completion. Direct beneficiaries account for 71% of the total beneficiaries. Education, health, water and road projects generate 73% of all direct beneficiaries, increasing to 89% if environment projects are included. The number of direct beneficiaries varies by type of project; for example, targeted small-scale ventures such as training and special needs groups projects have fewer beneficiaries per project (at around 77

Table 2.2. Summary of direct (DB) and indirect (IB) beneficiaries of SFD projects, by type of projects and year (up to October 2006)

Completion year	Benf Type	Cultural Heritage	Education	Environment	Health	Integrated Intervention	Micro Finance	Organizational Support	Roads	Special Need Groups	Training	Water	(blank)	Grand Total
1997	DB				5,755								0	5,755
	IB				1,006								0	1,006
1998	DB		37,356	1,967	60,828			310		20,000	30	53,041	0	173,532
	IB		7,243	7,400	5,000			0		0	0	0	0	19,643
1999	DB		92,459	10,500	164,472		40	72			68	105,237	0	372,848
	IB		18,338	0	25,000		0	0			0	0	0	43,338
2000	DB		69,489	10,770	166,310	9	3,657	2,061	5,000		157	87,820	0	345,273
	IB		4,465	0	9	0	8,040	220	3,000		0	724	0	16,458
2001	DB	14,900	143,103	105,872	163,663	9 39	1,843	17,163	61,409	8,591	307	196,126	0	713,916
	IB	0	20,092	0	17,500	0	10,813	4,655	26,494	45,377	0	1,200	0	126,131
2002	DB	9,420	228,398	277,970	211,700	26	6,232	22,571	172,153	8,239	2,159	286,299	0	1,225,167
	IB	5,930	23,915	1,000	127,076	12	36,872	1,524	42,980	3,461	52,900	124,465	0	420,135
2003	DB	8,423	137,841	299,169	228,715	752	4,517	2,279	284,548	23,318	1,311	227,809	100	1,218,782
	IB	8,250	22,650	7,000	23,760	948	29,984	369,792	115,662	13,716	20,764	5,337	0	617,863
2004	DB	13,395	157,973	228,469	134,241	23,627	5,119	21,676	208,371	7,947	5,712	327,206	0	1,133,736
	IB	24,200	13,166	19,240	4,450	5	27,426	2,914	561,227	10,141	16,648	3,033	0	682,450
2005	DB	7,000	124,628	152,381	146,515	3,546	16,160	316,259	181,413	13,256	3,279	173,680	23,080	1,161,197
	IB	0	61,686	2,119	100,818	18	86,000	5,080	125,125	9,082	7,936	18,328	4,410	420,602
2006	DB	15,900	94,206	127,140	239,074	9,359	7,010	15,180	125,087	19,284	1,079	93,233	280	746,832
	IB	8,320	496,830	0	3,001	0	35,000	670	68,066	454		6,517	0	618,858
Total DB		**69,038**	**1,085,453**	**1,214,238**	**1,521,273**	**38,258**	**44,578**	**397,571**	**1,037,981**	**100,635**	**14,102**	**1,550,451**	**23,460**	**7,097,038**
Total IB		4,700	668,385	36,759	307,620	983	234,135	384,855	942,554	82,231	98,248	159,604	4,410	2,966,484
Number of projects		38	2,081	98	331	30	72	279	129	221	304	587	19	4,189
DB by project		**1,817**	**522**	**12,390**	**4,596**	**1,275**	**619**	**1,425**	**8,046**	**455**	**46**	**2,641**	**1,235**	**1,694**

[1] People who benefit directly from the services provided by the SFD's investment.

[2] Where other people gain a benefit due to SFD's support/the project's existence, even though they are not direct users of the services or facilities, or where there is a benefit that arises as a result of the intervention.

and 487, respectively); whereas road and environmental projects, which are less targeted and larger in scale, have a higher number of beneficiaries per project (at around 8,093 and 12,396 respectively)[1].

As was the case in the 2003, it is likely that in a few instances the number of direct beneficiaries may have been overestimated. For example, education projects involve several types of interventions, including construction of new classrooms, completion or rehabilitation of existing classes or provision of furniture. Beneficiaries may have gained from one or more of these interventions, resulting in double-counting during the data collection. SFD has adopted more strict definitions for reporting on beneficiaries for each type of project (see Chapter 5 of the Monitoring and Evaluation Manual, December 2005. (*See Annex 7.*)

The proportion of female beneficiaries is detailed in *Table 2.3*. All types of projects benefit both men and women fairly equally, which is an important finding, as development projects can sometimes affect populations disproportionately.

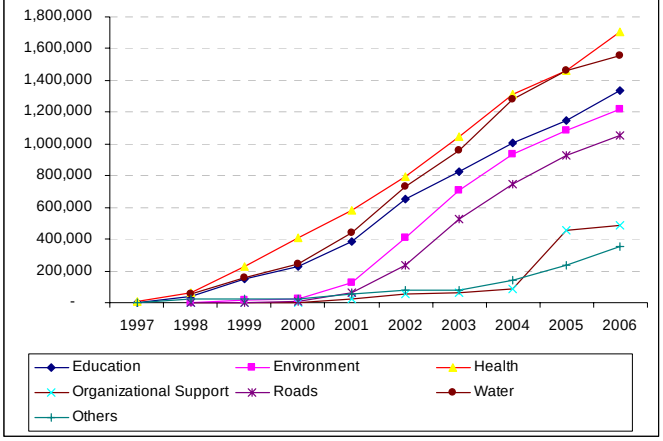
Table 2.3. Percentage of female beneficiaries by type of projects. 2006, 2003

	2006 Evaluation		2003 Evaluation	
Percentage of female beneficiaries	Direct	Indirect	Direct	Indirect
Education	43.0	44.3	43.3	34.7
Health	58.2	63.1	50.3	52.8
Water	50.5	49.7	50.1	49.9
All projects (the rest of projects)	49.7	49.8	48.9	47.8

Source: SFD-MIS

The data do show some slight variations depending on the type of project, partly related to the way in which the data is collected. SFD-MIS's data on beneficiaries are derived from estimations made by each project manager in accordance with the SFD's Monitoring and Evaluation Manual. According to the Manual, direct beneficiaries for water and health projects are estimated as the population in the service area covered by the water-supply system or health facility. In the case of water, this population tends to distribute equally between men and women. In the case of health, a higher proportion of those benefiting are female (58%); this is most likely as a result of the targeting of women through health programs such as obstetrics, motherhood and childhood, reproductive health, and neonatal care.

Figure 2.1. Cumulative number of direct beneficiaries



In the case of education, beneficiaries are estimated according to the expected school enrolment. This would explain why the estimated figure of direct female beneficiaries (43%),

[1] These figures are consistent with the number of beneficiaries estimated by the main respondents of the project survey, as illustrated in chapter 6.

comes close to that of female enrolment rate at the national level reported by the 1997 Demographic and Health Survey (40%).

As demonstrated in Figure 2.1, the cumulative number of direct beneficiaries resulting from water, health, education, roads and environment projects continued to increase between 2003 and 2006, as more projects were implemented. In addition, the number of beneficiaries resulting from organisational support and other projects (including those focusing on cultural heritage, special needs groups, etc.) implemented since 2003 has increased.

2.1.3 Project cycle performance

The concept of project cycle performance refers to the relative speed of the different steps needed to complete the project. There are five milestones that define the major steps in the process: project proposal, approval of the project by the committee, signature of a contract with the requesting community, adjudication of construction contracts, and completion of works.

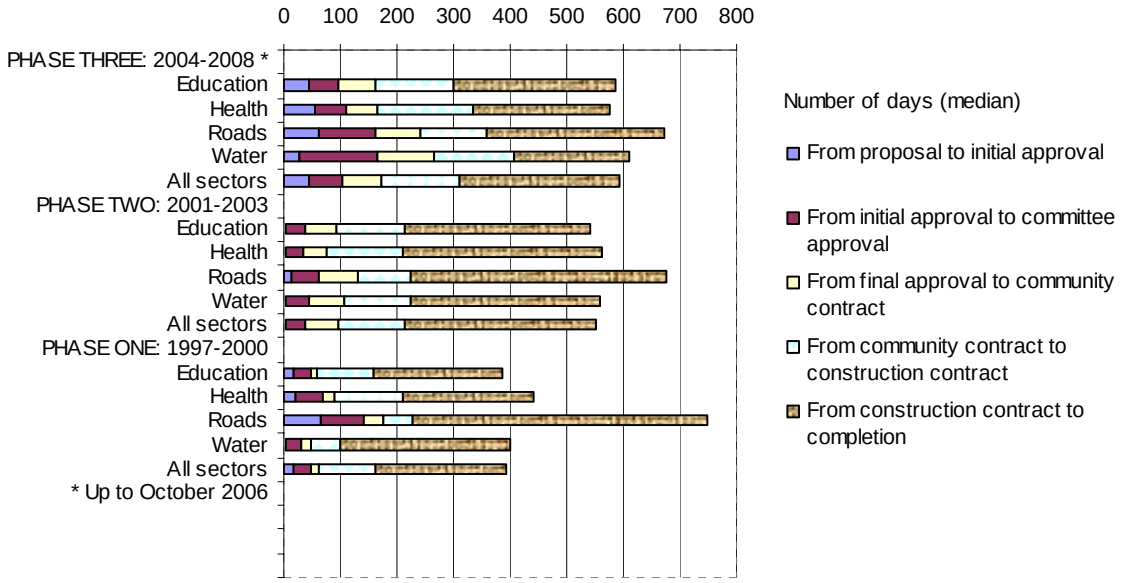
Table 2.4 Universe of completed projects: Project cycle performance by phase and sector. Number of days (median)

Sector	From proposal to initial approval	From initial approval to committee approval	From final approval to community contract	From community contract to construction contract	From construction contract to completion	Sum of medians	Number of projects
PHASE THREE: 2004-2008*							
Education	45	51	65	140	287	588	322
Health	545	56	56	168	240	575	8
Roads	62	101	77	119	314	673	17
Water	28	138	99	142	205	610	34
All sectors	**46**	**59**	**67**	**140**	**282**	**594**	**381**
PHASE TWO: 2001-2003							
Education	4	33	55	121	328	541	984
Health	45	29	42	136	352	563	102
Roads	15	46	72	92	452	675	92
Water	3	41	63	116	334	557	368
All sectors	**4**	**35**	**56**	**120**	**335**	**550**	**1546**
PHASE ONE: 1997-2000							
Education	17	31	10	101	227	386	652
Health	22	49	21	120	231	442	98
Roads	66	76	34	50	523	749	13
Water	4	26	17	53	299	399	146
All sectors	**16**	**32**	**13**	**100**	**233**	**394**	**909**

* Up to October 2006
Source: SFD-MS

Table 2.4 and *Figure 2.2* provide detail on the days associated with each of the components of the project cycle, measured in median number of days (rather than the average, which can be strongly influenced by a very few outliers).

Figure 2.2 Project cycle performance by sector and Program phase



The cycle (based on the sum of medians) has been increasing since SFD inception, from 394 days (13 months) in the first phase (1997-2000) to 550 days (18 months) in the second phase (2001 to 2003) and 594 days (20 months) in the actual third phase. These findings suggest that operational efficiency in terms of the project cycle has worsened. However, a couple of factors are driving this change:

- The contracting modality changed from commercial to community contracting since the beginning of phase two. Community contracting needs a lot of community mobilization work and allows more community involvement and at the end leads to higher ownership, and sustainability. It is expected that by means of community contracting the reactivation of the community and the improving of social capital will follow.
- Because rural communities used to build their structures by themselves, SFD started to reduce its financial support, and increase community contribution. This extends the project cycle (community contribution needs to be collected).

The longest step in the project cycle is construction (282 days median for all projects in phase three), followed closely by the time from community contract to construction contract (140 days median for all projects in phase three).

The duration of the project cycle varies by type of project. For example, in phase three health and education projects have a shorter project cycle at 575 and 588 days respectively. However, roads and water projects have a longer cycle at 673 and 610 days respectively. The project cycle for roads has been decreasing over time, from 749 days in phase one to 673 in phase three. However, other project types have moved in the opposite direction: for example, the education project cycle has increased from 385 to 587 days between the first and the third phase.

A number of factors may contribute to the increased time required for the project cycle. Firstly, although the above statistics are calculated on the basis of the completed projects, it is important to note that SFD continues to accept new requests, even though funding may not be available at that time. Managing these requests occupies time and energy that could be used for the implementation of selected projects. In addition, SFD is now better known and so they may have more requests to deal with than 3 years ago, which increases administration time. Their systems have also been updated over the years meaning more stringent monitoring and evaluation.

2.2 Cost – Efficiency of SFD Investments

In addition to operational efficiency, the cost efficiency of SFD projects is an important measure to indicate whether SFD investments are getting the maximum development gain for the money spent. This can be measured most easily by investigating the cost per beneficiary of SFD programs.

2.2.1 Cost per beneficiary

The average cost per direct beneficiary was calculated from data provided by SFD's Management Information System (MIS) for completed sub-projects. The results, presented in *Table 2.5*, range from US$9.14 of spend per beneficiary for environment projects to US$211.28 for training projects[7]. As one would expect, projects with a larger number of beneficiaries tend to be less expensive on a per capita basis, due to economies of scale.

These data are closely in line with the expected parameters that were anticipated in most of the project's designs and are slightly higher than those reported in the 2003 assessment, reflecting general price increases in the country during the period of assessment.

[7] These estimates are conditional on the accuracy of the other inputs in the equation, in particular the average number of beneficiaries.

In order to provide a clearer assessment of the cost efficiency of the SFD, it would be interesting to compare these figures to similar cost efficiency figures for organizations implementing similar projects. However, there are very few comparable organizations in Yemen, and any comparisons with the effectiveness of other organizations would be compromised by differences in the types of projects implemented. For example, cost efficiency would differ depending on the way data is collected, the quality of projects implemented (cost efficiency for low versus high quality projects will differ greatly), rural versus urban projects, and tax issues.

Table 2.5 Cost of SFD completed sub-projects per beneficiary

Sector	Average cost per project (US$)	Number of direct beneficiaries per project	Average cost per beneficiary 2006	Average cost per beneficiary 2003
Training	16,268	77	211.28	220.91
Agriculture	12,903	62	208.12	---
Micro-Finance	80,744	649	124.41	219.83
Special Needs Groups	60,525	487	124.28	195.15
Education	78,237	630	124.19	84.42
Integrated Intervention	48,886	1,231	39.71	85.81
Cultural Heritage	129,271	3,770	34.29	41.29
Water	60,958	2,629	23.19	20.56
Organisational Support	30,192	1,752	17.23	53.35
Small Enterprises	28,324	1,936	14.63	----
Roads	109,936	8,093	13.58	9.68
Health	63,733	5,072	12.57	11.93
Environment	113,288	12,396	9.14	7.26

* Total: Includes approved, underway and completed projects

Source: SFD-MIS

III SFD'S TARGETING OUTCOMES

> *The SFD was the first domestic institution in Yemen to rely on targeting –based on poverty indicators- to reach people in need. Thus its activities are driven by demand, as well as by the active role it takes in developing initiatives that respond to the needs of poor and disadvantaged communities* (SFD, 2003: 8).

Effective targeting of the poorest people is one of the main concerns of the SFD. A key performance indicator in the Project Appraisal Document for the Third Phase is that at least 40% of SFD resources go to the lowest three income deciles. This Chapter uses Benefit Incidence Analysis to assess how well SFD has targeted its programs to achieve positive development outcomes in the poorest segments of the population.

3.1 Benefit Incidence Analysis

Benefit Incidence Analysis uses statistical modeling to observe the proportion of the program's resources that are allocated to different income strata of the national population. This requires three sets of information:

- (i) the national per capita income distribution by population deciles (from the per capita income level of the population's poorest ten percent to the per capita income level of the richest ten percent),
- (ii) income levels of the population that receive benefits from the program and its distribution according to the national income decils, and
- (iii) investment values of the program through each of its projects and the respective number of beneficiary households.

The information corresponding to the national per capita income distribution is taken from the 2004 Household Budget Survey updated to 2006 values using the official retail price index. The information about the income levels of the beneficiary population comes from the 2006 Impact Evaluation Survey (IES) database, which includes information on household per capita income for all households in the survey sample, that is households located in the area of influence of the SFD projects (in this case, all the samples are included in the analysis, i.e. the Ex-post sample, the Follow-up sample and the 2006 baseline or pipeline sample). The information for each project covered by this survey was found from the SFD's MIS. In the absence of detailed household-level data on the utilization of the facility, it was supposed that each potential beneficiary derived equal benefit from the project. The value of the investment was therefore imputed to the deciles of the expenditure distribution, pro-rata with the distribution of its beneficiary households. For example, if 15% of a project's potential beneficiary households were in the third decile of the income distribution, 15% of its value was attributed to that decile, and so on.[8]

[8] The deciles for the household level analysis of targeting reported in this Chapter are based on equal numbers of people (population deciles), not equal number of households.

In this way, the investment in education projects, for example, was allocated between household income deciles, with each project in the sample having a weight proportional to its value. The distribution of the investment in water, health, roads and microfinance projects was established in the same way. *Annex 7* contains the spreadsheets used for these calculations.

The next step in the analysis was to estimate the total resource distribution. This was estimated as a weighted sum of the resource distributions for each sub-project type, where the weights are given by the total SFD investment to date in each of these types of sub-project, based on MIS data. Education has a weight of 0.66, water 0.14, health 0.09, roads 0.09 and microfinance 0.02.

The result is an estimate of the proportion of total SFD funding going to each decile of Yemen's population, by type of project and globally for all SFD projects. Table 3.1 shows the results of this analysis, and Figure 3.1 illustrates them graphically in the form of a cumulative distribution curve.

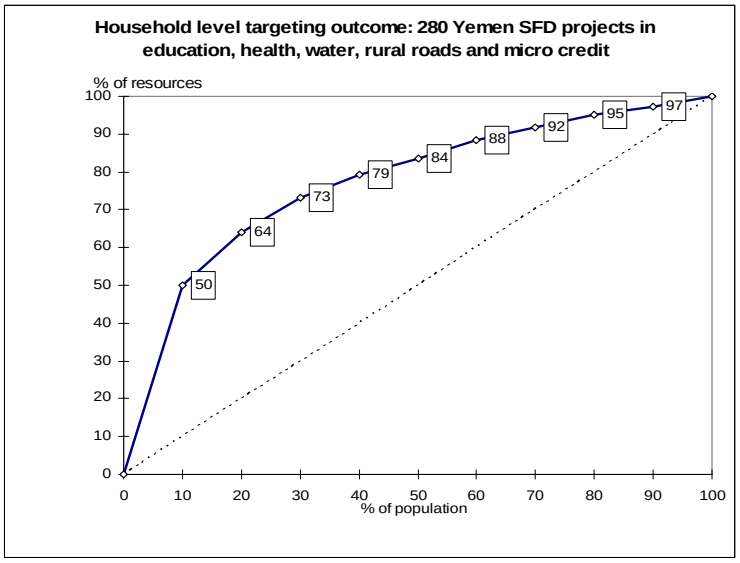
Table 3.1.Benefit incidence of SFD - 280 projects with data from the MIS of SFD and the IES 2006

	Total program resources SFD	Populations deciles from poor (1) to rich (10) *											
		1	2	3	4	5	6	7	8	9	10	Total	Distribution Index+
		% of resources based on potential beneficiary population ** for education, water, health, rural roads and micro credit											
Education	267,558,977	48.5	13.3	9.4	6.3	4.3	5.6	3.7	3.3	2.6	3.0	100.0	0.522
Water	55,890,116	57.1	17.0	6.7	5.6	4.1	2.5	3.0	1.9	0.9	1.1	100.0	0.649
Health	37,066,848	42.6	18.5	11.4	8.0	3.9	2.9	3.5	3.6	2.0	3.5	100.0	0.521
Rural Roads	37,309,322	63.2	13.0	7.3	3.4	2.9	2.6	2.1	2.5	1.2	1.9	100.0	0.662
Micro Credit	9,502,111	22.3	14.3	13.3	7.7	9.0	8.4	7.3	6.7	4.5	6.5	100.0	0.245
Total ***	407,327,374	**49.9**	**14.3**	**9.1**	**6.1**	**4.2**	**4.8**	**3.5**	**3.2**	**2.2**	**2.8**	**100.0**	**0.546**

Notes
* National Population deciles based on income data from HOUSEHOLD BUDGET SURVEY, YEMEN 2005 updated to January 2006 with CPI, accumulating population in order of per capita income with cut-off points determined by the accumulated population of the households and set at 10%, 20% etc of the total population.
** Potential beneficiaries are the population located in the IES 2006 sample considered to be within the area of influence of the 280 SFD projects analysed.
*** Total for the project types analysed here to October 2006. The total is based on the sector-specific estimates weighted by the investment amount in each sector for the whole SFD program. It is valid only for the project types reported here.
+ See text for definition.

The results are outstanding, showing that a high proportion of SFD resources are benefiting the poorest households in Yemen. Close to a half (49.9%) of SFD funds go to the poorest decile, 64% to the poorest quintile and 73% to the lowest three income deciles. The households in the top decile received only 3% of resources. These figures are considerably better than those found in other Social Investment Funds where similar analytical procedures have been applied. It is especially to the credit of the Yemen SFD that it has achieved this effective bias towards the poorest households, notwithstanding the very high level of poverty across the whole population and the relatively flat income distribution in Yemen (with a Gini

coefficient of 0.38). These factors might have been expected to make it more difficult to target the *relatively* poorer households. Even more, these findings represent an impressive improvement in targeting with respect to the situation reported in 2003 which showed that 44% of the SFD resources went to the poorest three deciles.



The cumulative distribution curve shown in Figure 3.1 graphs these findings, in which the population is accumulated in deciles from poor to rich along the horizontal axis and the resources assigned to each decile are accumulated along the vertical axis. If the cumulative distribution curve lies entirely above the 45^0 dotted line, the distribution is unambiguously progressive, as is the case here; while if it lies below the line, it is regressive.

The distributive impact is also summarized in the final column of Table 3.1, where an index number is reported for the distribution of resources. This number is defined in such a way that it takes the value of zero when every decile gets exactly 10% of the resources; it is greater than zero when the distribution is progressive and less than zero when it is regressive. The limit values are -1 and +1. The distribution index number for the total of the project types analyzed here is above zero, at 0.546, indicating a highly significant positive impact.

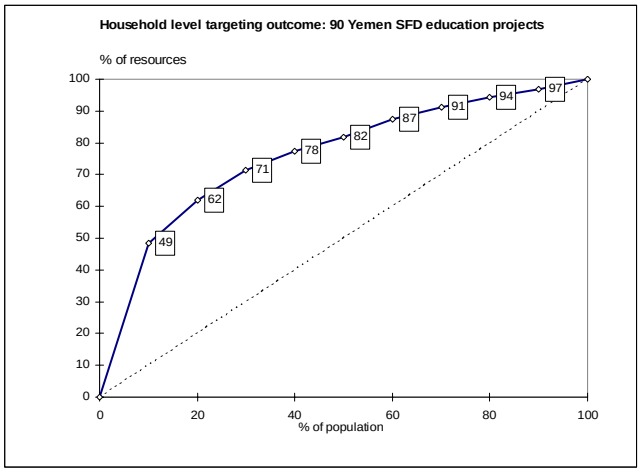
It is also noteworthy that the pattern is consistent across sub-project types (with distribution indexes ranging between 0.245 (micro-finance) and 0.662 (rural roads). (See Figure 3.2 for distribution curves by project type). Further, the distribution index shows an improvement from 2003, as shown in Table 3.2. The overall distribution index has increased from 0.204 to 0.546, and this increase has occurred in each of the project types, demonstrating improvement over time in targeting the poor.

Table3.2 Comparison of benefit incidence between the 2003 IES and the 2006 IES

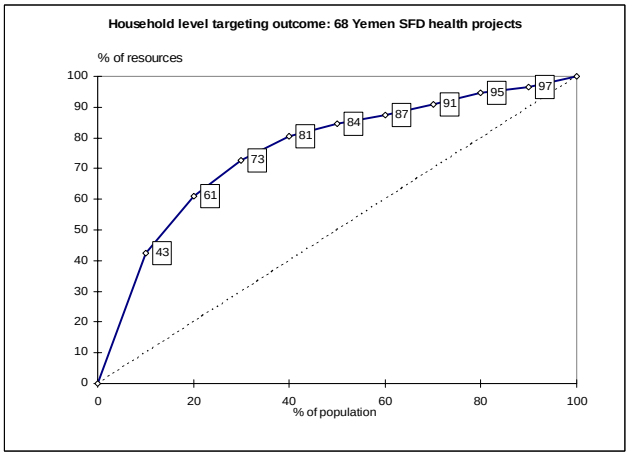
	2006 IES		2003 IES	
	Distribution Index	Number of projects	Distribution Index	Number of projects
Education	0.522	2,834	0.201	1,524
Water	0.649	874	0.176	530
Health	0.521	460	0.242	281
Road	0.662	268	0.256	100
Micro Finance	0.245	103	-0.072	42
Total	**0.546**		0.204	

Figure 3.2 Household level targeting outcome: Results by type of project

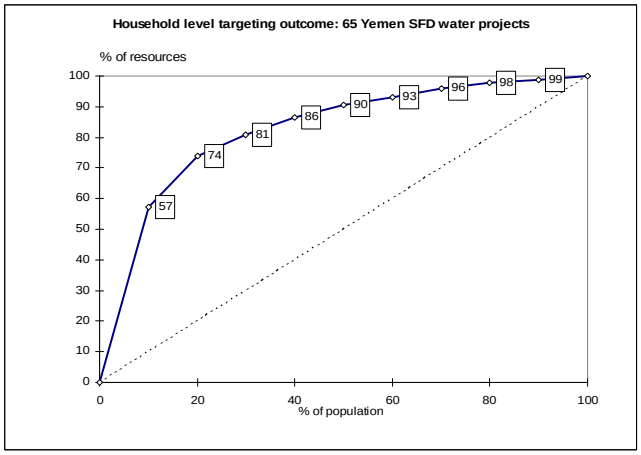
Education



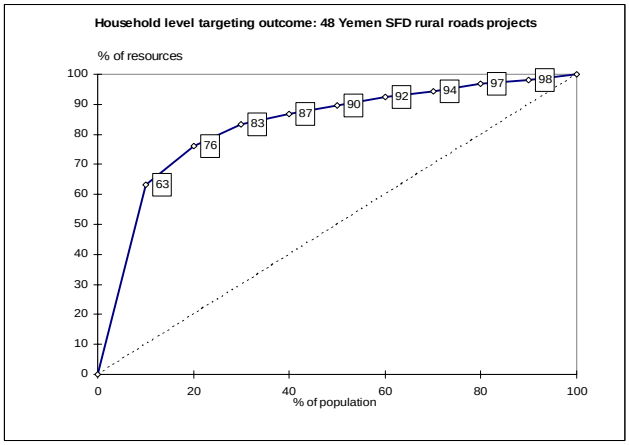
Health



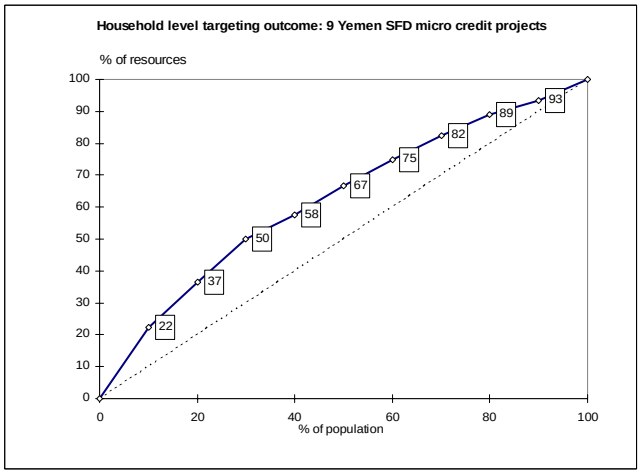
Water



Roads



Micro-Finance



Box 3.1 Is targeting benefiting poor women?

The benefit incidence analysis indicates that most of the SFD investment focuses on poor households. Households are family units mostly composed by both men and women, although this does not mean equity in the benefit perceived by both. Each project needs to consider special measures to assure that females will obtain benefits if this is a goal of the intervention. Section 1.2 shows women are about half of the SFD's beneficiaries. Among poor households, those lead by women are of special concern because they are generally associated with less favourable economic conditions. An analysis of the data shows that, in the sample of households of the IES-2006, 12% (677 out of 2,497) are households led by a woman. As compared with a national average of 7.2% of women headed households (6.8% rural and 8.4% urban; *Statistical Yearbook 2003*), this statistic suggests that the SFD is targeting poor women.

IV CONSULTATION, PARTICIPATION, OWNERSHIP AND SFD'S IMPACT ON SOCIAL CAPITAL

They asked us: What do you want? We said: The road, and they gave us exactly what we demanded
Men Focus Group in Nakee Rural Road Project

- Seventy per cent was the contribution of the Fund, and the community 23% in cash and in kind
- The whole village contributed
- The one who contributes becomes keen to preserve the project
Men and Women Focus Group in Al Sumaided Water Project

- If people pay, they will maintain it
Men Focus Group in Jaleh Water Project

- The functions of the Health Committee are supervising the health unit
- … And leading awareness campaigns as well as establishing contacts with the MOH Office Manager and the General District Manager concerning health issues
- Supplying the health unit with water
- Collecting contributions from the community
- Keeping a liaison with the Social Fund
Men Focus Group in Al Midmen Health Project

One of the development objectives of the SFD is to promote a bottom-up approach to community development by involving beneficiaries at every stage of sub-project identification, preparation, implementation, and maintenance, while coordinating with line ministries and other donor-financed projects in social sectors. This section reviews the extent and nature of community involvement in the sub-projects evaluated, and the perceptions of those communities with regards to the work undertaken. It includes an analysis of:

- Consultation with communities and stakeholders on project design;
- Consensus on the priority of SFD projects within the community;
- Community contribution to the project;
- Perceived quality and "ownership" of the project by the community; and
- The generation of "social capital" within the community.

4.1 Consultation on project design

Respondents in the project survey (i.e. project managers) were asked to estimate the extent of both their involvement ("main respondent") and the involvement of community leaders / representatives in the discussions held prior to project implementation. The results are presented in *Table 4.1*.

Table 4.1 Proportion of main respondents, community leaders and community representatives who were involved in sub-project discussions

	Education		Health		Water		Road	
	Ex-Post	Base-Line	Ex-Post	Base-Line	Ex-Post	Base-Line	Ex-Post	Base-Line
Main respondent informed	100	96	86	91	95	95	100	82
Leaders/persons involved in the discussion								
Community beneficiaries	84	64	71	84	90	90	82	89
Community representatives	41	NA	50	NA	53	NA	64	NA
Sheikh	61	64	67	53	58	90	64	78
Local Council	54	44	28	21	21	37	27	11
Staff of institution/ project	86	64	67	47	0	5	0	0
Member of parliament	32	52	50	42	11	24	27	22
District Government Office	46	28	56	26	0	0	0	0
Governorate Office	32	36	56	42	0	0	0	0
NGO	0	8	11	21	5	17	9	22

NA = Not asked
Source: Project Survey 2006, 2003

The respondents themselves, in most case managers of the sub-project or otherwise involved in its current work, were overall well informed about the project design, as one would expect. Their responses also indicate that a wide range of stakeholders were involved in project preparation, including local communities, political leaders, and government offices. The results show a good level of participation but also highlight the low levels of inclusion of NGOs in the discussion process. In the original design of SFD, NGOs and cooperatives were seen to be the main implementing partners for SFD, but in reality these were found to be weak. In addition, according to the 2006 institutional evaluation report, many of the NGOs in Yemen are seen to be temporary and short-lived.[9]

Although the project survey shows that in almost all cases, some members of the community were consulted, it does not indicate that all members of the community were informed or consulted about the project. Evidence from the household survey shows that between half and three quarters of the affected community knew about the SFD project. This finding was the same in both the baseline and the ex-post surveys. In general, these proportions are acceptable as this indicates a first encounter between project promoters and communities. However, the beneficiary (qualitative) study suggests that in some types of projects, this first step involved more people than in others depending on how the project was initiated. Demand-driven projects usually involve more people in the first phases of the process including consultation, whereas supply driven projects tend to be less consultative. In addition, projects in micro-finance, training and organizational support tend to be based on potential beneficiaries accessing information about the project after it has been initiated; in

[9] Jennings, 2006: 24

this case, several respondents indicated that they got information from friends or the media about SFD's programs once they had been initiated.

It is important to note that cultural biases tend to discourage female participation in project design. The household survey asked if women household members were involved in the process of project identification; only 26% answered positively. Where respondents answered negatively, the most common reasons were: "tradition does not allow women to participate" (68%), "non awareness of the meeting" (27%).

Box 4.1 Were beneficiaries informed about the project?

Testimonies from beneficiaries confirm that SFD is focused on promoting communities' wide participation in the different stages of the project cycle. Most respondents agreed that they were consulted and informed about project identification, cost, community contribution and other implementation details. The SFD also promotes female participation, but has to deal with cultural barriers. Women were less involved in this initial process of consultation as local traditions discourage their participation, particularly on the argument that they are illiterate and without skills for public debate. Meanwhile, women show different attitudes regarding participation, but the majority clearly express a desire for being actors in shaping the future of their communities.

- *At that time we communicate with the Fund via the local Sheik. There was a committee from the Fund in the District and the Sheik presented the problem to it. Then another committee from the Fund paid field visit to study the situation* (Key informant in Abadelah Education Project)

- *A group from the Fund came and specified a location for the (health) unit after they met with community elders and leaders and whoever came… Nothing was modified about the project after the meeting* (Men Focus Group in Al Midmen Health Project)

- *They (the SFD Committee) presented projects and asked us to choose from them; we chose water* (Men Focus Group in Al Tawr Water Project)

- *A consultant came and met with people and Mahmood Haider and we were consulted on the road* (Men Focus Group in Al Leem Road Project)

- *The men said they do not want a meeting of women…Because they (the women) are illiterate; they do not read or write* (Women Focus Group in Al Midmen Health Project)

- *The woman (SFD consultant) asked: "Do you want her, we chose one, to become a member?" And we said "Yes", and we raised our hands. She said: "It is done"* (Women Focus Group in Al Leem)

4.2 Consensus on priority of SFD Project

A key outcome of effective community consultation is a high degree of buy-in to the project. The respondents in the project survey and the interviewees in the household survey were both asked whether they thought the project was a priority.

As one would expect, the project survey respondents, most of them currently involved in the projects, are virtually unanimous that the project chosen was a high priority for the community. These findings mirror those reported in 2003: in education and road projects all respondents in the project survey perceived that the project was of high priority, while in health and water this same answer reached 95%. The other 5% considered the project as worthwhile. In the 2003 study, in all the projects except education, the project was perceived

among all the respondents as high priority. In education only 91% considered the project as high priority and the rest as worthwhile.

The household perspective is slightly more diverse, but there is still a clear majority of interviewers indicating that they would have chosen the same project as a priority for the community. This percentage is higher, across all sectors, than reported in 2003, indicating that the SFD is very focused on a demand-driven approach (*Table 4.2*). The beneficiary Assessment echoes these findings:

- *The Fund arrived and brought this (road) project that has been demanded for 20 years* (Men Focus Group in Aleem Road Project)

For those who stated other priorities, water projects were the preferred alternative in 62% of the cases, education in 17%, health in 12%, rural roads in 4% and electricity projects in 4%. This finding suggests that there may be an under-emphasis on water projects that respond to community needs.

Table 4.2 Priority of sub-project as perceived by households (household, ex-post survey)

Level of priority	Education	Health	Water	Roads
Would have chosen same project	74	82	74	83
Would have chosen other project	24	15	24	16
Did not know	2	3	2	1
Number of households	497	395	368	204
Would have chosen same project. *Result in 2003 Study*	60	74.2	73.8	78.9
Number of households 2003	595	387	344	308

Source: Household Survey 2006, 2003

4.3 Community contribution to the project

-It is great, the people paid 5%
- (My contribution) is 5% was 8,000 YR, and I paid it in cash
- Some gave money and some stones
- Poor people were exempted and the Sheik paid instead of them
- Contribution is good
- Nothing better than cooperation
- It makes us love the project and maintain it
- If there was no contribution, there was no project
(Men Focus Group in Jabal Water Project)

Once a project has been approved, communities directly participate in its implementation and/or maintenance. Communities' direct participation in project implementation primarily takes three forms - donation of money, donation of working days, and donation of materials for construction. SFD has Guidelines of Procedures for Community Contribution that were updated in 2004 (*See Table 4.3*, below, for a summary).

Table 4.3 SFD Guidelines of Procedures for Community Contribution		
Sector	Sub Sector	Community Contribution
Education	Improving infrastructure	5% of cost, in kind or cash
Health	Health Units Training health workers	5% 0%
Water *	Rainwater harvesting Drinking water Provision through public taps Household connections Irrigation and dams	Community provide all labour and local materials 5% - 10 % for poorer households 10% minimum plus provision of sanitation at the household level. 20%
Roads *	Feeder roads	The community provides local materials (according to the community available resources assessed by SFD staff); Minimum 10%
Environment	Sewerage Systems In very poor slum areas In poor rural and urban areas In better off urban areas	Community contribute with labour; 20% cash contribution 40% cash contribution
* The level of contribution is agreed before putting the project in the annual plan (during the priority survey), and finally approved in the "no objection" for community contracting submitted by the SFD branch office.		

Tables 4.4 and 4.5 show the proportion of projects receiving community contributions. The first table reflects these data as gathered during the Project Survey (i.e. by project managers) and the second reflects these data as gathered in the household survey (e.g. by the community beneficiaries themselves).

Table 4.4 Frequency and average amount of community contribution to SFD sub-projects, Project survey

	Education		Health		Water		Roads	
Type of participation	%	Amount (YR) *	%	Amount (YR) *	%	Amount (YR) *	%	Amount (YR) *
Money	64	492,857	59	476,385	33	803,333	89	2,724,062
Working days	36	104,062	6	70,000	50	438,178	33	75,333
Stones	46	327,354	53	363,111	50	477,778	44	130,000
Sand	9	100,000	6	480,000	11	450,000	100	0
Water	36	105,625	29	112,000	22	60,000	100	0
Other materials	20	208,750	41	785,714	39	546,833	14	200,000
Land	55	875,000	47	0	0	0	11	0
% projects with community contribution	81	1,101,226	81	886,797	90	2,727,966	82	2,834,899
% projects with community contribution. *2003 Report*	100	664,109	86	618,361	95	1,558,504	100	1,691,935

* Nominal YR
Percentages are estimated over the total of projects with community contribution
Source: Project Survey 2006, 2003

According to the project survey, community involvement in projects is relatively high, and varies from 81 (education) to 90% (water).

The type of community contribution varies substantially by project type, with all three – money, working days, and materials - all playing an important role. On average, the contribution by community (or sub-project) seems higher in the case of feeder roads and water, although the guidelines indicate that only in the case of water the percentage of community contribution be higher than 5%. This result suggests that the percentage agreed in road and water projects might be exceeding the above guidelines. Finally, the comparison with data of the 2003 Report indicates a general improvement in community contribution, since in all the sectors this contribution has increased even when the contribution is presented in nominal Yemeni Rials (YR)

According to the household survey, the overall percentage of households contributing to projects ranges between 37 and 58% (health received the least community participation while roads received the most). Money and materials are reported as the most common form of contribution. The majority of beneficiaries are from low-income households but the type of contribution is not shown to vary by income. The comparison with the findings of 2003 Report indicates that materials have gained importance as the most usual way of household contribution.

Table 4.5 Proportion of households contributing to SFD sub-projects by type of contribution, Household survey

	Ex-post			
	Education	Health	Water	Roads
Type of contribution	Percentages			
Number of contributing HH	217	145	193	119
Percentage of contributing HH (%)	44	37	53	58
-Donating labor	16	30	32	31
-Donating materials	84	88	74	89
-Donating money	82	67	58	71
-Other	5	2	2	3
Donating labor. *2003 Report*	33	46	33	43
Donating money. *2003 Report*	67	51	67	55
Donating materials. *2003 Report*	7	24	23	16

Source: Household Survey, 2006, 2003

The monetary value of the average household contribution has been calculated and is reported in *Table 4.6.* The average household financial contribution is estimated between seven (education) and sixteen thousand YR (water). Water and rural road sub-projects have the highest level of total average household contribution.

These figures show high variation from the 2003 report, with total contributions increasing significantly for health, and water projects, but decreasing for education and road projects. However, these figures denote perceptions of those contributing rather than external estimations, which may account for the differences. It is difficult to show the difference between actual and perceived amounts of household and community contributions since the MIS does

Table 4.6 Average household contribution to sub-projects by category

Monetary value of household Contributions (in nominal YR)	Education	Health	Water	Roads	# of households donating
Donated labor	1,150	2,800	3,413	7,438	180
Donated materials*	1,981	10,800	2,166	5,984	137
Donated money	4,161	3,562	22,100	11,540	471
Total (average value)	7,440	9,672	9,831	15,682	
Total (median value)	4,103	3,006	6,300	5,507	
Number of observations	217	141	189	117	
Total (average). *2003 Study*	25,450	6,607	7,348	17,933	
Number of observations 2003	238	84	119	190	

* Includes stones, sand, water, and other materials
Note: average and median values are calculated on the basis of only contributing HH
Source: Household survey

not have an exhaustive registration of all the contributing communities and households.

Table 4.7 shows the estimated value in YR of all community contribution (whether in cash or in kind) for the total completed projects by sector. The estimation assumes that the guidelines of procedures for community contribution (*Table 4.3*) were applied for each project. On this basis, community contribution is estimated to account for about 6% of the total cost of all completed projects during phases three and fourth or, grossly, 10.7 million US dollars.

Table 4.7. Community contribution to SFD's Community Development Projects (completed projects)

		Estimated community contribution (US$)		Estimated cost (US$)		Total Estimated community contribution (US$)	Total Estimated cost (US$)	Community contribution (%)
Main Sector	Sub-sector	Phase 2	Phase 3	Phase 2	Phase 3			
Education	Basic Education	4,726,520	977,553	88,137,509	40,238,290	5,704,073	128,375,799	4%
Education Total		4,726,520	977,553	88,137,509	40,238,290	5,704,073	128,375,799	4%
Health	Health Units/Centers	190,724	3,100	4,539,907	833,412	193,824	5,373,319	4%
Health Total		190,724	3,100	4,539,907	833,412	193,824	5,373,319	4%
Water	Shallow Wells	8,060		192,930		8,060	192,930	4%
	Water Harvesting (Tanks)	1,442,606	134,769	15,889,441	1,401,987	1,577,376	17,291,428	9%
	Irrigation	10,000		341,470		10,000	341,470	3%
	Dams	279,327	16,200	2,465,274	342,825	295,527	2,808,099	11%
	Piped System	707,344	15,941	3,918,397	446,579	723,285	4,364,976	17%
Water Total		2,447,338	166,910	22,807,512	2,191,391	2,614,248	24,998,903	10%
Rural Roads	Feeder Roads	472,839	100,272	7,050,012	1,640,254	573,111	8,690,266	7%
Rural Roads Total		472,839	100,272	7,050,012	1,640,254	573,111	8,690,266	7%
Environment	Soil and Water Conservation	126,066	84,637	1,186,820	423,889	210,703	1,610,709	13%
	Solid Waste Management*	686,332	22,000	1,963,101	449,034	708,332	2,412,135	29%
	Wastewater Management*	614,331	38,550	3,544,987	260,680	652,881	3,805,667	17%
Environment Total		1,426,729	145,187	6,694,908	1,133,603	1,571,916	7,828,511	20%
Grand Total		9,264,150	1,393,022	129,229,847	46,036,950	10,657,171	175,266,798	6%

* Governorates' contribution
Source: SFD-MIS

In addition to contributing to project implementation, communities also contribute to project maintenance through a Project Maintenance Committee. Typically, the SFD tries to build on existing traditional systems of maintenance, through one of three forms: (i) charge producers to contribute to workers, (ii) each village allocate responsibility to nearby households, or (iii) payment is made to a labourer to maintain.
As seen in *Table 4.8* the majority of projects have a committee, though this varies by project type. Road projects have the lowest incidence of maintenance committees. This may be a result of SFD´ policy only promoting maintenance committees where there is a division of responsibility between villages.

The involvement of women in the selection process, and as members of the committee, is relatively low, or in some cases nonexistent (as with roads). All the projects in the sample were approved before the initiation of systematic application of methodologies to activate the role of women which started gradually after 2003.

Table 4.8 Existence of Project Maintenance Committee and woman participation. Ex post data				
	Education	Health	Water	Roads
There is a project maintenance committee	68	62	75	46
How was the committee selected:				
• Election	21	62	60	0
• General consensus	32	15	27	0
• Appointing	42	23	13	0
• Other	5	0	0	40
Women were involved in this selection process	26	35	27	0
There is at least one woman in the project committee	18	35	0	0
Source: Survey Project, 2006				

4.4 Perceived quality and "Ownership" of project

Community involvement in project design, implementation, maintenance, and sense of benefit should lead to a sense of "ownership" of the project. Community contribution, supervision at the construction site, and/or community contracting on the project are all methods of attaining this sense of ownership.

Table 4.9 Perceived quality of SFD work among main respondents (project survey)				
Perceived quality of work	Education	Health	Water	Roads
Excellent-Good	96	86	65	45
Average	4	14	35	45
Bad	0	0	0	9
Number of respondents	28	21	20	11
Excellent. *Result in 2003 Study*	71.9	85.7	57.9	71.4
Source: Project Survey 2006, 2003				

The project and household surveys asked questions regarding respondent's perception of work on the project and quality of working materials used. In almost all cases the majority of respondents (both project and household) report their perceived quality of the work as excellent. However, while a high percentage of respondents report excellent quality education and health projects (between 84 and 96%), water and roads projects did not receive as high a rating (45 to 65% report excellent quality). A variety of conditions may explain these findings. For water projects, communities tend to have very high expectations, and can be disappointed if water is not as available as frequently as expected, or the system is exposed to frequent failures as a result of high levels of demand for water, or low water availability due to drought conditions. Communities have a clear preference for paved roads, while SFD promotes earth road with dry stone pavements (no cement between the stones) in critical points which may be perceived as inferior quality. A clear lesson is the need for greater discussion and participation by the community on the standard of project to

Table 4.10 Perceived quality of SFD work among main respondents (household survey)				
Perceived quality of work	Education	Health	Water	Roads
Excellent	86	84	55	64
Acceptable	2	7	11	25
Bad	1	3	21	7
No opinion/ no response	9	6	13	4
Number of observations	497	395	366	204
Excellent. *Result in 2003 Study*	62	56	43	54
Number of observations 2003	594	387	344	306
Source: Household Survey 2006, 2003				

be implemented, and type of repairs necessary to maintain successful functioning, in order to manage community expectations.

Where communities reported bad quality projects, reasons provided included: construction problems and contractors unqualified in the case of water projects; a project left incomplete or contractors unqualified in the case of road projects. In this latter case, it was verified in the field that no road projects had been left incomplete, but rather some respondents expected that the road would reach more communities, despite the specifications of the formal agreement.

Quality perception of a project can also be reflected in the perceived value of the finished product as compared to the resources (both project and community) invested in its development (value-for-money). *Table 4.11* describes project respondent views on value for money.

On the whole, the perception of the majority of project respondents is that roads, education and health projects are good value for money (100%, 96% and 85% respectively). However, water projects have a more mixed result, with only 65% of respondents, respectively, reporting them as good value for money. When compared with the 2003 findings, perceptions of the quality of water projects have decreased.

Table 4.11 Perceived value for money of the SFD works among main respondents (project survey)

Value for money	Education (%)	Health (%)	Water (%)	Roads (%)
Good	96	86	65	100
Medium	4	5	25	0
Low	0	9	10	0
Number of respondents	28	21	20	11
Good. *2003 Study*	75	86	84	79
Medium. *2003 Study*	22	5	5	0
Low. 2003 Study	3	10	11	21

Source: Project Survey 2006, 2003

A final indicator of whether households' have a sense of ownership of projects is the degree to which they feel that they have actually benefited from the project. *Table 4.12* provides figures on beneficiary status for those households in the 2003 baseline (e.g., before projects were fully implemented), and again in the 2006 ex-post study (e.g., the same group of households, after the projects had been completed).

Table 4.12 Households perceptions of their beneficiary status in relation to SFD projects

	2006 Ex-post				2003 Baseline			
	Education	Health	Water	Roads	Education	Health	Water	Roads
Beneficiary now (%)	64	74	49	96	11	13	1	24
Beneficiary in the future (%)	24	15	20	1	77	81	70	65
Not beneficiary (%)	12	11	31	3	12	6	29	11
Number of respondents	496	395	368	204	497	395	366	204

Source: Household Survey 2006, 2003

The proportion of ex-post households that feel they benefit from the sub-project implemented is highest for road projects and lowest for water projects. Failures regarding low levels of water availability could be behind the situation with water projects. As one would expect, the proportion that view themselves as beneficiaries increased quite substantially between the baseline survey and the ex-post survey, as projects become implemented.

4.5 Social Capital

Social capital is a term used to describe the existence of local organizations, and perceptions of support, reciprocity, sharing and trust in the community.

Pre-existing levels of social capital are likely to directly affect the success of any given project, since greater trust between community members, or stronger functional relationships between those members can facilitate the planning, implementation and operation of the SFD projects. Conversely, the community's experience of planning, implementing and operating an SFD project may, depending on the quality of this experience, create or erase social capital in the community. The impact of an SFD project on social capital is expected to be an important determinant of the overall impact of the project on a community's development. Because the 2006 monitoring was able to collect 2006 ex-post data on the same 2003 baseline, it is possible to try and comment on the changes in social capital within these communities. This was not possible with the 2003 study because baseline data for the same subset of households was not available.

Table 4.13 Service-providing organizations in the community (multiple answers). Percentages

Organizations	2006 Ex-post	2003 Baseline
Local societies (cooperatives/charitable)		34
Office of Post & Communications Services		33
Water/Electricity Corporations		31
Local Councils	15	19
Hospitals/ health facilities		19
Social Security Net	36	9
Education/ illiteracy offices		12
Other government agencies		11
Schools		11
Private Sector Firm	11	11
Foreign donors	2	10
Security/ Civil Affaires		10
Social Fund for Development	62	6
Government bodies	83	
NGO	3	
Number of observations	1,395	269

Source: Household Survey, 2006, 2003

Social capital was measured in two ways in the surveys: through the presence of service providing organizations in the community, and through the perceived importance of these organizations for community development.

Households were asked about the number of service providing organizations in the community, and these findings are presented in *Table 4.13.* It is important to note that the question was asked as an open ended question in the 2003 baseline, and a semi-closed question in the 2006 ex-post survey, and hence the findings are reported slightly differently. The number of observations jumped substantially between the two surveys (from 269 to 1,395) suggesting that there are more organizations operating in the community, or there is a greater perception of organizations in the community (or a bit of both). It is also interesting to note that the percentage of households aware of the SFD increased from 6 to 62%, suggesting that SFD is having a greater awareness within communities.

Households were also asked about the perceived importance of local organizations for community development. The data for both the 2003 baseline and the 2006 ex-post are reported in *Table 4.14*. However, it should be noted that it is not accurate to compare the rankings for these two samples. The 2003 survey only asked for a respondent's ranking of the organization if he/she was a member, whereas the 2006 survey asked for a ranking regardless.

The SFD is ranked as the second most important organization for community development, with the Ministry of Education ranked first. This response strongly indicates that SFD is perceived by local communities to be having a significant impact. Both government ministries and local societies seem to play an important role in the structural social capital network of these communities.

Table 4.14 Ranking of local organizations by their perceived importance for community development (multiple answers)

	2006 Ex-post		2003 Baseline	
	Rank	%	Rank	%
Ministry of Education (schools & others)	1	77	2	30
SFD	2	59	6	9
Ministry of Social Affairs	3	31	ND	ND
Health facilities	4	17	4	25
Local societies (NGO, cuasi NGO) and other community leaders	5	11	1	52
Local Councils	6	8	6	9
Ministry of Electricity	7	6	ND	ND
Ministry of Water , Irrigation & S.	8	4	ND	ND
Water / electricity corporations			27	3
International organizations	9	1	5	21
Ministry of Public Work	10	1	ND	ND
Number of observations	1,391		67	
Source: Household Survey, 2006, 2003				

Box 4.2 Participation: Insights from the Beneficiary Assessment

The Beneficiary Assessment provides additional insights about the impact of SFD on social capital. The most outstanding effects that emerge from the study are:

➢ **Projects restore or reinforce the sense of community, trust, solidarity, and self-help**

Generally, communities had a good knowledge of their problems and priorities for improvement. By requiring a complementary community contribution, the SFD presents the opportunity for communities to organize their contribution and, in the process, recognize social inequalities and accept flexibility in contributions according to each household's resources.

- *Every person had to bring 73 stones.. The needy, helpless or orphan were exempted. We determine the total number of the disabled in order to be exempted…Those who have cash can pay laborers to prepare their contribution of stones. A very comfortable arrangement* (Men Focus Group in Nakee Road Project)
- *Brother (name omitted) brought laborers and paid for them (from his pocket) and said this is the contribution of the community* (Men Focus Group in Birtas Health Project)
- *We do not have a maintenance committee but all the people do the maintenance either by money or work… the whole village is maintenance committee* (Men Focus Group in Jaleh Water Project)
- *The one who does not want to go to work in it (maintenance) will give money for who will go.* (Women Focus Group in Jaleh Water Project)
- *The committee members have our full trust* (Men Focus Group in Al Sumaided Water Project)

➢ **Projects encourage a constructive discussion on female participation**

SFD promotes female participation at every stage of the sub-project, but this approach nonetheless has to work

within the confines of traditional approaches to gender, especially in rural areas. While different approaches are developed to solve gender bias, the process creates the space for discussion and consideration of the role of women in local development.

- *Women are feeling comfortable now and we have a liaison with the government and the SFD* (Women Focus Group in Jale Water Project)
- *They invite us and we come…They invited the men as they are capable, but we (women), what we can do*? (Women Focus Group in Al Thawra Girl's Education Project)
- *I object to any gathering of men and women together. Women should meet separately by themselves or being informed later by their husbands* (Men Focus Group in Birtas Health Project)
- *We agree on engaging a woman if she can read and write* (Men Focus Group in Al Tawr Water Project)
- *The Committee's members work together (men and women). The nature of their duties necessitates that they work together…(But) only one woman has participated… She represent the women of the community* (Men Focus Group in Al Midmen Health Project)
- *The participation of one woman only is a limited participation* (Women Focus Group in Birtas Health Project)
- *When they are more than one they come to better ideas… Women here participate in everything. There is no objection at all* (Women Focus Group in Al Sumaided Water Project)
- *Look, it is necessary, woman is half of the society, but in this village, men are backward* (Women Focus Group in Rasad Road Project)

➢ **Projects provide increased forums for community participation and democratic processes through the creation of committees.**

SFD encourages the organisation of Beneficiaries Committees, Maintenance Committees, and Parent Councils (in the case of education projects), to support project sustainability . These committees provide more room for participation in public life and instruments for democratic solutions to daily problems.

- *All the parents were invited without any exception for attending the meeting of the general assembly to elect the fathers' council. But mothers' council is something new and it established in 25/03/2006 for the first time in the school history* (Key informant in Khaled Bin Alwaleed Education Quality Project)
- *Fathers' Council includes all community categories –even poor- The council was formed by using elective selection and voting. The SFD attended the process of voting* (Key informant in Alwfa'a s Girls Education Project)
- *The peripheral groups were engaged to participate in the formation process of the committee* (Men Focus Group in Al Midmen Health Project)
- *All of us agreed on election. We are all satisfied. It is the best method* (Men Focus Group in Al Leem Road Project)

➢ **Participation in community development through SFD projects paves the way for increased awareness and skills for advocating for future projects,**

Participation in community organizations builds capacity for problem solving, and identification of development needs. As a result, community members develop skills to negotiate new projects for the benefit of their communities.

- *School comes first (Women), (but) we also need water, electricity and roads (men)* (Focus Groups in Al Zubair School Project)
- *We have (also) demanded a girls' school…It was not constructed and the students were mixed, then we demanded and established a girls' school and another for boys* (Women Focus Group in Rasad Roads Project)
- *They (the Parents' council) explain to the fathers and mothers the importance of boys' and girls' education during ceremonies, formal meetings, and qat sessions as well as in the mosque since the preacher is a member of the (father) council* (Key informant in Al Yuser Girls's Education Project)

V SERVICES: QUALITY, SUSTAINABILITY AND IMPACT. THE COMMUNITY DEVELOPMENT PROGRAM

5.1 Introduction

During its first and second phases, the SFD has strongly supported education, health care and groups with special needs. Activities have focused on increasing education for girls, improving health care facilities in underserved areas and assisting disadvantaged women and children. In addition, the SFD has been improving basic rural infrastructure, promoting water harvesting and increasing access to people in remote, mountainous areas through feeder roads projects. The third phase continues to emphasize these activities with the aims of improving their quality and expanding their reach (SFD. 2003: 12).

This chapter presents the findings on service production, sustainability and impact of SFD sub-projects in the Community Development Program, specifically education, health, water and roads taken from the 2003 IES project survey component. Data are presented in most cases for both the:

- Current intervention group: this group compares baseline data collected in 2003 before SFD interventions, with 2006 ex-post data collected in the same communities after the intervention.
- Return visit group: this group compares data collected in 2003 in communities where interventions had occurred in the period 1999 to 2002, with data collected in 2006 in those same communities, in order to view the longer term impacts of SFD interventions.

Each of the sections on education, health, water and roads is divided into a series of subsections:

- Contribution to national stock of infrastructure: this section looks at the proportion of SFD investments in the sector as compared with the total national stock of the same, to assess SFD's contribution in relation to the national investment.
- Service production and sustainability: this section summarises data collected on the provision of services through SFD interventions, and the sustainability of those services.
- Impact on Household Level Development Indicators: multivariate regression modeling is used to further explore the impact of SFD projects on development, as compared with other influencing factors.

5.2 Education Projects

5.2.1 Contribution to National Stock of Infrastructure

Since its inauguration in 1997 to the end of 2005, the SFD built 9,292 new classrooms, completed 608 previously unfinished classes and rehabilitated 2,378 classes, for a total input in the period of 12,278. Compared to the overall national efforts, the data indicates that SFD has contributed 12% to the national stock of classrooms. *See Table 5.1a*.

Table 5.1b further shows the SFD financial contribution to the national stock of educational facilities, in each of SFD's operating years. The overall financial contribution of SFD to the education sector has ranged from 2% in 1998 to 31% in 2002, with fluctuations year on year.

Both sets of data clearly show the substantial input that SFD has made to the national stock of educational infrastructure.

Table 5.1a SFD Contribution to the national stock of educational infrastructure

Year of completion	number of projects	Newly built class rooms	Rehabilitated	Finishing class rooms	Total class rooms	Number of classrooms built (at national level)	% of SFD contribution
Up to 1998*						67,503	
1997/98	70	158	45	37	240	n/a	n/a
1999	197	689	361	133	1,183	3,687	32.1%
2000	149	545	157	61	763	3,303	23.1%
2001	183	780	191	65	1,036	1,979	52.3%
2002	246	1,334	435	60	1,829	3,412	53.6%
2003	314	2,050	468	68	2,586	9,287	27.8%
2004	273	1,694	302	68	2,064	6,504	31.7%
2005	368	2,042	419	116	2,577	5,471	47.1%
Contribution of the SFD at the national level							
As of 2005	1,800	9,292	2,378	608	12,278	101,146	12.1%

* Total number of classrooms at the national level up to that given year
n/a Figures are not available at the national level for that particular year

Table 5.1b Overall financial contribution to SFD to the Education sector in Yemen, 1998-2005 (US$)

	1998	1999	2000	2001	2002	2003	2004	2005*
Investment-National Level	85,310,045	49,805,772	51,278,405	61,862,331	59,282,673	93,272,948	116,449,211	180,744,701
SFD contribution-contracted	1,700,980	9,043,271	6,350,133	10,691,309	18,734,079	28,388,716	25,443,691	34,287,052
SFD contribution-Disbursed	1,680,687	8,957,851	6,299,293	10,636,583	18,634,870	29,279,771	25,363,195	33,525,210
SFD contribution-contracted (%)	2.0	18.2	12.4	17.3	31.6	30.4	21.9	19.0
SFD contribution-Disbursed (%)	2.0	18.0	12.3	17.2	31.4	30.3	21.8	18.6

* Provisional
Source: Central Statistical Organization and SFD-MIS

5.2.2 Service production and sustainability

While it is clear from the previous section that SFD has contributed substantially to educational facilities in Yemen, the production and sustainability of educational services associated with this input will have a significant impact on how effective this investment is at generating human development outcomes.

This section describes general information on the production and sustainability of services in the schools in the sample, including the number of classrooms, enrolment rates, maintenance, staffing patterns, operating problems and student performance. Each section compares information for both the short term analysis of the current intervention group (comparison of 2006 ex-post sample with the baseline data collected in 2003, for those projects implemented between 2003 and 2006) and the longer term return visit analysis (comparison of 2006 return visit data with 2003 ex-post data for project implemented between 1999 and 2002).

5.2.2.1 General Information

- **Current intervention group**

Within the current intervention group, the same 25 schools were sampled in both 2003 and 2006. Eighteen of these schools offer only basic education, of which the SFD built 13 of these schools and improved five. The other schools offer basic and secondary education. The SFD built six of these schools and improved one. Sixteen of these schools are rural and nine are urban.

Table 5.2 shows the number of schools, classrooms and students enrolled by type of classes (boys only, girls only or mixed classes), in both the 2006 ex post survey and the 2003 baseline sample. The total number of students increased by 38% suggesting that the SFD projects have had an impact on expanding educational opportunities. Comparing the number of boys and girls, the percent change favors boys (47% versus 30%). However, when these numbers are observed only in the rural areas, it happens that the change clearly favors girls (91% boys vs 122% girls).

Table 5.2 General information

	2006 Ex-post				2003 Baseline				Change (%)			
	Boys classes	Girls Classes	Mixed classes	Total	Boys classes	Girls Classes	Mixed classes	Total	Boys classes	Girls Classes	Mixed classes	Total
Number of schools				25				25				
Number of classrooms	198	263	174	635	102	167	199	481	94	57	-13	32
Number of students (all)	9,624	11,363	7,476	28,463	4,767	7,243	9,877	20,611	102	57	-24	38
Male	9,624	--------	4,701	14,325	4,767	--------	4,746	9,738	102	-----	-1	47
Female	--------	11,363	2,775	14,138	--------	7,243	5,131	10,873	------	57	-46	30
Male students (rural)	2,638	-------	4,201	6,839	869	-------	2,720	3,589	204	-------	54	91
Female students (rural)	--------	2,102	2,437	4,539	--------	544	1,501	2,045	-----	286	62	122
Students/ classrooms	48.6	43.2	43	44.8	46.7	43.4	49.6	42.9	4	0	-13	5
Classrooms/ school				25.4				19.2				32
Students / school				1,139				824	221	-36	-15	38

Source: Project Survey 2006, 2003

This finding is encouraging because it indicates success on the part of SFD policies to fill the gender gap in education in rural areas. Further, these increases have been accomplished in an environment that does not necessarily encourage enrolment of girls, despite SFD's policies:

(i) school projects are demand driven, and communities often prioritise schools/classrooms for boys;
(ii) The Ministry of Education (MoE) can request classrooms from the SFD (for instance, they have asked the SFD to provide 1,500 classrooms for 2007), but the SFD has no input as to whether they are for boys or girls. Further, MoE can regularly change the designation of schools; thus, a school/classroom that was built for girls could be changed to a boys or mixed school/classroom, depending on the demand and on the construction activity of other actors.

The total number of classrooms has increased by 32% overall (57% for girls-only classrooms, 94% for boys-only classrooms, and a reduction of 13% for mixed classrooms). If only rural sector is considered the previous trend changes in favor of girls: the number of classrooms has increased by 76%overall, with a 305% increase for girls-only classrooms, 223%for boys-only classes, and 13% for mixed classrooms. The low percent change in mixed classes reflects rural preferences for separate classes. (These data are not shown in a table)

Overcrowding of classrooms can limit learning opportunities, and was highlighted as an issue in the 2003 report. The average class-size has increased slightly (5%) over the intervening period, with the majority of this increase occurring in boys-only classrooms (4%).

In the case of mixed classes, overcrowding is still a problem, but the average number of students is showing a declining trend (as shown above).

Most schools use dual desks with either 2 or 3 seats – relatively few have single desks with single seats. The average student/seat ratio has improved significantly over the review period – decreasing from an average 3.2 students per seat to 1.3 students per seat (these data are not shown in a table).

The availability of textbooks for 5 subjects (Arabic, English, Mathematics, Sciences, Arts, and Islamic Studies) has remained the same compared to the baseline data, with an average of 1.3 textbooks per student. This takes into account two new subject books that did not exist in the 2003 baseline.

- **Return Visit group**

Thirty schools were included in the sample of projects implemented between 1999 and 2002. Of these thirty, it was possible to revisit and gather complete information on 28 as part of the 2006 assessment. This section reviews the long term changes in impact in these schools, by comparing the 2006 return visit data with the 2003 ex-post data.

Table 5.3 General information

	2006 Return visit				2003 Ex-post				Change (%)			
	Boys classes	Girls Classes	Mixed classes	Total	Boys classes	Girls Classes	Mixed classes	Total	Boys classes	Girls Classes	Mixed classes	Total
Number of schools				28				28				
Number of classroom	118	126	360	604	102	120	289	511	16	5	26	18
Number of students	3,444	4,362	10,365	18,171	3,483	3,859	7,159	11,205	-1	13	45	62
Male	3,444	-----	6,564	10,008	3,483	----	5,658	9,141	-1	------	16	9
Female	------	4,362	3,801	8,163		3,859	1,501	2,064	------	13	153	295
Students/ classroom	29	35	29	30	34	32	25	22	-15	8	16	37
Classrooms/ school				22				18				18
Students / school				649				400				62

Source: Project Survey 2006, 2003

Table 5.3 shows the number of schools, number of classrooms and number of students by type of classes (boys only, girls only or mixed classes), in both surveys. The number of students grew by 62%, suggesting that projects are still having an impact on expanding educational opportunities. The majority of this increase has particularly impacted girls (295% versus 9% for boys) and mostly in mixed classes. In this sense, the modest positive impact registered for this same indicator in the 2003 evaluation becomes now, in this return visit, a very clear outstanding achievement in terms of girls going to school even when they have to study in mixed classrooms, and may reflect changing cultural beliefs regarding gender separation in school.

The number of classrooms per school has also increased, by an average of 18% which is lower than the enrolment rate, thus the number of students/classroom has gone up by 37%(overcrowding is worsening).

The number of seats per student also shows a positive trend in the return visit schools, mirroring the trend seen in the current intervention schools. In the 2003 ex-post sample, the return visit schools had 3 students per seat, whereas the 2006 sample shows an average of 1.4 students per seat.

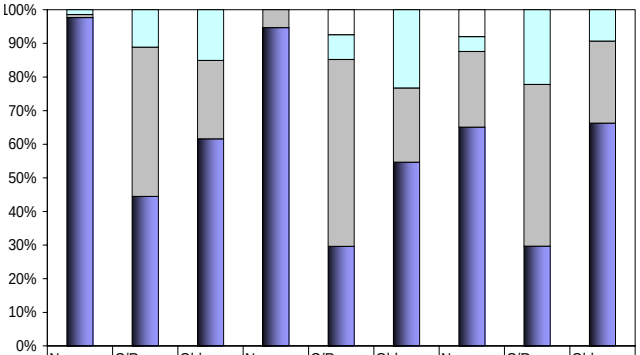
Textbook supply has also improved over the longer term, although it is still limited. In 2003 the schools had between 0.5 (Social Studies) and 0.7 (Arabic, Maths, Science, Islamic Studies) books per student, whereas the 2006 data shows that schools have between 0.8 (Social Studies and Islamic Studies) and 1.0 (Arabic, Mathematics, Sciences and Quran) books per student. The supply of English books is particularly low –with 0.3 per student in 2006, although data was not gathered on this in 2003 and therefore it is not possible to observe a trend. When compared with the trend observed in the current intervention schools, the return visit schools appear to have a more limited supply of textbooks.

5.2.2.2 Maintenance of SFD supported schools

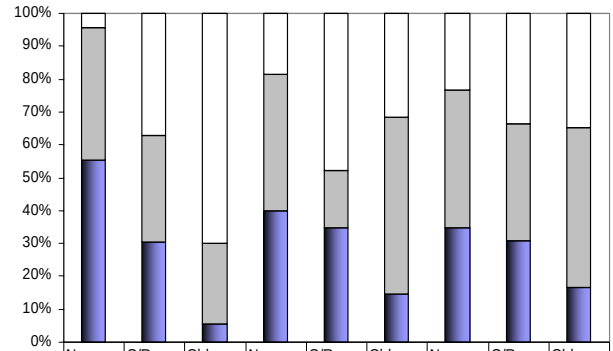
The survey also looked at the status of school infrastructure (buildings, furniture and cleanliness) as an element of sustainability. Figure 5.1 (left) presents a graph classifying status as good, fair or poor for three types of classrooms in the ex-post group: built by the SFD (new), completed or refurbished by the SFD (C/R), or untouched by the program (old). The majority of respondents indicate maintenance of school infrastructure as "good" for those schools that were constructed by the SFD ("new") and "fair" for those schools that were completed or refurbished (C/R), providing a clear indication that the SFD has improved the maintenance of school infrastructure. Maintenance of the building and cleanliness of the school tend to receive higher marks, whereas the condition of the furniture tends to rank lower.

The graph at the right shows the same data for the return visit sample (also *see Table 5.4*). When compared with the current intervention group, the return visit schools show a clear deterioration in maintenance, particularly cleanliness. Schools have never received funds for maintenance (in theory maintenance costs should be covered by school fees), which may account for this deterioration, particularly given that these schools have been in existence for twice as long and therefore had more opportunity to deteriorate. Traditionally, school fees have been split between the MoE (25%), the Ministry of Finance (70%), with only 5% for the school. A recent Local Authority decree has stated that all fees should go to the local councils, who under the decentralization laws are responsible for schools. However, at the same time, the MoE has introduced a decree that no fees will be charged for grades 1-6. As a result, it is very questionable whether local councils will have the funds/ will give priority to school maintenance. This issue would merit further attention by the SFD to ensure the sustainability of their funded schools.

Figure 5.1 Maintenance of SFD supported schools (left: Current intervention group; right: return visit group)



	Construction			Furniture			Cleanness		
	New	C/R	Old	New	C/R	Old	New	C/R	Old
ND	0.00	0.00	0.00	0.00	0.07	0.00	0.09	0.00	0.00
Poor	0.01	0.11	0.15	0.00	0.07	0.23	0.05	0.22	0.09
Fair	0.01	0.44	0.23	0.05	0.56	0.22	0.25	0.48	0.24
Good	0.98	0.44	0.62	0.95	0.30	0.55	0.73	0.30	0.66



	Construction			Furniture			Cleanness		
	New	C/R	Old	New	C/R	Old	New	C/R	Old
Poor	0.05	0.43	0.53	0.20	0.61	0.20	0.25	0.49	0.26
Fair	0.44	0.37	0.19	0.44	0.22	0.33	0.44	0.52	0.37
Good	0.61	0.35	0.04	0.42	0.44	0.09	0.37	0.45	0.13

Table 5.4 Maintenance of SFD supported schools in the follow-up situation

	Building			Furniture			Cleanliness		
2006 (Return visit)	New	C/R	Old	New	C/R	Old	New	C/R	Old
Good	61.1	44.4	4.9	42.4	44.4	20.0	36.8	45.1	13.0
Fair	34.7	37.0	43.0	44.4	22.2	61.0	44.4	51.9	3.7
Poor	4.2	18.5	53.0	4.2	0.0	0.0	24.6	49.2	26.0
2003 (Ex-post)									
Good	75.9	63.4	18.0	55.2	61.9	9.1	75.9	64.1	44.0
Fair	20.5	24.4	63.9	25.5	7.3	71.8	24.1	35.9	44.6
Poor	3.6	12.2	18.1	19.3	45.4	19.1	0.0	0.0	11.4
Source: Project Survey 2006, 2003									

5.2.2.3 Staffing Patterns

- **Current intervention group**

Staffing patterns also influence the availability and quality of services: *Table 5.5* shows the staffing patterns for the current intervention group.

The average number of teachers and general staff per school has decreased. Further, the average number of general staff has decreased in greater proportion, and hence the ratio of teachers to all staff has increased during the period from 44% to 82%, particularly in rural schools. So while the data show a positive trend in terms of the ratio of teachers, the overall decline in numbers underlying this data is a cause for concern.

The proportion of qualified teachers overall has increased from 77% in 2003 (before the SFD interventions) to 86% in 2006, though this increase has occurred in urban schools, while rural schools have shown a decrease in the percentage of qualified teachers.

While the increase in the proportion of teachers may have occurred for a variety of reasons, it is a positive indication that this figure shows an increasing trend in areas of SFD interventions, suggesting that the schools are attracting and maintaining high quality staff, and thereby improving educational opportunities. The data do also indicate that particular attention needs to be paid to rural schools to avoid a deterioration of the current situation.

Table 5.5 Staffing patterns for SFD schools

	Urban	Rural	Total
2006 Expost			
Number of all staff (average)	51	17	28
Number of all teachers (average)	40	14	23
% qualified/ all teachers	92	78	86
% permanent / all teachers	96	96	96
% qualified & permanent	89	75	83
% teachers / all staff	80	85	82
% female teachers	56	11	37
% administrative staff	16	12	14
2003 Baseline			
Number of all staff (average)	131	34	65
Number of all teachers (average)	57	15	28
% qualified/ all teachers	67	95	77
% permanent / all teachers	96	99	97
% qualified & permanent	64	94	75
% teachers / all staff	44	43	44
% female teachers	52	10	38
% administrative staff	4	5	5

Source: Project Survey 2006, 2003

The gender composition of staff was highlighted as a potential problem in the 2003 report and continues to be so in 2006, with a higher proportion of male staff (63% in 2006). The data also draws attention to the lower proportion of female teachers in the rural schools (11% versus 56% urban). The presence of female teachers is important to sustain attendance by girls, and therefore particular focus should be placed on filling the gap between male / female staff ratios in rural schools.

Data on the number of students per teacher (not shown in table) also raises concerns. The ratio has increased from 29.3 students per teacher on average in 2003 to 50.1 in 2006 (rural schools increasing by 23% versus 17% for urban schools during the same period). This is because the number of students enrolled has increased significantly, while at the same time the number of teachers has fallen in absolute terms over the same period (from 704 to 568). While increased student enrolment is clearly desirable, it needs to be matched with a commensurate increase in teachers in order to be sustainable. The current ratio of 50 students to 1 teacher is high and should be considered in designating further resources.

- **Return visit group**

The return visit group sample only includes rural schools, and therefore comparisons with the current intervention group are drawn on this basis. The data for this group shows enhanced conditions for the most part, suggesting that the longer SFD intervention period has allowed for improvements. For example, both the average number of teachers has increased, and the percentage of qualified and permanent teachers has also increased. These data suggest that the schools are attracting and maintaining high quality staff, and thereby improving educational opportunities. While the average number of all staff has decreased,

this is almost entirely due to a decrease in "other" staff (this is also reflected in the increase in the ratio of teachers to all staff)[10].

The gender composition of the staff was highlighted as a potential problem in the 2003 report, and continues to be a problem, as the percentage of female teachers has dropped during the period. Some additional effort may be required to increase the participation of female teachers.

Table 5.6 Staffing patterns for SFD supported schools

	2006 return visit	2003 ex-post
Number of staff (average)	18	32
Number of teachers (average)	15	13
Number of teachers (median)	16	11
% qualified / all teachers	92	85
% permanent / all teachers	93	94
% qualified & permanent	88	81
% teachers / all staff	84	42
% female teachers	7	11
% administrative staff	14	7
Student/teacher ratio	41	38.3
Source: Project Survey 2006, 2003		

The number of students per teacher has remained broadly the same over the review period, and is relatively high at approximately 40 students per teacher. The sustainability of such a high class size should be considered in designating further resources.

5.2.2.4 Operating problems

- **Current intervention group**

Project respondents were asked to identify any operating problems in the school. *Table 5.7* summarizes the issues most commonly mentioned as problematic. The top three issues in 2006 include a lack of support for school activities/laboratories (25% of respondents), a lack of furniture (13% of respondents) and a shortage of teachers (13%). Issues that were prevalent in 2003 included no school/office furniture, crowded classes, and a shortage of teacher. The data clearly show that, since the SFD intervention, the availability of schools/furniture has been a large improvement. It is interesting to note that the issue of overcrowding is no longer as important to respondents in 2006 even though the ratio of students per class has not changed much.

Table 5.7 Operating problems identified in schools

Problem identified (% mentioned)	2006	2003 Report
No school / office furniture	13	54
Crowded classes	8	46
Shortage of teachers	13	25
Not support for school activities/laboratories	25	18
No library	4	14
No concern for maintenance	4	14
No completion of a fence	8	
No a residence for teachers	4	
Non electricity and sufficient water	4	
Others	13	
Source: Project Survey 2006, 2003		

Absenteeism of teaching staff (not in the table) seems to have been reduced – before SFD intervention in 2003, absenteeism was estimated at 20%, while in the ex-post survey it reduced to 4%. Equally, school opening hours seems to have improved, increasing from an average of 74% (schools open the previous week) in 2003, to 99% in 2006.

- **Return visit group (follow up group)**

In the return visit group, the top issue described in 2006 was the shortage of classrooms/crowded classrooms (33% of respondents). By contrast, the top two issues in 2003

[10] Other staff includes janitors, cleaning and maintenance staff.

were shortage of classrooms/crowded classrooms (57% of respondents) and insufficiency of teachers (43%). (*See Table 5.*8)

While shortage of classrooms was cited as a problem in both evaluation years, insufficiency of teachers was not cited at all in 2006, suggesting that this problem has decreased significantly over the preceding three years. However, this data contrasts with those data presented in *Section 5.2.2.3*, which suggest that the ratio of students to teachers has increased over the period, suggesting the insufficiency of teachers is a growing problem.

Absenteeism of teaching staff has remained consistently high across the study period, at 14% in 2003 and 13% in 2006. This is compounded by evidence that the average time that a school remained open decreased from 95% of the available time in 2003 to 72% in 2006. Closure of schools can occur when teachers are absent, and therefore these data suggest that it may be advisable to exercise more supervision to assure teachers attendance at school and more days available for the learning process.

Table 5.8 Operating problems identified in schools

Problem identified (% mentioned)	2006 Return visit	2003 Expost
Non availability and shortage of furniture	10	17
Non availability of an administrative building	3.3	17
Shortages of classrooms/student crowdedness	33	57
Non availability of guard or and messengers	3.3	0
Non completion of a fence	10	30
No maintenance for the school	3.3	7
No residence for teachers	3.3	13
Standing against the project	7	
No rear gate for female students	3.3	
Contractor non abiding by the standard	3.3	
It is necessary to build a new school	3.3	
Non availability of library/ school broadcasting /laboratory	3.3	13
Insufficiency of teachers	0	43
Scarcity of water	0	20
Non availability of electricity	0	7
Non protection from floods	0	7

Source: Survey Project 2006, 2003

5.2.2.5 Student Performance

A number of questions regarding student performance were included in the 2006 survey (*see Table 5.9*) – that were not part of the 2003 survey and hence progress over time cannot be measured. The data indicates that 11% of all students (11% female and 10% male) have failed or had to repeat a year. The drop out rates are relatively low (2% for males and 3%

Table 5.9 Students performance. Ex-post 2006

Indicator	2006 Ex-post			2006 Return visit
	Total	Urban	Rural	
% Students failed or repeated the year. Total	11	11	12	*15*
% Students failed or repeated the year. Male	10	10	10	*17*
% Students failed or repeated the year. Female	11	11	11	*12*
% Students dropped out. Total	2	2	2	*4*
% Students dropped out. Male	2	2	1	*4*
% Students dropped out. Female*	3	2	4	*4*
% of students not accepted due to insufficient capacity *	3	3	4	*3*

Source: Project Survey 2006, 2003

for females), a positive indication that students are persevering in their studies and maintaining their presence in school. As observed, for both of the aforementioned indicators, girls show a slight disadvantage to boys.

Approximately 3% of students are not accepted due to insufficient capacity at the school (this statistics is similar for both urban and rural schools), indicating that there is still demand for further expansion of school infrastructure.

The same data collected for the 2006 return visit sample shows higher levels of failure and drop-outs, suggesting that there may be sustainability issues regarding quality of education in those schools that have been established for longer.

5.2.3 Impact on Household-Level Development Indicators

The previous sections present data which demonstrates changes in availability of educational services and their impact on beneficiary populations. While it is possible to make suppositions about the impact of SFD projects from these data, these conclusions are indicative only, and it is not possible to conclude that these changes have arisen as a result of the SFD intervention, as other factors may also be influencing changes in educational services over the study period.

Therefore this section uses regression analysis to assess the following:

- the degree to which indicators of human development have changed in those populations with SFD interventions
- how much of this change is attributable to the SFD intervention (as opposed to other influencing factors, within the limits described in the methodology section of this report).

5.2.3.1Approach

The assessment models the overall change in the current intervention group (2006 Ex-post versus 2003 Baseline data), and then further controls this model for other factors at the household level which might be affecting the relationship between the SFD intervention and the human development impact indicator (use of a l*ongitudinal* multivariate regression analysis)[11].

The impact indicators included in the analysis of education are the same as those used in the 2003 impact assessment:

- % of boys and girls aged 6 to 14 years enrolled in school, in the households before and after project completion, based on the household survey data; and
- % of boys and girls with a satisfactory grade-for-age performance, defined as follows: a child of 8 years of age should have completed at least the first grade; a child of nine, the second grade; a child of ten, the third grade, etc. Once again, the evaluation is based on a

[11] A Conditional Fixed-effects Logit Regression Model

comparison of households before and after project implementation, based on the household survey data.

The indicators are analyzed under the expectation that SFD investment in building or improving primary schools should have a positive impact on the gross enrolment rate (that is, on educational coverage) and on the grade-for-age statistics, which show what proportion of children are in the grades they should have reached at their age, compared with the baseline situation. The improvement in grade-for-age is the expected product of improved enrolment rates, coupled with reduced desertion and failure rates due to the improved quality of the educational environment. In each case, the positive impacts should be most notable amongst girls, whose enrolment rates and grade-for-age attainment are both markedly inferior to those of boys in Yemen.

5.2.3.2 SFD's impact on the probability of being enrolled in a basic school

- **Current intervention group**

The 2004 Yemen Population Census shows low gross enrolment rates for primary education, especially in rural areas and among girls. The gross enrolment rates at the national level for ages 6-14 are 64% (72%% for boys and 55% for girls). In the rural areas the figures reported are 68% for boys and 47% for girls.

Table 5.10 Comparison of enrolment statistics between 2003 and 2006 (Ages 6-14)

	2006 Ex-post	2003 Baseline	Significance of change
Boys	75.8	76.5	0.429
Girls	58.9	52.4	0.076
Total	67.4	64.5	0.172

Source: Household Survey 2006, 2003

Table 5.10 reports the gross enrolment rates for children aged 6-14 estimated from the 2006 (and 2003) IES. The comparison shows an increase of about 3 percent in the rate of enrolment for all children aged 6 to 14. This change is largely attributable to the 6.5 percent increase in female enrolment rates (male enrolment rates remained stable).

Table 5.11A shows the enrolment rates by age and sex for each of the years under comparison. These rates can be graphically observed in *Figure 5.2*. The 2003 report showed that the enrolment rates in the baseline dataset (2003 pipeline group) were higher than those of the 1999 baseline dataset, and concluded that SFD may have changed the balance of its interventions towards places with higher enrolment rates, that is, by placing more emphasis on helping increase the capacity of overcrowded urban schools (2003 Report: 66). In the case of the 2006 Ex- post sample, the enrolment rates by group of age (6-15) look a little bit higher than the national 2004 census data (*Table 5.11B*) which also corroborates the theory of an emphasis on overcrowded schools.

The enrolment rates for boys show an increasing trend during the period, except for the groups aged 6 and 7. In the case of girls the enrolment rate starts to show a clear increase after the group aged 9. Four conclusions can be drawn from these data:
(i) Boys and girls are entering late to school (the official starting school age is 6),
(ii) After age 9 the enrolment rate is up for almost all age groups,
(iii) Girls are showing a firm trend toward the goal of closing the gap with boys,

(iii) Boys and girls are staying on at school one year longer than in 2003; in this latter year the significant drop out age for girls was between 10 and 11 years, while in 2006 it is 11 and 12 years. Similarly for boys, drop out is postponed by a year – in 2003 over 18% dropped out between 11 and 12 years while in 2006, 15% dropped out between 12 and 13 years.

The 2003 evaluation argued that an increase in the enrolment rates of the first year of basic schooling was a clear indication of the project's positive effect, because those years corresponded to the time frame of the project implementation, and also were key to motivate girls at an early age. While this finding cannot be confirmed in this study, it is important to reiterate that the general trend for girls shows more clear progress than in the boys' case.

Table 5.11A SFD Impact on gross enrolment rates *

	2006 Ex-post			2003 Baseline		
Age	Boys	Girls	total	Boys	Girls	total
6	38.5	27.3	33.3	40.0%	27.4	33.3
7	55.2	56.3	55.7	72.5	58.1	64.6
8	84.6	64.4	72.8	76.7	67.7	72.1
9	94.0	75.4	84.1	78.7	63.8	71.3
10	89.1	71.4	80.2	86.6	68.5	78.5
11	89.3	78.3	82.4	97.6	51.2	74.7
12	92.6	56.6	76.9	80.3	48.0	65.8
13	78.6	53.8	66.7	75.9	52.3	65.3
14	76.1	43.2	60.0	87.5	32.6	55.1
15	79.6	32.8	53.6	72.2	34.1	51.9
6-14	**75.8**	**58.9**	**67.4**	**76.5**	**52.4**	**64.5**
6-15	**76.0**	**56.0**	**66.0**	**76.2**	**50.9**	**63.5**
7-15	**81.3**	**59.2**	**70.0**	**80.7**	**54.1**	**67.4**
No. of Observations	463	461	924	454	456	910

* 2005-2006 School year
Source: Household Survey. 2006, 2003

Table 5.11.B Gross enrolment rates. Yemen 2004Census *

Age	Boys	Girls	Total
6	32.7	27.9	30.4
7	64.6	54.7	59.8
8	73.3	60.4	66.9
9	80.3	67.1	73.9
10	79.2	62.4	71.1
11	83.1	66.8	75.5
12	79.4	57.3	69.2
13	78.1	52.6	66.1
14	74.7	46.4	61.1
15	65.3	36.1	50.9
6-14	**71.5**	**54.9**	**63.5**
6-15	**70.8**	**53.0**	**62.3**

* 2004-2005 School year

Figure 5.2 Boys and girls school enrolment rates

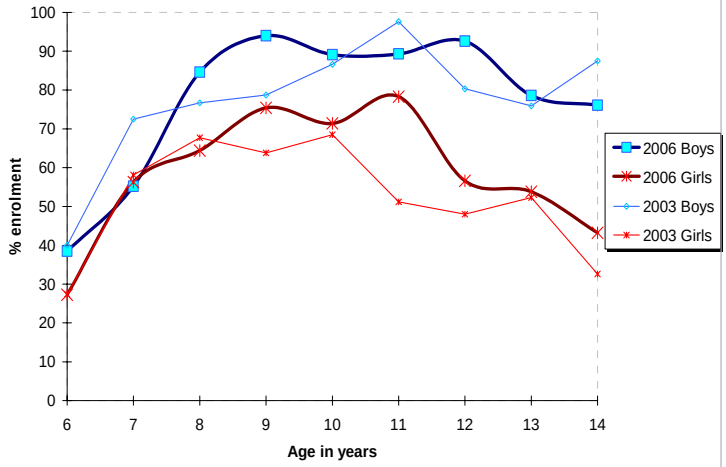
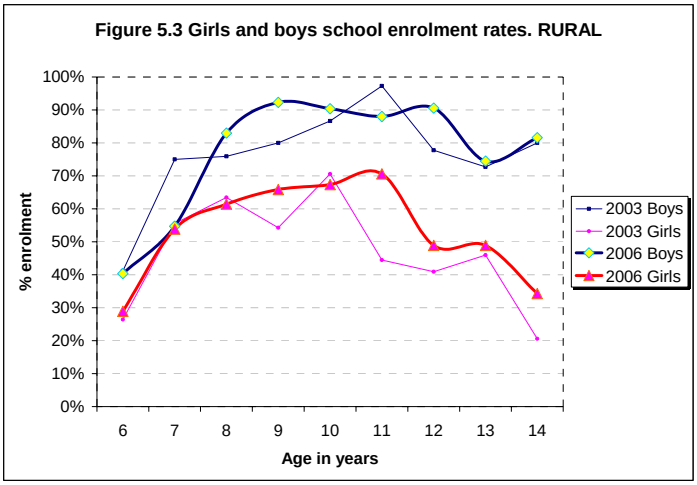


Figure 5.3 shows the enrolment rates in rural schools with a trend similar to the general one, although with a greater gap between girls and boys.



➢ **Return visit group (follow up group)**

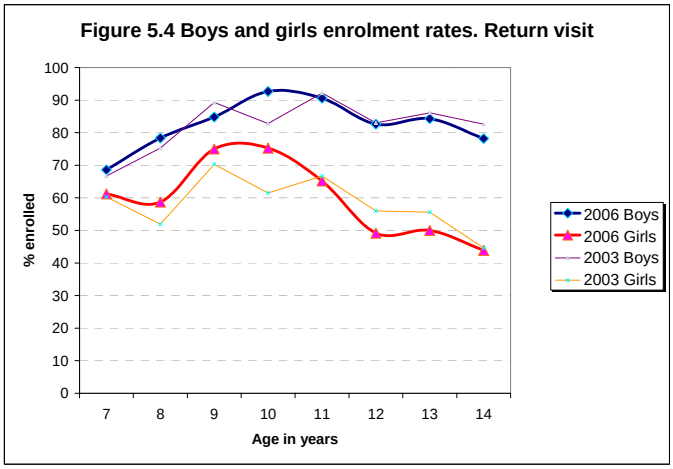
Gross enrolment rates in 2006 for the return visit group are 72% overall, 60% for girls and 82% for boys. These figures are higher than national averages (population census 2004 data shows that overall enrolment rates are 64%, 55% for girls, and 72% for boys). as well as the comparable figures for the 2006 Ex-post group. This finding would suggest that SFD interventions are continuing to provide enrolment benefits over time.

Table 5.12 SFD Impact on gross enrollment rates

	2006 Return visit			2003 Ex-post		
Age	Boys	Girls	Total	Boys	Girls	Total
7	68.6	61.2	65.4	66.7	60.3	63.6
8	78.4	58.7	69.3	75.3	51.9	63.9
9	84.8	75.0	80.5	89.3	70.3	79.2
10	92.7	75.3	85.0	82.8	61.5	71.9
11	90.6	65.2	78.8	92.2	66.7	82.1
12	82.6	49.2	68.7	83.0	56.0	71.4
13	84.3	50.0	67.6	86.1	55.6	71.9
14	78.2	43.9	60.7	82.6	44.6	65.6
Total	**82.3**	**59.9**	**72.1**	**81.7**	**58.2**	**70.6**
Observations	607	541	1148	600	501	1101

Source: Household Survey 2006, 2003

However, when an internal comparison is made (i.e. the follow-up sample is compared at both time periods 2003 and 2006) there is almost no difference in overall figures – enrolment rates have stayed stable over the timeframe (*Figure 5.4*). Some differences appear when the data are analysed by age and sex. Both boys and girls show an increase in the enrolment rates of the first four age groups (7 to 10). However, in 2006 girls show a drop by nearly 30% in enrolment rates between the ages of 10 and 14, while boys tend to maintain more of a plateau. This finding suggests that the SFD may need to place more emphasis on both enrolling and retaining female students (for instance, by building more secondary schools for girls).



- **Multivariate Analysis**

To isolate factors that may be affecting enrolment rates (the dependent variable), a conditional, fixed-effects logit regression model was applied to the data[12] (*See Box 5.1*). The model considers the project's fixed effects and controls variables at the household (e.g. income) or demographic level (age, sex) to obtain a statistical certainty that any observed effect can be attributed to the SFD project (at least partially as the control group is inferred for the purposes of the analysis). The variables analyzed were: SFD ex-post / baseline community

Box 5.1 The multivariate conditional (fixed-effect) logit regression model

This model considers the project's fixed effects and controls that of variables at household, person or children level, depending of each specific situation. In other words, a change in the enrolment rate, for instance, may be attributable to several factors like project-related factors (e.g., if the project built a new school or just improved an existing one) or household-related factors (e.g., a sudden augment of the school age child population). The model controls these effects to obtain a statistical certainty that any observed effect, if any, can be attributed to the SFD project within the methodological limits explained in Chapter I.

The analysis uses the following logit model:

$$Pr\ (Y_{it} = 1/\ X_{it}) = F(A_i + B_1.EXPOST + B_2XI_{it} + B_3XH_{it})$$

Where F is the cumulative logistic distribution:

$$F(z) = \exp(z) / \{1 + \exp(z)\}$$

i = 1,2 …, n denotes the independent units, in this cases the Project.
t = 1,2…, Ti denotes the observations for the subsequent project (in this case for the 2003 and 2006).

EXPOST: Take the value 0 for 2003 Baseline and 1 for 2006 Ex-post
XI: Variables for the individual
XH: Variables for the household

The analysis is made with the ODDS; where,
ODDS = Probability ($Y_{it} = 1$) / Probability ($Y_{it} = 0$).
The ODDS is no more than the probability of having a characteristic against the probability of not having such a characteristic.
In this case, the $\exp(B_1)$ estimates the factor by which the odds in 2006 changes when compared to the 2003 odds, independently of the rest of variables in the model; in other words, the probability that the characteristic under examination is present in 2006 with respect to 2003.

The analysis team used the commands XTLOGIT with FE option of the Stata version 9, Stata Corp 2005, Release 9, College Station, Texas, USA.

[12] The 2003 report also employed a multivariate regression model to test their hypothesis about that SFD was a significant factor in the changes. However, this model used rural/urban as an independent variable. Because we are actually comparing the same households at both assessment periods (which was not the case in 2003), urban/rural has been used as a constant and not a variable characteristic (it is a longitudinal analysis). The fixed effect logistic model cannot estimate the effect of constant factors. An alternative approach was to run separate regressions for each geographic zone, however, the sample of urban households was too small to attain meaningful outputs.

school (dummy); the socio-economic status of the household[13], education and sex of the household head, age and sex of the pupil. The model will confirm if a change in the dependent variable occurred during the period after several variables at the household level are under control[14].

Table 5.13 presents the result of this analysis. The findings clearly demonstrate that the enrolment rates have increased in the communities affected, and the SFD investment has been a significant factor in increasing school enrolment (OR = 1.34)[15]. This impact is statistically significant (Sig = 0.016)[16].

Table 5.13 Results of the logistic regression of factors that influence on the gross enrolment rate for children aged 7 to 14, include fixed effect for project

Index. Variable	TypeVar.	Value *	OR	Sig
SFD invest. completed	Cat	Yes	1.342	**0.016**
Sex of child	Cat	Fem	0.272	**0.000**
Age of child (years)	Cont	n.a.	0.969	0.236
Sex of h/hold head	Cat	Fem	1.373	0.187
HH head educational Condition	Cat	Illiterate	Reference Val.	
HH Head reads/writes before secondary level	Cat	reads/writes bef. sec.	2.183	**0.000**
HH head with secondary or higher	Cat	Sec. or superior	5.656	**0.000**
Per capita Annual Income (000), (1999 = 100)	Cont	n.a.	1.437	0.329

Note: Cat= categorical, cont = continuous, OR = Odd Ratio; bold print means significance level <0.05. Number of cases: 1834
* This is the value assumed by the categorical variable.

The analysis indicates that gender and education level are the other key factors having a significant impact on the enrolment rate:

- There is a large reduction in the probability of enrolment for female students (OR= 0.27, and Sig < 0.000).
- As compared with illiterate household heads, the probability of a child's enrolment is increased if the household head has reading and writing skills (OR = 2.18 and Sig = 0.000).
- Similarly, the probability of a child being enrolled is significantly impacted by whether the household head has secondary or higher levels of education (OR = 5.66 and Sig = 0.000).

Increased household income shows an impact on the probability of being enrolled, but it is not a statistically significant relationship (OR = 1.44 and Sig = 0.329)[17]. The overall low

[13] The household survey included a section with questions to estimate the annual income of household members. This is a different and more direct method than that used in the past 2003 evaluation, which was based on proxy income variables and per capita income information taken from the 1999 National Population Survey.

[14] Independent variables that might be highly correlated with the SFD's intervention were not included in the analysis.

[15] The statistic that measures size and direction of the impact of each independent variable on the dependent variable is the odds ratio (OR) for the probability of a "yes" answer subject to the value taken by the variable. When the OR = 1, the independent variable does not tend to reduce or increase the probability of being enrolled. If OR > 1, an increase in the value of the independent variable increases that probability, and when OR < 1, it reduces it.

[16] When Sig > 0.1,the impact of the independent variable (as reflected in the OR) is not statistically significant.

[17] Because the OR is greater than 1 (1.44), we can say that the relationship works in an expected (direct or positive) direction; that is, the higher the income level, the greater the probability of being

income of the population may partially explain this result – the income differentiation within the community is not enough to affect school enrolment.

Because gender is such an important determinant of school enrolment, the analysts conducted a further gender-specific analysis, in order to clarify the effect of the other independent variables, in particular the presence of the SFD support. *Table 5.14* presents the results in the case of girls and *Table 5.15* in the case of boys.

Table 5.14 Results of the logistic regression of factors that influence on the gross enrolment rate for girls aged 7 to 14, include fixed effect for project

Indep. Variable	TypeVar.	Value *	OR	Sig
SFD invest. completed	Cat	Yes	1.580	**0.006**
Age of child (years)	Cont	n.a.	0.867	**0.000**
Sex of h/hold head	Cat	Fem	0.983	0.958
HH head educational Condition	Cat	Illiterate	Reference Val.	
HH Head reads/writes before secondary level	Cat	reads/writes bef. sec.	1.856	**0.001**
HH head with secondary or higher	Cat	Sec. or superior	8.591	**0.000**
Per capita Annual Income (000), (1999 = 100)	Cont	n.a.	0.906	0.844

Note: Cat= categorical, cont = continuous, OR = Odd Ratio; bold print means significance level <0.05. Number of cases: 836
* This is the value assumed by the categorical variable.

The analysis shows that SFD interventions have a positive impact on girls' enrolment (OR = 1.58 Sig = 0.006). The age of the girl is also a significant factor – older children are less likely to be enrolled. In comparison to the situation of an illiterate household head, higher educational conditions greatly increase the probability of girls' enrolment. As in the first regression, increased per capita income did not seem to have a positive impact on girls' enrolment.

Table 5.15 Results of the logistic regression of factors that influence on the gross enrolment rate for boys aged 7 to 14, include fixed effect for project

Indep. Variable	TypeVar.	Value *	OR	Sig
SFD invest. completed	Cat	Yes	1.189	0.373
Age of child (years)	Cont	n.a.	1.130	**0.004**
Sex of h/hold head	Cat	Fem	2.689	**0.038**
HH head educational Condition	Cat	Illiterate	Reference Val.	
HH Head reads/writes before secondary level	Cat	reads/writes bef. sec.	2.653	**0.000**
HH head with secondary or higher	Cat	Sec. or superior	3.004	**0.009**
Per capita Household Annual Income (000), (1999 = 100)	Cont	n.a.	1.643	0.415

Note: Cat= categorical, cont = continuous, OR = Odd Ratio; bold print means significance level <0.05. Number of cases: 842
* This is the value assumed by the categorical variable

In the case of boys (*Table 5.15*), SFD interventions do not show a statistically significant impact. Older boys are more likely to be enrolled (the opposite trend to that of girls). Where there is a woman as head of the household, the boy's probability of being enrolled increases. As with the other regressions, the educational status of the head of household has a positive impact on the probability of a boy being enrolled.

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enrolled at school. However, the fact that the OR is not statistically significant means that the correlation might be a random output, and therefore the assumption of a positive relationship between the two variables could be misleading.

5.2.3.3 The Impact of SFD on Grade for Age in Primary Education

- **Current intervention group**

SFD has also sought to improve educational quality through new classrooms in urban schools, in order to reduce overcrowding, and project components to finance textbooks and desks. Such investments should lead to higher pass-through rates. The desired outcome of these efforts is an increase in the proportion of children who are up to date with their education (that is, at the right grade for their age). The analysis was undertaken for children aged between the ages of 8 (when at a minimum they should have completed first grade) and 13 (when they should have completed sixth grade). It was hypothesized that the SFD investment would increase the proportion of children at the right grade for their age.

The comparison of grade-for-age status of children, shown in *Table 5.16*, suggests that a change has not occurred in the intervention group in the period. In 2003, 40% of the children were behind the expected grade level, compared to 39% in 2006, a change that is not statistically significant. Small positive changes are observed at ages 9 to 12 in coincidence with the intervention period (except for age 8 where a change has not occurred).

Table 5.16 Proportion of children up to date and not up to date with their primary education

Age:	8	9	10	11	12	13	Aver
	% of the children in the group						
Completed grade level:	**2003 Baseline**						
None.-Pre.-Alph.	24.3	22.9	16.9	19.8	24.6	20.7	
Basic 1 Year	21.3	9.2	9.2	3.3	1.6	0.9	
Basic 2 Years	27.9	19.3	15.4	8.8	5.7	3.6	
Basic 3 Years	19.9	28.4	23.1	11.0	12.3	5.4	
Basic 4 Years	4.4	17.4	20.8	22.0	12.3	6.3	
Basic 5 Years	2.2	1.8	10.8	18.7	16.4	9.0	
Basic 6 Years	0.0	0.9	3.1	15.4	15.6	23.4	
Basic 7 Years	0.0	0.0	0.8	1.1	8.2	22.5	
Basic 8 Years	0.0	0.0	0.0	0.0	2.5	5.4	
Basic 9 Years	0.0	0.0	0.0	0.0	0.8	2.7	
Secondary-Superior	0.0	0.0	0.0	0.0	0.0	0.0	
% not up to date	**24.3**	**32.1**	**41.5**	**42.9**	**56.6**	**45.9**	**40.2**
	2006 Ex-post						
None.-Pre.-Alph.	25.4	14.2	16.1	10.3	12.8	18.6	
Basic 1 Year	19.4	13.3	5.1	2.3	3.8	3.4	
Basic 2 Years	31.3	20.4	15.3	8.0	5.3	5.9	
Basic 3 Years	22.4	31.9	24.6	14.9	14.3	4.2	
Basic 4 Years	1.5	15.0	18.6	29.9	15.8	8.5	
Basic 5 Years	0.0	3.5	16.9	17.2	18.8	16.1	
Basic 6 Years	0.0	0.9	1.7	12.6	17.3	16.9	
Basic 7 Years	0.0	0.0	0.0	4.6	9.0	16.9	
Basic 8 Years	0.0	0.0	0.0	0.0	2.3	8.5	
Basic 9 Years	0.0	0.9	1.7	0.0	0.8	0.8	
Secondary-Superior	0.0	0.0	0.0	0.0	0.0	0.0	
% not up to date	**25.4**	**27.4**	**36.4**	**35.6**	**51.9**	**56.8**	**39.1**
Significance of the total change 2003-2006							0.383

Note: The gray shadow indicates the combinations of age for grade that are below the desired norm; that is, children that are not up to date.

Source: Household Survey 2006, 2003. N = 703 (2006) and 699 (2003).

A gender-specific analysis (*Tables 5.17 and 5.18*) shows that being up-to-age in school has greatly improved for girls, while remaining virtually unchanged for boys. The proportion of girls that remains behind their respective age-for-grade goes down from 51% in 2003 to 44% in 2006, while it increases from 30% in 2003 to 34% in 2006 for boys. These results are coherent with those observed in the previous section regarding school enrolment, a trend that is clearly benefiting girls more than boys, thus narrowing the gender gap on education. Despite these positive trends, the proportion of girls behind their expected grade level is still higher than boys.

Table 5.17 Proportion of girls up to date and not up to date with primary education

Age:	8	9	10	11	12	13	Aver
	% of the children in the group						
Completed grade level:	**2003 Baseline**						
None.-Pre.-Alph.	25.7	29.1	22.0	38.6	37.5	32.7	
Basic 1 Year	22.9	9.1	16.9	4.5	3.6	0.0	
Basic 2 Years	28.6	25.5	16.9	13.6	5.4	3.8	
Basic 3 Years	17.1	21.8	18.6	13.6	8.9	5.8	
Basic 4 Years	5.7	12.7	11.9	9.1	14.3	3.8	
Basic 5 Years	0.0	1.8	10.2	9.1	8.9	11.5	
Basic 6 Years	0.0	0.0	3.4	9.1	14.3	19.2	
Basic 7 Years	0.0	0.0	0.0	2.3	3.6	13.5	
Basic 8 Years	0.0	0.0	0.0	0.0	3.6	5.8	
Basic 9 Years	0.0	0.0	0.0	0.0	0.0	3.8	
Secondary-Superior	0.0	0.0	0.0	0.0	0.0	0.0	
% not up to date	**25.7**	**38.2**	**55.9**	**70.5**	**69.6**	**57.7**	**51.2**
	2006 Ex-post						
None.-Pre.-Alph.	32.1	19.7	23.3	13.0	26.8	28.6	
Basic 1 Year	17.9	8.2	1.7	1.9	0.0	3.6	
Basic 2 Years	25.6	21.3	16.7	11.1	10.7	7.1	
Basic 3 Years	23.1	32.8	28.3	11.1	14.3	5.4	
Basic 4 Years	1.3	13.1	18.3	25.9	17.9	5.4	
Basic 5 Years	0.0	3.3	10.0	22.2	12.5	12.5	
Basic 6 Years	0.0	1.6	1.7	9.3	8.9	16.1	
Basic 7 Years	0.0	0.0	0.0	5.6	7.1	12.5	
Basic 8 years	0.0	0.0	0.0	0.0	1.8	8.9	
Basic 9 Years	0.0	0.0	0.0	0.0	0.0	0.0	
Secondary-Superior	0.0	0.0	0.0	0.0	0.0	0.0	
% not up to date	**32.1**	**27.9**	**41.7**	**37.0**	**69.6**	**62.5**	**44.1**
Significance of the total change 2003-2006							0.091

Source: Household Survey 2006, 2003. N= 365 (2006) and 336 (2003)

Table 5.18 Proportion of boys up to date and not up to date with primary education							
Age:	8	9	10	11	12	13	Aver
	% of the children in the group						
Completed grade level:	**2003 Baseline**						
None.-Pre.-Alph.	22.7	16.7	12.7	2.1	13.6	10.2	
Basic 1 Year	19.7	9.3	2.8	2.1	0.0	1.7	
Basic 2 Years	27.3	13.0	14.1	4.3	6.1	3.4	
Basic 3 Years	22.7	35.2	26.8	8.5	15.2	5.1	
Basic 4 Years	3.0	22.2	28.2	34.0	10.6	8.5	
Basic 5 Years	4.5	1.9	11.3	27.7	22.7	6.8	
Basic 6 Years	0.0	1.9	2.8	21.3	16.7	27.1	
Basic 7 Years	0.0	0.0	1.4	0.0	12.1	30.5	
Basic 8 Years	0.0	0.0	0.0	0.0	1.5	5.1	
Basic 9 Years	0.0	0.0	0.0	0.0	1.5	1.7	
Secondary-Superior	0.0	0.0	0.0	0.0	0.0	0.0	
% not up to date	**22.7**	**25.9**	**29.6**	**17.0**	**45.5**	**35.6**	**30.0**
	2006 Ex-post						
None.-Pre.-Alph.	16.1	7.7	8.6	6.1	2.6	9.7	
Basic 1 Year	21.4	19.2	8.6	3.0	6.5	3.2	
Basic 2 Years	39.3	19.2	13.8	3.0	1.3	4.8	
Basic 3 Years	21.4	30.8	20.7	21.2	14.3	3.2	
Basic 4 Years	1.8	17.3	19.0	36.4	14.3	11.3	
Basic 5 Years	0.0	3.8	24.1	9.1	23.4	19.4	
Basic 6 Years	0.0	0.0	1.7	18.2	23.4	17.7	
Basic 7 Years	0.0	0.0	0.0	3.0	10.4	21.0	
Basic 8 years	0.0	0.0	0.0	0.0	2.6	8.1	
Basic 9 Years	0.0	1.9	3.4	0.0	1.3	1.6	
Secondary-Superior	0.0	0.0	0.0	0.0	0.0	0.0	
% not up to date	**16.1**	**26.9**	**31.0**	**33.3**	**39.0**	**51.6**	**33.7**
Significance of the total change 2003-2006							0.229
Source: Household Survey 2006, 2003. N= 338 (2006) and 363 (2003)							

➢ Return visit group (follow up group)

The proportion of children behind the expected grade level increased from 37 to 39% during the study period. In the case of girls the change went from 48% to 47% and for the boys from 29% to 31%, but these changes are small and are not statistically significant. This lack of change suggests that the gap between girls and boys has not been furthered narrow over the longer term.

➢ Multivariate analysis

Multivariate analysis was undertaken to establish whether these differences are attributable to factors other than the SFD investment, (within the limits explained in the chapter on methodology). Again a multivariate conditional (fixed-effect) logit regression model was applied (*see above Box 5.1*).

Table 5.19 Logistic regression for factors that influence being up to date in primary education for children aged 8 to 13, include fixed effect for project

Indep. Variable	TypeVar.	Value / 1	OR	Sig
SFD invest. completed	Cat	Yes	1.236	0.113
Sex of child	Cat	Fem	0.341	**0.000**
Age of child (years)	Cont	n.a.	0.692	**0.000**
Sex of h / hold head	Cat	Fem	1.167	0.552
HH head education level	Cat	Illiterate	Reference Val.	
HH Head reads / writes before secondary level	Cat	reads / writes bef. sec.	2.179	**0.000**
HH head with Secondary or superior education	Cat	Sec. or superior	3.963	**0.000**
Per capita Annual Income(000) , (1999 = 100)	Cont	n.a.	1.139	0.751

Note: Cat= categorical, cont = continuous, OR = Odd Ratio; bold print means significance level <0.05. Number of cases: 1363

1/ This is the value assumed by the categorical variable.

General logit regression does not show a statistically significant impact of SFD interventions. The analysis confirms that girls and older children are less likely to be up to date. (OR = 0.341 Sig. 0.000 for girls; OR = 0.692 Sig.0.000 for older). The probability of being up to date at school is positively influenced by higher education of the household head (OR = 2.179 for literate head with a basic level; OR = 3.963 for literate head with secondary or higher level, Sig. = 0.000 for both cases). The per capita income does not show a significant impact, although the model does show that higher incomes generally lead to an increased probability of being up to date.

Table 5.20 Logistic regression for factors that influence being up to date in primary education for (separately) boys and girls aged 8 to 13, include fixed effect for project

Indep. Variable	TypeVar.	Value *	Girls		Boys	
			OR	Sig	OR	Sig
SFD invest. completed	Cat	Yes	1.724	**0.007**	0.985	0.936
Age of child (years)	Cont	n.a.	0.636	**0.000**	0.730	**0.000**
Sex of h / hold head	Cat	Fem	0.817	0.592	1.846	0.151
HH head education level	Cat	Illiterate	Reference Val.		Reference Val.	
HH Head reads / writes before secondary level	Cat	reads / writes bef. sec.	2.259	**0.000**	2.090	**0.000**
HH head with secondary or superior education	Cat	Sec. or superior	7.612	**0.000**	2.156	**0.040**
Per capita Annual Income(000) , (1999 = 100)	Cont	n.a.	0.567	0.323	1.795	0.354

Note: Cat= categorical, cont = continuous, OR = Odd Ratio; bold print means significance level <0.05. Number of cases: 648

* This is the value assumed by the categorical variable.

Running the regression for girls and boys separately (*Table 5.20*) confirms that SFD has a greater effect on improving girl's status of being up to date at school. Age and educational status of the household' head are also statistically significant factors for being up to date at school for both boys and girls.

5.2.4 Beneficiary Assessment: Perception of benefits

This section takes into consideration the perspective from the beneficiaries in the education sector, and is based on eight case studies: two of expanding and developing basic education infrastructure (Al Abadelah and Al Zubair), three of Rural Girl's Education Projects (Al Thawra, Alwfa and Al Yuser), and three involved in Quality Education (Hafsa, Al Razee, and Khaled Bin Alwaleed). Regular intervention projects (education infrastructure) were recently finished and the rest were still under implementation when the visit took place, thus it was too early to perceive medium and long term impacts. People's perceptions are based on expectations rather than actual benefits. [18].

Expanding and development the basic education infrastructure program

This program contributes to improving the basic education infrastructure through building new schools to expand the enrolment capacity of children at the age of basic education, rehabilitation of some educational buildings to improve the education environment to be more attractive and supportive to students' development. In addition, the program aims at adding classrooms and education annexes to existing schools to lower the crowdedness in the schools, or including education classes that are conducted outside the school premises. As well as providing equipment and furniture to school facilities to enable them to play their roles. All the educational facilities were built or are being building by private constructors through tender process.

Perceived benefits

Participants in focal groups mentioned several types of benefits, such us: higher enrolment, more comfortable facilities and furniture (classrooms, chairs, toilets, store-room), training for teachers, new space for community gathering, and others.

Rural Girl's Education Projects

This pilot program targeted five sub-districts in five governorates where the gender gap in enrolment education exceeds 90%. The program aims to increase girls' education in these targeted areas, and consists of the following components: community structures, awareness and community mobilization, capacity building and infrastructure to support the Ministry of Education efforts to narrow the gaps between girls and boys and offer some solution for these

[18] There are other issues explored by this study which can be consulted in the complete Beneficiary Assessment Report. *See Annex 8*

problems. The three visited projects were still under implementation at the time of the field visit.

Perceived benefits

Participants in focal groups mentioned several types of benefits, such us: Decrease of crowded classrooms, more privacy for female teachers and students, employment opportunities for female teachers, decrease of female illiteracy, better and more participative environment involving teachers, students and parents.

Several drawbacks were also described:

While men's focus groups agreed that education projects benefit everybody in the village, several cited the exception of elder girls that quit school because there are no female teachers:

- *There is a shared school and girls quit because of mixing with boys…Many don't send their daughters because there are no female teachers* (Men Focus Group, Al Thawra)
- *If the girl is elder, she refuses to go school where male teacher is there* (Women Focus Group, Alwfa'a)

Others mentioned that the poor are excluded from the project's benefits because they could not afford the school fees:

- *The poor they can not afford school fees* (Men Focus Group, Alwfa'a).

Quality Education Program

This Program has been implemented since 2005 in pilot urban schools based on clear criteria in order to provide models of schools of quality education and to lead to changes in the concepts, approaches and practices of education. It aimed to move the focus from quantity to quality, from teaching to learning and from teacher to student in order to improve the education outcomes. This will be attained through paying attention to improved elements of school environment, school administration, teachers, supervisors, parents, students, school activities and others. The program includes 17 schools in 9 governorates. The program has several components, including developing community structures and parent councils, training teachers and administrators, and providing equipment.

Perceived benefits

All respondents highlighted the virtues of the new learning environment after teachers were trained to use innovative techniques. Key informants provided a brief picture of the changes operating in the SFD supported schools:

- *Parents are happy for their children who are happy at their school, where water is (also) available. All this helps to improve education process and meet all students' requirements* (Key informant , Al Razee)
- *Yes, it solved a lot of issues and problems which were very difficult and only in our dreams we could resolve them, such as necessities and furniture and equipment and training for the teachers,*

knowledge transfer to students and ending violence against students at school in their interaction with each other and with the school and with the administration and with teachers (Key informant, Al Razee)

- *We achieved two things in our school, teachers commitment and students devotion* (Key informant, Khaled Bin Alwaleed).

5.3 Health Projects

5.3.1 Introduction

Health conditions in Yemen are among the worst in the world. For instance, infant, under-five and maternal mortality rates remain high: 74.8 infants and 102 children under five die for every 1,000 live births. 365 mothers die for every 100,000 live births, partly because prenatal, intra-natal and post-natal cares are underused (CSO, March 2003).

The SFD has intervened through projects focused on building health facilities, providing medical training, and strengthening community health services. In its first phase, the SFD focused on meeting community-defined needs for health care using the demand-side approach. Projects implemented under this vision assumed that the SFD would provide infrastructure, health authorities would cover operating costs and provide supervision, and communities would participate in facility management and maintenance through local health committees formed under SFD leadership. During the second phase the approach was refined and the SFD adopted a more exigent policy to build health facilities, emphasizing availability of well-trained health workers, particularly in rural areas according to special needs (female health care providers) and priority interventions (reproductive health, malaria prevention, neonatal care and psychiatric care). As a result, during the second and third phases the SFD interventions have focused on:

Second Phase

-Supporting and diversifying pre-service training to meet the needs of deprived areas. Paramedical staff, especially females, is trained by supported health training institutes to become medical assistants, community midwives, nurses, lab technician assistants and x-ray technicians.

-Establishing health information and management systems with community participation

-Involving district health authorities and local councils. Local health authorities to the MoH are sensitized on the need for partnership in health management and to issues hindering facilities from providing appropriate services.

Third Phase

-Training of service providers.

-Improving MoH's quality and coverage capacity.

-Strengthening community and local authority partnership to improve health services.

-Addressing reproductive health and neonatal care.

5.3.2 Contribution to National Stock of Infrastructure

During the period 2003-2005, the SFD built 40 new health centers and 40 health units, which represent 2.2% and 0.6% of the national stock registered for the same period (CSO, 2006). The

SFD also built from scratch 45 sections of hospitals, 14 health institutes and training centers and 4 other health centers. It has also extended, rehabilitated, and provided equipment and training to 76 different health facilities. Fifty four projects in training (mostly for midwives) were undertaken for the benefit of 1,175 women and 233 men (*See Table 5.21*).

During the period 2003-2005 the national stock of health units and health centers increased by 558 and 147, respectively. Thus, the SFD contribution represents 7% of the health units and 27% of the health centers built during the period 2003-2005. The overall financial contribution of SFD to the health sector has ranged from 1% in 1998 to 9% in 2003.

Table 5.21 SFD Health projects completed, 2003-2005

Facilities	From scratch	Extention	Rehabilitation
Health center	40	4	7
Health unit	40	4	7
Section of hospitals	45	6	8
Health institutes and training centers	14	8	2
Other centers	4	2	1
Total	143	24	25

Source: SFD-MIS

Table 5.22 Overall financial contribution to SFD to the Health sector in Yemen, 1998-2005 (US$)

	1998	1999	2000	2001	2002	2003	2004	2005*
Investment-National Level	36,193,478	21,586,568	34,218,581	35,172,087	34,388,393	48,432,595	120,686,778	88,867,799
SFD contribution-contracted	390,051	1,629,506	1,248,757	1,548,371	3,009,352	4,509,012	2,628,247	2,474,409
SFD contribution-Disbursed	345,928	1,500,586	1,191,055	1,520,551	2,970,531	4,480,899	2,613,346	2,421,288
SFD contribution-contracted (%)	1.1	7.6	3.7	4.4	8.8	9.3	2.2	2.8
SFD contribution-Disbursed (%)	1.0	7.0	3.5	4.3	8.6	9.3	2.2	2.7

* Provisional
Source: Central Statistical Organization and SFD-MIS

5.3.3 Service Production and Sustainability

This section describes general information on the production and sustainability of services in the health facilities in the sample, including staffing patterns, services, operating problems and maintenance. Each section compares information for both the short term analysis of the current intervention group (comparison of 2006 ex-post sample with the baseline data collected in 2003, for those projects implemented between 2003 and 2006) and the longer term return visit analysis (comparison of 2006 return visit data with 2003 ex-post data for project implemented between 1999 and 2002).

5.3.3.1 General information

The current intervention sample includes 21 projects initiated in the period 2003 to 2006 (13 are health units, 6 are health centers, and 2 are hospitals). The return visit sample also includes 21 projects (12 health units, 7 health centers, and 2 hospitals).

In the 2006 Ex-post group the SFD contribution included building new rooms from scratch and rehabilitating or amplifying existing ones, as shown in *Table 5.23.*

Table 5.23 Type of support provided by SFD to health facilities in the sample					
Components	Total	Type SFD Intervention			
		New	Completed	Rehabilitated	Untouched
Clinical room (consultation, child care/immunization, pregnancy/FP, delivery)	83	58	1	9	15
Rest rooms (male, female, mixed)	73	48	0	10	15
Other rooms (waiting, administration, pharmacy, laboratory)	87	54	0	6	27
Source: Project Survey, 2006					

The intervention also provided furniture to 16 facilities, medical equipment to 15, staff training to 10, forming and training a health committee to 7, a generator to 5, and other support to 3.

5.3.3.2. Staffing patterns

- **Current intervention group**

Table 5.24 shows the average staff composition of the health facilities surveyed. There have been some marked improvements in the staffing of the health facilities including the average number of staff per facility between 2003 and 2006, across all categories.

Table 5.24 Staffing patterns of health facilities.								
Category of staff	2006 Ex-post				2003 baseline			
	Total	Average	Facilities that has…		Total	Average	Facilities that has…	
Physicians	25	1.2	10	(48%)	27	1.3	8	(38%)
Professional nurses	46	2.2	11	(52%)	12	0.6	3	(14%)
Midwives	31	1.5	14	(66%)	18	0.9	8	(38%)
Auxiliary nurses	15	0.7	6	(29%)	11	0.5	4	(19%)
Medical assistants	18	0.9	12	(57%)	14	0.7	8	(38%)
Others (health guides, cleaners, escorts, others)	127	6.0	19	(90%)	64	3.0	10	(48%)
Number of facilities observed	21				21			
Source: Project Survey 2006, 2003								

The percentage of facilities that have physicians has increased in the period from 38% to 48% in 2006, professional nurses from 14% to 52%, and midwives from 38% to 66%. In addition, medical assistants are present in 57% of the ex-post health facilities as opposed to 38% of the baseline.

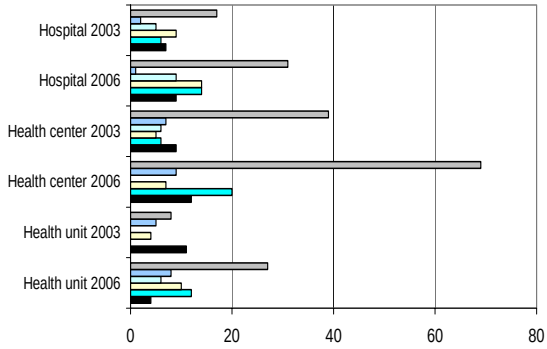
These improved results are contrary to the perception of a shortage of staff as reported by survey respondents in section 3.3.5. However, a breakdown of data on shortage of staff by type of facility and rural/urban shows differing trends (discussed in greater detail below), perhaps explaining this view.

The data show evidence of an increase in the use of temporary (contracted) and volunteer technical staff in the before and after scenarios: in 2006, 16% of staff is temporary and 10% are volunteers, while the corresponding figures for the baseline situation are 4% and 7%. The proportion of permanent staff is lowest for physicians and professional nurses in both situations. The data suggest the need for a further effort to provision the necessary budget for the hiring of permanent staff. Generally, most of the technical personnel, excepting midwives, are males.

Staff distribution by type of health facility is shown in *Figure 5.6.* "Other" staff, where most of the administrative and non-medical personnel are included, has grown more than any other category, particularly in health centers. By contrast, categories such as professional nurses and midwives have grown marginally, and the number of physicians has actually gone down in the case of health units and hospitals.

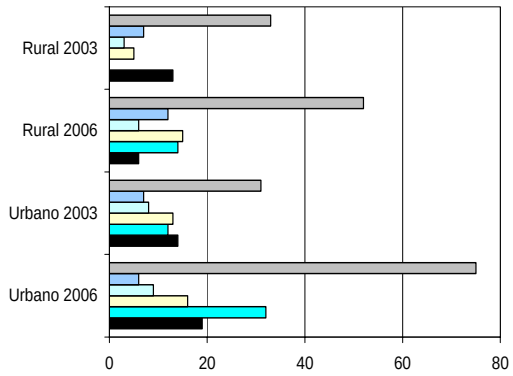
A break down by geographic area shows that urban areas benefit more from the increasing numbers of health staff, though the number of professional staff is increasing in both. (*Figure 5.7*)

Figure 5.6 Change in staff patterns by type of health facility 2003-2006



	Health unit 2006	Health unit 2003	Health center 2006	Health center 2003	Hospital 2006	Hospital 2003
Others (health guides, cleaners, escorts, others)	27	8	69	39	31	17
Medical assistants	8	5	9	7	1	2
Auxiliary nurses	6	0	0	6	9	5
Midwives	10	4	7	5	14	9
Professional nurses	12	0	20	6	14	6
Physicians	4	11	12	9	9	7

Figure 5.7 Change in staff paterns Urban/Rural



	Urbano 2006	Urbano 2003	Rural 2006	Rural 2003
Others (health guides, cleaners, escorts, others)	75	31	52	33
Medical assistants	6	7	12	7
Auxiliary nurses	9	8	6	3
Midwives	16	13	15	5
Professional nurses	32	12	14	0
Physicians	19	14	6	13

Table 5.25 shows an estimation of staff absenteeism, measured by calculating the proportion of staff presence by category, over the five days preceding the survey, over a maximum number of potential days of presence. Staff absenteeism has on average remained the same since the 2003 baseline.

Table 5.25 Staff presence the last working-week by category. 2006, 2003. Average per-cent

Staff categories	2006 Ex post	2003 Baseline
Physicians	82	79
Professional nurses	92	98
Midwives	91	91
Medical assistants	90	87
Auxiliary nurses	99	93
Average	90.8	89.6

Source: Project Survey 2006, 2003

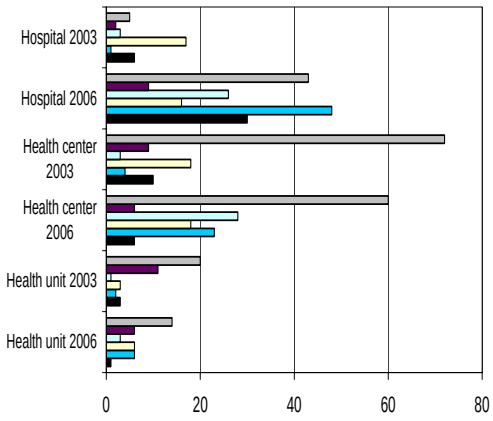
➢ **urn Visit Comparison**

5.3.3.3 Staffing patterns

Approximately one-third of health facilities have a physician present, and approximately half have a professional nurse, midwife, and/or medical assistant. The average number of technical staff per facility for all categories has increased between 2003 and 2006, while the percentage of facilities with physicians has decreased over the time period, suggesting a concentration of staff at a smaller number of health facilities.

In 2006, 69% of physicians are male, suggesting a reasonably good mix of both male and female doctors. 100% of medical assistants are male and 100% of professional and auxiliary nurses are female. A concern was expressed in the 2003 report over the high proportion of volunteer staff, suggesting that the facilities are under-resourced. In 2006, the proportions are still relatively high: 10% of physicians, 0% of professional nurses, 25% of auxiliary nurses, 20% of medical assistants, and 30% of midwives are volunteers.

Figure 5.8 Change in staff patterns by type of health facility, 2003-2006. Return visit



	Health unit 2006	Health unit 2003	Health center 2006	Health center 2003	Hospital 2006	Hospital 2003
Others (health guides, cleaners, escorts, others)	14	20	60	72	43	5
Medical assistants	6	11	6	9	9	2
Auxiliary nurses	3	1	28	3	26	3
Midwives	6	3	18	18	16	17
Professional nurses	6	2	23	4	48	1
Physicians	1	3	6	10	30	6

Figure 5.8 shows the distribution of staff according to the type of health facilities. In general, the data show the same trends as the current intervention group. This similarity extends to the urban-rural distribution. The data suggests the following trends: (i) a high increase of non-medical personnel (administrative, cleaning, etc.), (ii) a concentration on hospitals and health centers located mainly in urban areas, (iii) physicians have decreased in health units (and also in health centers in the case of the follow-up group), (iv) midwives have increased in all facilities (only in health units in the case of the follow-up group), though the quality of services in remote

rural areas needs to be checked to ensure consistency with the SFD policy to deliver services to women in their own homes.

Contrary to the current intervention group, staff absenteeism appears to have increased slightly in the return visit group. *Table 5.26* shows the proportion of staff presence by category, over the five days preceding the survey, calculated over a maximum number of potential days of presence.

Table 5.26 Staff attendance the last working-week by category. 2006, 2003. Average percent

Staff categories	2006 Return visit	2003 Ex post
Physicians	86	98
Professional nurses	89	89
Midwives	82	88
Medical assistants	91	86
Auxiliary nurses	87	100
Source: Project Survey 2006, 2003		

5.3.4.4. Services offered

- **Current intervention group**

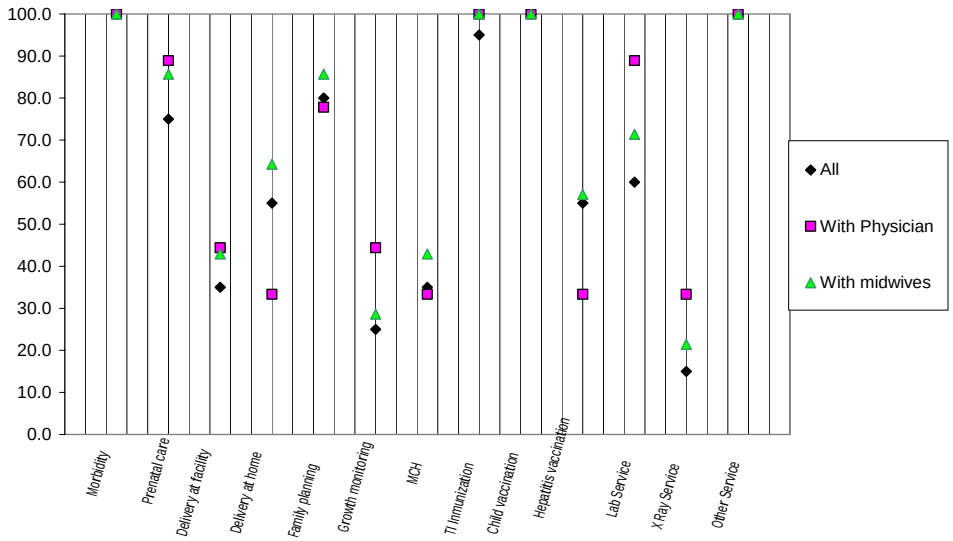
The presence of staff across all categories enhances the capacity of facilities to provide a wider range of services. *Table 5.27* shows the proportion of each type of service being provided by facilities with physicians, facilities with midwives and facilities with both. As can be seen in the table (and in *Figure 5.9*, for the ex-post group), the presence of physicians and/or midwives is associated with an increase in the availability of specific services.

Table 5.27 Percentage of health units providing selected services by availability of providers

	2006			2003 baseline		
Type of service	Both *	With Physician	With Midwife	Both*	With Physician	With Midwife
Morbidity	100	100	100	100	100	100
Prenatal care	75	89	86	69	88	88
Delivery at facility	35	44	43	54	63	75
Delivery at home	55	33	64	69	75	75
Family planning	80	78	86	54	75	63
Growth monitoring	25	44	29	39	63	50
MCH	35	33	43	54	88	75
TI immunization	95	100	100	100	100	100
Child vaccinations	100	100	100	92	88	88
Hepatitis vaccination	55	33	57	85	88	88
Lab service	60	89	71	46	63	75
X ray service	15	33	21	15	25	25
Other service	100	100	100	39	50	63
Average	64	68	69	63	74	74

* Both means: with a physician and midwife
Source: Project Survey 2006, 2003

Figure 5.9 Variations in service mix by presence of selected staff (ex-post group)



Closing of health facilities can affect the availability of services offered. Health facilities start their morning shift between 7.30 and 8.00 am. The evening shift is more variable, with an average opening at 6.00 pm. In the week before the survey, where data were available, there did not seem to be a major problem related to closing of facilities: one out of 21 ex-post clinics was closed during three days for an immunization campaign, while 2 of the 14 reporting baseline facilities had a one-day closing linked to staff vacations.

Not all services are provided every day. *Table 5.28* shows the baseline and ex-post proportions of days when the services were offered on the day of the survey and four working days preceding it.

Table 5.28 Frequency of health services provided

Service provided	2006	2003
	% of days when service is offered	
Morbidity consultation (OPD)	84	97
Prenatal care	44	33
Child Development Clinic	14	14
Family Planning	48	19
Vaccinations	41	35
Deliveries	35	27
Averages number of patients / day	54	30

Source: Project Survey 2006, 2003

While the frequency of most services (except morbidity consultations and child development clinic) has improved since 2003, the delivery of daily, integrated services, especially preventive services, is ad-hoc and far from being regular. This implies that patients in need of these services may not get treatment or be seen to on the day of the visit to the health facility and / or may have to make another visit to be seen.

The average number of patients / day has increased from 30 at 2003 to 54 by 2006. Assuming that the surveyed facility is the only source for the provision of health services, that the flux of patients observed at the time of survey is representative of the overall utilization, and that the services are delivered 260 days per year, using the average number of the beneficiary

population (14,905), the resulting utilization rate is 0.94 consultations per year per person in 2006 and 0.52 in 2003.

Information related to essential equipment and drug supplies in the health centers was collected for the ex-post facilities and the corresponding baseline facilities. On average around 79% of facilities in 2006 had access to 21 essential pieces of equipment, compared to an average of 63% in 2003. This includes several new pieces that did not exist in the baseline facilities in 2003.

Table 5.29 (below) shows the pieces of equipment according to their percentage of availability and their condition.

Table 5.29 Stock outs of essential equipment in health facilities. 2006, 2003

Equipment	2006 Expost					2003 Baseline				
	% of facilities that have…	Condition			Total	% of facilities that have	Condition			Total
		Good	Fair	Bad			Good	Fair	Bad	
Infant Clinic Metric Scale	80	86	12	0	100	54	29	71	0	100
Sphygmomano Meter	95	84	5	11	100	85	64	27	9	100
Stethoscope Binaural Complete	100	85	15	0	100	85	73	27	0	100
Stethoscope Foetal Pinard Mouaural	60	100	0	0	100	46	67	33	0	100
Cathereter	60	100	0	0	100	39	75	25	0	100
Boiling Disinfector Instrument	85	88	6	6	100	54	57	43	0	100
Table Examining Folding	75	100	0	0	100	69	44	56	0	100
Physician's Adult Scale	70	100	0	0	100	25	75	25	0	100
Themometer Clinical Oral Dual Cels\Fahr Scale	90	94	6	0	100	85	82	9	9	100
Refrigerator For Vaccinations Preservation	85	100	0	0	100	85	55	27	18	100
Screen(Bed Screen 3 Folders With Wheels)	85	88	12	0	100	54	57	29	14	100
Bassinet (Babys Cot)	60	92	8	0	100	15	50	0	50	100
Forceps Hemostat Curved Kelly	60	100	0	0	100	54	50	50	0	100
Scissors Gauze	85	94	0	6	100	85	58	25	17	100
Scissors Surgical Straight Baby	95	90	5	5	100	77	80	20	0	100
Basin Kidney	90	94	6	0	100	77	67	33	0	100
Forceps Sterilizer Cheatle	75	100	0	0	100	85	55	36	9	100
Jar Forceps	65	100	0	0	100	62	63	37	0	100

Source: Project Survey. 2006, 2003

Of the equipment available in the ex-post facilities, an average 94% was deemed to be in good condition, up from 61%, in the baseline facilities. Items most often in a state of disrepair included sphygmomanometers, and disinfector instruments.

From the above table, it is evident that the stock and condition of essential equipment in the ex-post healthcare facilities has improved significantly across all the categories since 2003.

Availability of drug supplies constitutes an essential element of the perceived quality of health services and a powerful motivator for increased use of services. The evaluation process

surveyed the availability of a sample of 42 essential drugs, vaccines and medical supplies (*See Table 5.30).* Both ex-post and baseline facilities had on average 52% of the products available. All the vaccines were available in 90% of health facilities, whereas the most common medicines in stock were ethanol and folic acid. The lack of medicines did not appear as one of the main concerns of respondents.

Table 5.30 Stock of medicines and vaccines. 2006, 2003

MEDICINES	2006 Ex-post Available # of health facility	2006 Ex-post Available %	2003 Baseline Available # of health facility	2003 Baseline Available %
AcetilSalic Acid 300mg tab.	8	40.0	5	39.0
Albendazole. Chewable 200mg tab.	13	65.0	11	84.6
ALOH250mg+MGOH 120mg tab.	10	50.0	7	53.8
Benzoic \Salicylic acid 6%, 3% oint.	9	45.0	7	53.8
Calamine 5% lotion	8	40.0	5	41.7
Chlorhexidine gluconate 5%sol.	8	40.0	8	61.5
Cholroquine phosphate 100mg\mL syr.	13	65.0	8	61.5
Cholroquine phosphate 150mg tab.	14	70.0	9	69.2
Cholrpheniramine maleate 4mg tab.	11	55.0	5	38.5
Co- Trimoxazole 400\8ml susp.	14	70.0	7	53.8
Co - Trimoxazole 400\80mg tab scored	11	55.0	8	61.5
Condom each	10	50.0	4	30.8
ethanol liq90%	4	20.0	3	23.1
Ethinylestradiol / Levonorgestrel 30/50 microgram tab	13	65.0	3	23.1
Ethinylestradiol / Levonorgestrel 30/50 microgram tab	12	60.0	3	23.1
Ferrous sulfate200 mg tab	14	70.0	7	53.8
Folic Acid .25mg+ ferrous sulphate 60mg tab.	9	45.0	6	46.2
Folic acid 1mg tab.	3	15.0	4	30.8
Gentian violet powder	10	50.0	11	84.6
Mitronidazole 200mg tab.	13	65.0	10	76.9
Mitronidazole 200mg /5ml susp.	10	50.0	10	76.9
ORS salts	15	75.0	11	84.6
Paracetamol 24mg/ml syr.	15	75.0	10	76.9
Paracetamol500mg double scored.	14	70.0	9	69.2
Peroxgyen and Orgaic Acid blend solution1%	2	10.0	3	23.1
Phenoxymethypencilin(V) susp. 250mg.	9	45.0	6	46.2
Phenoxymethypencilin(V) tab. 250mg.	9	45.0	4	30.8
Potassium Parmangante sol.	8	40.0	7	53.8
Permaquine tab.7.5mg	9	45.0	4	30.8
PVP Iodine solution 10%	11	55.0	7	53.8
Senna 7.5mg tab	6	30.0	7	53.8
Silver Nitrate applicator pencil	3	15.0	2	15.4
Simple linctus BP paediatric linct	10	50.0	7	53.8
Spermcidials	0	0.0	0	0.0
Sulphur in petrolatum 6%	0	0.0	2	15.4
Tetracycline HCL 1% eye oint	12	60.0	7	53.8
Zinc Oxide10% oint.	7	35.0	5	38.5
Polio	18	90.0	10	76.9
Measles	18	90.0	10	76.9
BCG	18	90.0	10	76.9
DPT	18	90.0	10	76.9
Tetanus	18	90.0	10	76.9
Number of health facilities	20		13	

- **Return visit group**

Health facilities do not offer the same services every day. *Table 5.31* shows the proportion of days when a specific service was offered during the day of the survey and the four previous working days. For all services, other than prenatal care, the percent offered in 2006 is less than that offered in 2003, suggesting that the health facilities have pulled back the availability of services on any given day. Further, in 2003, 97% of the facilities were open fully during the previous 5 working days, while in 2006 only 68% of the facilities were open fully. Explanations given include staff vacation (1 facility),

vaccination campaign (1), no electricity (3), no water (3), and no staff (3).
As with the 2003 report, these findings suggest that the daily, integrated, delivery of services, especially of preventative services, is far from being ensured, implying that people/families with the need for those services may have to come on several occasions to the facility in order to satisfy those needs.

Table 5.31 Health services provided

Service provided	2006 Return visit	2003 Ex-post
	Average percent of health facilities offering the service during the last working week	
Morbidity consultation (OPD)	86	97
Prenatal care	28	28
Child Development Clinic	6	18
Family Planning	27	37
Vaccinations	46	48
Deliveries	29	40
Averages number of patients/day	15	15

Source: Project Survey 2006, 2003

The evaluation process surveyed the availability of a sample of 41 essential drugs, vaccines and medical supplies. Facilities in 2006 had on average 50.2% of the products available, while facilities in 2003 had 56.4%.

Table 9.2. Stock outs of essential equipment in health facilities. 2006, 2003

Equipment	2006 Return visit					2003 Ex-post				
	% of facilities that have…	Condition				% of facilities that have…	Condition			
		Good	Fair	Bad	Total		Good	Fair	Bad	Total
Infant Clinic Metric Scale	91	73	32	11	100	86	78	17	6	100
Sphygmomano Meter	91	47	16	37	100	100	76	19	5	100
Stethoscope Binaural Complete	91	63	32	5	100	95	91	5	5	100
Stethoscope Foetal Pinard Mouaural	71	100	0	0	100	91	83	17	0	100
Cathereter	57	75	17	8	100	76	67	20	13	100
Boiling Disinfector Instrument	91	74	26	0	100	100	80	20	0	100
Table Examining Folding	91	74	21	5	100	100	91	10	0	100
Physician's Adult Scale	71	67	27	6	100	76	88	13	0	100
Themometer Clinical Oral Dual Cels\ Fahr Scale	76	100	0	0	100	86	88	12	0	100
Refrigerator For Vaccinations Preservation	91	63	32	5	100	95	90	11	0	100
Screen(Bed Screen 3 Folders With Wheels)	62	77	15	8	100	67	69	31	0	100
Bassinet (Babys Cot)	71	73	13	13	100	62	75	17	8	100
Forceps Hemostat Curved Kelly	62	85	8	8	100	57	75	25	0	100
Scissors Gauze	86	78	17	6	100	100	91	10	0	100
Scissors Surgical Straight Baby	86	72	28	0	100	100	76	24	0	100
Basin Kidney	91	63	37	0	100	95	95	5	0	100
Forceps Sterilizer Cheatle	86	67	33	0	100	95	79	21	0	100
Jar Forceps	67	71	29	0	100	76	18	6	0	100

Source: Project Survey. 2006, 2003

Vaccinations were available in 4 out of 5 facilities in 2006 – a significant increase from 2003 when less than 1 in 5 facilities stocked them. Paracetamol, ORS salts, tetracycline ointment and malaria medicine are also commonly present.

Healthcare facilities are generally well stocked with equipment (see *Table 5.32*). The percentage of facilities with essential medical equipment increased between 2003 and 2006 for most types of equipment.

Of the equipment available in the facilities, 73% (on average) was deemed in good condition in 2006, while in 2003 the corresponding average was 78%, suggesting just a slight deterioration of equipment quality.

5.3.3.5 Operating problems

- **Current intervention group**

Project respondents were asked to identify any operating problems in the healthcare facilities. *Table 5.33* summarises their responses for 2003 and 2006. In 2006, 23% (down from 48% in 2003) of all the respondents identify the shortage of staff as their main concern. This is followed by no water and or electricity (20% in 2006) and financial problems (12%). The respondent's perception of these problems has decreased since the 2003 baseline, indicating a slight improvement in general conditions. Problems such as low level of health awareness and delays in completing the projects, identified in the 2003 baseline, did not feature at all in 2006. These findings suggest that several issues have been resolved over the preceding review period. Lack of drugs is not perceived as a major problem in either group.

Table 5.33 Operating problems identified in health facilities project survey Percentage that mentioned each problem)

Problem	2006 (%)	2003 Baseline (%)
Non availability / shortage of staff	23	48
No water / water far from facility / and or electricity (2006)	20	10
Low level of health awareness	0	29
Non availability lab equipment and medical equipment	5	14
No laboratory / operations theater	0	10
Financial problems (non availability of funds for operation)	12	19
Non availability / shortage of furniture	9	19
Delay in completing project	0	19
Building not completed or not appropriate	6	14
Residency for physicians is not appropriate	6	Nd
No guard	3	Nd
No fence	3	Nd
No immunization, and no Mother and Child services	3	Nd
Number of health facilities	21	21

Source: Project Survey 2006, 2003

Box 5.2 Current problems from the view of direct beneficiaries

In Kasabat Rajeh and Al-Midemen Health Units and Birtas Health Clinic, people complained about the lack of appropriate supplies, equipment and adequate and stable male and female personnel. The MOH has not appointed enough personnel, equipment and medicines. In Al-Midemen the staff is working with short term contracts through a project and in Birtas personnel is entirely paid by a German Organization and has not reached an agreement to incorporate the Clinic to the MOH structures. In Rajeh and Al-Midemen health units the majority of medicines that at the beginning were not charged now have to be paid or are not available while in Birtas they are provided by the German organization. Check up and services fees are symbolic and exempt for the poorest. In Rajeh people severely complained about inappropriate service of personnel.

In Al-Jabeen Hospital people expressed they are confident and comfortable about services provided and personnel. There are symbolic charges for medicines and the poorest are not charged. Nevertheless they suggested there should be more specialized doctors, additional equipment (blood bank, cardiogram, more ambulances) and more training for local health workers to gradually assume services currently provided by Russian Doctors.

Men & Women focus groups in Rajeh:
-- *We lack medicines; there is no appliances and equipments* (Men focus group, Rajeh)
--*We lack both male and female doctors* (Women focus group, Rajeh)
-- *There are neither doctors in the health unit nor medical equipments (*Men focus groups, Al Midemen)
Men and Women focus groups in Birtas*:*
- *We want a female doctor* (Women focus group, Birtas)
Men & Women focus groups in Al Jabeen Hospital:
-- *(There is a) lack of specialized doctors…(We have) only general doctors* (Men focus grou, Al Jabeen Hospital).

- **Return visit group**

Among the facilities established by the SFD in the 1999-2002 period, a shortage of staff is cited as a significant problem - 31% of respondents identify this as a problem in 2006, down from 67% in 2003. A lack of water (26%) and shortage of medical equipment (24%) were also commonly cited problems, and have both similar to 2003 situation. By contrast, several issues that were cited as problems in 2003 are no longer considered a problem by any of the survey respondents, including a low level of health awareness, lack of laboratory / operations theatre, shortage of medicines, no guard and no ambulance. These findings indicate that several issues have been resolved over the preceding review period.

Table 5.34 Operating problems identified in health facilities project survey (percentage that mentioned each problem)

Problem	2006 Return visit	2003 Ex-post
Non availability / shortage of staff	31	67
No water / water far from facility / and or electricity (2006)	26	29
Low level of health awareness / Community not contributing	0	10
Non availability / shortage of medical equipment	24	24
No laboratory / operations theater / care equipped units	0	24
Financial problems (no incentives, low budget, etc)	13	24
Non availability / shortage of furniture	10	5
Delay in completing project	0	5
Non availability / shortage of medicines	0	14
No guard	0	14
Building not completed or not appropriate	0	5
No fence	9	10
Residency for physicians is not appropriate	3	0
No immunization, and no Mother and Child services	7	0
Lack of more space	3	5
No maintenance	3	0
Village is far from the health unit	3	0
No ambulance	0	10

Source: Project Survey 2006, 2003

5.3.3.6 Maintenance

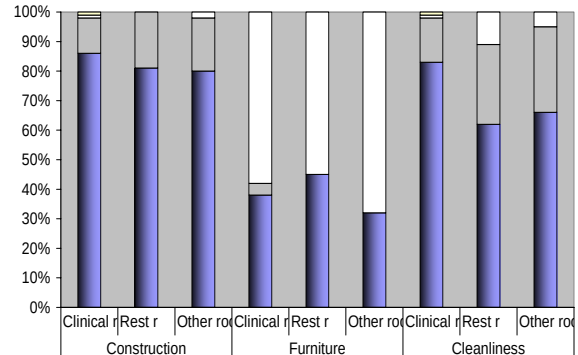
- **Current intervention group**

Data on community health funds (Project Survey) show that, in 2006, 62% of healthcare facilities have a health/beneficiary committee in the community (responsible for maintenance), an increase of 14% from 2003. In the Household Survey, 53% of respondents declared that the project maintenance is going well, and 51% knew who was in charge of maintenance.

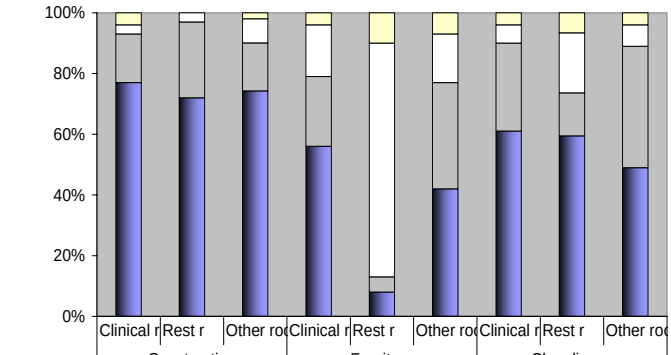
According to project respondents, patients pay, on average, 56 YR (37.4 YR of 2003) per consultation, up from an average of 40YR in 2003. In addition 90% of health facilities offer a discount to poor families in 2006. 67% of the interviewed facilities reported the existence of a Community Medicine Fund - an organization that did not exist (or was not reported) in 2003.

The survey team checked the quality of maintenance of the health care facilities, in terms of the condition of the construction, furniture, and cleanliness. The construction status of most of the health facility building components (rooms) is "good", as seen in the left side of *Figure 5.10*. However, the status of furniture and cleanliness in these rooms varied. For example: only 65% and 56% of consultation and waiting rooms, respectively, have "good" furniture status, whereas 81% of administration and documentation rooms are of "good" status; and only 50% and 65% of clinical areas (such as laboratory and X-Ray rooms respectively) have "good" cleanliness status.

Figure 5.10 Maintenance of SFD supported health facilities



	Construction			Furniture			Cleanliness		
	Clinical r	Rest r	Other ro	Clinical r	Rest r	Other ro	Clinical r	Rest r	Other ro
ND	0.01	0	0	0	0	0	0.01	0	0
Poor	0.01	0	0.02	0.58	0.55	0.68	0.01	0.11	0.05
Fair	0.12	0.19	0.18	0.04	0	0	0.15	0.27	0.29
Good	0.86	0.81	0.80	0.38	0.45	0.32	0.83	0.62	0.66



	Construction			Furniture			Cleanliness		
	Clinical r	Rest r	Other ro	Clinical r	Rest r	Other ro	Clinical r	Rest r	Other ro
ND	0.04	0	0.02	0.04	0.10	0.07	0.04	0.07	0.04
Poor	0.03	0.03	0.08	0.17	0.77	0.16	0.06	0.21	0.07
Fair	0.16	0.25	0.16	0.23	0.05	0.35	0.29	0.15	0.40
Good	0.77	0.72	0.75	0.56	0.08	0.42	0.61	0.63	0.49

Better furniture and improved decoration could increase both worker productivity and patient's attendance. Cleanliness of health facilities, especially in the clinical sections is also important to control the spread of diseases and infections. Both these areas need more effort in order to attain the desired 100% "good" status.

- **Return visit group**

In the **return visit group**, 71% of healthcare facilities in 2006 report a health / beneficiary committee in the community. Patients pay, on average, 69 YR (46.1 YR of 2003) per consultation, down from an average of 115 YR in 2003. 57% of health facilities have a discount for poor families.

Data on perceptions of maintenance is provided in the right side of *Figure 5.10*. In general, the data show similar trends to that reported by the current intervention group. Most of buildings are reported in "good" condition. Furniture is good for about half of the facilities. Cleanliness is very similar to the situation of the current intervention group where 61% of the clinical areas and 63% of the restrooms areas remain in good condition and about the half in the case of the other rooms.

Box 5.3 Maintenance from the view of direct beneficiaries

In Al Jabeen Hospital and Birtas Health Clinic there is no maintenance committee and the operation and maintenance is carried out by the administration. In Birtas the German NGO provides 50% of maintenance costs. However, there are major problems with equipment that would require additional support from other sources.

In Al Midemen and Rajeh Health Units the health committees are operating and superviss awareness campaigns and the operation of the health unit including minor maintenance. The community contributes to minor maintenance through fees paid for medical check up and laboratory services. However, there are major problems with equipment that would require additional support from SFD or other sources.

Some problems with the MoH were reported: In Al-Midmen and Rajeh the local council and MOH does not recognize the health committees and have had conflicts. In Birtas Clinic the MOH has refused to cooperate with the Head of the Clinic because they have not agreed with the German NGO on how the Clinic can be incorported as part ot the MOH health service network.

<u>The case of Al Midemen</u>

Currently the health committee works mainly in conducting awareness campaigns in addition to their technical work in managing the health unit because the health committee is the unit's manager, midwife, laboratory technician, and pharmacist. Men and women in the focus groups affirmed that the Health Committee is active.

According to the heath unit's manager, community members contribute to maintenance paying 30 Riyals for a medical check and between 50 to 100 Riyals for laboratory examinations and tests. These sums have gone to maintain the health unit. According to key informants the Health Committee has provided maintenance of the refrigerator and the windows using funds from the operation budget. However, they consider that there are medical tools which do not work and cannot be fixed because there is no budget for that, and they consider that SFD should provide support for maintenance.

- *The refrigerator was repaired as the regulator wasn't cooling due to gas leakage. They repaired it at the cost of 6,000 Riyals. The committee met and estimated the costs and decided to repair the refrigerator (Men Focus Group in Al Midmen)*

Even if men and women expressed that the health committee is operating well and has a good relation with the MOH Office, key informants, however, affirmed that the committee has not been able to convey with MOH fees for services that could be used to operate the health unit because the MOH Office does not consider the health committee a representative of the community.

<u>The case of Rajeh</u>

The Health Committee has a weekly meeting where members of the Health Unit submit notifications of their requirements and the difficulties they face. The Health Committee repaired the stairs and the bathrooms sewages, cemented the roof again and repaired the yard. Additionally, they followed up the activities that the contractor left unfinished. They have never received support from the local council because the council considers the committee is inefficient.

5.3.4 Impact on Household-Level Development Indicators

> *Now the midwife help the women deliver and treats bleeding* (Men FG in Birtas)
> *The child is benefiting by getting vaccinated and the women as well by being examined and instead of going to Al-Tahita or Zabid they can use the services of the midwifes here* (Women FG in Al Jabeen Hospital)

SFD investments in rural health posts would normally improve access to health services and this would lead to increased effective use (i.e., use at the level where appropriate care is available close to the community) of health facilities in cases of illness. Development of new primary health facilities should also improve vaccination and antenatal coverage in the communities served by these facilities.

Factors believed to contribute to low levels of utilization of health services in rural areas of Yemen include: the inexistence of facilities in many areas, the difficulty of access to the facilities that do exist, the poor quality of the services on offer and the lack of awareness among the population of the importance of primary health care.

The specific variables evaluated in the regression analysis included:

- % of persons who have suffered a health problem (disease or accident) in the past month and have received medical help;
- % of children under two years of age who are up to date with their vaccines; and
- % of pregnant women who attend antenatal care visits.

5.3.4.1 SFD impact on access to medical attention for health problems

When the SFD constructs a new rural health post or improves an existing one, it is expected that there will be an increase in the utilization of health services, for both preventative and curative care. As a large proportion of preventative procedures are still only carried out when families visit a health centre due to an illness of one of their members, the increased consumption of curative care is likely to be correlated with increased consumption of standard preventive procedures and controls.

However, an increase in the use of services of any health post could be due in part to the diversion of some users from other centers (private doctors or other public health centers). This may be a deliberate goal of a strategy to rationalize the use of health services by establishing primary care services closer to the population and to avoid the use of more expensive referral facilities for routine care that should be managed in the health posts. Nevertheless, to the extent that users are diverted from other centers, the benefit from the SFD investment is arguably less than in the case where it stimulates the use of professional services by people who otherwise would have treated themselves.

For this reason, the variable chosen for analysis was

the overall probability that a person will receive curative medical attention when facing a health problem (rather than the probability that they will use the particular health post supported by SFD). This assures that SFD is not credited for "crowding out" demand from other centers, but only for increasing the total take-up of primary health care services.

The Impact Evaluation survey recorded the health problems of each household member during the past month, identifying the type of problem and whether it was severe enough to cause the person affected to stop their normal activities. The sample of households from the ex-post group registers 714 problems and the sample of the baseline group 524 problems. *Table 5.35* reports the number and type of problems encountered.

Table 5.35 Incidence of health problems in the impact evaluation sample

	2006 Ex-post	2003 Baseline
	% of total	
Number of persons	3,012	2,977
% with a health problem in last month	23.7	17.6
Male	21.3	17.1
Female	26.3	18.1
Urban	21.0	11.6
Rural	24.6	18.6
Number of problems	714	524
% Type of problem:		
Malaria-Fever	43.7	38.0
Ear-Nose-Throat Condition	16.8	17.6
Diarrhea Diseases-Gastro-Intestinal	11.1	12.4
Respiratory Diseases	8.9	16.0
Kidney-Urinary Tract Diseases	4.8	N.D
Rheumatism Condition	3.6	5.7
Skin Disease-Allergy	3.0	2.5
Diabetic-Blood Pressure	2.3	2.3
Eye Condition	1.4	2.5
Tells Removals (Hysterectomy)	0.9	N.D
Accident-Injury	0.8	3.1
Other conditions	2.9	N.D

Source: Household Survey 2006, 2003

The proportion of people who have suffered an illness or accident in the month previous to the survey was higher in the ex-post situation (24% versus 18%, Sig. 0.000). The proportions were similar for both male and female (1-5% differentials, with a slightly higher proportion in women) and were higher among rural than among urban people in each group (24.6% versus 21.0% in the ex-post group).

Table 5.36 shows the reported effective access to medical attention for those in the 2006 ex-post communities compared with the 2003 baseline. The proportion of sick individuals who managed to receive health care for their illness increased from 57% to 62% in the period (Sig. 0.020) In this case similar increases were recorded for both men and women (Sig. 0.065 and 0.0.093, respectively) and also for urban and rural. More pronounced changes occurred among the service providers. The proportion of sick persons getting medical treatment from a public hospital or private provider decreases in the period, while the proportion receiving treatment from medical care center doubles.

Table 5.36 SFD impact on access to medical attention for a given health problem

	2006 Ex-post	2003 Baseline
	% of total	
Did not receive attention	38.3	42.7
Received attention	61.7	57.3
Male	62.7	57.8
Female	60.9	56.7
Urban	68.6	64.7
Rural	59.8	56.4
Where they were treated:		
Private provider	20.7	23.4
Medical Care Centre / Unit	49.9	25.1
Public Hospital	22.4	45.5
Main Medical Centre in the City	7.0	6.0
Number of cases analyzed	714	524

Source: Household Survey 2006, 2003

In the case of the return visit communities, the proportion of people with access to medical attention diminished from 70% to 57%. Only medical centers show a significant change in use for treatment (increase from 33 to 41%).

- **Multivariate analysis**

To isolate factors that may be affecting access to medical attention (the dependent variable), a conditional fixed-effects logit regression model was applied (*See Box 5.1*). The multivariate analysis of the incidence of medical attention for health problems included the following independent variables: the existence of an SFD investment, the age and sex of the sick person, seriousness of the problem, the education of the head of household, and the per capita annual income of household's members.

Table 5.37 Results of the logistic regression of factors that influence access to medical attention, include fixed effect for project

Indep. Variable	TypeVar.	Value *	OR	Sig
SFD invest. completed	Cat	Yes	1.029	0.834
Sex of patient	Cat	Fem	0.937	0.618
Age I	Cat	<5	Reference Val.	
Age ii (5-13)	Cat	5 - 13	0.848	0.396
Age iii (14-50)	Cat	14 -50	1.172	0.370
Age iv (> 50)	Cat	> 50	0.632	**0.034**
Type of sickness	Cat	Serious	5.259	**0.000**
HH head edu.	Cat	Illiterate	Reference Val.	
HH Head reads / writes bef. sec.	Cat	reads / writes bef. sec.	1.019	0.901
HH head edu. Sec. or superior	Cat	Sec. or superior	0.902	0.596
Sex of h / hold head	Cat	Fem	0.747	0.184
Percapita Annual Income(000) , (1999 = 100)	Cont	n.a.	0.886	0.641

Note: Cat= categorical, cont = continuous, OR = Odd Ratio;bold print means significance <0.05 Number of cases: 806
* This is the value assumed by the categorical variable.

Table 5.37 presents the results of the logistic regression, using access to medical attention (to any health facility) as the dependent variable.

The table shows that SFD's investment has no effect on the dependent variable, although the relationship show a trend in the expected direction (i.e. OR> 1)[19]. Age (for persons 50 and older) shows a significant relation to medical access in primary health care units, but the relationship is inverse (compared to children under 5, elderly people have less access to medical attention). The most important factor is the type of sickness (OR= 5.259, sig.=0.000). The sex of a patient, education, and income do not seem to play a role. The model indicates that sick persons living in households with a female head are less likely to obtain medical attention, (OR=0.747), though the finding is not statistically significant.

In the 2003 impact evaluation, the same modelling exercise showed very different findings. The SFD's investment appeared as a determinant factor in increasing the access to medical care. This difference may be the result of the different methodologies used in the two analyses (the 2003 regression did not use the same sample of households at both times. Its "baseline"

[19] The OR coefficient indicates that SFD intervention produces certain direct or positive effects on the dependent variable as expected. However, the non statistical significance indicates that this finding could be random and therefore conclusions have to be drawn with care.

came from the 1999 National Poverty Survey (NPS) and its "Ex-post" from the 2003 IES). It may also be explained by recent changes in SFD policy. In the last three years much of the SFD's approach has been to strengthen maternal and child care in the community /home based care through community midwives who provide services to women in their homes; this cadre of midwives are not necessarily recognized or employed by the Ministry of Health and hence are unlikely to show up in the data collected.

Further, the data presented in *Table 5.37* does show that health centers /health units in the target communities have been highly successful in providing access to medical treatment. Running a regression with access to medical care in health centers /health units only and the same mentioned dependent variables, the SFD's investment appeared as a strong factor influencing access to medical attention (OR=3.232; sig.= 0.000).

5.3.4.2 SFD impact on vaccination coverage

Data presented in *Table 5.38* suggest that SFD investments are associated with a substantial improvement in the vaccination status of children in the beneficiary populations, showing an increase from 36.5% to 74.7% for children 12-23 months and from 30.6% to 60.1% for children below 2 years (sig. = 0.000).

Table 5.38 Impact of SFD presence on immunization of children under 2 years

	2006 Ex-post		2003 baseline		
	% of Children	Observations	% of children	Observations	Significance
Children 12-23 months with immunization completed	74.7	99	36.5	115	0.000
Children under 2 years up-to-date with immunizations	60.1	183	30.6	209	0.000

Source: Household Survey 2006, 2003

Similar findings are observed in the case of the return visit sample, where the percentage of children 12-23 months with immunization completed increased from 36.3% in 2003 to 50.7% in 2006 (sig. = 0.087), and the percentage of children under 2 years up-to-date with immunizations increased from 32% to 45% (sig.= 0.036).

Much of this improvement may be attributable to last year's national campaign on vaccination (especially polio as there was an outbreak last year), rather than SFD interventions. A valid hypothesis is that communities with or close to health posts have a higher probability of good coverage on immunisations.

- **Multivariate analysis**

Multivariate analysis provides support to the hypothesis that SFD interventions influence levels of vaccination coverage. After controlling for other factors, SFD investment is an important factor in the probability of children aged 12-23 being vaccinated (OR = 7.031 Sig.= 0.000).

This probability is also positively influenced by

the education status of the head of household, especially those with a secondary or higher level of education (OR = 4.130 Sig. = 0.019). The sex of the child reveals a bias against girls, but is not a statistically significant factor. *See Table 5.39.*

Table 5.39 Results of the logistic regression of factors that influence to complete immunization achedule children aged 12-23 months, include fixed effect for project

Indep. Variable	TypeVar.	Value *	OR	Sig
SFD invest. completed	Cat	Yes	7.031	**0.000**
Sex of child	Cat	Fem	0.731	0.376
Age of child (months) I	Cont	n.a.	1.028	0.638
Sex of h/hold head	Cat	Fem	2.081	0.319
HH head edu.	Cat	Illiterate	Reference Val.	
HH Head reads/writes bef. sec.	Cat	reads/writes bef. sec.	1.563	0.289
HH head edu. Sec. or superior	Cat	Sec. or superior	4.130	**0.019**
Percapita Annual Income(000), (1999 = 100)	Cont	n.a.	0.814	0.613

Note: Cat= categorical, cont = continuous, OR = Odd Ratio; bold print means significance <0.05. Number of cases: 205
* This is the value assumed by the categorical variable.

A similar result is obtained when the dependent variable changes the age of reference to children under 2 years old. Again, the regression analysis shows a strong correlation between SFD projects, and the probability of getting vaccinated (OR = 4.057 Sig. = 0.000). (See *Table 5.40.*)

Again, these results must be viewed with caution as not all possible factors are under control without the inclusion of a control group.

Table 5.40 Results of the logistic regression of factors that influence for up to date immunization children under 2 year, include fixed effect for project

Indep. Variable	TypeVar.	Value/1	OR	Sig
SFD invest. completed	Cat	Yes	4.057	**0.000**
Sex of child	Cat	Fem	0.908	0.686
Age of child (months) I	Cont	n.a.	1.070	**0.000**
Sex of h/hold head	Cat	Fem	1.653	0.285
HH head edu.	Cat	Illiterate	Reference Val.	
HH Head reads/writes bef. sec.	Cat	reads/writes bef. sec.	1.361	0.270
HH head edu. Sec. or superior	Cat	Sec. or superior	2.076	**0.039**
Percapita Annual Income(000), (1999 = 100)	Cont	n.a.	0.896	0.762

Note: Cat= categorical, cont = continuous, OR = Odd Ratio; bold print means significance <0.05 Number of cases: 392
1/ This is the value assumed by the categorical variable.

5.3.5 Beneficiary Assessment Perception of benefits

The sample included four study cases: Two health units, one hospital, and one health centre. All projects included building or enlarging health facilities. Two Health Units (Rajeh and Al-Midemen) were entirely built and equipped. Al Jabeen Hospital received support to build X-Ray and blood bank rooms and an electricity generator. Birtas Clinic received funds to finish the main building and a doctor's residence that were started by a German Organization that sponsors the Clinic's operation.

Projects were promoted by diverse stakeholders such as: SFD (Al Jabeen), local citizens (Al Midemen), an international German NGO and a local leader (Birtas) and a *sheik* (Rajeh).

People generally site that they are benefiting from the project, especially from more and better treatment and medicines, as well as the services provided by midwives that were trained by SFD. While health projects are benefiting all community members, key informants and participants in the focus groups particularly emphasized benefits to children and women.

Treatment and medicines

Children have particularly benefited from increased access to vaccinations and treatment. Patients affirmed they do trust doctors, other workers and the health facilities and services. Only in Kasabat Rajeh people clearly complained about the medical treatment and the complete lack of medicines.

- *The workers are excellent* (Men FG, Al Midemen)
- *We are confident (*Women FG , Al Midemen)
- *All of us has benefited from the hospital…They are keen in their work and they provide injections for free (*Men FG , Al Jabeen)
- *The Hospital expanded with support of SFD has better quality services and a new Administration (*Men FG , Al Jabeen)
- *They provide (health) services at the hospital and at homes* (Women FG, Al Jabeen)

Midwife training

It was reported that midwives were trained and are helping local staff to reduce workloads. Men and women interviewed also thought that midwives are properly serving the community and that many women that before were ashamed about male doctors now are receiving medical treatment by midwives who assist with childbirth and deal with problems related to pregnancies and births.

- *Now the midwife help the women deliver and treats bleeding* (Men FG in Birtas)

Women FG in Al Jabeen:

- *The child is benefiting by getting vaccinated and the women as well by being examined and instead of going to Al-Tahita or Zabid they can use the services of the midwifes here.*
- *The nurses and midwives go on foot to all houses, even the far ones, to assist childbirths.*
- *They (the midwives) assist childbirths at homes… and they give IV fluids (to the mothers).*

5.4 Water projects

5.4.1 Introduction

Yemen is one of the world's most water scarce countries, with an average rainfall of 200 millimeters a year and no year-round rivers or lakes. Urban communities normally rely on public and private water networks for supply, and the network faces problems of supply sufficiency and large distribution losses. Rural households primarily rely on cooperative networks, rainwater harvesting systems (cisterns) and wells and springs.

The SFD's water projects are now concentrating entirely on establishing and improving rain water harvesting (collection and storage) systems in rural areas, alongside hygiene and environmental awareness campaigns.

In 2004, the SFD introduced a new approach to rainwater harvesting projects involving higher cost sharing and participation by beneficiary communities. The SFD pays for materials that are not available locally, while communities provide other materials, water and labor. This approach serves to enhance community ownership, and rationalize the use of resources as beneficiaries tend to choose cost efficient options in order to lower the cost of community contribution (Annual Report, 2004: 28).

5.4.2 Contribution to National Stock of Infrastructure

Between 2003 and 2006 the SFD added 1.8 million cubic meters of capacity to the national stock of water systems – it was not possibly to gather data on the total stock at the national level. Most of this capacity (64%) comes from the 20 built and 2 rehabilitated dams. Cisterns are the second source of the added water capacity (26%). The SFD built 208 new open cisterns and rehabilitated 176, and built 47 new covered cisterns and rehabilitated 12 (*See Table 5.41).*

Table 5.41 SFD Water projects, 2003-2006

Components	New	Extended	Extra capacity (m^3)	Rehabilitated
Uncovered cisterns	208		463,251	176
Covered cisterns	47			12
Kareefs (a kind of cistern)	26	25	189,400	
Dams	22		1,158,950	2
Water tanks	196		70	
Total			1,811,671	

Source: SFD-MIS

Table 5.42 SFD Water projects, 2003-2006	
Sub-sector	Number of projects
Dams	21
Irrigation	3
Superficial wells	5
Training and awareness (water)	11
Water harvesting (cisterns/tanks)	217
Water pipes	38
Total	295
Source: SFD-MIS	

5.4.3 Service Production and Sustainability

5.4.3.1 General Information

The sample of analysed projects includes 20 projects of the current intervention group and 16 of the return visit group. From the first group 15 are water harvesting system projects, 2 are dam projects, and there is 1 each for piped water system, irrigation, and superficial well projects. In the follow up group there are 8 water harvesting systems, 7 piped water systems and 1 dam project. The prevalence of water harvesting system projects in the current intervention group (almost twice the number than in the return visit group) reflects SFD's shift in focus to water systems that meet the demand of the poorest communities.

During the Third Phase the SFD has focused on water harvesting (cisterns and small reservoirs), irrigation (efficient systems) and improving shallow wells and springs. Most of these projects do not treat water directly, but rather use environmental awareness campaigns to improve hygiene. In the current intervention group, 8 of the 20 sample water projects have had associated training of staff or beneficiaries in the field of health and environmental awareness. This same training had been received by 9 of the 16 projects in the return visit group. In addition, 9 projects in the current intervention group, and 11 in the return visit group, have plans to preserve water from depletion.

However, the impacts of training seem effect awareness, but are not as successful in changing habits. 63% perceive that clean water is "very important" in maintaining good health and 35% "quite important". This is contrasted with a low uptake of water purifying: 66% of the interviewed beneficiaries declared that they were not using a means of purifying water (25% use chlorine, and less than 10% use boiling, filters or other). About 64% of respondents associate poor quality water with diarrhea, and about half with malaria and stomach upset.

5.4.3.2 Water System Maintenance

The systems currently promoted by the SFD do not require a complicated maintenance procedure and therefore the 2006 survey only reports on 2 projects having a total of 2 managers, 1 accountant and 1 bill distributor or money collector.

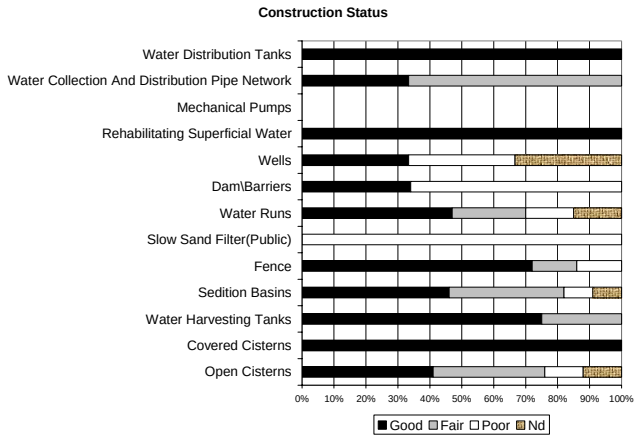
One particular problem with rainwater systems is that they are subjected to contamination due to open catchment's area. *Figure 5.11* shows the current status of construction, cleanliness, and efficiency of the equipment of different units of the water systems as qualified by the fieldwork team. Approximately half of all respondents in the current intervention group report maintenance as "good", implying that maintenance of water systems needs improving.

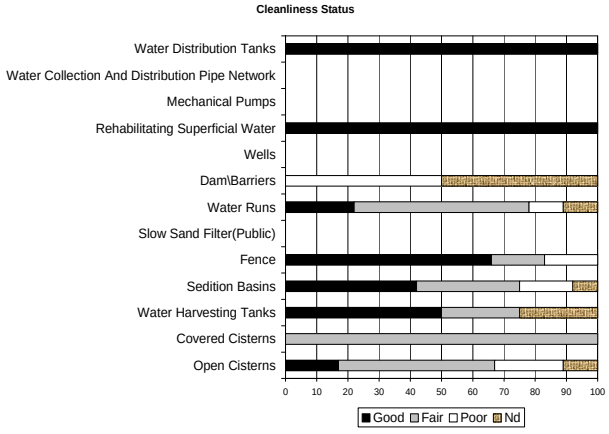
The situation seems not better for the case of the return visit group of projects since the averages for the "good" status of the different water units is 61% in construction, 30% in cleanliness and 49% in the efficiency of the equipment[20].

Figure 5.11 Maintenance of SFD supported water projects

Averages for the "good" status

Construction: 55%
Cleanliness: 43%
Efficiency of equipment: 45%





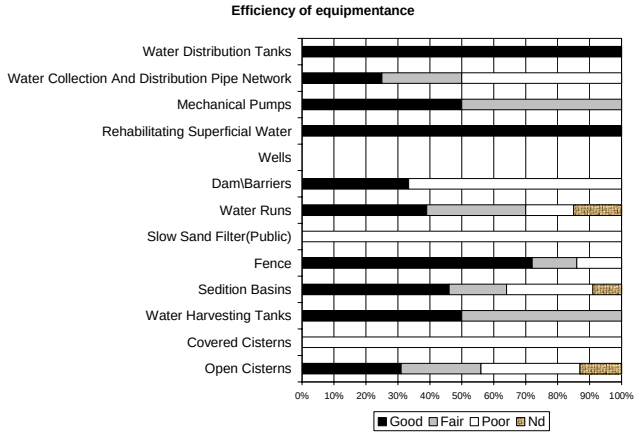


Table 5.43 reports the perception of beneficiaries on issues related to maintenance.

[20] The average for the "poor" qualification is 14% in construction, 10% in cleanliness, and 11% in efficiency of the equipment.

Table 5.43 Maintenance of water systems (Percent of affirmative perception)				
	Current intervention group		Return Visit group	
Perceptions	2006 Ex-post	2003 Baseline	2006 Return visit	2003 Ex-post
Level of performance of the organization in charge of the water service:				
- Good	61	11	59	42
- Fair	18	5	24	13
Maintenance process is going well	39	4	45	34
Household participate in maintenance	17	2	8	10
Household contribute to maintain the cistern clean	38	Nd	23	Nd
Source: Household Survey. 2006, 2006				

There are several organizations that can be in charge of the water service, such as, a Water Committee, a Local Authority for Water and Sanitation, or a private company. The data reported demonstrate increasing faith in these organizations to run the water services (the proportion of favorable perceptions has increased in both samples). Similarly, there is a growing perception that maintenance is working, although the percentage of the community reporting good maintenance is still below 50%, and relatively low percentage of households contribute to maintenance, or cleaning.

Box 5.4 From the Beneficiary Assessment: The Beneficiary Committees (BC) in water projects

As indicated in *Box 1*, the sample covered two types of projects: construction or rehabilitation of water systems (Al Sumaided and Al Tawr) and building cisterns for rainwater harvesting (Jabal and Jaleh). Projects are located in mountainous small rural villages which rely on agriculture production.

In Al-Tawr the beneficiary committee (BC) was elected unopposed by men with supervision of SFD with representatives of all villages. In Al-Sumaided men elected the BC formed by local teachers and women appointed one representative to the BC. In Jabal the BC is integrated by the sheik and middle class persons.

In the four communitie,s men interviewed are aware of the structure and functions of the BC. In Al-Tawr and Al-Sumaided and Jaleh, women referred to the BC but had a more limited understanding of election procedures, structure and functions of their members. In Jabal women seem less informed about the BC.
The BC's in Al Tawr, Al-Sumaided, Jabal and Jaleh have played an important role in the implementation defining and collecting contributions (in cash and in kind), supervising construction of water projects and coordinating activities with contractors.

Al Tawr:
-- *It's function* (of the BC) *is to follow up on the project, collecting the fees* (Men)
-- *For every closing account, they do a meeting and they brief the supervisory committee on everything every six months* (Men)
-- *If there's a malfunction, they repair it* (Men)
-- *They repair* (Woman, she means the committee is tasked with maintenance)
In Al Tawr beneficiaries pay 60 riyals for every unit of water for maintenance costs. These fees are deposited in a special account where the committee can withdraw for financing any maintenance activities. The committee also buys diesel and oil for maintenance.
Al Sumaided:
- *The committee members have our full trust* (Men)
Jaleh:
In Jaleh there is no maintenace committee but they explained that the whole community conduct the maintenance work whenever needed.
-- *The whole village is a maintenance committee* (Men)
Jabal
In Jabal the BC was elected as the Maintenance committee in charge of cleaning the cisterns and the watercourses. The committee defined a schedule for beneficiaries to take out soil from the cisterns and repair watercourses.
- *We are so happy that we got these cisterns so we clean them, repair the watercourses, get soil out of them, and weld the manual pumps. The head of the committee orients people to do these works* (Men)
- *The one who doesn't go to work for maintenance he hires workmen to do his job* (Woman).

5.4.3.3. Operating Problems

- **Current intervention group**

Table 5.44 summarizes the operating problems encountered with the water systems, according to the survey respondents. The top four problems identified in 2006 include: cisterns / well without cover / needing protection from pollution (65%), electromechanical pump break downs (30%), and shortage of water and insufficient water runs (25%). None of these issues were identified in the 2003 baseline. Issues (such as distance of project locations, water leakage, and communities being unable to contribute) that were prominent in 2003 are not been identified as key in 2006 suggesting that they may have been resolved, while other issues have arisen.

Table 5.44 Operating problems identified in water sub-projects

Problem identified (% mentioned)	2006 Ex-post
Project location far from beneficiaries	5
Water leakage	15
Shortage of water and in-sufficient water runs	25
Cisterns/well without cover/ Need protection from pollution	65
Delay in implementation	5
Pipe network deteriorated	5
Pipe network insufficient to cover all households	5
The electromechanical pump break down	30
The water source dried up	5
Project located on a fragile land	15
Parts of the cistern are close to collapse down	15
No pump to raise the water	10
No water treatment	5
Source: Project Survey 2006, 2003	

- **Earlier intervention group**

In the follow up group the top four problems identified in 2006 included: water pollution (40%), water leakage (27%), and failure of pumps (20%). The tankers and pumps were not cited as issues in 2003. In other cases, issues that were prominent in 2003 are no longer issues in 2006, and hence appear to have been resolved. These include defects in cisterns, lack of equipment, and low capacity / dry wells.

Table 5.45 Operating problems identified in water sub-projects

Problem identified (% mentioned)	2006 Return visit	2003 Ex-post
Project location far from beneficiaries	7	0
Water leakage	27	25
Shortage of water and insufficient water runs	7	0
Defects in finishing of cistern walls/bottom	0	25
Cisterns/well without cover/ Need protection from pollution	40	25
Non availability of other equipment	0	25
Delay in implementation	13	0
Low capacity of cistern/ dry wells	0	31
Community unable to contribute/different opinion	0	6
Pipe network deteriorated	13	6
Pipe network insufficient to cover all households	7	13
Pipe network incomplete	13	0
Pipe network unavailable	0	13
Insufficient/misuse of financial resources	7	13
The electromecanical pump break down	20	0
Small size of the pump/ Has a defect	7	13
No pump to raise the water	13	0
The water source dried up	13	0
Project incomplete, there is no dam	0	6
Project located on a fragile land	7	0
Truck tankers with problems to come due to roughness of the road	7	0
Competence with Qat irrigation wells	7	0
A new well is needed	7	0
Source: Project Survey 2006, 2003		

The shortage or lack of water affected 12 harvesting projects of the current intervention group and the problem extended from two to six months (5 projects). For the earlier intervention group this problem was suffered by a half of the 16 sample projects (in 4 projects the crisis extended for about six months). The problem is

associated mainly with the depletion of water resources (that also affected 1 dam for a short time), but also with water leakage from the cistern/tank. There are clearly severe issues around water scarcity in the whole country, particularly during the dry season. While rain harvesting systems can provide some relief by relying on rain rather than groundwater, they do guarantee a full service year round. Testimonies from the beneficiary assessment help to illustrate the severity of this situation.

Box 5.5 Beneficiary Assessment: Operating problems

In Jabal and Jaleh cisterns for rainwater harvesting are considered too small and not enough for water requirements of the communities. Additionally, in both communities they requested coverage for cisterns and filters to reduce presence of mosquitoes and soil contamination to improve water quality because sometimes they have to stop using water due to contamination.

The beneficiaries committee of Jabal organizes people and schedules them; every year they take the soil out and repair the watercourses.

Some male beneficiaries in Jaleh criticised the water quality, the need to cover the cisterns and problems with leakages:

- *The colour of water changes and it (the pool) needs to be covered .The water is going down. it goes down one meter and we don't know why.*
- *The filter fills with dust*
- *Around the pool we maintain, and it costs us 100,000 YR each year, we hire workers and take out the soil.*
- *We need a bigger watercourse and filter*.

Even though almost everybody in the community has benefited, there were complaints on water quality and especially on its availability:

- *The cisterns are not enough for us, people are increasing and in winter we need 12 buckets and they are not enough, everyday we need 470 buckets for the whole people*
- *It is for washing, but there is no clean water, we bring from Bara'a. We wash ourselves and our clothes from the cisterns.- They are not good for drinking. The Cattle drink form it, sometimes we drink from it until it is so dirty we stop drinking from it*

5.4.4 Impact on Household-Level Development Indicators

The 2003 and 2006 impact evaluation surveys collected data at household level on the type of water system used, the perceptions on quantity and quality of water available to the households before and after interventions, the cost of water, the distance and time needed to fetch water for people without a household connection, and girl's enrolment rates in communities benefited by a water project.

Several indicators can be used to assess the impact of water projects on beneficiaries. The most immediate indicator is the quantity and quality of water available for the family to satisfy its needs (drinking, cooking, personal cleaning) during a given period. Increases in the amount and improvements in the quality of water consumed lead directly to increased welfare and to better health conditions and the prevention of water-related diseases such as diarrhea. A second indicator is the cost of bringing the water to the dwelling (both in time and money). A water project might significantly reduce this cost, freeing resources for other vital needs. The carrying of water is normally assigned to the women and girls of the

household and the need to carry out this task is an important factor reducing girls' enrolment in school.

Table 5.46 shows the different sources from which the sample of households of the current intervention group is obtaining drinking water, disaggregated by sectors. Wells outside the dwelling have become the main source of water for almost half of the interviewed households (from 28% to 44%). This source is found in the sectors of dams, piped systems and water harvesting. Cisterns / spring / tank without pump diminished their importance from 44% in 2003 to 27% in 2006.

Table 5.46 Access of households to main sources of water

Main source of drinking water	Sector								Total	
	Dams		Irrigation		Piped system		Water harvesting (Tanks)			
	n	%	n	%	n	%	n	%	n	%
2006 Ex-post										
Piped service with household tap	4	20.0	6	31.6	13	72.2	10	3.2	33	9.0
Piped service with public tap	0	0	13	68.4	0	0	12	3.9	25	6.8
Cistern/spring/tank with pump	0	0	0	0	0	0	21	6.8	21	5.7
Cistern/spring/tank without pump	1	5.0	0	0	0	0	99	31.8	100	27.2
Well inside the dwelling	0	0	0	0	1	5.6	0	0	1	0.3
Well outside the dwelling	15	75.0	0	0	4	22.2	144	46.3	163	44.3
Other	0	0	0	0	0	0	25	8.0	25	6.8
Total	20	100.0	19	100.0	18	100.0	311	100.0	368	100.0
2003 Baseline										
Piped service with household tap	2	10.0	5	26.3	0	0	26	8.6	33	9.2
Piped service with public tap	0	0	8	42.1	0	0	5	1.7	13	3.6
Cistern/spring/tank with pump	5	25.0	1	5.3	0	0	26	8.6	32	8.9
Cistern/spring/tank without pump	7	35.0	5	26.3	3	16.7	142	47.0	157	43.7
Well inside the dwelling	0	0	0	0	0	0	10	3.3	10	2.8
Well outside the dwelling	6	30.0	0	0	15	83.3	78	25.8	99	27.6
Other	0	0	0	0	0	0	15	5.0	15	4.2
Total	20	100.0	19	100.0	18	100.0	302	100.0	359	100.0

Source: Household Survey. 2006, 2003

32% of the 368 households in the current intervention group said that the quantity of water available is sufficient for their needs; 55% that it is not enough. In the return visit group the percentages are similar: 39% and 47% respectively. Similarly, findings from the Project Survey show that 25% of projects reported to have sufficient water the whole year in the current intervention group and 50% in the return visit group.

Regarding quality 32% of household respondents reported water quality as "excellent", 43% "fair", and 14% dark or dirty.

Because not all the systems include a household tap, fetching water continues to be a part of daily life, although the distance to the source has become shorter. 82% of respondents in the current intervention group fetch water (54% in the return visit group). 64% of households fetch water on foot and 26% on donkeys or other animals. However, according to the project survey the proportion of those households with a tap available less than 100m distance from their dwelling increased from 3% to 25% (water for domestic use and only for the case of the piped water systems). For these same household the cost of water went down from 350 YR in the baseline to 306 YR in 2006 (at a constant prices of 2003). According to the household

survey, households employ in average about two journeys daily to fetch water using containers of 20 litters. The average time expended each day on this task has reduced from 1 hour and a quarter in 2003 to 49 minutes in 2006 during the rainy season; in the dry season the average time of fetching water lasts about 1 hour and 20 minutes (2006). Fetching water is a gender biased activity. 88% of persons collecting water are female, and 13% of all persons fetching water are children 15 years old or less. Men fetch water about 10 times a week while women do it almost double (19 times on average).

In the return visit group the cost of water for houses with a tap available also descended from 738 YR in 2003 to 357 YR in 2006 (at constant prices of 2003). For all houses the average time in fetching water in a rainy season also reduced from 55 minutes to 45 minutes daily; during the dry season this time goes up to the same 1 hour and 20 minutes of the earlier intervention group.

Multi-regression analysis

A multi-regression analysis (fixed effects logit models) was applied to test if SFD water projects have contributed to improving rural girls' (age 6-14) gross enrolment rate in school. If the projects have reduced the time in fetching water, particularly for girls, it can by hypothesized that school attendance would increase. The regression model included other variables, such as the age of girls, the sex and the educational level of the household's head, and the household per capita income.

The findings show that the SFD investment does not have a statistically significant impact on increasing girls' enrolment rates (OR=1.154). However both age of the girl (negative), and higher educational level of the household's head (positive) were factors statistically significant (95% confident interval).

These findings may be explained by two factors: first, fetching water is still a reality in the lives of most of the beneficiary communities, particularly those with rain harvesting systems; and second, the available data did not indicate whether these communities have schools that attract girl (e.g. female teachers, separate classrooms, awareness campaign).

Insert Box 5.6 Beneficiary Assessment: Perceived benefits from water projects

Members of the communities consider that they have benefited from water projects because: first, they have reduced the time spent fetching water; second, they have now a better quality of water and can keep their homes and family members clean reducing illness especially among children, and third, people who had left the community due to water scarcity are now coming back to their towns (according to men focus group in Jabal).

In Jaleh the water reservoir is in the village and near the houses; in Al Sumaided the water source is near the village, it is clean and carried through pipes to the houses. In these two cases, respondents agreed the time for fetching water has been reduced. Extra time allows children to go to school. However, in the first case women and children continue to carry the water containers on their heads or on donkeys to their homes, although from a shorter distance.

-- (Before the project) *If we went in the morning, we returned at sunset. Thanks God, it has become near, now we get in minutes* (Woman, Al Sumaided)

-- *It lessens the hardship of going to another place to get water* (Woman, Jaleh)

-- *It is nearer from us, we can take 10 buckets, we used to go to Waror and carry them on our heads…We used to take only one bucket and travel for about 4 hours (Woman, Jabal)*

-- *Women are feeling comfortable now and now we have a liaison with the government and the SFD* (Woman , Jaleh)

-- *The children educational level has improved* (Woman, Al Sumaided)

- The children were dirty. Today cleanliness is present. This is the most important. Before, we used to return home ill and with much headache. Diseases became less especially among children (Woman, Al Sumaided)

5.5 Rural road projects

Men Focus Group in Al Leem Road Project:

-- Transporting a flour sack used to cost 200 and now it's 50 by car
-- After the road's excavation people have opened small stores in the area. Everything is now available
Women Focus Group in Rasad Road Project:
-- The one who has a child she used to carry him to Rasad. My arms were in pain from carrying
-- Previously, it was hardship, the gas cylinder was carried in our back but today thanks God

5.5.1 Introduction

The Yemen population lives on highly dispersed settlements (100,000 settlements), mostly located in mountainous regions with difficult terrain, for which roads play a crucial role in improving living conditions. However, only a fifth of rural roads are in good condition. Further, access roads to small settlements are very limited - the existing network of feeder roads is approximately 6,000 km, and if each settlement were provided with just 2-3 km of access roads, a total of 200 thousand to 300 thousand km of new roads would be required.

To face this challenge, the SFD started by financing rural roads with high labour content. Learning from experience the SFD has refined this initial approach by developed technical standards, policies and criteria for project selection. It has also expanded community involvement in road implementation and maintenance. As a result, the SFD has added the category of "village access roads" as part of their work, (thought these are not yet recognized in the official categorization by the Ministry of Public Works, consequently, the maintenance is the sole responsibility of communities themselves). The intervention of the SFD helps villages to have a better design and drainage to support an existing road. Before approving a project, the SFD requires a satisfactory plan for routine and periodic maintenance. The objective is to keep roads open for vehicles and the mode of construction is community contracting.

5.5.2 Contribution to National Stock of Infrastructure

During the period 2003-2005, the SFD completed 77 road projects. 70% of these projects are rural roads, 22% street pavement (stone paved) and the rest are projects for training in road maintenance. As a result, the SFD has contributed to improved or rehabilitated 491 km of gravel roads, and 218 km of paved roads.

5.5.3 Service Production and Sustainability

5.5.3.1 General information

The current intervention group included a sample of 11 rural road projects, and the return visit group included 14 rural road projects.

The SFD's support mainly consists of building or upgrading rural access roads. Other intervention includes drainage work and road widening. In the current group, the average length of the roads being supported was 8.1 km, benefiting 8,760 beneficiaries, 1,076 beneficiaries per Km in 2006, with a minimum of 321 beneficiaries per km). In the return visit group the road average length was 6.3 km in 2003 and 7.3 km in 2006.

5.5.3.2 Operating problems and Maintenance

Project managers were asked to identify operating problems of roads projects (*Table 5.47*). The top three problems identified in 2006 include a lack of walls, trenches, and water outlets (73%), the difficulty/ roughness of the road (64%), and no maintenance of road (27%). These same problems were reported in 2003. In the return visit group, these same top problems were also reported.

Table 5.47 Operating problems identified in rural roads sub-projects

Problem identified (% mentioned)	2006 Ex- post	2003 Report	2006 Return visit
Road exposed to rain/flood damage/Lack of walls, trenches, water outlets	73	84	45
Difficulty/roughness of the area or road	64	47	38
Road not maintained	27	32	5
Narrow/ not widened road	9	5.3	9.5
Road does not reach many places	9	11	--
Tribal conflicts	9	--	--
Non availability of a sub-road	9	--	--
Slowness of the contractors works	9	--	--
Not competitive standards	--	--	17

Source: Project Survey 2006, 2003

Road maintenance is primarily carried out through individual arrangements with communities (73%). In 2006, road supervision has taken place on periodic (62%), daily (12%) or both basis (26%). At both years under comparison there existed a maintenance committee (60% in 2003 and 64% in 2006)[21]. Some of the actual committees emerged with the project. No women were reported as participants in these committees. In 64% of the projects (2006) the communities contribute to maintenance. The SFD does not impose a standard for project maintenance structure, but rather builds on existing local traditions and agreements already in existence.

The majority of beneficiaries know who is in charge of maintenance, and consider that maintenance is going well. Only a small percentage of households actually participate

Table 5.48 Facts about maintenance. Percentage of "Yes" answers

	Current intervention	Return visit
Maintenance is going well	52	64
Knows who is in charge of maintenance	60	60
Household participates in maintenance	22	29
Number of respondents	170	290

Source: Household Survey 2006, 2003

[21] Rural roads are not always built from scratch. A project can be directed to improve an existing road where people has previously been organized for maintenance although with very limited resources.

in maintenance.

Box 5.7 From the Beneficiary Assessment: Projects and their Maintenance

Road construction included road widening, revision of road courses, and paving slopes and difficult areas and erecting walls along fragile cliffs.

In the majority of projects community contractors were selected and supervision by the beneficiaries committees was effective with the supervision of SFD consultants. Beneficiaries committees encouraged participation and contribution of the communities coordinated with the local contractor who is often a part of the community. In Al Madan, where SFD hired a private contractor, people complained about delays and that the roads has not been finished. Moreover, as the maintenance of the road during the first year was part of the contract the local maintenance committee is still not operating.

In Al Leem, Nakee and Rasad projects, community contractors were hired and supervised by the beneficiaries committee with support from an engineer as a consultant from SFD in coordination with the head of the committee of beneficiaries. Key informants and men focal groups have a good opinion of the role played by SFD consultants stressing their integrity and cooperation (Al Leem, Nakee, Rasad). Also there were favourable opinions about the blasting contractor (Al Leem).
-*There was no private contractor because the population of the area works in cutting stones* (Key informant in Nakee)
- *Beneficiaries committee had worked on the whole road. It used to receive money from the Fund, supervise the workers, buy explosive materials, and implement the road under the supervision of an engineer* (Project Brief on Rasad)

Maintenance Committees
Maintenance committees are functioning in Al Leem and Rasad. Nakee road was finished recently (one month before the field work) and they were establishing the maintenance committees. In the case of Al Madan the road is not finished yet, and the maintenance committee has not been established as the first year of maintenance is a responsibility of the private contractor.

Community members in Al Leem and Rasad have actively participated in cleaning the roads after heavy rains under the supervision of the beneficiaries committee. Community members erected walls, along the road where falling rocks from fragile cliffs blocked the road.

In Rasad the beneficiaries committee designated a poor worker from the area to maintain the road daily except during holidays and on Fridays. The vehicle owners each pay him a monthly fee of 200 to 500 riyals depending on the extent of repairs road. There are 50 vehicles that benefit from the road daily other than the vehicles that come from outside the area. And if a major break down occurs, the community members gather to fix the road under supervision of the committee.

MenFG in Al Leem
-- Maintenance is on us and we're committed to that
-- The maintenance committee calls people and we respond promptly
-- On the morning, we go early to repair (the road) quickly
- In paved areas it's easy to remove fallen rocks but in non-paved areas the road is damaged and it gets difficult.

In Al Leem the beneficiaries committee, now transformed into a maintenance committee, was able to supervise the implementation and engage the citizens in working and contributing during the excavation of the road, and to (stone) pave the road during maintenance.
-- The committee has engaged all the beneficiaries.
-- The committee specified the amount of contributions for each
-- They summon the people and they go together to repair the road.

5.5.3.3 Impact on household-level development indicators

Table 5.47 summarizes some of the most important benefits expected from a rural road project. The survey results suggest that feeder road projects have had a very positive impact.

The percent of villages with stone roads rose from 9% to 55% in the period, as did the proportion of villages with unpaved roads accessible year round (from 40% to 80%).

Household level data confirm that travel times have been reduced. The time needed to get to the nearest town market has decreased from 120 to 60 minutes, 50% reduction. The cost of travel has decreased by 45% and this has reduced the cost of carrying several basic goods as water, wheat and others. For example, the sack of wheat in the village went from an average of 2,838 YR in 2003 to 1,859 YR in 2006 (deflated cost). Also 100% of beneficiaries recognize that the project has facilitated the transportation of people and goods, as well as in some instances citing other benefits, such as access to health and education services, and fetching of water.

Table 5.49 Outputs of rural roads sub-projects

	2006 Ex-post	2003 baseline	Return visit	
			2006	2003
% of villages with stone paved roads +	55	9	50	50
% of villages with unpaved roads accessible the whole year +	80	40	71	71
Cost of transport to nearest city/market +	179.3	326.7	293.9	288.6
Time spent (Median values in minutes) ^	60.0	120.0	120.0	120.0
Cost of one sack of wheat (in the village) ^	1,859.2	2,838.8	1,859.4	1,821.97
Cost of one sack of wheat (in the nearest market) ^	1.715.4	2,534.2	1,709.2	1,673.67
Project made easy the transportation of people and goods ("Yes") ^ *	100%	---	100%	---

* n = 195 (Ex-post) ; n = 273 (Return visit)
2006 prices (after) are expressed in 2003YR deflacted using the CPI = 1.4961
Source: **^**Household Survey; **+**Project Survey 2006, 2003

The reduction in travel time and cost has led to a sharp increase in the number of trips that a householder makes per day. These data show an increase of 95% (from 81 to 158) in the number of trips made by family members to the nearest market/town. The reasons for the trips stayed the same - shopping (40%), working, health and visiting friends and relatives (20% each).

Box 5.8 From the Beneficiary Assessment: Benefits of a feeder road

In all study cases, community members consider that the project benefits all. As transportation has become faster and less expensive, people have more goods (especially water which is fetched from distant places), sick persons can be moved rapidly and more comfortably, vehicles are less exposed to bad road conditions reducing maintenance costs. Women felt they have particularly benefited because of their traditional role in carrying different goods.

Water availability. Water supply is a major concern, and the road has helped to increase water availability through facilitating access and reducing costs., as illustrated by these (men) testimonies in Al Leem:
-- A water unit (20 liters) used to cost 200 riyals, now it costs 50 riyals
-- We have to fetch grass and water for a long distance from Aloujah- a far valley- on our backs

Transporting sick persons. People in Al Leem and Rasad recognized the importance of the road in increasing access to medical care and preventing deaths through faster routes to facilities (as opposed to transport by foot or donkey).
-- *If a person was sick, we used to carry him on our backs until the main road*
-- One time, my leg got swelled and infected, there was no one and they lifted me on a donkey and then they lifted me to the market where I didn't find a car to get back. Now it's direct transportation
-- A person used to pay 2,000 and 5,000 for transport the sick person and he might finish in road.

Increment of trade and services and reduction of communities' isolation. Carrying merchandise on donkeys

or in vehicles was very expensive due to poor quality or nonexistent roads. Local markets and other services have been able to increase their activities, providing a wider variety of goods, more local market opportunities and lowering prices.
-- *Transporting a flour sack used to cost 200 and now it's 50 by car*
-- *After the road's excavation people have opened small stores in the area. Everything is now available.*
-- *Before, people used to gather at Alouja market on Wednesdays (to shop). Today, we shop daily*
(Men FG, Al Leem)
-- *If there's no grass (for animals), they get it* (Women FG, Al Leem)
-- *I have a storage by my house that was built using 200 sacks of cement; if there were no road, I wouldn't been able to get the cement* (MenFG, Al Leem)
-- *We can now reach (our destinations) with our goods so quickly* (Men FG, Nakee)
Women refer to a higher availability of food:
- *If there is no flour for making bread, we can get it by car* (Women FG, Al Leem)
- *We go to the road to bring vegetables, cereals, wheat and fruits* (Women FG, Nakee)
- *Today they bring fish and rations to the home's door* (WomenFG, Rasad)

Reducing transportation efforts and costs especially for women. The road has reduced time and efforts for transportation by villagers, especially women.
-- *Our mode (of transportation) before the excavation was on donkeys and on foot until the valley*
-- *Before, people used to walk for an hour and half*
(Women FG, Nakee)
- *Before we used to carry flour sacks on our backs from Aloujah a far away place*
(Women FG, Al Leem)
-- *Previously cement and woods used to be brought on their backs (men back)* (Women FG, Rasad)

Reduced car maintenance costs. Previously only 4x4 vehicle could reach the villages and vehicles used to break down frequently.
-- *The car used to climb the road slowly and in great difficulty while the men walk behind it as if they were in a funeral…Few vehicles were present in the past, now they are many* (MenFG, Nakee)

VI SERVICES: QUALITY, SUSTAINABILITY AND IMPACT. THE SMALL AND MICRO-ENTERPRISE DEVELOPMENT PROGRAM

6 Micro Finance Projects

6.1 Introduction

The Small and Micro-enterprise Development Program seeks to create jobs and increase poor people's income by developing local capacity to provide training, technical assistance, saving and credit services to small and micro-entrepreneurs. The program is the only component of Yemen's social safety net that actively aims to generate income and create permanent jobs for poor people. The program provides two types of service: financial and non-financial (SFD. 2003: 30).

The Small and Micro-enterprise Development Program is being implemented by the SFD through financing and technical support to 11 microfinance programs executed by NGOs and specialized microfinance institutions throughout the country.

Internal data from SFD-MIS shows that the number of borrowers by the end of 2005 was 25,588 and 89% of them are women (*See Table 6.1)*. The number of loans to women has increased by 1.5 times each year for the last 3 years. On the other hand, savers have doubled their number each year, keeping the fact that around 95% of new savers are women.

Table 6.1. Evolution of the SFD Portfolio of Microfinance Programs

Item	2002	2005	Average Annual growth rate
Borrowers	3,282	25,588	98.3%
% Females	42%	89%	154.7%
Savers	2,899	24,840	104.6%
% Females	95%	94%	103.9%
Outstanding Portfolio (YR Millions) *	100	508	48.9% **
Market penetration ***	0.09%	0.22%	

* MF Portfolio as % of the credit loans from commercial and Islamic Banks to the private sector
** Average real annual growth rate, based on real figures at their December 2002 constant values
*** It does not include SEDF operations.

Source: SFD Annual Reports 2002 and 2005. Central Bank of Yemen Statistics.

The microfinance portfolio shows an impressive annual growth rate of 48.9% per year in real terms (measured on constant 2002 values), reaching the amount of YR 508 million invested by the end of 2005. Although this figure is small compared to national level lending, it plays a key role in strengthening small and micro-enterprises, and it represents 0.22% of the outstanding credit and loans from commercial and Islamic banks to the private sector, a significant level of growth from 0.09% by the end of 2002.

The evaluation of this program is based on the re-visit of 9 projects surveyed in 2003 (*Section 6.6 of the 2003 Report*)[22]. However, the households corresponding to these projects (239 in 2003 and 308 in 2006) are not necessarily the same, due to the rotations in microfinance clients

6.2 Sponsoring and SFD Support

Eight out of the nine micro finance projects visited in 2006 are run by an NGO. This situation is similar to that reported in 2003.

The SFD has financed grants for technical assistance and training in one of these projects, and has provided grants for seed capital to five, and loans for on – lending and other support to six (*See Table 6.3).* Except in the case of grants for TA and training, the average amount of each type of support per project shows a strong increase, compared to those observed in 2003. This is more noticeable in the loans for lending and other support.

Table 6.2. Surveyed microfinance projects by type of sponsor

Type of sponsor	2003 Report	2006 Re-visit
Local NGO/Charity	8	8
Cooperative	2	0
Other	1	1
Total	11	9

Source: Micro Finance Program Survey 2003 and 2006

Two micro-finance entities created with support from the Dutch Government under the World Bank PPF as pilot programs to be taken over by SFD, once operational, the other seven entities were created only with SFD support. The covering capacity of the program has also enhanced. Most of the projects in 2006 (7 out of 9) are covering a district or more, and only 1 project is serving part of a city. In 2003 data there were 6 out of 11 projects serving only part of a city.

Table 6.3. Type and amount of support received by SDF

	2003 Report		2006 Re-visit	
	# of projects	Average amount received (YR)	# of projects	Average amount received (YR)
Grant for TA and training	4	160,945	1	30,889
Grant for seed/capital	11	3,484,725	5	12,663,456
Loans for lending	11	13,747,216	6	33,988,889
Other support	10	1,853,994	6	12,572,954
Total	11	19,246,879	9	59,256,187

Source: Micro Finance Program Survey 2003 and 2006

In the period 2002-2006, the average funds per project grew to 3.5 times the level it had in 2003. The source of financing has also changed for better. On average, in 2006, beneficiary savings represent 11.4%, and other sources 8.7%, accounting together for 20% of the seed capital, up from 3.6% reported in 2003 (*See Table 6.4).* Currently, there is no legal environment allowing microfinance entities to take and use savings. SFD loans and grants are still the main sources, but their participation has come to 78%, down from 96% shown in 2003.

[22] The 2003 Report mentioned 11 microfinance projects, but later it was discovered that one project was operating in three governorates and therefore it has been taken as three different projects. So, in reality only 9 projects were surveyed in that year.

Table 6.4. Source of financing the seed capital						
	2003			2006 Re-visit		
Type of support	# of projects	Average amount received (YR)	%	# of projects	Average amount received (YR)	%
Beneficiary savings	4	294,401	1.5%	4	7,634,856	11.4%
Loan from sponsoring agency	0		0.0%	1	66,667	0.1%
Grant from sponsoring agency	2	107,265	0.6%	3	917,822	1.4%
SFD Loan	11	13,646,466	71.8%	7	36,577,778	54.6%
SFD Grant	11	4,565,758	24.0%	9	16,008,962	23.9%
Other sources	3	395,259	2.1%	2	5,822,222	8.7%
TOTAL	11	19,009,150	100.0%	9	67,028,306	100.0%
Source: Microfinance survey 2003 and 2006						

6.3 Governance

In most cases, the administrative board members continue to be nominated by the General Assembly of the sponsoring agency. In 7 out of 9 microfinance projects consulted in 2006, women are involved in this process and take part in the administrative committee. Members of this administrative board are elected for periods of 2 to 4 years. Board meetings take place at least twice a year, up to 15 times a year.. This has shown a significant increase from 2003. The administrative board is re-elected in most cases (7 out of 8 cases); none of the cases reported paying salaries to the board members, but they receive incentives such as meeting attendance fees (2), covering expenses (1), and minutes paid for forming groups (1).

Between 2002 and 2006, the average board size remains the same, women increased their participation, and younger people entered the boards as members (*See Table 6.5).* In 2006, boards have an average of 7.3 members, with a mean age of 39.7 years and a majority of female members (4.2 versus 3.1 men).

Table 6.5. Characteristics of the administrative board members		
	2003	2006 Re-visit
Average members	7.3	7.3
Average members - Male	3.1	3.1
Average members - Female	4.2	4.2
Average age	42.0	39.7
Number of sample projects	9	9
Source: Microfinance Project Survey 2003 and 2006		

6.4 Project Staffing and training

Micro finance projects have increased their average staff from 11.4 to 26.4 (*See Table 6.6).* This increase is due mainly to an increase in female participation that rose from an average of 5.6 to 19.2 staff members. Although the numbers of females increased in all positions, it is worth noting that women have greater participation as loan officers and, to a lesser extent, as support staff.

Table 6.6. Staffing patterns: Average number of persons per post, by sex

	2003			2006 Re-visit		
Staff category	Male	Female	Total	Male	Female	Total
Manager	1.2	1.0	2.2	1.2	2.0	2.9
Accountants	1.2	1.0	1.1	2.6	1.8	2.8
Loan Officers	6.2	3.3	5.2	4.3	13.9	15.8
Trainers	0.0	0.0	0.0	0.5	0.0	0.5
Other professionals	1.6	1.0	1.4	1.7	1.7	1.9
Support staff	1.7	1.1	1.4	1.4	2.8	3.6
Average by MF project	9.7	5.6	11.4	9.3	19.2	26.4

Source: Microfinance survey 2003 and 2006

The increased participation by females accompanied by higher average salaries than men in positions such as loan officer, and similar salaries in positions such as accountants, but women appear with lower average salaries in the positions of managers, support staff positions and other professions. *See Table 6.7.*

Table 6.7. Staffing patterns: Average salary of persons per post, by sex

	2003			2006 Re-visit		
Staff category	Male	Female	Total	Male	Female	Total
Manager	32,211	23,704	27,958	94,227	46,553	64,889
Accountants	22,146	11,000	19,359	22,029	21,833	21,958
Loan Officers	74,938	38,416	52,463	15,388	19,763	18,416
Other professionals	19,090	15,054	17,577	17,008	11,375	14,755
Support staff	15,270	5,573	8,482	14,871	8,243	11,336
Female average salary as % of male salary						
Manager		74%			49%	
Accountants		50%			99%	
Loan Officers		51%			128%	
Other professionals		79%			67%	
Support staff		36%			55%	

Source: Microfinance Project survey 2003 and 2006

In the past 12 months, 320 people have been trained, and 78% of the trainees were women.

59% of staff was trained in credit and savings, 24% in accounting and finance topics, 19% in specific skills (like language), 13% in management / Human resources and 11% in strategic planning and promotion.

Table 6.8. Number of people trained in the Past 12 month

Modality	Total	Female %
Separated	153	79%
Altogether	167	76%
Total	320	78%

Source: Microfinance Project survey 2006

Table 6.9. Staff trained by field of training in the Past 12 month

Field	% of the Staff
Credit and/or savings	59
Accounting and finance	24
Specific skills	19
Management/Human resources	13
Strategic Planning and promotion	11

Source: Microfinance Project survey 2006

6.5 Project Services

All of the projects surveyed in 2006 have a small/micro loan program; 7 out of 9 have a saving component, and one project has a training component. So far, this pattern is very similar to that observed in 2003. There is an obligatory insurance in case of non-ability to repay due to sickness, death or other emergencies – insurance is only for the loan amount; accordingly, all of the nine projects offer insurance services. One project reported providing marketing services for clients' products.

Table 6.10. Services provided by the program

	2003	2006 Re-visit
Small/Micro Loans	10	9
Savings	5	7
Training	1	1
Insurance	0	9
Other=Marketing Clients Products	0	1
Total MF projects	9	9

Source: Microfinance survey 2003 and 2006

The number of beneficiaries has increased dramatically, mainly in favor of women. In 2006 there was an average of 3,782 women considered as beneficiaries of loan services and 3,906 beneficiaries of saving services (*See Table 6.11)*. As a result, it is estimated that 86% of loan beneficiaries are women (up from 34% in 2003), while their participation as saving beneficiaries also went up from 81% in 2003 to 93% in 2006.

Table 6.11. Number of beneficiaries, by sex

	2003		2006 Re-visit	
Type of service	Men	Women	Men	Women
Average loan beneficiaries per project	226	116	637	3,782
Average saving beneficiaries per project	59	258	311	3,906
Women loan beneficiaries as % of total		34%		86%
Women saving beneficiaries as % of total		81%		93%

Source: Microfinance survey 2003 and 2006

6.5.1 Savings Projects

All the projects that have a saving component also have saving regulations, and 2 out of 7 use a company accounting program which is computerized. The interest rate on members' savings range from 4% to 10% (the average equivalent rate of commercial banks in 2005 was 13%). In all except 1 project out of 7, savers have priority in obtaining a loan.

The 7 projects surveyed that have saving services have a total of 2,683 saving accounts, with a total saving amount of YR 8.37 million[23]. This gives an average of YR 3,122 per account, which is 1.6 times the average found in 2003 (*See Table 6.l2).*

Table 6.12. Active saving accounts

	2003	2006 Re-visit
Total number of accounts	502	2,683
Total saving amount	958,614	8,374,657
Average amount per saving account	1,910	3,122

Source: Microfinance survey 2003 and 2006

[23] As a reference, the total saving deposits of commercial banks in 2005 was YR 78,634 millions.

6.5.2 Lending Projects

Four of the 9 projects work with group loans under the *murabaha* (buying and selling) type, and 2 also work with individual loans under this scheme, while two are using the *musharaka* (profit sharing) modality[24], and six projects use ordinary interest mechanisms. The household survey reports that the ordinary fee type of loans has come down from 80.3% in 2003 to 63.4% in 2006; while the *murabaha* modality represents one third of the loans in 2006 (*See Table 6.13).*

According to the microfinance (project) survey, monthly interest rates on *murabaha* and ordinary loans range between 2% to 3%, while in the *musharaka* cases the profit sharing rate averages 25%.[25] Household survey data confirms this same information[26]. For households reporting loans based on an annual interest rate, the weighted rate is 24%, ranging from 10% to 36%, and those on a profit-sharing scheme pay a 33% average share.

Table 6.13. Percentage of loans by Type

Type of loan	2003	2006 Re-visit
	%	%
Ordinary Fees (Interest)	80.3	63.4
Profit Sharing	5.4	1.6
Buying And Selling (Murabaha)	0.0	33.7
Other	14.2	1.3
Total	100.0	100.0

Source: Household survey 2003 and 2006

By the time of the survey, there were 23,079 active loans in the 9 visited projects, with a total loan portfolio of YR 500.8 millions[27], representing four times the loan portfolio found in 2003. Similarly, the average portfolio per project has increased five-fold from its 2003 level, while the average loan amount has increased by 16%.

The range of the loan for microfinance is start from 5,000 to 250,000. The first loan ranges from 5,000 to 40,000 and the subsequent loans may reach 250,000. The terms for repayment have relaxed and now the minimum term for the loans is 6 months (3 months in 2003), while the maximum is two years (one year in 2003), but the mean loan duration remains at 279 days (9 months). All surveyed projects give loans for trade and services activities, but also for manufacturing (4), repaying other loans / Emergency (4), animal raising (3), agriculture (2), family and personal consumption (1), purchasing of households goods / appliances (1), and house repairs (1).

[24] In Islamic culture, the use of in-cash lending has not been common. They use instead in-kind lending, by which lenders go with the borrower to buy what the borrower needs (equipment, raw materials, inputs, and the like, related to the loan purpose). The amount of the purchase becomes the amount of the loan. The lender might be the provider itself as well (Commercial credit). In Islamic culture, “service fee” or “service charge” is a preferred term to the less known "interest rate". The traditional Islamic definition of charge on loans is the "profit sharing" agreement.

[25] The annual interest rate on loans in commercial banks in 2005 ranged from 15% to 21%.

[26] 194 households (63.6% of the total) reported ordinary fees loans type in the 2006 survey. Out of these, 113 loans based on monthly and 81 based on annual interest rate. These data are not available for the 2003 survey.

[27] The amount of outstanding credits and loans from commercial and Islamic banks to the private sector in December 2005 was YR 225,783 millions.

Comparing with the 2003 data, the household survey reveals that the microfinance projects are diversifying their loan portfolio by diminishing the number (and amount) of loans financing trade, cattle and agriculture activities, and increasing those going to manufacturing, purchasing of households assets, and housing repair (*See Table 6.14).* Although the final decision on lending must be based on a case-by-case risk analysis of the borrower and the financed activity, diversifying is a good principle in portfolio management. However, some activities like consumption and debt repayment might imply a greater risk and, therefore, require closer monitoring.

Table 6.14. Main destiny of the loan (Percentages)

Loan destiny	2003	2006 Re-visit
	%	%
Trade	49	37
Manufacturing	6	14
Purchasing Hh Appliances/Goods	3	11
House Repair	0	6
Animal raising & Agriculture	12	7
Services Activities	0	3
For Personal And Family Consumption	3	6
To Repay Debts Or Loans	0	3
Buying/Fixing motorcycles/car/Equipment	0	2
Emergency	1	2
Other	27	9
Total %	100	100
Number of households	239	306

Source: Household survey 2003 and 2006

All projects have credit regulations available and loan registers and all but one also have a loan tracking computerized program (8).

Table 6.15. Active loan accounts

Concept	2003	2006 Re-visit
Number of active loans	4,208	23,079
Total outstanding loan portfolio	123,835,094	500,800,000
Average portfolio per project	11,257,736	55,644,444
Average amount per loan	29,428	34,125

Source: Microfinance survey 2003 and 2006

Sanctions are applied to those who are behind with loan repayments including delayed release of subsequent loans (8 projects), banned for future loans (6 projects) and execution of the guarantee (6 projects). Only one project allows refinancing of loans that have run into arrears and has a total of 41 such loans, for a total amount of YR 1,339,780.

All projects require a guarantee before they provide a loan. The solidarity modality is the most utilized form of guarantee for all projects. Other guarantee schemes are wage or salary (3), personal (3), commercial (3). Gold is also accepted as a guarantee in 3 projects and only one project reports the use of a property guarantee.

Average microfinance project financial statements are presented in *Table 6.16.* Data for 2005 have been deflated to their 2002 equivalent, by using the CPI index. In general, the main accounts show improved statistics as compared with 2003 levels, with a 41% annual increase in assets, financed mainly by a 97% annual increase in liabilities, and a 7% annual growth rate in capital. However, at the end of 2005, member savings accounted for only 14% of the loan portfolio, which means that the main sources for lending are loans from financial institutions and other liabilities.

Further, although the average operating income has experienced a real annual growth rate of 69%, greater than 53% annual growth in expenses, this has not been enough to compensate for the accumulated losses suffered in the previous 3 years. The amount of accumulated losses are mainly related to 2 projects where the joint amount of administrative cost and other operational expenses account for more than 100% their operational income.

Table 6.16. Microfinance project financial statements as for December 2002 and 2005

Account	Averages (YR Thousands)		Annual Average Growth Rate
	2002	Real 2005 *	
Balance Sheet Statement			
Cash & Banks	6,079	10,455	19.81%
Investment	0	4,042	n/a
Loan Portfolio	8,831	37,582	62.1%
Reserves for bad loans	0	-419	n/a
fixed assets	1,953	2,599	10.0%
Other assets	4,928	4,018	-6.58%
total assets	**20,895**	**58,276**	**40.8%**
Liabilities			
Members savings	939	5,231	77.3%
Other savings	0	41	n/a
Loan from financial institutions	7,071	24,918	52.2%
Other liabilities	4,305	8,672	26.3%
Total liabilities	**5,069**	**38,862**	**97.2%**
Capital			
start up capital	1,532	1,627	2.0%
Other capital contribution	5,289	583	-52.1%
Accumulated profit/loss	0	-4,309	n/a
Donations &grants	13,068	21,513	18.1%
Total capital	**15,826**	**19,414**	**7.0%**
Profit and loss Statement			
Operating income			
Income from interests on loans	1,758	10,787	83.1%
Income from other charges on clients	122	541	64.3%
Income from investment outside loans	466	4	-78.9%
Total operating income	**2,346**	**11,332**	**69.0%**
Operating expenses			
Interest paid to savers			
Interest paid to Banks		163	n/a
Provision paid for bad loans	19	115	83.2%
Administrative costs -staff	1,984	5,816	43.1%
Other operation expenses	1,070	4,907	66.1%
Total expenses	**3,057**	**11,001**	53.2%
Net results of operations	**-894**	**331**	-171.8%
Non-Operational income (Expenses)			
Donations and grants	0	832	n/a
Other non operational income	323	174	-18.6%
Non operational expenses	602	0	n/a
Final result	**-945**	**1,338**	
Source: SFD-MIS			

6.6 Household Perception of the Program

Almost all households (96%) have had a good experience with the program (up from 82% in 2003). Those who report a bad experience or who are not benefiting from the program, complain about the high cost of the loans.

Table 6.17. Assessing experience with the Program

Experience	2003	2006 Re-visit
Good	82.4	95.8
Bad	9.2	1.3
Neither Good Nor Bad	7.5	2.9
No Opinion	0.8	0.0
Total	100.0	100.0
Number of households	239	306
Source: Household survey 2003 and 2006		

The main positive aspects highlighted include good management (40%), creating jobs and enhancing living conditions (35%), and learning from the experience of working with the Program (15%).

Table 6.18. Positive aspects of working with the Program

Referred aspect	%
Successful Program and good management	40.3
Creating job chances and enhancing living conditions	35.3
Learning savings and the Program terms are appropriate	13.5
Funding small projects	4.3
The loan taught people skills they benefit from	2.6
Raising morale and self-reliance	2.0
Provision of poor families to fix their houses	2.0
Total %	100.0
Number of households	303
Source: Household survey 2006	

Conversely, people find high interest rates (31%), short period of repayment (26.5%), and low amount of loans as the most negative aspects in dealing with the Program.

Table 6.19. Negative aspects of working with the Program

Referred aspect	%
Intersest rate is high	31.0
The period/term of paying off the loan is short	26.5
The loan value is not big/ sufficient.	14.7
There is no markets to sell the products	2.9
Loan officers do not consider beneficiary circumstances	2.3
Other	22.5
Total	100.0
Number of households	306
Source: Household survey 2006	

Notwithstanding, when asked if they would be interested in obtaining a loan from the program under the same terms, 75% said yes. This percentage is higher than the 68% positive answer found in 2003 household survey. For 88% of the surveyed households in 2006, the microfinance program has contributed (positively) in changing their lives, which is higher than the 69% that thought so back in 2003.

Table 6.20. Did the Program contributed in changing your life? Percentage of households

Contributed	2003	2006 Re-visit
Yes	68.6	87.8
No	29.7	12.2
Dk	1.7	0.0
Total	100.0	100.0
Source: Household survey 2003 and 2006		

Similarly, 84% of the surveyed households in 2006 think they are better off now after having a loan from the Program, 3.3% think they are worse off, and 13.1% feel almost the same as before. These percentages appear more optimistic than those equivalent ones reported in 2003 survey.

Table 6.21. Better off after having a loan from de Program? Percentage of households

Answer	2003	2006 Re-visit
Now Better	61.9	83.6
Now Worse	13.0	3.3
Almost The Same As Before	24.7	13.1
Do not know	0.4	0.0
Total %	100.0	100.0
Number of households	239	305
Source: Household survey 2006		

For those who feel they are better off, the main expressed reasons relate to having more job chances and better standard of living (64%), and having carried out their project (30%). Those feeling worse off appear to be either not benefiting from or experiencing problems paying back the loan. For the overall program, the total column on the right shows 87% of the households highlighting positive reasons for the impact of the Program in their standard of living[28], and 13% expressing their complaints about their non benefiting from, having difficulties in paying back or in getting higher amounts for the loans. Some households (borrowers) still regret the fact that they could not market their products.

Table 6.22. Reasons for the Program affecting their standard of living Percentage of households

Main reason	Now Better	Now Worse	Almost the same	Total
	%	%	%	%
Creating job chances and enhancing Living Conditions	64.2	0	12.5	55.3
I Could Buy Household Appliances/Decoration Furnishing	11.0	0	12.5	10.9
Expanding in Small Establishments	9.1	0	2.5	7.9
Gave Me A Chance To Fix The Car/ House	6.3	0	10.0	6.6
Non Benefiting From The Loan	0.8	50	30.0	6.3
Difficulty In Paying Off The Loan	0	30	2.5	1.3
Small Size Of Loan	0.4	0	20.0	3.0
Could Not Market Our Products	1.2	0	7.5	2.0
The Loan Allows Us To Own Lands And Raise Animals	1.6	0	0.0	1.3
Raising Morale And Self-Reliance	1.6	0	0.0	1.3
The Loan Taught Me Skills I Benefit From	0.8	0	2.5	1.0
I Could Pay Back My Debts	2.0	10	0.0	2.0
The loan taught me how to save	1.2	0	0.0	1.0
Text not clear	0	10	0.0	0.3
Total %	100	100	100	100
Number of households	254	10	40	304
Source: Household survey 2006				

[28] Some of the worse off mentioned positive reasons and, similarly, even some of the better off expressed their complaint about factors affecting their lives negatively.

6.7 Beneficiary Assessment

In general, benefits and complaints about the program that came out from the households survey appear again in the focus groups carried out as part of the qualitative evaluation.

In addition to the benefits associated with income generating activities, some women identify other positive externalities, such as enhancing their business and social contact net and acquiring new experiences.

- *In the beginning it was simple and today it's an enterprise…I have acquired new connections and relations…We have benefited by the experiences.* (Women Focus group, Zinjibar).

Even though most of the beneficiaries recognize the positive impact of women participating in economic and income-bearing activities, there is still controversy on the matter, especially among men. On the one hand, some agree that women gain a higher status when having income:

- *Women share (with) men in life matters especially the women with income…A woman gets respect and a higher status if she has an income….* (Men FG, Al-Hodeidah).

Other men think this might reflect marital problems, or embarrass spouses:

- *When women take loans and work, this may lead to problems and divorce, especially when they go out for work...Sick men let their women take loan…All women are not the same and all men are not the same. The man who can work will never let his wife take loan and work…Only men with limited income ask their wives to take loans to help them.* (Men FG, Sana'a).

Women, on the other hand, confirm that they are more respected and have a higher position in the family when they earn money:

- *There is a Yemeni proverb (that) says: my husband loves me because I am strong, and my family loves me because I am rich…If you give them money, your family and friends love you. If you don't have (money), no one will care about you…After we worked and gained money, they take our opinion in everything…We have a higher position now.* (Women FG, Sana'a).

When asked about things they would like to change or problems they face when working with the program, issues like higher interest rates, longer repayment period and individual loans arise. Regarding the interest rates and amount of loans:

- *Every time we want to develop a project and thus request a loan the interests get higher… If they could lower the interest…I took a loan of 70,000 (riyals) and they calculated an interest of 17,000 riyals.* (Men FG, Al-Hodeidah).
- *To lessen the interests…The traders who the program buys from increase the prices…If the borrower meets all their conditions (criteria), they should increase the amount of loan.* (Men FG, Sana'a).
- *If someone needs 500.000 Y.R, why they don't give us (that amount)?* (Women FG, Sana'a).

- *They used to take small interests, and now they (have) doubled interests…The interest is really exhausting.* (Women FG, A'abs) .

Regarding the loan repayment period or a grace period for installments:

- *Sometimes you are late for repayment for about three days because you face some difficulties, but they write infringement on you.* (Men FG, Sana'a).
- *Why don't they give us a yearly loan instead of monthly and weekly…They have to expand the time of repayment; every one has a different situation.* (Women FG, A'abs).
- *If the loan period were extended, amount of instalments will be less…We want individual loans to be handed out so we feel that they trust us...I want expertise to be exchanged between us and other governorates like Hais and Al-Hodeidah…They should leave a grace period of up to five days, because the circumstances don't allow sometimes (to repay by the specified date)..The girls say how could we waste our times during vacations, they should setup workshops and training courses.* (Women FG, Zinjibar).
- *In the beginning, it (the loan) was for three months, six months, and one year. We want it to be for two years so the burden would be less on the members.* (Women FG, Zinjibar).

Other problems mentioned referred to the need for individualized credits after a successful group loan, and difficulty for women to obtain a required identification card.

- *They, in the beginning, tricked us and told us that after a group loan there would be individual loans, but this didn't happen.* (Women FG, Zinjibar).
- *They asked for (identity) cards and photographs and that wasn't easy (to get).* (Women FG, Al-Hodeidah).

Beneficiaries of SFD supported microfinance programs do not find many alternatives at the time of getting a loan. The only options are traders, relatives or the banks. Traditional commercial credit provided by traders is seen as expensive:

- *There is a person who comes from Saudi Arabia with clothes and shirts, I take them from her and sell. Everything she brings I take and sell…They give to whom they know but they take up half of the profits.* (Women FG, Al-Hodeidah).
- *Even if you give him gold (as collateral), he won't lend you money...Frankly, if he (the merchant) lends you, you will indulge him (when) repaying.* (Men FG, Al-Hodeidah).

Therefore many borrowers find it more comfortable working with SFD supported programs:

- *The most important thing was that they (the Program) rescued us from the injustice of the traders; they (traders) raise the prices and give us bad goods.* (Men FG, Sana'a).

Borrowers in Sana'a also find it inconvenient making weekly repayments, while Azal Microfinance Program charges monthly. Some people, nevertheless, prefer merchants over the SFD Program because they believe the Program operates by usury when it uses interest rates.

People also mentioned that there are banks that give loans to employees and take off a portion from their salaries to repay the loan. In Zinjibar, they informed that banking loans take 28% interest for 18 months and then 12% for six months.[29]

[29] They did not mention the legal aspects, including guaranties, the bank might require from potential borrowers.

VII SERVICES: QUALITY, SUSTAINABILITY AND IMPACT. THE CAPACITY BUILDING PROGRAM

Quality, Sustainability and Impact Program is assessed exclusively on the basis of the Beneficiary Assessment, which uses evidence from key informant interviews and focus groups with individual participants and families selected from study cases of NGOs working on these fields. The style of the chapter is purely descriptive to provide details of the SFD intervention and the benefits that the NGOs and their service recipients declare to obtain from it.

Three type of projects are included: (i) Special Needs Groups (three case studies), (ii) Organizational support (four case studies), and (iii) Training (a sample of trainees from three governorates).

7. Projects for Special Needs Groups

7.1 Introduction

Special Needs Groups are defined as the disabled, children at risk (orphans, children in trouble with the law, street children, children of imprisoned women, child laborers), women at risk (women in prison and coming out of it) and the socially marginalized (institutionalized psychiatric patients, institutionalized elderly people, slum dwellers).

SFD interventions in this area focus on social integration, encouraging participatory approaches –especially by women- in project design and implementation, encouraging members of groups with special needs to form groups and speak out about their issues, and introducing organizational measures that help ensure the sustainability of facilities and activities.

During the second phase the program has focused on:

- Building the managerial and technical capacity of institutions that help groups with special needs;
- Supporting activities to ensure the sustainability of services and facilities;
- Raising awareness and advocating for the rights of groups with special needs;
- Supporting the social integration of these groups, especial through education and training;
- Supporting rehabilitation services that enable these groups to access available facilities;
- Encouraging the duplication and expansion of successful pilot initiatives; and
- Funding the infrastructure and technical assistance needed to establish protection and rehabilitation services of groups with special needs, especially children.

For the third phase the SFD's focus will be:

- Integrating disadvantaged children into mainstream education;
- Supporting the training of specialized educators for Special Education;
- Continuing to pilot the private sector-NGO partnership in managing and operating the government welfare and rehabilitation centers for children;

- Exploring the possibility of intervention in the area of mental disability;
- Continuing the support of the improvement of the National Sign Language Dictionary; and projects for Early Detection of Disability and Early intervention; and
- Supporting the development of a number of national strategies like the national strategy for the mother and child, and the national strategy for disability.

7.2 The beneficiary NGOs

The three selected NGOs were:

The Mentally Disabled Training and Rehabilitation Centre. Located in Al-Hodeidah, the Centre belongs to the Yemeni Child Rights' Association. Founded in 1990, the Centre aims to help street children, juveniles and orphans of Al-Hodeidah. It was first supported in 1999 by Oxfam that provided training to all staff in teaching methods for disabled children. Before the SFD intervention teachers' skills was still a serious problem, additionally the centre lacks transportation for children .

The SFD project had the objective of enhancing the instructors' capability in dealing with the mentally disabled. I addition the project provided a physiotherapy centre, wheel chairs, and buses for the transportation of children.

- **The Al-Iradah Association** was established in 1998 aiming to rehabilitate and take care of deaf people. It is considered to be the first association of this kind in Dhamar. Initially the organization faced many difficulties because people did not accept the Association and had a misconception about its objectives because they thought that the Association would distribute food and provide salaries. There was also a lack of awareness about the importance of educating children, as well as a lack of financial resources.

- The objective of **Al-Iradah Association** project was to integrate deaf in the public schools, build classes for deaf, training instructors (in the trainers of trainers modality) to learn how to work with deaf (e.g. signs language was a part of the training) and equip the association (buses and computers). Also the project offered a "Hearing Aid" device and access to computers.

The Physiotherapy Center was established in Al-Mansourah by the International Organization for the Handicapped. The centre provides services on physical therapy for cases of muscle rigidity and floppy muscles, such as cerebral paralysis and polio in addition to manufacturing the artificial limbs and compensatory instruments for the paralyzed, such as medical shoes and the wooden and metallic walking sticks. There is an annex to the centre which includes training on carpentry, computer and other crafts to give the disabled an income generating capability. It also provides massaging, guidance and services for the deaf and dump, and a workshop for artificial limbs. In cases of cerebral paralysis mothers are trained on how to perform physical therapy.

The problem of the centre was the lack of furniture, equipment and training materials, becoming the provision of these inputs the main objective of the SFD project.

7.3 Benefits

Al-Hodeidah Association

The Association has received furnishing for the building (computers) and physiotherapy facilities, staff training and two buses for transporting the disabled children as well as the volunteers.

The Physiotherapy centre is used by children from inside and outside the centre especially those with muscle emaciation where the disabled are helped to perform several exercises in the presence of their mother or one of their relatives so that these exercises can be performed at home. The performance of the staff has improved as a result of training on administration, as well as management of both the physiotherapy centre and the early intervention section. Trained teachers became more capable to deal with children.

The buses facilitated transportation as well as organizing trips and visits for the disabled outside the centre (the Centre visits children who have physical disabilities such that they cannot come to the Centre)

The beneficiaries of these services agreed that the Centre takes care of children with disabilities, who rarely find the necessary support because of the difficulty in dealing with them and the need for high skills as well as patience to reach out to them. All interviewees agreed that the services provided by the Centre have left a positive mark on the children. Women emphasized that this positive impact has been reflected upon the families of the beneficiaries who were delighted to see their children more able to interact with them. The families of the beneficiaries reduced the burden and strain of disabled children because the children learns how to depend on himself for eating, drinking, dressing as well as making cubes, reading and writing, and some games. For example, mothers of the disabled are instructed on special exercises for the child so that they can later deal with them without outside support. The families are coached on how to deal with disabilities.

- *The instructors are keen and most of them are volunteers for a period no less than seven years; therefore, they should be helped to become a permanent staff and to receive training regularly especially on how to engage the families of the disabled with the Centre* (Key informant)
- *Buses provided by SFD make a big difference for the centre because before there were transportation problems. Instead of renting buses from outside now the Centre has its transportation. There were problems with transportation every day, the bus either breaks down or it doesn't come. The Centre wasn't qualified (the staff), now it's better. The training workshops organized by the Fund might surely have reflected positively on the Centre and improving the qualifications of its staff* (Men FG)
- *There are positive sides in the Centre having its own buses. I know that the bus (that picks up my child) is specified (no different bus showing up every other day) and it bears responsibility if anything happens* (Woman FG)
- *Now she started to read. Today she knows how to use the bathroom. She knows how to express herself. The society (community) started to feel the (disabled) children presence. The burden is lifted from us during the morning period until noon when the children are in the center* (Woman FG)

- *If the normal child becomes happy (with these kind of services), then imagine how about a disabled one. Activities (of the children) were in the streets and now they are in the school (Centre), which is safer. I consider that a large proportion of society don't understand that this disabled children have an interest activity to pursue* (Woman FG)

Men mentioned that children's improvement was modest because of the nature of the mental disability, and because the tools on which the disabled children were training were not available in their homes Others were more positive, and think that the situation now is better than before, as the Centre has "lifted the burden at home". The community has started to recognize mental disability and to understand how to deal with a disabled child as a result of the Centre's existence.

Al-Iradah Association

Beneficiaries of **Al-Iradah** Association considered the SFD intervention as a very positive turning point for the institution and its beneficiaries, as a result of provision of training courses and equipment support. Staff members have participated in deaf conferences in Qatar and the three schools and a kindergarten were furnished, equipping them with demonstration learning equipment and a video player. Families now have access to social welfare and their children will finish school or get vocational training.

The Association has become a reference for the rest of the organizations in the governorates. Staff members mentioned that they have learnt how to establish projects and network with other partners.

Interviewed beneficiaries argued that before the intervention of SFD, their children were depressed and unhappy as they could not express themselves. Now they are attending school and using sign language.

- When I took him to the association he was feeling so depressed and doesn't understand what you tell him, now he gets better and speak a little better. Now, he is better, and understands more than before. In past he was wondering what is the purpose behind his existence, today he study in the intermediate school and can use signs language. You don't know...is he sick? Is he thirsty? Is he hungry? But now we know, thank God

A deaf boy expressed:

- At home I wasn't able to speak with my father and they did not know the sign language. People used to laugh at me and call me deaf and it was difficult for me to understand people. Before it was difficult for me understand anything, I wasn't able to deal with teachers. I studied in the village and I was communicating with my friends. Teachers were telling me to write but I didn't know what to write and I was crying when they tell me that I didn't pass.

A mother explained that their daughters were not sociable and they never go out, remaining silent all the time. Now they can go out and have a lot of friends, they can read and write, attend school and participate in several activities:

-She was bad at first, but now she is good. She used to have only one friend but now she has a lot and she goes to play in the street .I took her to school but they didn't accept her, she was illiterate but now she can read and write .When anybody visited us , she was hiding in the room and close the door not to

let them see her ,but now it is different she can face others. She was going to study and coming back crying and saying.

Female children comment that they have learned to laugh, learned sewing and how to sell their products.
- I am so comfortable I can sew. I sewed this by myself (showing piece of clothes) it was my design I learnt and understood, in the past I didn't understand the teacher at school. Very comfortable, people here and kind and polite not like the ones in the street they are impolite, and I am learning sewing I feel so comfortable in the past there was no comfort.

Moreover, families are pleased as their children can socialize. The Association encourages them to learn and be competitive in their schools.
- We get benefited that their daughters learnt and we are reassured about them because they get out to life and they deal and work as ordinary people. My family loves me so much and my father told me that I should be the first one in my class and when I gave him my certificate and he greets me (Woman, FG).

Further, community attitudes to deaf children have changed – they are more accepted:
All people were happy they said it is good for them (deaf children) to go out and community accepted that because my daughter felt better. In the past they were saying to her: oh we feel pity for her!, but now she is happy, she is sociable and never sits by herself and people encourage her to socialize with them. (Man, FG).

Al-Masourah Disabled Rehabilitation Centre. SFD support has resulted in the hiring of volunteers, strengthening the stability of the cadre through retaining staff. The Centre building is completely new.

According to the interviewed beneficiaries the most important positive impact for the disabled is that they gain self-confidence, as their conditions have improved. By using artificial limbs, a beneficiary can get a paid job.

- *Confidence is high. The centre built confidence. I have a child who had muscle rigidity. He is now improved and can walk.* (Woman, FG)
- *The centre is excellent, and the services provided are excellent. The disabled benefit well the centre despite its simple capabilities. The trainers are very good and deal with the patients very nicely. We noticed that all those working in the leather section are motion disabled.* (Man, FG.)

Several governorates benefit from the services rendered by the centre (Aden, Lahj, Abyan, Al-Baidha and al-Dhala'). Society benefits from their services as they help to reduce the number of unemployed disabled, who can become a burden on society.

The Centre also enables those with special needs to merge more effectively with society in some cases:
- He was brought here and improved very much. He now walks very normally, even better than me and than you. Some people improved. Some did, and some did not (Men, FG)

8. Organisational support

8.1 Introduction

The SFD finances activities in the areas of organizational support and training. Organizational support comprises NGOs, selected governmental organizations, and the private sector. SFD support is directed toward governmental organizations whose activities and tasks target the same groups that SFD targets. This support includes:

- Providing necessary equipment and teaching aids for training establishments that implement training of trainers (ToT) programs financed by the SFD;
- Designing and constructing databases and internal networks when necessary, in some establishments by providing hardware, software, and consultants, as well as by on-the-job training of personnel using consultants; and
- Providing specialized equipment and training for the government departments whose work complements SFD interventions.

The projects funded by the SFD consist of building organizational capacities through training NGO staff members in managerial abilities and providing institutions with adequate equipment for achieving their objectives. SFD contributions have improved NGO services according to beneficiaries' opinion; however, services are still weak and cannot satisfy the demand for training due to the lack of sufficient equipment and building capacities. The projects have impacted on gender relations in the communities, providing women with income generation capacities that have brought income to many families. Moreover, many women have learnt how to read and write, increasing their participation in society and their self esteem.

8.2 The Beneficiary NGOs

The Beneficiary Assessment for organizational support encompassed four NGOs which aim to improve the living standard of their beneficiaries by creating new job opportunities. The organizations are:

Al-Aidaroos Charitable and Development Association. Founded in February 2001 to provide training courses for women in sewing and hair dressing and conduct classes for children in basic education.

Al-Bushra Women Charity Association. Located in the East of Sana'a, founded in 1998 to provide training courses for women in sewing, weaving**,** cosmetology and computer skills.

Sam Association for women training and development. Located in the Old Sana'a City, it trains women in sewing.

Khadija'a Association aims to improve women's well-being through training in income-generating skills, such as sewing, handicrafts, and cosmetology. It also offers literacy courses. The goal is to train women in all the fields and upgrade their educational and cultural level to empower them as effective members of society. They also provide microfinance services through an independent program. The Association received support from SFD to acquire furniture and material for training sessions.

8.3 The SFD intervention

Institutional support projects help NGOs to reach their objectives. In the four study-cases, SFD support consisted of improving the quality of building facilities, furniture and equipment, providing training material for courses, and providing management training to NGO staff members.

For instance, in Al-Aidarous Association the type of interventions supported by SFD were:

- A training course on institutional building that benefited all the administrative board members. The content of the courses were: how to establish an association, project formulation, planning, archiving and handling accounting books.
- Fully equipped hairstyling space to accommodate 20 trainees
- Provision of five sewing machines, in addition to raw materials and a closet to keep the materials.
- A project for leather sewing.
- A training course in waste recycling and ceramic flowers making.

8.4 Benefits

According to the informants, the projects have improved NGO operation and services. In **Al-Aidarous Association** the number of participants has been expanding, and financial revenues from the training courses fees have increased, enabling the Association to organize new courses as well as purchase additional equipment.

In **Albushra Association** interviewees highlighted the increasing number of female students.

- *We expanded our services and our income increased. Besides, a large number of students graduated .We feel that we qualified many women to be able to get job and achieved the goal of the association* (Key informant)

Sam Association has also increased their number of beneficiaries, and has set plans for expanding training activities, including making Yemeni perfume, cosmetology, embroidery and sewing.

Participants have acquired new skills such as computer abilities, sewing, reading and writing, expanding opportunities for income generation, particularly for women. Together with the courses, Sam Association has raised awareness on issues such as HIV- AIDS.

- *Some of the beneficiaries do the handiwork at their homes. We provide them with the equipment then we buy the things they made. After that, we market the products and sell them* (Key informant)
- *Whatever comes out of selling those products is for them. If they can not sell the products, the*

association buys them (Key informant)

Khadija´a Association respondents felt that the economic and social situations of beneficiaries have improved, and cited greater cooperation between the community and the association. The impacts of the Association on the community are many: women illiteracy has diminished, job opportunities for women have been created, improving family incomes; and women have gained new skills and raised self esteem.

Women in focal groups showed satisfaction with the courses and mentioned the following benefits:

Women FG, Al Aidarous:
- *If there is a torn shoe, I can fix it and renovate it*
- *There is nothing to get rid off, I can renovate the shoes instead of buying new shoes for 1500, and embarrass myself bargaining to reduce it to 1200, I can make one myself*
- *I can now do hairstyles at home, thanks God, I benefited a lot of things*"

Women FG, Albushra:
- *We start to sew a little*
- *We read and understand*
- *We were not able to cut (the fabric) and now when we learnt we can*
- *Teach our children how to read and write and sew for herself*
- *I sew the dress for (1500 Y.R) and I can save money*
- *Our income has improved*
- *Tailors used to spoil my dresses, now I can do it myself*
- *We learnt a craft that can bring us money*

Women FG, Sam:
- *Embroidering belts and other things*
- *Illiteracy diminishment.*
- *Embroidering Baltoos (the long black dress worn by Yemeni women)*
- *We have silver works which we do ourselves.*
- *Many handiworks like embroidery, cosmetology, belts and making perfumes.*
- *We learn everything here even cosmetology.*
- *I learnt how to make belts and I started to work for myself.*
- *If there is a difficult work we try to spell it. We don't feel shy.*
- *I can sew for my mother for 25000 YR.*
- *I embroider, and when I have some money, I keep it for myself.*
- *I do not wait for my father to give me my allowance. I sew and get my own income*

Women trained by Khadija'a described that they have gained new skills and use them to improve their living conditions of their families. These skills build confidence and change the beneficiaries' lives; they become productive members of the family instead of consumers. Some of them opened their own small projects. Women participants of the focal group mentioned the benefits they received from the occupational training:
-- *We have job opportunities in the association.*

-- We get experience in sewing and teaching.
-- It makes the families productive.
-- We learnt how to read and write.
-- They market for our products in exhibitions and festivals. The community got benefited from our experiences.
-- There were only limited number of tailors, and the prices were high, but now there are many who can sew, so the prices went down.

All these skills (training and literacy) have helped to improve women status within their families:

It helped our position in the society and now we have our own words in the family decision was just taken by men. I can now differ between important and unimportant papers. My personality becomes stronger. It is right that we have roles, but men still control us. I proved myself and empowered my position in the family. My husband trusts me more.

9 Training

9.1 Introduction

The SFD finances activities in the areas of organizational support and training. Training activities include preparation of training manuals and development training modules. Once a technical training module is developed fully, which normally is done by a technical unit in the SFD, the training unit takes over the replication and standardization of the module. Interventions include material support to increase the capacities of intermediary training facilities. Most of the training activities of the SFD are designed to support the other activities in which the SFD is involved.

The intervention of the SFD on this field is described on the base of testimonies of key informants and training beneficiaries coming from three districts. The districts were selected from 327 districts in the country that have received SFD trainings through 461 training sessions including 8,000 beneficiaries. The beneficiaries were district members who prepare plans. They were interviewed in focus groups that took place in: Seera district in Aden governorate, Arman district in Amran governorate and in Al Mudhafr district in Taiz governorate.

9.2 The SFD support: the training courses

The Training program consists of training the elected local council members and the local council administrative committee members. Three training courses have been held in different subjects - one for the board of directors, the second for the executive offices, the third for local council members and the district offices. The three training courses were conducted in the form of participatory workshops. The duration of each workshop was five days.

The assessment sample of districts characterize for centralized practices. There planning is a practice divorced from supportive information and based more on particular interests. The courses teach about these realities, discuss the Law and speak about alternatives. The interviewers confirmed this situation by indicating that Local Council has no decision making capacity, no decision power, and that in recent years decisions have been concentrating in provincial bureaucracy.

In Taiz men at the focal group complained on some functions that they said were taken from the local authorities:

- *Another main problem is with the security organs. They don't perform in an accurate way. As a Republican Decree was issued prohibiting the monitoring of the security organs even by the local councils. Formerly, the local councils had this authority. The council was created for two individuals, the District General Director and the General Secretary., whatever they say is executed, and what they don't is not. As for us, we have been members of the local council for four years, and there is nothing!*

In Aden the local council did not have any powers in any department. In 2003 the salaries of the employees in five departments only were transferred to the local council. The local council members are very competent and have achieved high academic levels. They are university graduates and doctors and one of them is a professor at the university. All of the have a strong background in law and accounts.

- *It was limited to how to plan projects* (Men FG, Aden)

The problem tackled by SFD was the lack of understanding of the Local Authority Law and the lack of experience in plans preparation and implementation of the Local Council Members.

- *The SFD has held many training courses to solve the problem of the lack of experience in preparing plans and budgets for the district* (Key informant, Amran KI)
- *We told them that we didn't understand many points and there were kind of carelessness and lack of follow up, we were reading some subjects and we didn't understand them well.* (Key informant, Amran)
- *Most members of the district local council did not have the slightest idea on planning of projects, however most members of the administrative committee had some background and experience on projects and administration either due to education or their earlier posts. Most of them had occupied positions that require the drafting and implementation of plans* (Key informant, Taiz)

9.3 Participants

In Aden, a key informant said that the participants of the training courses were council members, committee heads, the District General Manger, the General Secretary and the labor and education officers:

- *The SFD has supported 3 courses…the participant were 20 with the board of directors and they represent the whole district* (Key informant)

In Amran the target group encompassed the board of directors, district local council members, district executive administration managers (executive officers), and some of the district managers (secretary manager, statistic and information manager, duties manager, resources monitoring manager, administrative and financial affairs manager).

- *When participants attended they were asked who is willing to attend and accordingly they have been selected* (Man, FG).

In Taiz, there were courses for the members of the district local council, and for the administrative committee members. The Director of Works and several other employees were also invited to a course on how to perform a tender process.

9.4 Benefits

The study tried to identify whether there were any improvements in the relations between the Council member and local society, with other local elected groups and with provincial and central authorities. Moreover, the changes in women empowerment and on the Council functioning (annual plan and resources allocation) were explored. The following paragraphs summarise participant's opinions.

- Relations with society

The study tried to understand whether training has contributed to enhance the relation between local authorities and local society by means of participatory planning tools.
In Aden, men felt that these training courses have nothing to do with relations with society:

- *Brother, training did not help. These relations come spontaneously. How can such a relationship be created when there is no standing project? Honestly, we feel that the Fund is the only organ that works properly, but it is necessary for the Fund to establish direct contact with the district local council. Brother, we know all the necessary requirements of the community because we live within them.* (Men FG, Aden)

Other interviewed said that participatory planning and consultations with society were undertaken by local authorities even before the training courses:

- *The members meet with the people in their quarters and gatherings, hear their needs and bring them to the administrative committee. This was the reality before and continues after training. It is right that they were trained on the involvement of society in defining its needs. However, the needs in towns are obvious and specific. It is not necessary to hold public meetings, and it is difficult for the population to contribute.* (Key informant. Aden).

Aden's participants, on the contrary, agreed that the learnt tools enhance their work with the communities:

- *From the training we learnt our relation and tasks toward the community. Through field visits and based on inhabitants, neighbourhood leaders, women and community leaders and social characters' opinions and ideas, we know the areas needs.*
- *Through coordination and communication with charitable, agricultural and women association we offered morale and financial support to them. For instant, we approved providing some equipment to Productive Family Centre.*
  (Men FG, Aden)

Amran men in the focal group believed that the training courses have helped:

- *Certainly it is better, because the local council member visit people and they start to participate. Yes, there is a difference, we used to meet the community randomly (without purpose) now we meet them and we know what we want and what they want. Our knowledge is not complete yet, and I blame the SFD the courses were late and we need another course in the same subjects. I think they should make this course for the new members* (Men FG, Amran).

In Taiz participants felt there is no improvement in the relations with communities after the training courses, because decentralization of planning and decision making has not yet begun:

- *The council has, even before the training, worked in partnership with the elected representative of Uzlas in identifying the needs of their areas. However, these members identify the needs as they see them personally without any consultation with the population, as the needs are obvious and there is no need for such consultations. The council does not depend for the preparation of plans on the dignitaries or those who have power or are influential; but sometimes after the administrative committee approves the district plan, many projects are amended, changed or replaced at the governorate offices without consultation with the administrative committee.* (Key informant,

Taiz KI)

- *Our relations deteriorated (with our constituencies) because of the oppressive measures of the implementation offices. The indifference of the implementation offices caused people to despair of the ability of members to deliver services. People think that we lie to them. Their reaction is a bad psychological condition. They tell us they didn't benefit by electing us. The needs are so obvious that there is no need to share about them. Where is the implementation* (Men FG, Taiz).

- Relations with civil society groups

The study explored whether the councils improve their interaction with civil society groups. The case of Aden:

- *There are several female and male welfare and development societies they deal with in several aspects. For example, they support the Al Aydaroos Development Society morally rather than materially and attend its exhibitions. They keep contact also with the Aden Charity Society and Al-Islah Social Society in order to help the needy and poor in the constituencies they represent*. (Aden. KI. Training)
- *There are societies, including women societies. But the local council is neither involved nor informed on the support rendered to these societies. If the local council was the party that suggests the projects, it could take the opinions of women in consideration, but our problem is the projects are decided at the governorate*. (Men FG, Aden)

In Amran and Taiz councils have no relation with local groups:

- *No, there isn't. One main role for the council is to supervise (civil) societies. But, this role is just isn't there! No, the council has never discussed such topics* (Men FG, Taiz)

- Relations with provincial and central authorities

In Aden, people interviewed emphasized that the training courses have no impact on relations with central authorities because of the centralized mode of the policy making process. They emphasized that the previous Governor did not give them any authority, and did not meet with the elected members; the governorate amends the plans they prepare and selects and implements projects according to his preferences. The governorate never informs the administrative committee about any financial or administrative details. The problem is a lack of authority rather than a lack of training

- *There was no impact. There are no relations. The governorate is more interested in the public image* (Men FG, Aden)

A similar story is told in Taiz. All members of the administrative committee agreed that although the officials at the governorate know that they are trained, the opinions of the council members are neglected and the plans they prepare are amended without any consultations. They complained that they face many problems and complications when dealing with the governorate and ministries, due to routine and administrative complications which hinder their work.

- *We are marginalized. There are no relations between us and the governorate. 1- Yes it is mentioned in the law, but in reality nothing. Those who are in authority don't know us. 2- That is right, by God, they don't know us. We went once to the governorate offices and nobody received us. The law is in a place and reality is at somewhere else* (Men FG, Taiz)

On the other hand, key informants in Amran agreed that the training courses have contributed to their empowerment, by providing them with a greater understanding of their duties and limits, and improving their relations with other authorities:

- *We learnt and understood the ways and levels of preparing plan and budget. In the past there was only one person who prepares the plan without coming back to the necessary statistics and information. The plan for 2005 has been prepared with the attendance of local council members and SFD representative. We determined the most important projects needed for the coming three years and then we chose that are of priority for us and we involved them in 2005 plan , after discussion the local council members has voted on them . The plan included all the centers and fields and it has been submitted - with SFD cooperation -to the governorate budget committee.*
- *We learnt how to set up plans and we understood what our limits of authority are and what the local council should do.*
- *In the training, the local council has been introduced to the official bodies in the governorate and the ministry by studying these bodies' organizational structure. Also we learnt what kind of system of correspondence, visits, monitoring and reports these bodies use.*

- Women's empowerment

According to local laws, women's participation is promoted. However, in general terms, it seems that women are included in local decision-making only indirectly. In practice there is no specific procedure or action for actively including women. Moreover, there is no agreement among council member's on women's participation. Training courses might not be enough to change gender perspectives.

- *I want to tell you that woman voice is heard because most of the health workers are women and also we work with women associations. Women become important in many aspects and they become rivals to men*. (Key informant, Aden)
- *There were never involved women in direct consultations with the council, but members of the administrative committee participate in opening exhibitions of women societies such as the Al-Aydaroos Society. They support morally and personally some women activities in a very minor way*. (Key informant, Aden)
- *We have only one female member in the council. She is a very competent and honest teacher. If we were the authority that endorses the projects, that might be reasonable; but all projects are endorsed centrally at the governorate level. We got rid from centralism at the level of the nation and fell victim to centralism at the governorate.* (Key informant, Aden)
- *We made field visit to the Productive Family Centre and identify their needs and provide them with what they need. Each wife suggests to her husband what she thinks and we transfer her ideas. Her voice is more powerful than the man's voice. Right, because many organizations support them beside the military orders from the government that support her. I found that women are very ambitious* (Man FG, Amran)
- *Members of the administrative committee don't hold meetings with women in order to identify their needs because they didn't the initiative to put their needs or problems to the council, except those who come to follow up some personal issues or routine work. There were no consultations with the women societies, but council members were invited by the "From Child to Child Society" to a workshop. However, the council supports the cultural activities in girls' schools and communicates with the headmistresses about the needs of their schools. The council has worked also*

to restore and keep the girls' schools in good condition. However, women aren't given a role, in their opinion; women don't play a role in decision making. (Key informant, Taiz)

- *Women are half of society. Every project for women is also for men, and vice versa. The council does not support (the cause of) women. It is necessary to support women. It is in the law, but in reality there is no support to women. That is still the case in the Yemeni environment. We have made some personal efforts and succeeded. But in institutional efforts, women are nott elected yet* (Man FG, Taiz)

- Impact on the Council

Respondents in Aden felt that they had benefited in planning, performing and evaluating plans; however, they are not able to use what they have learned because their projects are still planned centrally. They pointed that in some cases the trainer was less capable and efficient than those he trained.

- *I told you there is a gap between theory and reality. It was all theory. There was much good talk about the local authority, but the projects were managed centrally. At the course you are told that the local councils have all the authorities over the projects. When you look at practice in reality it is very different. Honestly, our problem in Yemen is that we don't fight corruption and the corrupted. But on this point exactly through the cooperation between the local councils and the Fund reality will be much better. We didn't say other than the truth and honesty. This is a great meeting and if our opinions are conveyed this meeting will very great. By God, we are all Yemenis and know our realities. We say the words that express the right fear only God who created us.* (Man FG, Aden)
- *We learnt a lot, before we didn't know anything. Based on the available resources, we plan.* (Man FG, Amran)

In Amran, participants agreed that training has been useful and some teachings are currently applied, for instance, the Council is now formulating field visits committees to collect information from main and minor resources; it prepares report about local council performance and the main difficulties they faced in the past period; determinate areas' needs and priorities depending on the survey results; and eventually, they would collect the projects proposals and studies and decide priorities according to the needs and incomes.

In Taiz, participants recognize that they have acquired new knowledge and skills; however, in practical terms, there are limitations to implementing what they have learnt.

- *Our benefits were in the technical aspects and the formulation of reports and how to arrange meetings. We gained how to be organized and to arrange things and respect the others. Stopping the telephone (contacts was also useful). - We gained how to make reports and organize the secretariat* (Man FG, Taiz)
- *Training had a very good impact on the relations between members. I can say that we, the members are in full agreement. In fact the barriers between us were broken. Yes, but tension continues as long as the General Director and the Secretary General are there. It was 100% positive. It raised the members' moral and improved their knowledge of the role of the council towards society and (his role towards) members. Yes by God, we learnt even how to work in work groups between us. After the course I knew the rights and duties of the local council. It introduced topics that I have to be acquainted with, and that I must know my role. The Fund should intensify these courses. They should be followed with implementation programs with (the participation of) the leaderships of local councils. The Director General and the General Secretary didn't attend the training. It is*

necessary for them to be trained. They won't hear from their subordinates. (Man FG, Taiz)

- Changes on the council annual plan

Regarding changes in planning, respondents stated that the councils do not draw any executive plans. The administrative committee, the district elected members and the head of the planning and finance committee meet and prepare a list of the projected needs by their area. The list of needs is ranked according to priority and forwarded to the governorate office, where they are then radically changed. Participants complained that their opinion on priorities has not been taken into consideration.

- *We don't prepare plans. We hold a meeting and endorse twenty projects. Then we rank them according to their priority. Then they choose one project those twenty. There isn't any development in the plan of the council. There are no outputs for the local council members from the training course. Furthermore, in the aftermath of every training course, the outputs of the training should be implemented in order for the information to become deep-rooted in the minds of the council members, because theoretical training is fruitless without practical application. The training mechanism should differ, otherwise the next council will arrive and you shall come here next time and discover that the situation didn't improve.* (Men FG, Aden)
- *The benefit: the problem was the lack of understanding for the local authority law and the lack of assimilation for many duties, plans preparation and organizing. Lesson learnt: we learnt how to set up plans and we understood what our limits of authority are and what the local council should do. Also we got to know the way of monitoring the incomes and learnt the methodology of following the resources' offices.* (Key informant, Amran)
- *The training gave us a great knowledge in analyzing problems, determinate objectives and ordering them according to their priorities. We start thinking in a better way and think closely to reality. We start implementing according to what has been planed. Through analyzing problems and solving them we could determinate priorities.* (Key informant, Amran).
- *The impact is good, in the past there were conflicts and the board of directors was only considered in this matter, but after the training courses the situation has changed we ask the council members their opinions. Before, some powerful people used to submit request to the governor to have a project, and we know nothing till we see the project is being implemented, but now...Everything should first go through us.* (Key informant, Amran).
- *We devolved 2006 plan in a better way then before. Now, we identified the projects' that are of priority and agreed on them. Then we submitted them to the official bodies that accredited them. Before, the governorate used to prepare and approve the projects which are not in the district plan.* (Key informant, Amran).

In Taiz, all members of the focal group said that there was a slight improvement this year in comparison with the previous year in terms of the quality of plans, and al;so added that they have now a stronger trust in their ability to prepare plans and budgets for projects. However, they said that prior to the training they had already held a meeting and asked every member to identify the needs of his area and to rank them according to priority, to be included in the plan.

The members benefited greatly from the training courses. They are now more familiar with the ways of planning, and have an idea on how to identify the needs of the community. (Taiz, KI. Training)

- Changes on resource allocation

The Councils interviewed do not administrate financial resources directly, they only visit communities and raise their project demands as priorities. As a consequence, most of them considered that the financial courses had no impact on resource allocation.

- *The council has no control over any financial resources, neither its members have the authority to distribute resources. Resources are distributed at the governorate level, where project are implement according to the wishes of the Governor who never consults with the administrative committee on the resources and their distribution. This bitter reality existed before training and continues after it. The problem is that the governorate does not give the local council any powers and that the local government law is not executed.* (Men FG, Aden).
- *The resources have been divided based on projects of priority for the most in need areas* (Key informant, Amran).
- *We divide according to projects and fields, for example health field, education field and then decide the area that needs these projects. We make field visits and meet the people to know their needs.* (Man FG, Amran)
- *Our mission is to identify the needs of our areas and forward them to the Administrative Committee. The committee asked us to identify them. During the meeting we suggested projects and problems. These were discussed according to their importance and necessity. This took place before training. Yes that was before the training. The first plans were prior to the course.* (Man FG, Taiz)
- *Every area of the district was given a share of the budget according to its needs and the costs of projects needed. However, that doesn't mean that the allotments were made in an equal and fair way because there are other factors that have a decisive role.* (Key informant**,** Taiz

- Overall impact

District representatives unanimously agreed that the course improved their confidence to raise issues with the general director, changed their way of thinking and stimulated them to read the law of local authority. Before the course they were not as aware of their rights and duties. They were also unanimous that the course made them feel that they are still in need of more information especially on the law of local authority.

District representatives argued that their benefit was, to some extent, not used as nothing was practiced by them as they were not given the appropriate authority.

All of them agreed also that the most important benefits they gained from the course were how to formulate reports, manage meetings and reunions, and work in groups, the organization of work and behaviour during meetings, such as turning off cell phones, respecting others and communication skills. The course also provided them with the opportunity to network with other participants.

However, district representatives argued that the benefit of this training was, to some extent, not used as they do not have the appropriate authority. Council members are frustrated because of the dominance of the administrative committee and hence difficulties in practicing skills learned on the course.

- *We got an idea of the nature of the Fund's projects, but for the future nothing gained.. The courses were much nearer to the theoretical side, however reality differs.* (Man FG, Aden)

- *We learnt how to set up plans and we understood what our limits of authority are and what the local council should do. Also we got to know the way of monitoring the incomes and learnt the methodology of following the resources' offices"* (Man FG, Amran)
- *Big difference. In the past we didn't determinate the priorities when setting plan, now we consult all the people around us and listen to their opinions* (Man FG, Amran)
- *The course improved things but when we come to implementation it is different,, but we thank you for this course.* (Man FG, Taiz)

VIII CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

Operational Efficiency

1. As of October 2006, the Social Fund for Development has committed a total of US$493 million in 5,973 project, of which 4,189 (US$284M) have been completed, 1,600 (US$187M) are under implementation and 184 (US$21M) have been approved pending implementation. Education projects continue to be the largest share of the SFD's total investment commitments (54%), followed by water projects (11%), health projects (7.5%), and roads (7.6%). These four categories represent 80% of the program's total investment portfolio.

2. The SFD has directly benefited an estimated 7.1 million people, around half of which are women. Education, health, roads and water projects generate 73% of all direct beneficiaries. Environment and roads have the highest number of beneficiaries per project (about 12,390 and 8,046 respectively). Health and water projects often target women and hence benefit the highest proportion of females.

3. The median duration of all the projects completed has increased from 550 days (Phase II, 2001-2003) to 594 days (first half Phase III, 2004-2008). This is mainly due to increasing approval and construction stages for road and water projects, that rely more on community contracting and community contribution whose organization are time consuming activities. Further, SFD is receiving an increasing number of requests as its profile is raised, and managing these requests occupies time that could be used for the implementation of selected projects.

4. The average cost of projects per direct beneficiary varies from US$9.14 for environment projects to US$211.28 for training. These costs are generally in line with the expected parameters that were anticipated in the project's design and are slightly higher than those reported in the 2003 assessment, reflecting general price increases in the country during the period of assessment.

Targeting outcomes

5. A "benefit incidence analysis" was used to assess to what degree SFD programs are targeting the poorest communities. The targeting analysis shows what proportion of program resources benefits each decile of the population, based on data for the per capita income of each household and the amount of the SFD's investment in each community and project.

6. A high proportion of SFD resources are benefiting the poorest households in Yemen. 49% of SFD funds go to the poorest decile, 64% to the poorest quintile and 73% to the poorest three

deciles. Only 3% of resources are received by households in the top decile. These figures are considerably better than those found in other Social Investment Funds where similar analytical procedures have been applied.

7. These findings are more positive than those yielded by previous analysis of the SFD project beneficiary communities covered by the 1999 NPS and the 2003 IES. This may reflect an improvement in targeting by project officials (though conclusions should be drawn with caution as the methodologies used were slightly different and may account for some of this variation).

Consultation, participation, ownership and SFD's impact on social capital

8. The results of the project survey indicate a good level of overall participation in project design, particularly by local communities, political leaders and government offices. They also highlight low levels of inclusion of NGOs in the discussion process. SFD originally envisaged NGOs to be key implementing partners, but experience has found them to have limited capacity.

9. The household and project survey indicate a high-level of buy-in to SFD interventions with the majority of interviewees indicating that they would have chosen the same project as a priority for the community. This percentage is higher, across all sectors, than reported in 2003, indicating that the SFD is increasing its focus on a demand-driven approach. For those who stated other priorities, water projects were the preferred alternative in 62% of cases, indicating a potential under-emphasis in this sector.

10. Communities contribute to projects through donations of money, working days, and materials for construction. According to the project survey, the proportion of projects with community contributions ranged from 81% of education projects rising to 90% for water projects.

11. Money and materials are reported as the most common form of contribution, with households contributing between seven and sixteen thousand Yemeni Riyals per project. Estimations from the SFD-MIS data show that community contributions represent on average 8% of the total cost of projects since the SFD's inception.

12. Communities contribute to maintenance through Project Maintenance Committees, and the majority of projects have a committee in place. The involvement of women, both in project selection and project maintenance is low, or in some cases nonexistent (as with roads).

13. On the whole, the perception of the majority of project respondents is that roads, education and health projects are good value for money (100%, 96% and 86%, respectively), whilst water projects have a more mixed result. When compared with the 2003 findings,

figures for water projects have dropped substantially, suggesting that the perceived value for money of these projects has decreased. Reasons cited for low quality of water projects include limited water availability, leakage of water, incomplete works, low quality water (no filter provided) or the need of a pump.

14. Pre-existing levels of social capital are likely to directly affect the success of any given project. Results from the household survey indicate that the number of service providing organisations has jumped significantly since 2003 (from 269 to 1,395). In addition, the percentage of households aware of the SFD increased from 6 to 62%, suggesting that SFD is having a greater awareness within communities. The SFD was also ranked as the second most important organization for community development with the Ministry of Education ranked first.

15. The Beneficiary Assessment provides additional evidence of the SFD impact on social capital, indicating that SFD projects (i) restore or reinforce the sense of community, trust, solidarity, and self-help, (ii) encourage opportunities to discuss female participation, (iii) provide increased forums for community participation and democratic processes through the creation of committees, and (iv) projects paves the way for increased awareness and skills for advocating for future projects.

Service quality, sustainability and impact

Education

16. Since its inception, the SFD has contributed 12,278 classrooms through its projects, a contribution of approximately 12% to the national stock of classrooms.

17. The total number of students enrolled in schools association with SFD investments has increased by 38%. Importantly, in rural areas, enrolment has increased by 91% for boys, and 122% for girls, indicating success in both increasing rural participation in education, and in particular, opportunities for girls. This impact is further reflected in the return visit group, suggesting that the trend is growing.

18. While maintenance of schools is reported as good for new schools in the current intervention group, the statistics for the return group show a significant decline, suggesting that schools are not sufficiently maintained over the longer term. Key concerns in 2006 include a lack of support for school activities, a lack of furniture a shortage of teachers, and a shortage of classrooms/crowded classrooms.

19. The drop out rates are relatively low (2% for males and 3% for females), a positive indication that students are persevering in their studies and maintaining their presence in school. However, the same data collected for the 2006 return visit sample shows higher levels of failure and drop-outs, suggesting that there may be sustainability issues regarding quality of education in those schools that have been established for longer.

20. The proportion of qualified teachers has increased from 77% in 2003 to 86% in 2006. This suggests that schools are attracting and maintaining high quality staff, and thereby improving educational opportunities. However this increase has occurred in urban schools, while rural schools have shown a decrease in the percentage of qualified teachers.. The gender composition was highlighted as a potential problem in the 2003 report and continues to be so in 2006, with a higher proportion of male staff (63% on average, 44% at urban school and 89% at rural schools) in 2006. Further, the student/teacher ratio has gone up from 29 in 2003 to 50 in 2006. While increased student enrolment is clearly desirable, it needs to be matched with a commensurate increase in teachers in order to be sustainable. In the return visit group, this ratio remained stable, suggesting that the influx of new students elevates the ratio at first, but then remains constant.

21. Multivariate analysis confirms that the SFD investment has been a significant factor in increasing school enrolment. The analysis also shows that SFD interventions have a positive impact on girls' enrolment, while SFD interventions do not show a statistically significant impact on boys' enrolment. A further analysis investigates the proportion of children who are up to date with their education (that is, at the right grade for their age). While the data show that being up-to-age in school has greatly improved for girls over the time period, it has remained virtually unchanged for boys. Multivariate analysis shows that the SFD intervention has not influenced the proportion of children who are up to date.

Health

22. During the period 2003-2005, the SFD built 40 new health centers and 40 health units, which represent 2.2% and 0.6% of the national stock registered for the same period.

23. There have been some marked improvements in the staffing of the health facilities. The percentage of facilities that have physicians has increased from 38% in 2003 to 48% in 2006 and mid-wives from just 14% in 2003 to 52% in 2006. In addition, medical assistants are present in 57% of the ex-post health facilities as opposed to 38% of the baseline. These trends are echoed in the return visit analysis. A concern was expressed in the 2003 report over the high proportion of volunteer staff, suggesting that the facilities are under-resourced. Both the current intervention and return groups show an increase in the proportion of volunteer staff, suggesting this issue has not been addressed.

24. While the frequency of most services (except morbidity consultations and child development clinic) has improved since 2003, the delivery of daily integrated services,

especially preventive services, is ad-hoc and far from being regular. This implies that patients in need of these services may not get treatment or be seen to on the day of the visit to the health facility and/or may have to make another visit to be seen. The data suggests the following trends: (i) a high increase of non-medical personnel (administrative, cleaning, etc.), (ii) a concentration on hospitals and health centers located mainly in urban areas, (iii) physicians have decreased in health units (and also in health centers in the case of the follow-up group), (iv) midwives have increased in all facilities (only in health units in the case of the follow-up group), though the quality of services in remote rural areas needs to be checked to ensure consistency with the SFD policy to support the delivery of services to women in their own homes.

25. Key operating problems cited by respondents include shortage of staff, financial problems, shortage of furniture, lack of water, and shortage of medical equipment. The respondent's perception of these problems has decreased since the 2003 baseline, indicating that general conditions on this matter has improved for both current SDF supported facilities and follow-up group.

26. The proportion of sick individuals who managed to receive health care for their illness in any health facility increased from 58% to 63%. Multivariate analysis shows that SFD investment positively encourages the supply of services in any health facility, and even more clearly in primary health facilities (health centers/health units.

27. The percentage of children 12-23 months with immunization completed increased from 37% in 2003 to 75% by 2006, and from 31% to 60% for children below 2 years old. A similar trend is observed in the case of the return visit group, where the percentage of children 12-23 months with immunization completed grew from 36% to 51% in the same period, and the percentage of children under 2 years up-to-date with immunizations changed from 32% to 45%. Although part of this increase may be attributable to a national campaign on vaccinations last year, the order of magnitude of the changes in SFD intervention communities strongly suggests that much of the change is attributable to the program's intervention.

Water

28. Between 2003 and 2006 the SFD added 1.8 million cubic meters of capacity to the national stock of water systems.

29. The SFD focuses on rainwater harvesting systems which are the main traditional source of water in rural areas; these systems provide renewable, low-cost water. By using cisterns, kareefs, and dams the strategy looks to increase the storage capacity of rural communities. These systems do not rely on sophisticated schemes of maintenance and can be administrated by Water Beneficiary Committees that the SFD promotes. Approximately half of all

respondents in the current intervention group report maintenance as "good", implying that maintenance of water systems needs improving.

30. Operating problems identified with water projects include cisterns without covers; pump breakdowns, water pollution and water leakage. A shortage or lack of water can also be a significant problem, with over half of water projects being affected, and 55% of respondents stating that the water is not sufficient for their needs.

31. Many systems do not include household taps, and hence fetching water is still a frequent obligation for most households, although the distance to the source has become shorter. 82% households of the current intervention group were still fetching water (54% in the return visit group). 88% of persons collecting water are women. Regarding age, 13% are children 15 years old or less.

Rural Roads

32. During the period 2003-2005, the SFD completed 77 road projects. 70% of these projects are rural roads, 22% street pavement (stone paved) and the rest are projects for training in road maintenance. As a result, the SFD has contributed to improved or rehabilitated 491 km of gravel roads, and 218 km of paved roads.

33. Household level data confirm that travel times have been reduced. The time needed to get to the nearest town market has decreased from 145 to 123 minutes, a 18% reduction. The cost of travel has decreased by 45%. 100% of beneficiaries also recognize that the project has facilitated the transportation of people and goods, as well as in some instances citing other benefits, such as access to health and education services, and fetching of water.

Microfinance

34. Micro finance projects show important increases in the number of savers/borrowers and the average amount saved/borrowed, with strong participation by women - of the 25,588 borrowers in 2005, 89% were females, demonstrating an annual growth rate of 98% from 2002.

35. Some borrowers' complaints remain the same as in 2003, primarily relating the levels of interest rates, the loan amounts and repayment period.

36. Some accounting registry problems remain. For example, some projects report large amounts of investments other than lending in their balance sheet, however there is no income reported on the profit and loss statement related to those investments. Conversely, some

projects report income from investments outside the loans, but there are no such investments registered within their assets. On the other hand, those projects experiencing big loses are also those whose administrative and operational expenses are much higher than their operational income. Finally, although some of the projects report that they pay interest on saving accounts, none of the surveyed project's profit and loss statement shows expenses in this regard.

Special Needs Groups

37. The Beneficiary Assessment found strong evidence that SFD is contributing to Special Needs Groups. In the three case-studies, the SFD had provided equipment and services, such as furniture, computers, learning equipment, a physiotherapy section, training to teachers and staff, and buses for transportation. This support has greatly enhanced the capacities of NGOs to provide better quality services. As a product of this, children and adults with disabilities are improving their physical and psychological conditions, receiving understanding and guided care from their families, learning new skills (e.g. reading and writing, sign language, sewing), attending school, getting a job and being accepted by their communities. The benefits extend to other governorates either directly through the services the organization itself render there or indirectly by becoming a reference for similar organizations in the governorates.

Organisational Support

38. The findings show that SFD support to NGOs is contributing to the provision of poor women with income-generation skills, such as, sewing, weaving, hair dressing, cosmetology, computer and additional microfinance services. In all the cases, the SFD support consisted in improving the quality of building facilities, furniture and equipment, training materials, and managing training to staff members. As a consequence NGOs have improved their operations and services (some are planning to enlarge their training menu), the number of their students has increased and so have their financial revenues. Women participants, their families and communities also receive the benefits of NGO service improvement: some learn how to read and write, with possibilities for income generation expand, women gain confidence and self-esteem, and some open their own small projects.

Training

39. Three governorates were selected to provide feedback on training courses implemented as a part of training program and directed to local council members and local council administrative committee members. The overall impact of the training course was considered good in terms of the technical knowledge, attitudes and skills provided (e.g. the detailed study of the Decentralization Law which included plan and budget preparation, duties and limits in relation to other authorities, community consultation). However, they observed

structural barriers for an acceptable application of the training recommendations, due to the lack of power within local councils and a centralized mode of policy making.

8.2 Recommendations

8.2.1 On the Program

Process

1. **Promote efficiency in the project management cycle.** The increasing number of project requests is detracting somewhat from SFD's ability to implement projects efficiently. As SFD's success grows, it may be necessary to rethink the way in which new project requests are handled, to ensure they don't negatively impact the effective and timely operation of the rest of the program.

2. **Increase female participation in project selection and maintenance.** Clearly, SFD has to act responsibly within the confines of cultural practices and beliefs. However, the clear advancements that SFD has made in promoting women's involvement in development should be built on and extended to the degree possible.

Project effectiveness

3. **Maintain focus on those areas of project intervention that show strong positive impacts on development.** For example, the data show strong improvements, as a result of SFD interventions, in the targeting of the poorest segments of society, advancing development for women, and increasing childhood vaccinations (to name a few). A concerted effort is needed to ensure that these improvements continue, and not lose focus on these important advancements in human development. SFD should seek ways to actively replicate these efforts in other areas, given their positive outcomes.

4. **Increase assistance for project maintenance to ensure projects are sustained over the long term**. The data highlights a variety of problems with maintenance in all of the project categories. Greater resources should be committed to project maintenance, either through direct monetary support, or capacity support for community maintenance, in order to guarantee the duration of the project works and the continuation of good services. In other countries social funds are budgeting for basic measures on maintenance, for instance, providing communities with basic tools or signing agreements with local councils to guarantee these will take complete or partial responsibility on this issue, as the SFD as started to do.

5. **Consolidate gains in closing the gender gap in education**. Gender is a problem at play in basic education. The analysis clearly shows that the SFD is contributing significantly to improvements in education for girls, but sustained effort is necessary at all levels to

guarantee that the initial encouragement brought by the project continues. Hiring female teachers can be an important condition to encourage girls' retention at school, as well as providing more facilities at secondary level.

6. **Promote and coordinate efforts to increase school enrolment**. The findings show low school enrolment rates at ages 6 and 7 (it is a national trend), which indicates that children are entering school late for their age, and therefore may be losing the benefits of early education. The SFD may be able to provide interventions to increase pre-school education, and advocate with parents to send their children to school at the official age. Any additional intervention should be coordinated with the government on appropriate measures to encourage early education.

7. **Address problems with staffing and service delivery in medical centers.** The study demonstrates that, while staff inputs on health have increased, there are underlying problems on the composition of staff (technical versus other staff) and urban/rural distribution. Similarly, the provision of services shows irregularity in availability of services. It is recommended that SFD coordinates with the MoH to revise policies and practices on these matters.

8. **Consider additional response to the demand for water sector projects**. Where survey respondents stated other priorities for project implementation, 62% stated that water projects were the preferred alternative. Given the high demand for water projects SFD should consider whether a greater emphasis should be placed on implementing water projects. Work on water projects should be undertaken in the context of integrated water resource management given the lack of water in the country as a whole, and should be accompanied by training and education over water resource issues.

9. **Intensify dialogue and awareness raising about the reach and rationale of water and road projects**. Both water and road projects reflect dissatisfaction with quality and value for money. However, the reasons for lack of quality are often out of the SFD's control (lack of water generally, focus on non-paved village roads). Expectations should be more clearly established at project design and implementation to make communities aware of the benefits and limitations of projects.

10. **Assure that microfinance NGO maximize the SFD economic support according to the development objective of the sectorial strategy**. Given the fact that administrative and operational expenses of some SFD supported microfinance organizations are frequently linked to their financial looses, it is advisable that the program establishes, or at least recommends, some limits on the amount of administrative expenses projects can afford, as a percentage of the expected or previous year's operation income.

11. **Give more importance to NGOs training on advocacy and resource mobilization.** Particularly among NGO working with Special Needs groups it was expressed the need for additional support to satisfy new demands on building installations, equipment, training to technical personnel in areas like mental disorders, other physical discapacities, or income generating activities. It is known that these demands cannot be afford under the actual budget constraints or are not likely to form part of future priorities of the SFD it is recommendable to provide more attention to training (or intensify current efforts) these entities on advocacy and resource mobilization topics.

Stakeholder involvement

12. **Intensify efforts to support the institutional development of NGOs**. NGOs are actors with low participation in most of SFD projects, due to weak capacity. The study team endorses the recommendations of the Institutional Evaluation (Jennings, 2006) regarding support to NGOs to strengthen areas of weak institutional development. Further, NGOs can be important project partners, as their involvement in local communities can help to sustain the long term viability of projects. SFD should seek to establish mechanisms for working with NGOs as part of project development, as a means to build capacity, and establish the presence of NGOs as actors who can help to sustain projects.

13. **Increase** c**oordination efforts with local government.** Local governments also tend to have a low profile in SFD investments. SFD's action rests on community development, capacity building and micro-enterprise at a decentralized/local level. This expertise can be used by SFD to encourage and involve local governments to learn from practice (a "training-on-the-job approach"). Involvement of local government at different stages of the project cycle could be a part of SFD policy, with the objective of building capacity for further development work.

8.2.2 Methodology for future impact evaluations

A variety of issues related to the survey design and implementation need to be resolved.

14. **Issues with field research and analysis:** Field research and analysis revealed some inconsistencies and deficiencies in the survey instruments, including a lack of several key questions, and failures in the sequence of certain questions. For example, some questions asked about piped water systems, which were no longer relevant due to the increased focus on rainwater harvesting systems. While these issues arise from need to make sure that the survey tools in each year are consistent with each other, certain questions will need to be changed at each evaluation to adapt to the changing focus of SFD. Further, translation from Arabic to English rendered some data inaccurate, which came to light in the analysis stage. These issues are common in empirical research, and can be addressed through refining survey instruments

following each evaluation, and ensuring careful training and appropriate supervision in the field by the part of the analyst(s).

15. **Re-evaluate the sample selection process.** In the 2003 pipeline sample, some projects were allowed to be part of the sample even when it was known that they were not going to be implemented. This caused problems for matching of projects between the pipeline and ex-post sample. Similarly, there were several projects not fully implemented in the ex-post sample, thus producing weaknesses in the registration of outcomes, outputs, and impacts. Because the research team selects the pipeline sample at an early stage (when the majority of the projects of the next cycle are not yet approved), there is a great risk of sample bias. This problem is being further compounded by the increased request for projects that may or may not be approved. The sample selection process should be reviewed to minimize these problems to the extent possible (recognizing that they will not be fully avoidable). Further More discussion on the control (or comparative) group issue is also highly recommendable for next evaluation.

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