AFRICAN DEVELOPMENT BANK GROUP

LESOTHO

DEVELOPMENT OF HEALTH SERVICE PROJECT

Project Performance Evaluation Report (PPER)

OPERATIONS EVALUATION DEPARTMENT
(OPEV)

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TABLE OF CONTENTS

		Page
Preface		i
List of Tables		ii
List of Annexes		ii
Equivalents and Abbreviations		iii
Basic Project Data		iv
Highlights		v
A.	PROJECT PERFORMANCE AUDIT MEMORANDUM	
1.	INTRODUCTION	1
1.1	Socio-Economic Background	1
1.2	The Health Sector	3
1.3	The Project	5
2.	MAJOR ISSUES/FINDINGS	7
2.1	Changes in Project Design	7
2.2	Implementation of Project	9
2.3	General Assessment	20
2.4	Performance of the Borrower	26
2.5	Performance of the ADF	29
3.	CONCLUSIONS AND RECOMMENDATION	33
3.1	Conclusions	33
3.2	Recommendations	36
3.3	Policy Issues and Requirements for Follow-up	38
B.	PROJECT COMPLETION REPORT (attachment)	
1.	INTRODUCTION	B.1
2.	PROJECT DESCRIPTION	B.2
3.	PROJECT IMPLEMENTATION AND COST	B.4
4.	CONCLUSIONS	B.10

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P R E F A C E

As at the end of 1985, ADF cumulative lending to the Health and Education Sectors amounted to FUA 440 million, representing about 16 per cent of cumulative loan approvals. Cummulative lending to the Health Sector alone totalled FUA 164 million, five per cent of which had supported two health services projects in Lesotho. This report, the second in the series of post evaluation of Bank-financed health sector projects, concerns the Development of Health Services project in Lesotho, for which the ADF granted a loan of FUA 2.5 million in 1976 to finance immunization and construction programmes. The immunization programme was implemented as envisaged, but the ADF disbursements for it amounted to FUA 392,300; the remaining balance on the loan for the programmeamounting to FUA 465,058 was cancelled in 1984. The construction components were not funded bv the ADF as originallv intended and a portion of the original loan amount for these was cancelled in 1980.

A completion report (PCR) on the project was prepared bv staff of the OARD.3 in March 1985. A post evaluation mission was undertaken bv staff of the Evaluation Division during the months of Mav/June 1986 to prepare a project performance audit report (PPAR) based on its findings and those of the completion report. The purpose of this evaluation, like the previous ones, is to identifv and disemminate lessons that can contribute to improvements in the design and implementation of future Bank Group-supported projects. This is with a view to complementing the continuous efforts being made to gather Bank Group experience in its project lending (in this case for the health sector) and to evolve more effective policies and procedures for accomplishing this objective.

Part A of the report represents the project performance audit memorandum (PPAM) consisting of sections on background information on the economv and the project, analvses of the major issues or findings of the post evaluation mission, and conclusion and recommendations. Part B of the report contains the Project Completion Report, as an annex to the PPAM.

Sources of information for the PPAM were data obtained during the post evaluation mission, the PCR and information available at the Headquarters.

LIST OF TABLES

1. Ministry of Health and Total Government Expenditure.
2. Records of Immunizations Performed Between 1980-85.
3. Percent of Infants Immunized, 1976, 1980 and 1985.
4. Comparison of Immunizations Performed Between 1980/82 and 1983/85.
5. Percentage Drop-Outs with Successive Doses of DPT and POLIO.
6. Reported Morbidities of EPI Target Diseases, 1974-1985.
7. Stock of Vaccines in Central EPI Vaccine Store.
8. Project Expenditure and ADF Disbursements, 1978-1983.

LIST OF ANNEXES

I. Summary of Government Operations, 1977/78-1982/83.
II. Summary of Selected Socio-Economic Data on Lesotho.
III. Per cent Total Immunization Coverage of Target Population by Districts.
IV. Project Completion Report.
V. Comments from the Ministry of Health (Lesotho)

EQUIVALENTS

Currency Units:

Maloti (Lesotho)	:	M
Funds Unit of Account	:	FUA
US Dollars	:	US$

Exchange Rates

	FUA	US$	M
As at Appraisal (22/10/75)	1	1.261	0.923
As at 1st Disbursement (06/03/78)	1	1.111	0.741
As at last Disbursement (18/11/83)	1	0.973	1.082
As at time of PCR (03/85)	1	0.903	1.791

ABBREVIATIONS

ADF	:	African Development Fund (Fund)
BCG	:	Tuberculosis Vaccination
CDC	:	Commonwealth Development Corporation
CPDO	:	Central Planning and Development Office
CRS	:	Catholic Relief Services
DPT	:	Diptheria/Pertussis/Tetanus Vaccination
EPI	:	Expanded Programme on Immunization
FP	:	Family Planning
GNP	:	Gross National Product
GOL	:	Government Of Lesotho
LFDS	:	Lesotho Flying Doctor Service
MCH	:	Maternal and Child Health
MOH	:	Ministry of Health
PCR	:	Project Completion Report
PHAL	:	Private Health Association of Lesotho
PHC	:	Primary Health Care
PPAM	:	Project Performance Audit Memorandum
PPAR	:	Project Performance Audit Report
SA	:	South Africa
SCF	:	Save the Children Fund
UNESCO	:	United Nations Education, Scientific, Cultual Organization
UNICEF	:	United Nations Children's Emergency Fund
WHO	:	World Health Organization

BASIC PROJECT DATA

PROJECT : Development of Health Services (ADF)
Loan No.CS/LES/H/76/3
BORROWER : Government of Lesotho
EXECUTING AGENCY: Ministry of Health

I. KEY PROJECT DATA

Terms of Lending	Appraisal	Revised	Actual
- Project's Total Cost	FUA 2.82 mill.	FUA 1.11 mill.	-
- Loan Amount	FUA 2.50 mill.	FUA 0.9 mill.	FUA 392,300
- Statutory Commission	0.75 %	-	0.75 %
- Repayment period including:	50 years	-	50 years
Grace period	10 years	-	10 years
Disbursement			
- Disbursed Amount	-	-	FUA 392,300
- Cancellations:			
For the construction components (1980)			FUA1,642,642
For the unused balance on EPI			FUA 465,058

II. SIGNIFICANT EVENTS AND DATES

	Planned	Actual
- Project's identification	-	18/06/75
- Project's appraisal	-	22/10/75
- Board approval	-	27/02/76
- Signature of loan agreement	-	06/05/76
- Deadline date for 1st disbursement	30/06/77	30/06/78
- Effective date of 1st disbursement	-	06/03/78
- Deadline date for last disbursement	31/12/81	31/12/83
- Effective date of last disbursement	-	18/11/83

III. MISSION DATA

Type of Mission	No. of Persons	Mission Date	No. of Days	Man/Days
- Identification	2	18/06/75	-	-
- Appraisal	1	22/10/75	-	-
- Follow-up	1	18/09/76	-	-
- General Supervision I	1	10/77	-	-
- General Supervision II	1	01/79	-	-
- Technical Supervision I	1	10/79	-	-
- General Supervision III	1	05/80	-	-
- General Supervision IV	1	08/82	-	-
- Financial Supervision	1	05/83	-	-
- Technical Supervision II	2	02/84	-	-
- Project Completion Report	1	01/85	-	-
- Post Evaluation	2	23/05/86	21	42

Note: All supervision missions, other than technical and financial, were undertaken by loan officers and usually covered more than one country atimes.

HIGHLIGHTS

1. Vaccination of the under-five Basothos, to protect them against childhood infections, was performed on a rather limited scale before 1976. The inadequacies of health care deliveries to the people of Lesotho generally, and the low immunization coverage for children particularly, were at the time attributed in part to the limited range of influence of the static health facilities in the country. Partly with a view to correcting these problems, and in the light of its commitment to the policy of providing adequate health services to all, the Government of Lesotho consulted various donors during 1975 to secure finances for the development of health services in the country. The ADF was among those invited by the Government, to identify a suitable project in the health sector.

2. Following a joint ADF/WHO mission in June 1975, a project package was identified consisting of three components: (i) an expanded programme on immunization (EPI); (ii) construction of, and provision of equipment for a new maternity wing at the Queen Elizabeth II Hospital; and (iii) construction of, and provision of equipment for student nurses' hostel and administration/teaching block. Subsequently, after its appraisal in October 1975, the project was recommended for financing; an ADF loan of FUA 2.5 million was approved for the project in February 1976.

3. The project was not implemented as appraised. Among others, a change in the Government priorities in the health sector led to suspended implementation of the two construction components, shortly after signature of the loan agreement for the project, and cancellation of a portion of the loan for these, later in 1980. The critical phases of the immunization programme - mass attack and maintenance - were implemented from 1980-82; three years later than originally envisaged. An estimated M1.0 million or more was expended on the immunization programme between 1979 and 1983. The programme is presently in its continuous phase, envisaged to last until 1990 when full coverage of the population is expected to be accomplished.

4. The delay in the commencement of the programme originated partly from that of procurement of specialized services, and partly as a result of prolonged negotiations on whether or not to phase the project's development as requested by the Government. After overcoming the initial bottlenecks, the implementation of programme progressed fairly satisfactorily. The loan amount for the EPI was underdrawn by more than 50 per cent; total ADF disbursements for the project was eventually 16 per cent of the estimated total cost of the project as appraised. The uncommitted balance on the ADF loan for the programme was cancelled in 1984. During its implementation, the programme received generous financial support from other external donor agencies which would explain why the cancellation of the balance on the loan has not affected the programme adversely.

5. Inadequate technical and financial supervision of the programme resulted in the ADF losing control over the programme, by not being able to monitor or determine precisely the magnitude of other financial commitments to the EPI, the magnitude of the programme's additional requirements and anticipated sources of financing. As a consequence of this, and also on account of administrative inadequacies with the project's management, the ADF's total contribution to the project was by far lower than originally anticipated.

6. A completion report (PCR), prepared by a Bank staff, on the project reiterated its major achievements including: a wider coverage of immunization now than before the programme (para. 4.1.1); integration of the programme into the main stream of health care delivery system (para. 4.1.2); strengthening of the disease surveillance system (para. 4.1.3); sensitization of the population towards EPI activities; and institutional development. The PCR also noted the weaknesses of the programme including its inefficient management, and reported on the inadequate technical and financial supervision of the project by the Fund (para. 4.2.1-4.2.2).

7. The PPAM agrees basically with the conclusions that the programme has been satisfactorily implemented overall and that its benefits have been considerable in terms of protection of an increased number of children against EPI related diseases. However, a number of other issues were raised in the PPAM which represent a stock of lessons for the future. Among these would be: (i) the cancellation of a significant portion of the loan amount for, and the slow rate of disbursement on the project, which were to some extent a consequence of a change in the projects scope at the beginning, and inadequate supervision and monitoring of the programme's activities during implementation; (ii) the reduced effectiveness of the programme and lower benefits, due to manpower and resource (local) constraints, as well as to the limited co-ordination within government set-up.

8. The PPAM makes the following recommendations for further improvements in coverage, administration and supervision of this programme, and in administration/supervision of a similar health project in the future:

(i) the procurement and record keeping procedures for vaccines should be streamlined;

(ii) adequate transport, communication facilities and staff should be provided at District level;

(iii) further training programmes relating to EPI should include differential diagnosis of measles, chicken pox and scarlet fever; the laboratories in Leribe and Mohale's Hoek should be equipped to make them operational;

(iv) health education should be intensified and vaccination drop-outs should be followed more intensively;

(v) Government should continue to grant adequate financial support for the programme, and should improve upon co-ordination and information disemmination among its Ministries;

(vi) the ADF should increase the frequency of technical and financial supervisions of projects (at least one of each a year).

PART A

PROJECT PERFORMANCE AUDIT MEMORANDUM

1. INTRODUCTION

1.1 Socio-Economic Background

1.1.1 The Kingdom of Lesotho is a small, landlocked country of 30,400 square kilometers entirely surrounded by South Africa (SA), on which it is almost fully economically dependent. Close to a fourth of the country in the West and South is lowland area, varying in elevation between 1,500 and 1,800 meters. The balance is made up of mountains with peaks of over 3,400 meters. About 13 per cent of the country is cultivable with most of the arable land situated in the lowlands. The mountainous areas are suitable only for grazing.

1.1.2 The population of Lesotho is presently estimated to be 1,438,000. The population growth rate, at about 2.4 per cent per annum, is not excessively high compared to those of other developing countries of Africa (averaging 3.5 per cent per annum). However the rate may still be considered high relative to economic trends, service infrastructure and employment opportunities within the country. About 12 per cent of the people live in urban areas; the remainder live in scattered villages. Some 11 per cent of the population are employed outside the country (80 per cent of these, in SA). In 1983, it was estimated that about 180,000 persons, mostly men were working abroad, which amounts to as much as 50 per cent of the national male work force. The employment opportunities abroad continued to result in a brain drain from the country, up to about 35 per cent of those trained from the country's resources.

1.1.3 The Gross National Product (GNP) was estimated at US$ 756 million in 1983; the Gross Domestic Product (GDP) was approximately US$ 430 million. Despite its serious handicaps, the economy of Lesotho grew rapidly in the 1970s - the GDP grew at about 7.0 per cent per annum in real terms while the growth of GNP, swelled by migrant remittances, was about 9.0 per cent. In spite of the good performance of the past, the structure of the economy remained fundamentally unchanged into the 1980s, and the country's productive base has not expanded materially. Agriculture generates about 33 per cent of the GDP; manufacturing (4 per cent) tourism, government and others (63 per cent).

1.1.4 The majoritv of the people depend on workers' remittances and subsistence agriculture the growth of which has been sluggish. Several vears back Lesotho was among the principal grain producers in the entire Southern African region, but in recent vears the countrv has been experiencing a decline in national agricultural output. The decline in crop production since the middle of the 1970s coupled with advanced soil erosion have graduallv led to a high dependence on food imports. Agriculture and livestock production have been further affected over the last few vears bv serious droughts, adding to the dependencv on food imports and donations. In 1982, onlv 40 per cent of food requirements were locally produced; 50 per cent were purchased and 10 per cent came from donations.

1.1.5 The factors which led to accelerated growth of Lesotho's economv in the 1970s have become less significant over the past few vears. A reduced outflow of migrant workers to the SA mines coupled with moderated wage increases have led to reduced growth of workers' remittances. In spite of this, and the stagnant revenue from customs union and diamond production, the Government embarked upon an expansionarv fiscal policv in the early 1980s, increasing among others, public sector emplovment and investment outlays. Consequentlv, the recurrent account of the Government was in deficit throughout 1980-83 - the overall deficit was 23.4 per cent of GDP in 1981/82. Increased domestic demand has kept the current account of the balance of pavments in deficit since 1979 (estimated to be M 44 million in 1982). These deficits have been financed partlv from external sources; latest available estimates indicate that total external aid amounts to about 25 per cent of the GNP (see Annex I for summarv of Government operations 1977/78 - 1983/84). At the present stage of the economv, it can be assumed that in the short run the national economic growth cannot be that spectacular; in fact growth will be verv modest.

1.1.6 With regards to health conditions, Lesotho is free from most common diseases of the tropical belt i.e. malaria, schistosomiasis, onchocerciasis, filariasis, hookworms, vellow fever and sleeping sickness. This and particularlv the absence of malaria, mav be accounting for the lower infant mortalitv rate, estimated at 112-130 per thousand, as compared to some other countries of Africa (between 129-180 per thousand, for 20 countries). The health profile of the population is dominated bv gastrointestinal and parasitic diseases including endemic tvphoid. Tuberculosis, influenza,

measles, malnutrition and skin diseases are all common, and there is some leprosy. It should be remarked that the main health problems are related to social, economic and environmental conditions such as ignorance, inadequate health service coverage etc. Other demographic data and statistics on health services and coverages are presented in Annex II.

1.2 The Health Sector

1.2.1 Health services in Lesotho are provided by the Ministry of Health (MOH), and private hospitals and clinics. The MOH has overall responsibility for planning and directing the development and operation of health services and health care facilities in the country. But it directly manages only the public sector health institutions consisting of 11 hospitals and 36 health centres, ten of which are operated by the Lesotho Flying Doctor Service (LFDS) a branch of MOH. The private organizations (mainly Missions) and the Lesotho Red Cross Society share the responsibility for the remaining 9 general hospitals, 70 health centres and associated outstations. The Mission institutions activities are co-ordinated with those of the Government through the Private Health Association of Lesotho (PHAL). There are 23 private medical practitioners situated mainly in larger population centres. In addition to these is a large number of traditional medical practitioners/healers, 4,000 of whom are registered with the MOH.

1.2.2. The present network or distribution of health facilities and manpower in the country is uneven, with major concentration in the towns and lowlands, leaving the mountainous areas underserved. General shortages are noticeable for some categories of health workers and no significant increases in employment of these are foreseen in the near future, due to budgetary constraints or low absorbing capacity. The management lines of the health structure is pyramidal with the Village Health Workers (VHW) at the base, followed by the Health Centres and Health Service Area/Districts respectively at the intermediate level, and the MOH at the apex.

Table 1
Ministry of Health and Total Government Expenditure
(Maloti Millions)

	Actual 1981/82	Revised Estimate 1982/83	Budget Estimate 1983/84	Budget Estimate 1984/85	Budget Estimate 1985/86
Health Ministry					
Recurrent	10.3	7.0	9.5	13.4	5.7
Capital	1.7	1.5	3.5	1.3	3.8
Total	12.0	8.5	13.0	14.7	9.5
Government					
Recurrent	125.8	136.0	173.6	177.1	141.9
Capital	66.6	63.5	137.2	157.1	197.4
Total	192.4	199.5	310.8	334.2	339.3
Health Ministry as % of Government					
Recurrent	8.2	5.1	5.5	7.6	4.0
Capital	2.6	2.4	2.6	0.8	1.9
Total	6.2	4.3	4.2	4.4	2.8

Source: MOH and Ministry of Planning and Economic Affairs.

1.2.3 Health and health related activities receive presently approximately 5.2 per cent of the total recurrent expenditure budget of Government - between 1981/82 and 1984/85, they averaged 6.6 per cent; in the 1985/86 fiscal year, the budget estimate of recurrent expenditure for the MOH was about M5.7 million or 4.0 per cent of the total. Compared to the past, the MOH recurrent share now has generally been falling; between 1974 and 1980 for instance, these were within a range of 7.5-8.8 per cent. Capital expenditure of the MOH on the other hand has generally been about 1.8-2.3 per cent of both actual and budgeted expenditure of Government - in 1982/83 the budget estimate for the MOH was M1.5 million; in 1983/84 this was M3.5 million (see Table 1). Under the circumstances of a modest national economic growth in the future, dramatic increases in the relative share of recurrent and capital budget for the MOH cannot be expected. If the MOH were then to receive external aid in capital investment terms, additional recurrent expenditures were more likely to be generated. Thus, any future capital investment would also have to consider recurrent expenditures in order not to create a burden on an already constrained national budget.

1.3 The Project

1.3.1 For many years, the MOH through its fixed facilities has carried out vaccination of children to protect them against childhood infections, with more emphasis initially on small-pox. However, such exercise was performed on a limited scale before 1976 and coverage among the under-five population was generally low. The low vaccination rates were attributed to the following: (i) inadequate and untimely supply of vaccines; (ii) shortage of general supplies; (iii) poor organization and management; (iv) suspicious potency of available vaccines due to inadequate and improper storage and distribution; and (v) the limited range of influence of the static health units. To address these problems, and committed to its policy of providing health services to all, the Government of Lesotho decided in 1975 to expand immunization services throughout the country. Various donors were consulted with a possible view of securing finances for the development of health services in Lesotho.

1.3.2 Following an invitation from the Government, a joint ADF/WHO mission visited Lesotho in June 1975 and identified a project package consisting of three components viz: (i) an expanded programme on immunization (EPI); (ii) construction of, and provision of equipment for a new maternity wing at the Queen Elizabeth (QE) II Hospital; and (iii) construction of, and provision of equipment for student nurses' hostel and new administration/teaching block. This project was appraised by an ADF mission in October 1975.

1.3.3 The loan for this project was negotiated between 2-4 February 1976, during which the following critical issues were discussed and agreed upon: (i) vaccines for the EPI were to be procured through WHO and UNICEF; (iii) the technical officer to head the EPI unit should be recruited through the WHO, or on grant basis through bilateral sources outside the project; and (iii) vehicles and major equipment for the project were to be purchased through open bidding. The ADF approved a loan of FUA 2.5 million for the project in February 1976. The said sum represented about 89 per cent of the project's total cost, of which 74 per cent constituted the foreign exchange costs; the balance, local costs. The relative shares of the three components were as follows: immunization programme (45 per cent); maternity block (22 per cent); and nurses accommodation and teaching block (33 per cent).

1.3.4 Aware of some factors which were likely to inhibit the successful implementation and operation of the project, the ADF attached the following additional conditions to the loan: (i) prior assurances by Government to meet recurrent expenditures arising from the project; (ii) assurances to provide additional staff required for the nurses component; (iii) assurances to improve rural facilities to ensure that the EPI can be effectively integrated into the overall health infrastructure; and (iv) assurances to grant adequate autonomy to the EPI unit. In addition to these conditions, it was required that a technical officer to head the EPI unit be recruited prior to first disbursement, and that the Government should undertake to recruit within three years of loan signature, a health planner to strengthen the planning unit in the MOH. The schedule of implementation for the EPI was to be in stages; a mass attack phase lasting two years (1976-77), to be followed by a one-year maintenance phase.

2. MAJOR ISSUES/FINDINGS

2.1 Changes in Project Scope

2.1.1 Four months after the signing of the loan agreement for the project (May 1976), the GOL communicated to the Fund a proposal to introduce certain changes in the implementational scope of the project. In view of the idea of constructing a new National Referal Hospital, the Government wanted the appraised maternity wing and nurses accommodation/administrative block to be attached to this new hospital instead of these being annexed to the existing QE II hospital as originally envisaged during appraisal (cf. PCR. para. 3.3.1).

2.1.2 In the light of this new idea, and considering the lead time in seeking finances, in preparation of plans, and the laying out and servicing of the site for the new hospital, the Government wanted the ADF to consider separate implementation of the three components constituting the project's package. By implication, the EPI was to be implemented first, and this was to start immediately, to be followed by the construction aspects afterwards, pending Government decision on the location of the new hospital (PCR, para. 2.1.2 referred to this move by the Government as a change in policy). Records in the ADF file showed that the Government had earlier obtained a clearance from a previous ADF supervision mission in the country, that such arrangement was feasible and indeed should be acceptable to the Fund, provided a formal request on this matter was received from the Government. The Headquarters staff of the Bank had different views on the subject of change in implementation schedule.

2.1.3 The above request by the Government resulted in a prolonged negotiation and considerable debate in the Bank. Although the proposed change of implementation plan would not have appeared readily justifiable, to the extent that it constituted a major deviation from that of the original project, which in fact had been appraised as a package. However, an immediate conclusion was not be reached by the Fund on whether or not to accede to the Government request of change in programme. On the one hand, there was the view that the project should be implemented as appraised, first because a phased development would in this instance mean locking up the scarce resources

of the Fund for a long time, and second, because details about the new hospital were not presented to the Fund well in advance to enable better judgement. On the other hand, there was another view sympathetic to a phased development, recommending its approval on the basis that the three components were independent, unrelated and unique sub-projects by themselves.

2.1.4 The actual resolution of the matter in January 1977 was in favour of the reduction of the project's scope to the EPI, and the ADF communicated this decision to the Borrower recommending that the Government should consider cancelling the portion of loan for the construction components, and keep the ADF informed of future actions regarding the new National Referral Hospital. The WHO, being involved with the procurement of services and vaccines for the project, was informed of the ADF decision to scale the project down to one component (the EPI). The estimated cost of the EPI was FUA 1.26 million (equivalent to US$ 1.38 million) including provision for the salary of the technical officer to be recruited for the programme, and including also provisions for physical and price contingencies. The approved ADF loan for the EPI was in the sum of FUA 857,358.

Plan of Immunization

2.1.5 In line with the decision taken in 1975 to expand immunization services throughout Lesotho, the programme's general objective was to immunize every child born in the country during its first year of life. The other goal was to reduce by 80 per cent the infant mortality due to EPI diseases. The programme's immediate targets were as follows: (i) 60 per cent of all children under one year who were to receive vaccinations against diptheria, whooping cough, tetanus and poliomyelitis; (ii) 80 per cent of children under one, against tuberculosis; (iii) 80 per cent of all children 9-23 months, against measles; and (iv) all new school entrants.

2.1.6 This original plan of immunization (as also detailed in Annex IV of the Appraisal Report; and para. 3.3.2 of the PCR) was revised later when the EPI commenced in 1979. The revision of both the implementation strategy and targets had been recommended by the WHO based on new developments in the field of immunization and on experience in other countries with similar programme. Following a national evaluation of the programme in 1982, further ammendments were made to the target population, 12-23 months. The new targets

for coverage in this age group were set vearly as: 50 per cent in 1982, 60 per cent in 1983, 65 per cent in 1984, and that of 1985 to be determined in line with subsequent evaluation results. Among the other recommendations made during the 1982 evaluation were the needs to integrate EPI into Maternal and Child Health (MCH)/Family Planning (FP) services, and to decentralize the project to the district level, instead of managing it centrally as originally envisaged. Also, the original plan to include small pox in the vaccination programme was abandoned later because small pox had been eradicated.

2.2 Implementation of Project

Procurement and Funding:

2.2.1 The list of goods and services envisaged for the EPI consisted of personnel, vehicles, vaccines, immunization equipment and supplies for the mobile teams (see also PCR, para. 3.2.1). The actual procurement methods followed during implementation were satisfactorv except for recruitment of technical officer for the programme (see also PCR, para. 3.2.2). The technical officer was recruited through the WHO in November 1978, about two years behind the original schedule. After serving for six months, he was recalled bv WHO for re-assignment. A replacement was found for the re-assigned technical officer but this was not funded bv the ADF because he was not from a participating member countrv (see para. 2.4.3 for further details). The new technical officer served for three years as planned, and the financing of his position was borne by the WHO, which accepted such responsibilitv to avoid anv other interruption of the programme or creation of further delavs in the project's start-up.

2.2.2 The recruitment of, and necessarv training for the personnel of the EPI, including field operation officers, and staff of the mobile teams, took place between June 1979 and Febuarv 1980. The chief operation officer appointed in November 1978 resigned in Februarv 1980; another officer was recruited to take up this position, shortlv after. There were three mobile teams at the beginning which commenced village field immunization in mid-Febuarv 1980. The number of the teams was, on request, increased to six in 1981, consisting of 6 team leaders (registered nurses), 18 vaccinators (nurse assistants), 6 advance publicitv officers and six drivers. Various

quantities of vaccines (BCG, DPT, Measles and POLIO) were procured for the programme at different times between 1979 and 1983. Other acquisitions during this period included vehicles and motor cycles (20), cold-chain equipment and supplies (assorted quantities and types of freezers, refregerators, wicks, glass chimneys, gas conversion kits and bottles, cold boxes, and cold carriers).

2.2.3 The stock of equipment/supplies procured for the project, and the other activities which have taken place under the EPI, have been funded from sources not anticipated at appraisal. Apart from the ADF whose disbursements for the EPI totalled M462,160 (FUA 392,300), the other donor agencies which have rendered financial supports to the programme included the Save the Children Fund (SCF), the UNICEF and the WHO.

2.2.4 The SCF assistance to the EPI began in 1979, and its total commitments to the programme amounted to an estimated M228,692 (or US$ 274,000) over 2 years. Further commitments totalling M194,263 were made during 1982 and 1983. The area of SCF intervention has been in the provision of polio vaccines, refrigerators, cold boxes, vehicles and their maintenance, motor cycle, salaries and training materials. The UNICEF committed a total amount of M25,873 (US$ 30,999) in 1982 for supplies of BCG, DPT and Measle vaccines, refrigerators and transport. The WHO assisted in miscellaneous supplies, vaccines and training materials; its total commitment was estimated at M62,598 (US$ 75,000) in 1982. The Government's contributions to the project was, according to records, M30,882 during 1982.

2.2.5 According to the Government submission in 1983 when applying for the extension of the deadline date for last disbursement, the total expenditure on the EPI, excluding grants, was estimated at M509,123 between 1979 and 1983 (see also Table 8). However, considering total contribution to the programme as a sum of the ADF disbursement, the funds and grants from other external sources and the Government expenditure, the total expenditure on the programme would be much higher (although no actual figure could be given because of lack of proper records an estimate of the total expenditure on the project based on the ADF's contributions and those of the donors mentioned above, would be M1,004,468 between 1979 and 1983). The estimated cost of the programme at appraisal was FUA 1,106,505 (M1,303,607) including

contingencies. Comparison of the estimated and actual expenditure would imply a cost underrun of 61 per cent going by the Government submission, or 23 per cent going by the evaluation mission's estimate of the project's expenditure.

2.2.6 A majority of the items procured for the project, and which have received varying amounts of commitments from outside, overlapped considerably between the known sources of financing. There was no indication as to whether the multiple contributions were based on additional needs not foreseen previously at the time of preparing the project or were a result of sheer goodwill to Lesotho. Improper record keeping on the project has made accountability difficult; the activities of the various donors were also not that closely co-ordinated.

Vaccines and Vaccination Equipment:

2.2.7 The latest stock of vaccines at the EPI central store is summarized in Table 7 below.

Table 7
Stock of Vaccines in Central EPI Vaccine Store as of 31/12/85

	DPT	POLIO	MEASLES	BCG
Vaccine received 1985	686 000	190 000	121 500	170 000
Vaccine used 1985	132 248	134 210	63 820	51 657
Estimated needs 1986	45 000	40 000	35 000	45 000
Vaccine in stock (12/85)	500 000	52 000	56 600	112 000
Expiration date	Oct.87	Apr.86	Oct.87	Dec.86
Average number of months supply left in Central store	24 months	4 months	13 months	12 months

Source: EPI Headquarters
Notes: 1. DPT, Measles and BCG vaccines were supplied by UNICEF
2. POLIO vaccines were supplied by SCF (London) and by Zimbabwe.

Generally, there has been continuous improvements in the procurement and supply of vaccines and vaccination equipment, and the procedure for these is being standardized of late. However, it was discovered that the Polio vaccines in stock at the central store as of 31/12/85 had relatively short expiration date, indicating that a fairly large quantity of the vaccines would not have been used, and consequently might have been disposed of as of April 1986. The abundance of vaccines with short duration of potency is largely explained to the extent that most of these vaccines were received as donations. Attention needs to be paid in the future to the procurement or acquisition of polio vaccines, to avoid wastage.

2.2.8 The storage condition of the vaccines kept in the cold chain at the EPI headquarters in Maseru can be considered adequate. Temperatures in the deep freezers and refrigerators were checked normally twice daily, and records were properly kept and maintained on these routine checks. Cool boxes were available for transporting the vaccines to the various vaccination stations. The design of these boxes is such that during transport, the temperature inside them may increase slightly, up to about +3 degree centrigade, which cannot be considered detrimental to the potency of the vaccines. In one of the vaccination stations visited by the post-evaluation mission, the absence of sufficient stock of vaccines was noted, and in another station, the refrigerator had been out of order for 1 1/2 months, during which no vaccinations were carried out. Although the EPI headquarters had sufficient stock of these two items, the insufficiency of one or the non-replacement of the other was due to lack of transport. Some other shortcomings observed concerned incorrect rotation of vaccines stock in one station and failure to remove expired pharmaceuticals from the stock of the other. In both cases, and in a number of other stations as well, scheduling of vaccination sessions had not been frequent. The concerned stations attributed these shortcomings to lack of staff.

2.2.9 The EPI headquarters and the various health stations or clinics associated with vaccination throughout the country had adequate supply of syringes for immunization purposes. A few of these, however, had experienced shortages of needles despite their availability at the headquarters. The EPI headquarters has begun supplying pressure cookers to all stations for sterilization of their vaccination equipment. At the time of evaluating this project, only a few stations have obtained the pressure cookers; the others were supposed to continue to use the "boiling water" method for sterilizing their equipment. The maintenance of the cold chain equipment has not been neglected, as the EPI technicians carried out regular inspections of the equipment at the various stations, usually 4 to 6 times a year, and have been responding quickly to repair calls as and when necessary. Immunization cards were found to be in sufficient supply at the health station and also at the EPI central store.

Transport:

2.2.10 The means of transport available to continue the EPI activities were not adequate; in some instances communication equipment were also not

sufficient. It was observed that distant health centres had not been undertaking a more regular replenishment of their stock due to lack of transport. Although a number of vehicles and motor cycles were purchased for the EPI at the beginning of the programme, most of these have broken down, following their intensive use during the mass attack phase. Even with good maintenance and very careful driving, the very poor road conditions in some areas of Lesotho could not have permitted the use of these vehicles for a longer period of time. The Land Rovers originally purchased for the EPI have been out of operation. The existing stock of 2 Tovota Land cruisers belong to the Ministry of Health motor pool, and could not be used exclusively for the EPI activities.

Progress of the Programme:

2.2.11 The EPI was launched in 1979 - three years behind schedule - and the programme's activities started in February 1980 with village immunization by three mobile teams - three more teams were introduced in January 1981 for wider coverage. The intensive (mass attack) phase of the programme was completed in two years (1980-81). The maintenance phase commenced in 1982 but, following recommendations from the various evaluations of the EPI, will be continued until 1990 when universal coverage of target population is expected to be fully accomplished. The appraisal's expectation was to complete the maintenance phase in one year (1978). Following the critical phases of the programme's operation, the six mobile teams were merged with the MCH/FP services in 1984, forming part of the overall Primary Health Care (PHC) system in Lesotho. This was in conformity with the original plan.

2.2.12 The EPI followed the strategy of applying continuously the BCG (freeze dried), DPT, POLIO (oral) and measles (freeze dried) antigens to the target population, strictly abiding by the standard schedule of immunization. Immunizations have been performed to date using the services of fixed, mobile and limited outreach facilities. A total of 119 units (hospitals, health centres etc) were involved in the programme, in addition to coverage through the Lesotho Flying Doctors Service. Immunization sessions were assumed to be distributed roughly as follows: Health centres (60 per cent), Hospitals (10 per cent); mobile units (15 per cent) and outreach facilities (15 per cent).

2.2.13 A historical profile of immunizations performed between 1980 and 1985 is summarized in Tables 2 and 3. Judging by the number of children who actually received the vaccines, one gets the impression of satisfactory achievements,

Table 2

Records of Immunizations Performed Between 1980-85

Type of Vaccine	Number of Beneficiaries 1980	1981	1982	1983	1984	1985
A. INFANTS (Less than one year)						
1. DPT						
3rd dose	24 744	27 504	32 487	19 745	29 315	35 531
1st dose	36 270	40 329	41 135	25 145	35 010	40 295
2nd dose	29 001	33 634	37 988	22 974	32 694	38 701
2. POLIO						
3rd dose	24 044	27 731	33 250	20 333	30 609	35 289
1st dose	36 454	41 709	42 457	25 391	36 277	41 003
2nd dose	29 597	34 827	38 857	23 197	34 207	38 798
3. BCG	34 704	42 464	45 176	25 531	39 494	41 349
4. Measles	20 772	26 983	31 178	18 002	29 349	34 721
B. TOTAL IMMUNIZATION (all children)						
1. DPT						
3rd dose	41 741	39 990	42 768	24 929	34 906	42 001
1st dose	53 486	53 028	49 566	28 898	38 769	45 635
2nd dose	44 606	48 028	46 957	27 8	37 091	44 387
2. POLIO						
3rd dose	46 752	53 765	49 166	26 726	36 240	42 037
1st dose	63 474	76 515	56 596	30 721	40 591	46 717
2nd dose	53 101	61 657	52 885	28 524	39 107	45 017
3. BCG	81 756	12 594	67 164	32 583	46 191	51 657
4. Measles	49 033	62 182	56 336	40 560	40 048	63 820

Table 3

Per cent of Infants Immunized, 1976, 1980, 1985

Type of Vaccine	1976	1980	1985
1. DPT (3rd dose)	31	53	68
2. POLIO (3rd dose)	4	52	68
3. BCG	40	74	80
4. Measles	0	44	67
Under 1 year population	42,100	46,585	51 941

Source: MOH, EPI files.

and that accessibility has not been so bad either. Although no unique trend is particularly discerned by the statistics on immunization, the general observation is one of significant increases over the years, in the number of infants or children protected against the incidence of EPI diseases. Of particular interest, is the notable increases in coverage from 1976 (before the project) to 1980 and 1985 (during project years).

2.2.14 The returns on immunization for 1984 showed that approximately 91 per cent of the actual beneficiaries of the programme were reached through the fixed and outreach services; 9 per cent were reached through the mobile team services. Immunization activities have been extended to cover practically all parts of the country. However, there is little variation in coverage by districts. Available evidence suggests that the mountainous areas of Leribe, Mokhstheng, Thaba-Tseka and Mohale's Hoek still remain basically under-served (Annex III).

2.2.15 Further analysis is done in Table 4 where a comparison is made between total immunizations during the period 1980-82 (corresponding to the intensive and maintenance phases of the programme) and those of 1983-85. A downward trend in participation of all children is clearly evident for all types of vaccination. In the case of infants, the decline is more pronounced for BCG vaccination.

Table 4

Comparison of Immunizations Performed Between 1980/82 and 1983/85

	1980-82	1983-85	% Change
INFANT			
1. DPT (3rd Dose)	84 635	84 591	- 0.05
2. POLIO (3rd dose)	85 025	86 231	+ 1.4
3. BCG	122 344	106 349	-15.0
4. Measles	78 933	82 072	+ 3.9
ALL CHILDREN			
1. DPT (3rd dose)	124 499	101 836	-22.3
2. POLIO (3rd dose)	149 683	105 003	-42.6
3. BCG	274 867	130 431	-110.7
4. Measles	167 551	144 428	-9.1

Source: Table 2.

2.2.16 The decline in immunization generally reflects the shrinking size of the target population for vaccination as the programme was progressing. Initially, during the mass attack phase, all of the children who had shown up at the various health stations were vaccinated, irrespective of their ages. When the intensive phase ended, and the continuous phase began, immunization was concentrated on children below the age of 2. Later on, during the continuous phase, the main target for vaccinations was 80 per cent of all newbowns.

2.2.17 Other probable causes of decline in immunization may be attributed to the following: (i) inadequate transport situation following the completion of the mass attack phase which might have led to reduced coverage of outstations, villages and areas with difficult access; (ii) lack of motivation among some mothers who might have no longer been bringing their children to the health stations because the food supplement programme, previously in existence in all health units was phase-out later during the continuous phase of the EPI; (iii) inability of some mothers to bear the cost of vaccination being charged by some of the private health centres, in view of performing other types of services in their clinics; and (iv) irregular schedule of vaccination in some outstations and villages which might have discouraged some mothers needing to cover a long distance to these health centres to get their children immunized.

2.2.18 Table 5 shows the drop-out rates between first and third doses of

Table 5

Percentage drop-outs with successive doses of DPT and POLIO

	% Drop DPT1 to DPT2	% Drop DPT2 to DPT3	% Drop Polio.1 to Polio.2	% Drop Polio2 to Polio3
1975	24.0	38.0	21.0	42.0
1976	18..0	24.0	24.0	26.0
1977	27.0	44.0	36.0	53.0
1978	5.0	19.0	30.0	40.0
1979	15.0	24.0	-	53.0
1980	20.0	15.0	18.8	18.8
1981	16.6	18.2	16.5	20.4
1982	7.7	14.5	8.5	14.5
1983	8.7	14.1	8.6	12.3
1984	6.6	10.4	5.7	10.5
1985	4.0	8.2	5.4	9.1
1986*	7.9	11.6	3.8	11.3

* First quarter only.

Source: 1975 to 1979: Report on a Joint Mission to evaluate the "Lesotho Expanded Programme on Immunization", February 1982, p.33.

DPT and POLIO, from 1975 to the first quarter of 1986. The impact of the mass attack phase of the EPI is clearly indicated by the considerable reduction in drop-out rates in the years 1982/83. Beyond 1983, further reductions were marginal which might be due to the phasing-out of the mobile teams around this time, and consequently, the reduced contact with the population in villages, outstations and remote areas.

2.2.19 Table 6 also provides some evidence of a declining trend in morbidity arising from EPI target diseases, since the commencement of the programme; the decline is more pronounced for pertussis. In the case of measles, a reduction of its incidence is recognizable from 1981 to 1983. The increased incidence of measles in 1984/85 might be due to wrong diagnosis. Also, the incidence of pulmonary tuberculosis reduced slightly since 1982. Although the data presented in Table 6 do not discern a unique pattern, regarding morbidity levels pertaining to EPI diseases, some inference can still be made that a reduction in their incidence is reflecting partly an improvement of the reporting system; the low reported incidence before 1980 might have been due as well to the lack of reporting during this period.

Table 6

Reported Morbidities of EPI Targed Diseases 1974 to 1985

Year	Measles	Polio	Diphtheria	Pertussis	Pulm. Tuber
1974	5903	57	40	1633	2751
1975	5806	6	41	1643	2795
1976	3691	20	30	2183	1926
1977	10434	12	37	1455	2200
1978	6458	10	13	1392	1908
1979	8753	40	25	2261	2861
1980	7935	36	13	2020	4087
1981	7172	17	8	1250	5392
1982	6932	19	135	554	4931
1983	5239	13	23	632	3443
1984	5821	30	16	565	2923
1985	7362	29	26	186	2927

Source: 1974 to 1979, Evaluation Report (1982); 1980-85: EPI data file.

2.2.20 The above analyses show that the EPF has made some appreciable progress and that there are prospects for further improvements in the programme results. For these improvements to materialize the health services

department will need to focus more attention on the factors contributing to low coverage and on the constraints preventing mothers from completing the whole series of immunization for their children. The MOH is of course encouraged to continue, as before, to relv on the statistics on outbreak of EPI-related diseases to gauge the extent of demand for the EPI services, and the level of utilization of the available services.

2.2.21 Immunizations continued to be done at the levels of villages, health centres, district hospitals, referral hospitals and also by private practitioners. Less accessible areas were and are still being covered by the Flying Doctors whose visits to these locations have been as regular as the weather condition has permitted. The various units involved with the EPI were well managed (with a few exceptions), however, some improvement is still needed in the supervision of the outstations and the village health workers. The inadequate supervision of services in the remote parts of the country were attributed to staff shortages and frequent lack of transport in these units. For instance, most of the health centres were staffed with 1 nurse clinician and 2 nurse assistants with responsibilities for both routine curative medical services and those pertaining to EPI, MHC and FP. The usually heavv work load had often not permitted the staff of the health units to visit outstations and village health workers, more regularly, even if transport were to be available.

2.2.22 Another area where improvement is needed concerns contact with the outstations, the populations of which need to be more informed about the purpose and the advantages of getting children immunized particularly, and that of preventive medicine as well. The usual health education sessions given in the health centres prior to treatment is not sufficient since it has, for now, reached only those who have been coming to the stations. Public relations regarding EPI must in addition be brought to those not visiting the health centres. To accomplish this, additional staff will be required both in the health centres and as assistants to the present core of public health nurses.

2.2.23 Apart from the supervision and public relation issues, there is also the question of knowledge of the target population being covered. A number of health units did not know the correct size of population, the number

of villages and those of the village health workers in their health service area, making it difficult to determine the targets to be covered or establish actual coverage more accurately. This raises the question of validity of the reports or data submitted to the EPI headquarters for statistical purposes; particularly those reports or data coming from the units which did not have adequate knowledge of population being served. The problem of compiling statistics accurately applies also in the case of registration of vital events (especially births), and therefore, it has been difficult to correctly assess vaccination coverage for or the impact of vaccination among infants.

2.2.24 During the mass attack phase in 1980, the mobile teams carried out 85 per cent of total BCG immunizations. The relative shares of their involvement in other types of vaccinations were as follows: between 10-35 per cent (DPT); between 38-61 per cent (POLIO) and 77 per cent (Measles). Although the teams were not able to fully reach their target age-group, they have been able to make significant contributions during the initial phases of the programme. This is confirmed by the decline observed in coverage of immunization following the phasing-out of the terms.

2.2.25 The mobile units used originally for strengthening the EPI during the earlier years of the programme's operation were integrated into the districts later where they have become part of the MCH/FP/EPI teams. With their field exposure and continuous training while under the EPI, the mobile teams have acquired sufficient experience to enable them perform satisfactorily in their new assignments. It was impressive to learn that even the drivers had been trained to work as Assistant Vaccinators and Assistant Cold Chain Technicians whenever the need arose.

2.3 General Assessment

EPI coverage:

2.3.1 Overall, the achievement of the immunization programme to date has been satisfactory. However, vaccination coverage is still below target, particularly as far as DPT, POLIO and measles vaccines for infants are concerned. Around 65 per cent of all children is estimated to have been immunized by now. Among the major constraints to a higher coverage, and

therefore a more effective programme of immunization were the inadequacy of transport and the shortage of staff. The programme has been cost effective to the extent that not more than US $6.0 has had to be spent on a fully immunized child. Given the reductions since the commencement of the programme in morbidity levels pertaining to the EPI diseases, it can be said in addition that the EPI has been health-effective. The ADF should be encouraged to support more of such programmes in the future.

2.3.2 The analysis of information available at hand, and further investigation on the field revealed that a considerable number of children were not being vaccinated before their first birthday. For the universal coverage planned for 1990 to be more effective, further efforts are needed to remove the identified constraints to getting all children vaccinated during their infant years. For instance, there have been a few cases whereby mothers visiting health centres for minor ailments have prevented clinic staff from vaccinating their children at the times of their visits. Such mothers were believed to have refused immunizations on these occasions for reasons of contra-indications to vaccinations, and have preferred to delay immunization for their children until a later age. There is therefore the need to intensify the campaign to mothers not just on the advantages of vaccinating children, but also in doing so at the right age. Further, cases of incomplete cycle of vaccinations, especially DPT and POLIO, for whatever reasons, need further attention by the health and clinical staff to ensure continuous improvement in drop-out rates for these two types of vaccine.

2.3.3 Finally, the coverage data and the results of routine evaluations[1/] on the EPI each year have formed and should continue to form the basis for determining the strengths and weaknesses of the programme at any point in time, and for reformulating appropriate strategies to achieve even better results in the subsequent rounds of immunization exercise. So far, such continuous assessments, have led to visible improvements from time to time in procedures, the programme's management, and capabilities to actively sustain the EPI until the desired results are achieved.

1/ A national evaluation of the EPI was carried out in 1982; another one in 1984 was jointly conducted by a team of national and international experts. The findings of these evaluations have formed the basis for extended financial support to the programme, by the external donor agencies.

Integration of the EPI:

2.3.4 At the end of the active phase of the immunization programme, attempts made to integrate the EPI into the MCH/FP system, and at the decentralization of the programme activities, met with noticeable difficulties. The problem arose originally from the fact that the EPI was conceived from the beginning as a seperate entity, receiving maximum support from the outside. Consequently, the static facilities were hesitant to absorb the responsibility of the EPI and integrate immunization roles into their traditional clinical functions. As a result of the initial resistance, the staff of EPI was subsequently after the decentralization exercise being used for other activities, neglecting the EPI. A stepped-up campaign on universal immunization for children would go a long way to popularize its value, and would also enhance the absorption of EPI activities into the traditional clinical functions of the existing health facilities.

2.3.5 The main concern now, that the Government is committed to continuing the programme on its own, with some support from the Commonwealth Development Corporation (CDC), is the need to sustain an uninterrupted service delivery in a manner that the same coverage as at least in the past can be maintained. The bottlenecks to this objective are generally manifested by resource constraints (finance and manpower), logistics (the much needed transport to be able to reach out), and supply of drugs and vaccines which needs to be ensured at all times. It is understood that the WHO and UNICEF funds will be available for these purposes in the meantime, but such support cannot be relied upon on a permanent or long-term basis. To some extent the Government's inability to draw upon the balances on the ADF loan was unfortunate (also see para. 2.5.6).

Organization, Management and Administration of EPI:

2.3.6 An autonomous unit, created within the MOH some time back has been in charge of the entire immunization programme. It has had very close cooperation with the Public Health and MCH units. The staff at the EPI headquarters consisted of: 1 programme manager; 1 central operations officer who also acts on occasions as field supervisor for MCH/EPI; 1 field supervisor MCH/EPI; 3 cold chain technicians; 2 assistant cold chain technicians who are

also trained vaccinators and drivers; 1 statistical clerk and 1 secretary/typist. The overall responsibility for these staff rests with the programme manager who reports to the Director of Health Services. She is also in charge of budget, organization, supervision, relations to other officials (Ministry of Finance, Ministry of Planning and Economic Affairs, Planning Unit of the MOH, the Principal Public Health Nursing Officer etc.) and to representatives of other organizations in Lesotho, including the SCF, UNICEF and WHO. The programme manager is also entrusted with the responsibility of ensuring adequate supplies of vaccines and vaccination equipment, and of the delivery of these to the District Hospitals which in turn supply the health centres.

2.3.7 Overall, the EPI is considered to have been organized satisfactorily. At the headquarters level, administration and management were good, but at the lower levels, some improvements are necessary. It can be said that the financial administration of the project was inadequate to the extent that proper accounting records were not kept on the project's expenditures. As a result of the lack of appropriate book-keeping procedure on the EPI activities, the contributions of the various donors involved with the project could not be determined accurately. This lack of financial accountability has in turn contributed to the slow rate of ADF disbursements for the project. It also explains in part why the government was unable to justify, some time back, the use of the revolving funds which had been created earlier during the implementation of the EPI.

Mobile Teams:

2.3.8 At the time of the project's preparation, the idea of creating mobile teams for vaccination purposes was not wholly favoured by the officials of the MOH. The Government preferred at that time to concentrate efforts on the possibility of utilizing the static facilities for implementation of the EPI. The objection to using mobile teams for EPI purposes was based on the inherent difficulties of sustaining them as permanent means of service delivery. This concern of the MOH was later justified as some difficulties were encountered during the integration of the mobile teams. Besides being a temporary measure of service delivery, the mobile teams have also been very expensive to maintain. It can be said, however that coverage by the mobile

teams during the mass attack phase of the programme was not that bad (para. 2.2.24). But when a comparison is made between the total number of immunizations performed subsequently by the mobile teams and those of the static health facilities (para. 2.2.14), the conclusion would tend to be that the role of the teams as means of service delivery has tended to diminish relatively. Consequently, their integration into the permanent health service structure has been a measure to ensure that the services of the mobile teams be cost-effective.

Medical and scientific/technical aspect:

2.3.9 The incidence of measles was reported to have been frequent even among vaccinated children. Further investigation of this problem (by checking the overall condition of a few patients and discussing several such cases with nurse clinicians) revealed that most cases of observed symptons were related to either scarlet fever or chicken pox. In fact, differential diagnoses between the three types of diseases may sometimes be difficult, particularly if the investigator has not been adequately trained to detect the different skin irritations and clinical symptons associated with these diseases. The limited availability of laboratory tests and the less-than-adequate means of diagnosis have enhanced these difficulties the more, so much so for some of the health stations which are located far away from the QE II Hospital in Maseru. The two clinical laboratories which were to be built as originally envisaged at appraisal, were erected in Leribe and Mahales Hoek but have not been operational due to lack of equipment.

2.3.10 The constraints presently inhibiting correct diagnosis of different diseases can be removed in the longer term by establishing and maintaining an adequate network of laboratory services throughout the country. The public health nurses and nurse clinicians of all health units also need to be exposed to the various methods of diagnosis for the EPI diseases. This can be accomplished through further training on these methods, to include clinical demonstrations on the various manifestations of these diseases in patients. As an interim measure, the public health nurses and clinicians could be supplied with simple diagnostic devices to facilitate early detection of these diseases and related malfunctions. The provision of equipment for the laboratories in Leribe and Mohale's Hoek will be desirable for enhanced laboratory services.

Health Education:

2.3.11 Health education programmes are being carried out in all the health centers, and these are introduced to patients often prior to the clinical sessions. The programmes include subject matters relating to basic health hygiene (domestic and community), sanitation, nutrition and also EPI and preventive health care. However, it is felt that such basic educational programmes should be extended also to the villages, where access to health centres is limited.

2.3.12 Also, information on the EPI is passed on to the populace through the local papers, and for those who cannot read or write, through radio messages. Further awareness of the EPI has been promoted through various seminars in different locations throughout the country, and these have often been well attended. Visits to clinics for other reasons (ailments) has also been often exploited to stimulate awareness of mothers regarding full immunization of their children. And in addition, health messages and other related issues are sometimes diseminated through published leaflets widely circulated. This system of health education and information has been effective and should be encouraged and further reinforced.

Health Planning Unit:

2.3.13 As far back as 1974, there was no separate planning unit within the MOH. Health planning was then being undertaken at the level of the CPDO. Even then the staffing position of the latter was inadequate to support a continuous programme of health planning; there was no continuity in staffing most of whom were expatriates. But the situation changed in 1976 when a planning unit was established within the MOH. The unit took off with only one staff and presently consist of 6 planners all of whom are holders of college degrees in health planning, management and economics. The planning unit is charged with the responsibilities of: (i) identifying areas where health facilities are required and proposing remedial measures for them; (ii) holding consultations with other units and programme co-ordinators to assess various needs and how these could be met; and (ii) reviewing of plans and designs related to proposed health facilities/infrastructure.

2.3.14 It was difficult in the past to establish accurate and reliable statistics on health activities generally, and on the EPI particularly. And also, not much information could be obtained on surveillance (which includes reporting, monitoring and data recording activities). Even for those statistics which were readily obtainable from hospitals in the country, information on out-patient returns were often not reflected. The collection and analyses of statistics have been included presently in the roles of the planning unit; these tasks have been performed with continuous improvements to date.

2.4 Performance of the Government

Loan Effectiveness:

2.4.1 The agreement on the ADF loan for the health project was signed on 6 May 1976, but the loan became effective in February 1978 (PCR, para. 3.1.1-3.1.2). The 21-month lag between loan signature and effectiveness can be considered too long given that the requirements from the Government in fulfilling all conditions precedent to first disbursement were simple and straightforward. Two events contributed to this delay; one of these concerned the recruitment of the technical officer to head the EPI, the other was the proposed request by the Government to change the implementation schedule of the original project package.

2.4.2 It took some time for submission to the ADF of a copy of the letter of understanding, between the WHO and the Government, regarding the EPI, and a copy of the final terms of reference for the officer to be recruited under the programme. On the receipt of these and following approval by the Fund, the commencement of the programme was further delayed by the insistence by the WHO on advance payment for the technical officer. The second major source of delay in loan effectiveness was the prolonged period of deliberations on whether or not to phase the implementation of the project in accordance with Government request. Other delays were encountered in submission for ADF approval of list of goods and services to be procured for the project. On account of these delays, the deadline date for first disbursement was extended once, from 30/06/77 to 30/06/78.

Procurement:

2.4.3 In procuring goods and services for the EPI, the procedures followed by the Borrower were generally in conformity with the ADF's established guidelines. The exception to this was the recruitment of technical officers whose replacement had taken place without the knowledge of the Fund. Further, there was evidence that the WHO recruited the new officer from Jamaica which, not being a state participant of the ADF, constituted a violation of the established ADF procedure for procurement. It was found also that some of the vehicles for the project were procured through the UNICEF instead of through open bidding. Such procurement practice through the UNICEF was to enable the Government to take advantage of lower prices compared to those of the open market.

Cancellations:

2.4.4 There were two cancellations duly approved by Management of different loan amounts during the implementation of the EPI. The first one took place in August 1980 and concerned the two construction components which the ADF was supposed to finance. The cancellation was prompted by the final decision to remove these components from the original project's package, resulting in the reduction of the project's scope to the EPI only. The first round of cancellation by the Fund was in essence inevitable, as the change in the Government's priorities at this time, and the absence of alternative plans of implementation did not permit the Fund to retain the construction components for financing.

2.4.5 The second cancellation in 1984 took place under a different circumstance. Following the extension of the deadline date for last disbursement - from December 1981 to December 1983 - it became apparent that the Borrower could not fully utilize the loan amount for the EPI before the expiration of the new deadline date. A request was then sent to the Bank through an ADF technical supervision mission, to permit the use of M 378,972 covering the additional requirements of the EPI, as well as related activities (integration and decentralization) earmarked for completion by the end of 1984. This request of the Government was not granted by the ADF, first because eight years had passed since the approval of loan for this project, and second, because the additional requirements for the project were

considered to be a result of the Executing Agency's failure to account for its expenditures properly.

2.4.6 It can be said, in conclusion, that the first cancellation was justified because a decision to the contrary would under the given circumstance have meant the holding up of the Fund's scarce resources indefinitely. However, this was certainly not the case the second time around when cancellation had been based on reasons of inefficient documentation on the project and of the administrative inadequacies of the executing agency Given that a significant portion of the original loan amount had already been cancelled, another round of cancellation under the same loan could and should have been avoided, at least to allow for continuity of the EPI whose progress has been satisfactory to date

Co-ordination

2.4.7 During the initial phase of the programme, a co-ordinating committee representing all agencies associated with health-promoting activities was established This committee was successful in drawing and implementing plans of operation for the EPI. The success of the programme so far is to some extent attributable to the active co-ordination of operations. the EPI has been an area where inter-sectoral collaboration showed a lot of promise The approach of involving other related agencies, in addition to those in the health sector, to bring services to the people is worth emulating for other ADF projects in the health sector.

2.4.8 However, while co-ordination of operations relating to the EPI was satisfactory, the co-ordination of activities at the level of administration and use of the programme resources was less than adequate The weakness of co-ordination at the latter level is manifested generally by the less-than-adequate liaison between the relevant implementing parties MOH, the Central Planning and Development Office, and the Finance Ministry on matters concerning management of financial resources for the programme, status of requests to donor agencies vis-a-vis programme needs, and transmission of information within the government set-up.

2.4.9 The management of the EPI unit was on occasions not aware, or rather so belatedly, of important decisions by the Government, even those of the ADF, on crucial matters concerning the immunization programme. The absence of effective communication between the government ministries might have been responsible for the delays in submissions of various requests to the ADF. The non-existence of a more open system of information dissemination would also explain why correct details on the project were sometimes not readily available - e.g. the inability of the GOL to fully account, at the time of its requesting for a loan extension, for the use of the revolving fund previously established for the project.

2.5 Performance of the ADF

General:

2.5.1 The ADF responded quickly and actively to the Government request for financing of a health services project in Lesotho. The appraisal of the project was based on a thorough analysis of its feasibility and its socio-economic viability. However, considering developments subsequently during implementation, it is clear that the three components of the project appraised as a package constituted unrelated, and unique sub-projects. The success or failure of the EPI, for instance, did not depend on those of the construction programmes. Similarly, measures proposed within each component were independent of each other since each of them was identifiable as a distinct sub-project with distinct operational and financial consequences. In this context, experience has shown that the project could have been separated at appraisal and more emphasis could have been put then either on the immunization programme or on the construction elements

2.5.2 In terms of relative importance, and because of its higher socio-economic benefits to the country - i.e. for being a preventive rather than curative medicine - the EPI was more desirable for the development of health of the society. To this extent, more emphasis and resources ought to have been put on the immunization programme. The programme attracted substantial support from outside sources as demonstrated by the multiplicity of donor agencies involved with its implementation. The additional support from these external sources has contributed to further success of the EPI.

But to the extent that this was not foreseen and programmed for from the beginning, the problems of co-ordination and accountabilitv were clearly unavoidable. In view of the above, it can be remarked that sufficient efforts were not made during supervision of the project to fully address the problem of co-ordination during its implementation.

Disbursement:

2.5.3 The loan for the Development of Health Services project was approved in Februarv 1976, the first disbursement was made by the ADF in March 1978 - two years after loan approval - following one extension of the deadline date for first disbursement. The reason for this delav has already been given earlier in this report. The profile of disbursement from 1978-1983 (summarized in Table 8) shows that no disbursement was made during the active phases of the project (1980-82). The programme needs were being financed during this period from external resources which also included some grant elements. The ADF cancelled in August 1980 a portion of the loan (FUA 1,642,642) representing 65 per cent of the original total amount; the circumstances leading to this have alreadv been explained above. However, cancellation of such magnitude is partlv a consequence of unforeseen and substantial modification to the project; the chances of this occuring could have been less, had the focus been on EPI from the beginning.

Table 8
Project Expenditure and ADF Disbursements, 1978-1983
(Maloti)

Year	Expenditure on EPI		ADF Disbursement	
	Amount	Cummulative	Amount	Cummulative
1978	-	-	52 132	52 132
1979	159 164	159 164	203 098	255 230
1980	38 180	197 344	-	255 230
1981	97 605	294 949	-	255 230
1982	99 216	394 165	-	255 230
1983	114 958	509 123	206 950	462 160
Cancellation (1980)			1 935 246	2 397 406
Cancellation (1984)			547 899	2 945 305

Note: ADF disbursements were in FUA, converted to Maloti at the exchange rate of FUA 1.0 = M1.17813
Source: MOH, EPI files and ADF ledger.

2.5.4 The deadline date for last disbursement was extended once from June 1981 to June 1983, at the expiration of which total disbursements by the ADF amounted to FUA 392,300 (or M462,160 at the exchange rate of FUA 1 = M1.17813). The Borrower submitted a request for further extension of the deadline, to enable utilization of the balance on the loan (FUA 465,058 as at December 1983). The request was specifically for an amount of M378,972 to cover additional requirements of the project, and other activities planned for completion in 1984. This request of Government was not granted by the ADF and the balance on the loan was cancelled in 1984 (see also para. 2.4.5 above).

2.5.5 The cancellation of the uncommitted balance on the loan would appear to have been unfortunate given the satisfactory results obtained from the EPI to date and in view of the supporting justification for use of the balance. This cancellation led to a temporary disruption of activities and has affected the progress of the programme adversely. The immediate consequence of the cancellation was the inability of the MOH to pay staff salaries, and to acquire other essential equipment and transport for the programme. In particular, the two laboratories included as a component to be financed by the ADF, but which were built later from the Government resources, could no longer be equipped as envisaged, and the temporary financing of activities from the MOH budget created further budgetary constraints.

2.5.6 In retrospect, the cancellation of the balance on the loan amount for the EPI should have been forestalled. Given that 65 per cent of the original loan amount had been cancelled earlier, the Borrower should have been better assisted to utilize the remaining amount of the loan fully. The slow rate of disbursement for the EPI is largely explained by the multiplicity of participation and the high magnitudes of commitments to the programme, from the other donors. However, a situation whereby only 16 per cent of the original loan amount (or 46 per cent of the approved loan sum for the EPI) was eventually disbursed in 8 years, does not indicate an effective use of scarce resources. In the same context it can also be concluded that the Fund lost full control over the management of the project's financial resources during those years. In terms of lessons for the future, substantial modification to projects following loan approvals can be avoided to some extent through a better project focus during preparation. Also, the Fund's financial assistance to member countries will be enhanced with more flexibility in terms

of procedure, and increased assistance - of technical and advisory nature - to Borrowers utilizing the proceeds of its loan.

Supervision:

2.5.7 The issue of the ADF's supervision of the health project was raised and dealt with in the PCR (para. 3.8.1). The basic observation of this and that of the evaluation mission is unanimously one of inadequate supervision of the EPI both in terms of number and quality - particularly technical and financial. There were relatively more follow-up missions (referred to as general supervision missions) during the implementation of the health project, all of which were required to cover many projects, or even visit many countries at times, thereby leaving little time to follow in greater depths, the developments on the EPI. Further, apart from the limited number of technical supervision missions, none of these missions was fielded during the critical phases of the EPI, i.e. 1980-1983.

2.5.8 The various developments during the project's implementation suggested the need for more frequent supervision of the programme at the technical and financial levels. The inadequate supervision of the project at these two levels has led to the loss of control by the ADF over project's expenditures; it has also reduced the effectiveness of the Fund's intervention technically, in the programme of immunization in Lesotho. On the basis of the above observation this report advocates for more frequent technical and financial supervision missions in the future for projects supported by the Bank Group - at least two of such missions will be desirable in a year.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 Conclusions

3.1.1 The investment on the EPI has generally been worthwhile and the coverage of the programme to date can be considered satisfactory; immunization activities have been extended to cover practically all parts of the country. The ADF should be encouraged to support more of such programmes in the future. Broadly, the EPI offers considerable protection for children against related infections; and the importance of the programme is in the case of Lesotho underlined by the fact that child vaccination against polio and measles was practically non-existent in the country prior to 1979. The impact of the programme has been evident. In some areas of the country, there have been no more cases of diptheria, poliomyelitis or whooping cough since about 2 years; the prevalence of measles has also declined in relative terms. Further, there has been visible evidence of a downward trend in morbidity rate pertaining to EPI diseases, since the intensification of the programme. There were, nonetheless some under-served areas, primarily in the mountainous regions of the country where difficulty of access has prevented a much higher vaccination coverage.

3.1.2 The progress made so far by the programme has been due to the continuous availability of vaccines and vaccination equipment, and also to the highly motivated, and experienced staff of the EPI. However, further improvements are necessary with regards to the procurement and record-keeping procedures for vaccines, and in terms of staffing at the district levels, particularly for coverage of the mountainous areas. It is equally useful to remark that all agencies involved in health delivery generally, and in matters relating to children particularly, have actively participated at all levels. Most of the health institutions carrying out vaccinations seemed to have had sufficient stock of antigens and equipment; a routine maintenance service had been generally followed. Mention should also be made of the adequacy of the cold-chain system but which is yet to be developed throughout the country. Moreover, there is apparent need for more regular supervisory visits to all static facilities by the public health nurses and the EPI staff. The integration of EPI personnel into the district health care system met with some difficulties initially, but this is being overcome gradually. The co-operation between EPI and MCH, FP and PH has been good.

3.1.3 Despite the positive achievements of the programme, some improvements in its management and operation will be definitely desirable. In the first instance, although the programme has been in existence for more than five years now, the set targets for vaccinations are yet to be fully met; judging by the records of immunization performed so far, one would tend to conclude that coverage is relatively still low (about 65 per cent). In addition, there are indications of a considerable number of children that were not being vaccinated by their first birthday or during the childhood years. This has created a backlog of population which still needs to be covered, and of course at a higher cost.

3.1.4 Secondly, the officials of the MOH, and the findings of a number of evaluation reports on the EPI, suggested that the relatively low level and pace of immunization were not because the services were insufficient or not made available. On the contrary, it was believed that the benefits of the EPI were being undermined by the presence of a core of mothers who neither get their children vaccinated nor get them to complete the full cycle of vaccinations (8) for full protection. The reasons for poor receptivity or drop-outs included lack of easy accessibility to the health facilities, poor knowledge of the EPI and lack of motivation among certain mothers. The issue of motivation was partly justified. There were large turn-outs of mothers in the past when the food-supplement scheme was available throughout the health units in the country, but the frequency of visits to these units has reduced drastically since the discontinuation of the food scheme. Incomplete immunization was in a few instances attributed to inadequate knowledge and practice of health staff. There were also general problems of diagnosing EPI diseases properly or making a more precise distinction between these diseases and others with identical symptons.

3.1.5 Thirdly, a number of staff and vehicles were redeployed to the district health facilities between 1983-85 in keeping with the original plan of phasing out the mobile teams after three years of running the programme. The Ministry of Health has not been fully successful in obtaining Government funding to support this integration of staff - the mobile teams have hitherto been funded from the ADF resources. Some salaries for the teams have not been fully settled while Government on its parts was and is still determined to keep overall recurrent cost expenditures at a minimum level. Generally the

continuitv as well as the full success of the EPI are contingent upon the willingness of the Government to meet the recurrent cost requirements of the MOH. Many of the vehicles acquired for the programme at the early stage of implementation were and remain in poor condition, having been extensively used and poorly maintained. Some of the health stations in the districts have not been adequatelv staffed. As no immediate replacement or increases has been assured, transport and staff shortages constitute important constraints to the effectiveness of the EPI.

3.1.6 Lastly, it was remarked earlier in the report that the MOH succeeded in acquiring adequate quantities of goods and services for the programme. The exception to this would be the two laboratories which were built from Government resources - instead of from ADF funds - and which were not operating because of lack of furniture and equipment. The non-functioning of the laboratories has meant that important diagnostic functions could not be performed; specimens for examination have had to be sent to the Queen Elizabeth II Hospital in Maseru, which alreadv had a heavy back-log of laboratorv activities. The Government was able to emplov other resources outside the ADF funds for building the laboratories, and had intended to utilize the balance on the ADF loan for the EPI, to furnish and equip them. But by the time of its requesting for funds for furniture and equipment, the deadline for last disbursement had alreadv expired; further extension was not granted by the ADF.

3.1.7 Furthermore, it was mentioned in this report that the EPI received substantial support and financial resources from external sources. Among the various funding agencies, the financial assistance provided bv the ADF has not been quite significant. In addition, the technical and financial supervision of the EPI bv the ADF was not adequate, which explains partly whv the loan amount earmarked for the programme was not fullv utilized; the cancellation of more than 50 per cent of the ADF loan for the EPI could have been forestalled with better knowledge of the programme's activities and better co-operation between the ADF and the GOL. Further, the documentation and disemmination of information within the Government set-up reflect some gaps which perhaps would explain why the project started three vears later than scheduled on the one hand, and whv further extension of the loan could not be granted on the other.

3.1.8 In view of the experience with this health project, the following lessons can be drawn. One is the lack of focus at the beginning, in terms of defining unique sub-projects within the health sector ranked according to their specific developmental goals. The lack of focus had not permitted a clearer identification of needs and better direction regarding possible sources of financing. As a result of the frequent changes in Government priorities in the health sector a number of external donors intervened in the sector, including EPI related activities, at the same time. The particular point of the latter is that the multiplicity of donor agencies participating in the EPI for instance was accompanied to some extent by unco-ordinated roles and activities relating to the EPI. It was difficult to identify areas or specific components with which individual donor agencies was involved. And there was a problem of accountability or for that matter responsibility in respect of goods and services procured for the project.

3.1.9 Another lesson of experience is the fact that the Government budget is increasingly being put under considerable strain/pressure as the inertia of the external resource flows for the programme continue to diminish. The continuity of the EPI rests on the ability of the MOH to maintain adequate recurrent cost budget, and this can be assured only if Government is willing to take up the responsibility for fundings which have hitherto come from external contributions. The impression got is that the Government may resist attempts to make additional allocations to finance MOH's ever expanding activities, since it has to contain the overall budgetary crisis being experienced currently. Finally and more generally, more active involvement at the country level, flexibility in terms of rules and procedures and greater emphasis on assistance of technical and advisory nature are invaluable for the ADF's ability to better foster the development course of member countries. In the particular case of the EPI, a substantial portion of the loan was eventually cancelled when it could and should have been possibly forestalled.

3.2 Recommendations

3.2.1 In view of the foregoing analyses and conclusions, the following recommendations are made for further improvements in coverage and, supervisions of the programme particularly and in administration of ADF loans generally; the department(s) responsible for the implementation and/or follow-up on individual recommendations is/are indicated in parenthesis:

The Executing Agency (MOH)

(i) Procurement and record keeping procedures of vaccines for the programme should be better streamlined, taking into account their expiration dates (paras. 2.2.7, 2.2.8, 3.1.2; (OARD)

(ii) Adequate transport, communication facilities and staff should be provided at District level, particularly for coverage of the mountainous areas (paras. 2.2.8, 2.2.10, 2.2.17, 2.2.21, 2.3.1, 2.3.53.1.5); (OARD)

(iii) Further training programmes relating to the EPI should include differential diagnosis of measles, chicken pox and scarlet fever; the laboratories in Leribe and Mohale's Hoek should be equiped to make them operational (paras. 2.3.9, 2.3.10, 2.5.5, 3.1.4, 3.1.6); (OARD)

(iv) Health education should be intensified, particularly in villages and schools, and vaccination drop-outs should be followed up more intensively (paras. 2.2.18, 2.2.22, 2.3.2, 2.3.11, 2.3.12, 3.1.4); (OARD)

The Borrower:

(v) The Government should endeavour to continue to grant adequate support to the EPI, particularly in the area of recurrent cost financing (paras. 2.5.5, 3.1.5, 3.1.9); (OCRN)

(vi) There is need to improve upon co-ordination and information disemmination within the Government set-up; the Co-ordination Committee should be made more functional and there should be more open system of information disemmination among government ministries (paras. 2.4.8, 2.4.9, 3.1.7, 3.1.8); (OCRN)

The ADF:

(vii) Supervision and co-ordination of activities at the country level needs continuous improvement; the frequency of technical and financial supervision missions should be increased to at least one per year (paras. 2.5.6, 2.5.7, 2.5.8, 3.1.7, 3.1.9). (OARD and FTRY)

3.3 POLICY ISSUES AND REQUIREMENTS FOR FOLLOW-UP

None.

ANNEX I

LESOTHO: Summary of Government Operations, 1977/78-1982/83
(in Million of Maloti)

				Preliminary Actual			Budget Estimate
	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84
Recurrent Revenue	52.4	80.5	99.5	104.3	111.1	134.5	166.4
Recurrent Expenditure	38.0	47.2	68.8	104.6	125.8	152.5	158.6
Surplus/Deficit	14.4	33.3	30.7	-0.3	-14.7	-18.0	7.8
Capital Expenditure: Including:- Net Lending	51.5	39.3	61.5	62.2	66.6	54.5	137.2
Overall Surplus/ Deficit	-37.1	-6.0	-30.8	-62.5	-81.3	-72.5	-129.4
Financing of the Deficit - Grands-in-aid	12.3	11.5	17.9	21.2	13.7	9.4	59.2
External Loans	6.8	2.5	14.2	14.3	40.9	44.1	40.2
Domestic	2.7	0.6	4.4	27.0	26.7	19.0	30.0
Change in Cash Balances (- = increase)	15.3	-8.6	-5.7	-	-	-	-

Source: National Accounts of Lesotho 1972/73-1979/80, Central Bank of Lesotho Quarterly Review, March 1983, and CPDO Donors Round Table Papers, September 1983.

PART B

PROJECT COMPLETION REPORT

ANNEX II

LESOTHO: DEVELOPMENT OF HEALTH SERVICES PROJECT

SUMMARY OF SELECTED SOCIO-ECONOMIC DATA AND LESOTHO

A.	DEMOGRAPHIC		
1.	Population (1983 estimate):		1,438,000
2.	Rural population:		1,265,440
3.	Crude Birth Rate:		37-38 per thousand
4.	Crude Death Rate:		15.9 per thousand
5.	Life Expectancy at Birth :	Male	49 years
		Female	52 years
6.	Infant Mortality Rate:		112-130 per thousand
7.	Children below 5 (1981):		16 per cent
	below 15 (1981):		40 per cent
8.	Total number of births per woman of completed fertility:		4.6
9.	Mean family size:		5.4

B. HEALTH STATUS DATA

10. First six causes of morbidity, all outpatients, 1982, ranked:
    (a) Respiratory tract diseases
    (b) Diseases of the digestive system, including gastro-enteritis
    (c) Diseases of the genito-urinary system, including gonorrhoea
    (d) Skin diseases
    (e) Diseases of nervous system and senses
    (f) Injuries, fractures, dislocations
    (a)-(f) constitutes 70 per cent of total registered outpatient diagnoses

11. First four causes of morbidity in children below five years of age, outpatients 1982, ranked:
    (a) Diseases of respiratory tract, including measles
    (b) Gastro-enteritis, diarrhoea and other diseases of the digestive system
    (c) Skin diseases
    (d) Manultrition.

C. HEALTH SERVICE COVERAGES

12.	Health Centre	:	1/12 000 population
13	General Hospital	:	1/76 000 population
14	Referral Hospital	:	1/1 438 000 population
15.	Hospital Beds		
	Total	:	1/561 population
	General	:	1/775 population
	Specialist	:	1/2 037 population
16.	Doctors (1979)	:	1/16 000 population
	(1982)	:	1/14 000 population
17.	All health service personnel (1979)	:	1/2 900 population
	(1982)	:	1/2 100 population

ANNEX III

LESOTHO: DEVELOPMENT OF HEALTH SERVICES PROJECT

EPI: % TOTAL IMMUNIZATION COVERAGE OF TARGET POPULATION BY DISTRICT

	Measles			DPT			BCG			POLIO		
strict:	1st Quarter 1985	2nd Quarter 1985	1st Quarter 1986	1st Quarter 1985	2nd Quarter 1985	1st Quarter 1986	1st Quarter 1985	2nd Quarter 1985	1st Quarter 1986	1st Quarter 1985	2nd Quarter 1985	1st Quarter 1986
itha Buthe	34	61	44	33.4	66	44	50	62	50	37.1	70	44
ribe	15	28	17	15.2	31	17	22	30	22	16.3	31	17
rea	16	36	27	17.7	41	27	26	39	26	20.7	44	27
iseru	25	52	20	35.4	64	20	39	55	39	35.1	64	20
ifeteng	21	44	28	12.2	28	28	26	36	26	11.9	27	28
hale's Hoek	9	22	13	9.9	25	13	16	26	16	10.4	24	13
ithing	19	43	26	18.6	45	26	27	46	27	18.9	45	26
icha's Neck	26	52	45	34.1	62	45	41	58	41	33.4	56	45
okhotlong	7	20	28	9.8	24	28	21	36	21	7.-	17	28
naba Tseka	14	33	25	11.8	31	25	14	29	14	14.9	32	25
ational otal average per Quarter	18.6	39.1	27.3	19.8	41.7	27.3	28.2	41.7	28.2	20.6	41	27.3
stimated ational total verage % per ear		115.4	109.2		123	109.2		139.8	112.8		123.2	109.2

ource: MOH, EPI files.

AFRICAN DEVELOPMENT FUND

PROJECT COMPLETION REPORT
HEALTH SERVICES DEVELOPMENT PROJECT
KINGDOM OF LESOTHO

AGRICULTURE AND RURAL
DEVELOPMENT DEPARTMENT

MARCH 1985

PART B

PROJECT COMPLETION REPORT

CURRENCY EQUIVALENT

FUA 1	=	Maloti 1.79131
FUA 1	=	US$ 0.902824
US$ 1	=	Maloti 1.984118

MEASURES

1 metre	=	3.28 feet (ft)
1 square metre (sq.m)	=	10.76 sq. ft
1 hectare (ha)	=	2.47 acres
1 kilometre (km)	=	0.62 mile

ABBREVIATIONS

ADB	=	African Development Bank
ADF	=	African Development Fund
BCG	=	Tuberculosis vaccine
DPT	=	Diphtheria, Perlussis & Tetanus vaccine
EPI	=	Expanded Programme on Immunization
FE	=	Foreign Exchange Costs
FUA	=	Fund Unit of Accounts
GOL	=	Government of Lesotho
LC	=	Local Currency Costs
MOH	=	Ministry of Health
OPV	=	Polio vaccine
PCR	=	Project Completion Report
SCF	=	Save the Children Fund (UK)
UNICEF	=	United Nations Children Fund
WHO	=	World Health Organization

PART B

PROJECT COMPLETION REPORT

TABLE OF CONTENTS

		Page No.
1.	INTRODUCTION	B.1
	1.1 Health Sector	B.1
	1.2 Bank Group Interventions in the Sector	B.1
2.	PROJECT DESCRIPTION	B.2
	2.1 General Description	B.2
	2.2 Detailed Features	B.3
3.	PROJECT IMPLEMENTATION AND COST	B.4
	3.1 Loan effectiveness	B.4
	3.2 Procurement of Goods and Services	B.4
	3.3 Changes in Implementation	B.5
	3.4 Implementation Schedule	B.6
	3.5 Reporting	B.7
	3.6 Costs	B.7
	3.7 Expenditure Schedule	B.9
	3.8 Project supervision	B.10
4.	CONCLUSIONS	B.10
	4.1 Achievements	B.10
	4.2 Lessons for the future	B.12

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LIST OF TABLES

3.1 Project Costs at appraisal

3.2 Revised Project costs at appraisal

3.3 Estimated and Actual Costs

3.4 Expenditure schedule

3.5 Supervision missions

LIST OF ANNEXES

1. Map of Lesotho

2. Immunization Schedule

3. Immunizations performed (1979-1982)

4. MOH Organization Chart and EPI staff

1. INTRODUCTION

1.1 Health Sector

1.1.1 According to available health statistics, the health status of the Basotho people is relatively better than that of most African nations of comparable socio-economic development level. This is often attributed to the absence of major tropical diseases and to the country's weather which does not favour the spread of infectious diseases. Nevertheless, the morbidity pattern is dominated by diseases of the respiratory system, symptoms and ill-defined conditions, diseases of the digestive system, diseases of the skin and subcutaneous tissues, and diseases of the genito-urinary system. Such conditions are also reflected in the mortality pattern but in a different order of magnitude. The major causes of death are: diseases of the circulatory system, pulmonary tuberculosis, diseases of the respiratory system, gastro-enteritis, injuries, fractures and dislocations.

1.1.2 A national health care system has been set up to deal with these conditions and others not described above. The system is organized according to a pyramidal structure which includes rural clinics supported by village health workers at the base, followed by district and Health Service Arca hospitals at the intermediate level, and referral hospitals (one general and two specialized) at the apex. In 1980, there were over 2000 clinic/hospital beds operated in Lesotho, giving a bed to population ratio of 1 to 615. This is about half of the recommended WHO norm for the African region.

1.1.3 The population of Lesotho was estimated at about 1.4 million in 1983. It is a relatively young population with over 40 percent of people aged less than 15 years. This results from a fairly high fertility rate, i.e. 6.0 children per woman and involves a high dependency ratio (75 children per 100 adults). For the period 1980-1985, the crude death rate and the crude birth rate were respectively estimated at 40 and 17 per 1000, resulting in an annual rate of increase of 2.3 percent. Infant mortality though declining remains high (130 deaths per 1000 live births) and keeps life expectancy at birth at 53 years for both sexes.

1.2 Bank Group Interventions in the Sector

1.2.1 The Bank Group interventions in the health sector include two project loans and one study loan. The first operation concerned the Health Services Development project under consideration. Its basic data are given below:

Total Costs	:	FUA 2.82 million
Loan amount	:	FUA 2.50 million
Government contribution	:	FUA 0.32 million
Beneficiary	:	Ministry of Health
Executing Agency	:	Ministry of Health
Date of approval	:	February 1976
Date of signature	:	6 May 1976
Date of loan effectiveness	:	16 February 1978

More detailed data given later in this report come from the project's appraisal report, the quarterly report on activities of the immunization programme,

as well as periodic field evaluation reports (1982, 1985) undertaken by an independent body of experts.

1.2.2 Seven (7) years after the first intervention, ADF financed a project and a study in the area of rural health. Their basic data are as follows:

		Project	Study
Total Costs	:	FUA 9.04 million	FUA 1.35 million
Loan Amount	:	FUA 6.35 million	FUA 1.24 million
Government Contribution	:	FUA 2.66 million	FUA 0.11 million
Beneficiary	:	Ministry of Health	Ministry of Health
Executing Agency	:	Ministry of Health	Ministry of Health
Date of Approval	:	20 January 1984	20 January 1984
Date of Signature	:	13 March 1984	13 March 1984

The Rural Health Services projects aims at strengthening the health care delivery system in rural areas of Lesotho. It involves establishment of ten new rural clinics, upgrading of 23 existing clinics, support to the existing nurse clinician training programme and project management. The loan was declared effective in March 1985 and disbursement has already started.

1.2.3 The objective of the Rural Health Services study is to prepare design services required for rehabilitation of eight district hospitals to be considered under the Second Rural Health Services project. The TAA loan was also declared effective in March 1985 and the consulting firm expected to carry out the study is being recruited.

2. PROJECT DESCRIPTION

2.1 General Description

2.1.1 The Health Services Development Project consisted of the following components:

- Immunization programme against diphtheria, smallpox, whooping cough, tetanus, tuberculosis, poliomyelitis and measles;
- Construction and equipping of a maternity wing at Queen Elizabeth II Hospital in Maseru;
- Provision of adequate accommodation and an administration/teaching block for nursing students at Queen Elizabeth II Hospital in Maseru along with the necessary furniture and equipment.

This project was identified by WHO as part of the cooperative programme between WHO and the Bank Group. The project was then prepared and appraised by ADB staff with assistance from WHO.

2.1.2 Soon after loan approval, Government requested ADF to drop the second and third components from the project. This request was claimed to be justified by a change in Government policy. Indeed, the construction of a new referral hospital in Maseru to include a new maternity and a nursing school was being contemplated by the Government. The referral hospital was expected to replace the existing Q.E. II Hospital. This was never realized, and at the time of the PCR mission, extension of Q.E. II Hospital was underway with funding from bilateral assistance programmes.

2.1.3 After a long exchange of correspondence debating the implications of the reduction of the project, the Fund and Government agree to implement the immunization component alone. We will therefore, in the remaining pages of this report, address ourselves to the Immunization Programme only.

2.2 Detailed Features

2.2.1 The programme was divided into two phases: a 'mass attack' phase lasting two years and a 'maintenance' phase lasting one year. The objective was to reach 85% of potential beneficiaries, or about 280,000 children over the three-year period. In order to achieve this objective, the following goods and services were to be acquired:

- personnel : to include a technical officer (expatriate), nurses, vaccinators and drivers;
- vehicles : to include 5 4WD Cars, 2 five-ton trucks, spares and maintenance;
- vaccines and immunization equipment;
- equipment for mobile teams: to include essentially logistics equipment;
- miscellaneous: to include construction and equipping of two laboratories at Mohale's Hoek and Leribe as well as allowance for horse hire.

2.2.2 The Technical Officer was expected to head the programme and his recruitment was set as a condition precedent to first disbursement. Since an immunization programme is closely linked with the identification of the diseases it is aiming to prevent, the laboratories to be built at Mohale's Hoek and Leribe were expected to assist in the diagnosis of these diseases. The immunization programme was expected to be integrated into the health care delivery system of the country, at the completion of the project, at the latest.

3. PROJECT IMPLEMENTATION AND COST

3.1 Loan Effectiveness

3.1.1 As indicated above, the loan was declared effective in February 1978, or about two years after its signature. This was due to a couple of factors. First of all, following the Government's request to scale down the project, lengthy negotiations were engaged between the Borrower and the Fund as discussed above. This took about one year before an agreement could be reached. Secondly, the recruitment of a Technical Officer, which was set as a condition precedent to first disbursement, took about another year. The delay resulted from difficulties in locating a suitable candidate and from procedural problems within the World Health Organization which was responsible for the recruitment.

3.1.2 The other condition set under the loan was the undertaking by the Government to recruit, within three years of loan signature, a health planner to strengthen the Planning Unit in the Ministry of Health. This condition has been complied with and there are today two professional health planners in the Ministry.

3.2 Procurement of Goods and Services

3.2.1 The procurement of goods and services related to the Immunization Programme was defined in the appraisal report as follows:

- contract for construction of the two laboratories to be awarded following international competitive bidding;
- vaccines to be procured with assistance from WHO;
- the Technical Officer to be recruited through WHO.

The method of procurement for other items such as vehicles, equipment and supplies was inadvertently not determined.

3.2.2 During implementation, the actual procurement methods followed by the Borrower are indicated below. They exclude award of contracts for the laboratories which were built by the Government with assistance from other donors.

a) Vaccines and immunization equipment were directly bought from UNICEF. However it should be noted that the bulk of vaccines came from other donors i.e. WHO and Save the Children Fund of UK on a grant basis.

b) The Technical Officer was assigned to the project by WHO following ADF and Government approval of his qualifications. When his services ended in December 1983, he was replaced by a national civil servant transferred from the establishment of the Ministry of Health. Vaccinators and drivers as well as other staff members were recruited locally by the project.

c) Vehicles were procured locally through the Ministry of Transport with ADF approval. This was justified by the fact that Landrover was the only type of vehicle highly recommended then for mobile team work.

d) Equipment for mobile teams which included inter alia camp beds, tents, cooking pots etc., were bought directly from local dealers following ADF approval.

As indicated above, the procurement of most goods and services was regularly undertaken according to ADF rules, except for the recruitment of the technical officer which engendered unnecessary delays.

3.3 Changes in Implementation

3.3.1 The first major change in the implementation of this project was the elimination of the project's other components i.e. construction and equipping of a maternity wing at Queen Elizabeth II Hospital in Maseru, and extension of the nursing school at the said hospital. This was requested by the Government and approved by the Fund. At the time of this request, the Government was contemplating the construction of a national referral hospital which would provide, inter alia, facilities envisaged under the project. The loan amount was subsequently reduced by FUA 1,642,642.

3.3.2 Another change affected the design of the project. According to the appraisal report, the project was expected to be implemented in two phases: a mass attack phase and a maintenance phase. The targets for each phase are given below:

Type of Vaccine	1st Phase Target/Age Group	2nd Phase Target/Age Group	Observations
1. BCG	70% of 0-14 years[a]	85% of new borns + 100 % of school entrants	The overall goal was to reach 85% of potential beneficiaries over the three-year period.
2. Smallpox	30% of total pop.[b]	85% of new borns	
3. DPT	70% of 0-4 years[c]	85% of new borns[e]	
4. Polio	85% of 0-14 years[d]	85% of new borns[f]	
5. Measles	85% of 0-4 years	85% of new borns	

When the project started in 1979, the Government with assistance from WHO produced a plan of operation which revised the implementation strategy and targets for each vaccine in light of new developments in the field and experiences accumulated by WHO in comparable programmes in other countries. The plan included a revised immunization schedule which is indicated in Annex 2. The objective of the EPI programme was then stated as to immunize every year:

- 50% of all children under the age of one year against diphtheria, whooping cough, tetanus and poliomyelitis;
- 80% of all children under the age of one year against tuberculosis;
- 80% of all children aged 9-23 months against measles;
- 45,000 children aged 5-9 years (new school entrants) against tuberculosis.

---

a) 30% assumed to be already covered
b) 70% assumed to be already covered
c-d) 3 doses per year
e-f) 4 doses per year to new born

The overall goal being to immunize all children against diphtheria, whooping cough, tetanus, poliomyelitis, tuberculosis and measles by 1985. The strategy adopted in order to achieve this goal was to provide intensive immunization services through a combination of mobile teams, fixed and limited outreach facilities in order to cover the entire country within three years. The mobile teams were expected to be phased out during 1983 and the staff integrated into the overall health care delivery system. This change in implementation strategy did not affect the project's ability to achieve its objectives. It should be noted that vaccination against smallpox was dropped from the programme because this disease was meanwhile declared eradicated by WH(

3.4 Implementation Schedule

3.4.1 The appraisal report does not provide a detailed schedule of implementation for the EPI component. Pertinent information given throughout the report can be summarized as follows:

- Board approval : February 1976
- Recruitement of Technical Officer : 1976
- Mass-attack phase : 1976-1977
- Maintenance phase : 1978

The actual implementation however started three years later. Details are given below:

- Board Approval : February 1976
- Loan signature : May 1976
- Loan effective : February 1978
- Technical Officer assumes duty : January 1979
- Field operations start : February 1980
- First International Evaluation : February 1982
- Second International Evaluation / : ~~May~~ 1984
- Cancellation of the loan : December 1984

3.4.2 As explained above, delays in implementation were basically due to two main factors: Government's decision to scale down the project, which was followed by lengthy negotiations before agreement was reached; and difficulties encountered by WHO in the recruitment of the Technical Officer and his mobilization. After assumption of duties, the Technical Officer took a full year to establish the programme and to train required staff before field operations could start. At the time of the PCR mission, the intensive phase of the programme was completed and the mobile teams were being phased out and integrated into permanent health care delivery channels. The programme's head office in Maseru will continue to play a coordinating and advisory role within the Ministry of Health.

3.4.3 In December 1984 the Fund cancelled the unspent balance of the loan despite the fact that the project was still under implementation. This decision was justified by the slow rate of disbursement of the loan, mainly caused by Government inability to use effectively the disbursement method viz: revolving fund, preferred by the Executing Agency. Replenishment of the revolving fund was suspended by the Fund, and it took Government about three years to use other disbursement methods.

3.5 Reporting

3.5.1 According to the appraisal report, the Borrower was required to submit to the ADF on a quarterly basis, progress reports on the Immunization programme. The purpose of these reports was twofolds: firstly, to keep ADF abreast of progress achieved while making it possible for the Fund to take remedial action as and when necessary; secondly, to provide data for future assessment of the status of the immunization coverage following the initial three-year period. The Borrower was also required to undertake periodic assessments to ascertain the progress of the programme.

3.5.2 All these requirements were fulfilled by the Government. The Fund received regularly on a quarterly basis progress reports prepared and submitted by the project since 1980. Moreover, achievements of the programme were evaluated four times; in 1981 and 1983 by a national team from the MOH, and in 1982 and 1984 by an international team consisting of experts from GOL, WHO, UNICEF and other bilateral aid agencies. Reports produced following these exercises were submitted to the Fund by Government for review.

3.5.3 Progress reports submitted quarterly to the Fund were precise and thorough. They indicated basically the quantity of work accomplished by the project expressed in terms of vaccinations administered. Technical evaluation reports, on the other hand, assessed quantitative as well as qualitative aspects of the project. They were well prepared and included recommendations to improve the operation of the project.

3.6 Costs

3.6.1 The total costs of the project were estimated at FUA 2.82 million broken down as indicated in table 3.1:

Table 3.1

Project costs at appraisal
(FUA '000)

	L.C.	F.E.	Total Costs
- Immunization Programme	121.53	822.05	943.58
- Maternity Block	168.91	283.34	452.25
- Administration Teach. Block	143.60	198.76	342.36
- Nurses Accommodation	152.78	207.58	360.36
Total Base Cost	586.82	1,511.73	2,098.55
- Professional fees (design)	-	122.61	122.61
- Price escalation (12%)	70.42	196.12	266.54
- Physical contingencies (15%)	88.02	245.15	333.17
Total Cost	745.26	2,075.61	2,820.87

3.6.2 Following Government's decision to scale down the project, the revised total costs of the project could be estimated at FUA 1,198,350 as indicated in Table 3.2.

Table 3.2

Revised Project Costs at Appraisal
(FUA '000)

	L.C.	F.E.	Total Costs
Immunization Programme			
- personnel	80.93	97.45	178.38
- vehicles	40.60	135.34	175.94
- vaccines & immunization eq.	-	578.72	578.72
- equipment for mobile teams	-	10.54	10.54
Base cost	121.53	822.05	943.58
Price escalation (12%)	14.58	98.65	113.23
Physical contingencies (15%)	18.23	123.31	141.54
Total cost	154.34	1,044.01	1,198.35

3.6.3 The comparison between estimated and actual costs is given below:

Table 3.3

Estimated and Actual Costs
(FUA '000)

	Appraisal Estimated Cost	Actual Costs ADF Disb.	GOL	Other Donors	Total
Personnel	178.38	298.38			
Vehicles	175.94	65.32			
Vaccines & Immunization eq.	578.72	28.25			
Equipment for Mobile Teams	10.54	-			
Miscellaneous	-	-			
Price Escalation	113.23	-			
Physical Contingencies	141.54 /	-			
Total Cost	1,198.35	392.30	200.00	1,052.75	1,645.08

It appears from Table 3.3 that, apart from ADF disbursements that can be itemized by category of expenditure, other expenses incurred by other sources of finance could not be determined in the absence of dependable records. The Ministry of Health did not keep a separate accounting system for the project. It was not possible to single out project's expenses during our short stay in Maseru. The mission learned that expenses covered by GOL included salary for the programme manager and three other persons, fuel (estimated at US$ 65,000 for the period February 1980 - February 1982 alone), printing and reproduction of materials, electricity, telephone, etc. The total of these expenses can roughly be estimated at about FUA 200,000.

3.6.4 Other donors, (WHO, UNICEF, SCF) covered a large portion of the project's costs. There again it was not possible to determine the exact contribution of each donor. The World Health Organization provided supplies, equipment and the services of a technical officer during the period 1980-1985 to the tune of about US$ 232,200. The cost of vaccines supplied to the project by WHO as part of another project (essential drugs and vaccines) is not included in the amount given above. Another major donor was UNICEF. During the early stages of the project (1977-1981) this Organization provided vaccines, equipment and supplies valued at US$ 80,000. After 1981, the project received each year vaccines worth about US$ 20,000. This contribution will continue for some more years. The last major donor was Save the Children Fund of UK (SCF). Its total contribution can be estimated at UK£ 500,000. This includes staff salaries, vaccines, equipment, vehicles, training expenses and short-term services of technicians. SCF contribution was expected to end in March 1985.

3.7 Expenditure Schedule

3.7.1 The schedule given in Table 3.4 indicates ADF disbursements only. It was not possible to include expenditures made by the Government for reasons explained above:

Table 3.4

Expenditure Schedule
(FUA '000)

	Appraisal Schedule		Actual Schedule	
Year	ADF	GOL	ADF	GOL
1976	500	100	-	
1977	900	120	-	
1978	700	100	44.25	
1979	400	-	172.39	
1980	-	-	-	
1981	-	-	-	
1982	-	-	-	
1983	-	-	175.66	
Total	2,500	320	392.30	200.00

3.7.2 The appraisal expenditure schedule indicated in table 3.4 comprises the three original components of the project. When the reduction of the scope of the project was agreed upon between GOL and ADF, the expenditure schedule was inadvertently not revised accordingly. Furthermore, it can be noted from the same schedule that three years elapsed between the last two ADF disbursements. This is due to the fact that GOL could not justify the utilization of funds from the penultimate disbursement in order to have the revolving fund replenished. Finally, yearly distribution of GOL contribution to the project could not be determined because of MOH accounting office did not keep separate books for the project.

3.8 Project supervision

3.8.1 During its lifetime, the project was supervised by eight missions from the Fund. They include missions from departments of Programme (5), Projects (2) and Finance (1) (see Table 3.5):

Table 3.5

Supervision missions

Date	Type	Staff Member
Sept./Oct. 1976	General Supervision	Follow-up officer
Oct. 1977	" "	Loan officer
Jan. 1979	" "	Loan officer
Oct. 1979	Technical Superv.	Project officer
May 1980	General Supervision	Loan officer
Aug./Sept. 1982	" "	Loan officer
May/June 1983	Financial Superv.	Finance officer
Feb. 1984	Technical Superv.	Project officer
Jan. 1985	PCR	" "

Since missions undertaken by officers other than project officers dealt with all Bank Group projects including the health project, it can be argued that appropriate supervision of the project during its entire nine-year life was undertaken only twice in 1979 and in 1984. This is inadequate when we consider all problems faced by the project during its implementation. Moreover, it is surprising to note that only one financial supervision mission was undertaken despite disbursement problems discussed above.

4. CONCLUSIONS

4.1 Achievements

4.1.1 The EPI programme in Lesotho is considered among the most successful programmes of the WHO Afro region. Its first achievement is the extension of the immunization coverage as indicated in Annex 3 and summarized below:

Vaccine	Immunization coverage: Before the project (1976)	Immunization coverage: After the Project (1984)
Smallpox	31%	-
BCG	40%	98%
DPT (3 doses)	31%	69%
Polio (3 doses)	4%	64%
Measles	nil	63%

In 1983, 46 percent of all children were fully immunized against the six EPI diseases. Although the 1984 report was not yet published at the time of the PCR mission, it was believed that about 310,000 children or more than 55 per cent of the population aged 0-14 years were fully immunized at the end of 1984. This outcome will definitely contribute to the reduction, in the near future of morbidity due to the said diseases.

4.1.2 Another achievement of the project is the integration of EPI activities into the main stream of health care delivery system. About 91% of the target population was reached through fixed health facilities and outreach services operated from these facilities. This means that provided that vaccines and related pharmaceuticals are regularly supplied to clinics and hospitals in the country, immunization services will be permanently available to the population throughout the country. The EPI Unit which was established by the project within the MOH (see Annex 4 for organization chart and staffing) will be maintained to provide technical support and to advise the Government on immunization matters. The integration of EPI into the health care delivery system was achieved through inter alia staff training and reassignment, establishment of a reliable cold chain system and organization of immunization activities around existing health facilities and programmes.

4.1.3 The project should also be credited for strengthening the disease surveillance system. Reporting on the incidence of the EPI diseases has become now a daily routine for all health units which periodically submit statistical returns to the Ministry of Health. The Health Information Unit, recently created in the Ministry collects and analyzes these data to produce a national report on morbidity and mortality. Such information is a prerequisite to effective planning.

4.1.4 Still another achievement of the project is the sensitization of the population toward EPI activities. An important information campaign was carried out in most villages to explain the consequences of the EPI disease as well as the advantages of immunizations. This resulted in a massive participation of the target population in the programme. Moreover, the campaign has enhanced the public's propensity to receive health information. Other health programmes would build upon this sensitization to convey future health messages to the population.

4.1.5 A final major achievement of the project is the training of health manpower. Two MOH staff participated in an EPI Planning & Management training course sponsored by WHO. Twelve other staff members took an EPI mid-level management course organized abroad. Orientation and refresher courses in EPI technics were organized throughout the country. About 500 staff members participated in these courses. Moreover, training in immunization has now been included in the curricula of most schools and training programmes for health cadres. Finally, cold chain technicians, whose presence is vital for the survival of the programme, were trained and assigned to some district hospitals with responsibilities to maintain cold chain units in their respective regions.

4.2 Lessons for the Future

4.2.1 For future operations in Lesotho, especially with the Ministry of Health, special attention should be attached to the daily management of projects. The slow disbursement rate experienced by the project under consideration resulted from inefficient management of the project. If project expenses were accounted for separately from MOH expenses, the loan could have been fully disbursed. This experience prompted us to require an independent project implementation unit with appropriate accounting system for the recent Rural Health Services Project.

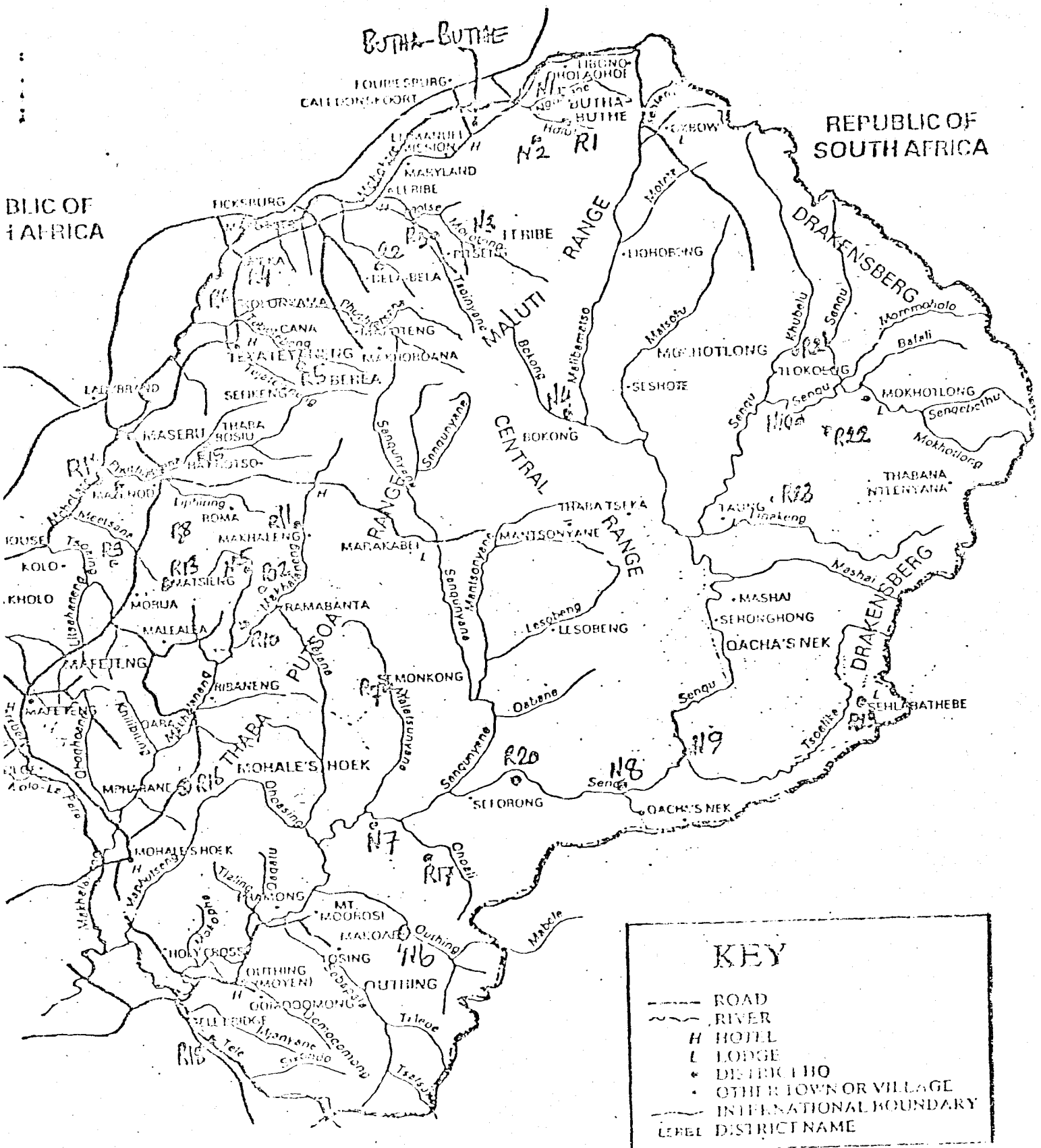
4.2.2 Regular technical supervision of projects is essential in Lesotho since the management capabilities of the Government are quite limited. Project officers should be allowed to supervise projects under their responsibility at least twice yearly until smooth implementation is achieved.

4.2.3 EPI projects are generally cost-effective programmes. Despite the fact that the PCR mission could not determine in this report the total cost of the project, it should be noted that the cost per fully immunized child was estimated in 1981 at US$ 5.63. Preventing six diseases at that price is one of the most economical public health measures that the Bank Group should encourage.

KINGDOM OF LESOTHO

HEALTH SERVICES DEVELOPMENT PROJECT

MAP OF THE COUNTRY


BUTHA-BUTHE
REPUBLIC OF SOUTH AFRICA
BLIC OF
AFRICA
DRAKENSBERG
MALUTI
RANGE
CENTRAL
RANGE
PUTSOA
THABA
TSEKA
MOHALE'S HOEK
QACHA'S NEK
MASERU
LERIBE
BEREA
TEYATEYANENG
MOKHOTLONG
THABANA NTLENYANA
SEHLABATHEBE
SEMONKONG
LESOBENG
MANTSONYANE
MARAKABEI
MAKHALENG
RIBANENG
MAFETENG
MOBUA
MALEALEA
MATSIENG
ROMA
MAPHUTSENG
HLOTSE
KOLO
KHOLO
MASHAI
SEHONGHONG
THABA TSEKA
TAUNG
MOKHOTLONG
TLOKOENG
SEBAPALA
SEFORONG
MOLUMONG
MT. MOOROSI
MAKOANENG
HOLY CROSS
OUTHING
LOSING
TELLE BRIDGE
MAJANENG
QOALOOMONG
MAPHUTSENG
MAMOHAU
MAPHUTSENG
TEBANG
MAMOHAU
MAPHUTSENG
TEBANG
MAMOHAU
MAPHUTSENG
TEBAN

KINGDOM OF LESOTHO

HEALTH SERVICES DEVELOPMENT PROJECT

Immunization Schedule for Infants

Vaccine	BCG	DPT	OPV	Measles
Earliest age	at birth	3 months	3 months	9 months
Number of doses	1	3	3	1
Interval between doses	-	1 month	1 month	-

N.B.

Target age group is still 2 years. Children above 2 years who have not been immunized are also vaccinated.

Coverage strategy : Coverage begins at the periphery i.e. at villages, outstations, health centres, district hospitals and at referral hospitals.

ANNEX 3

KINGDOM OF LESOTHO

HEALTH SERVICES DEVELOPMENT PROJECT

Immunizations performed (1979-1982)

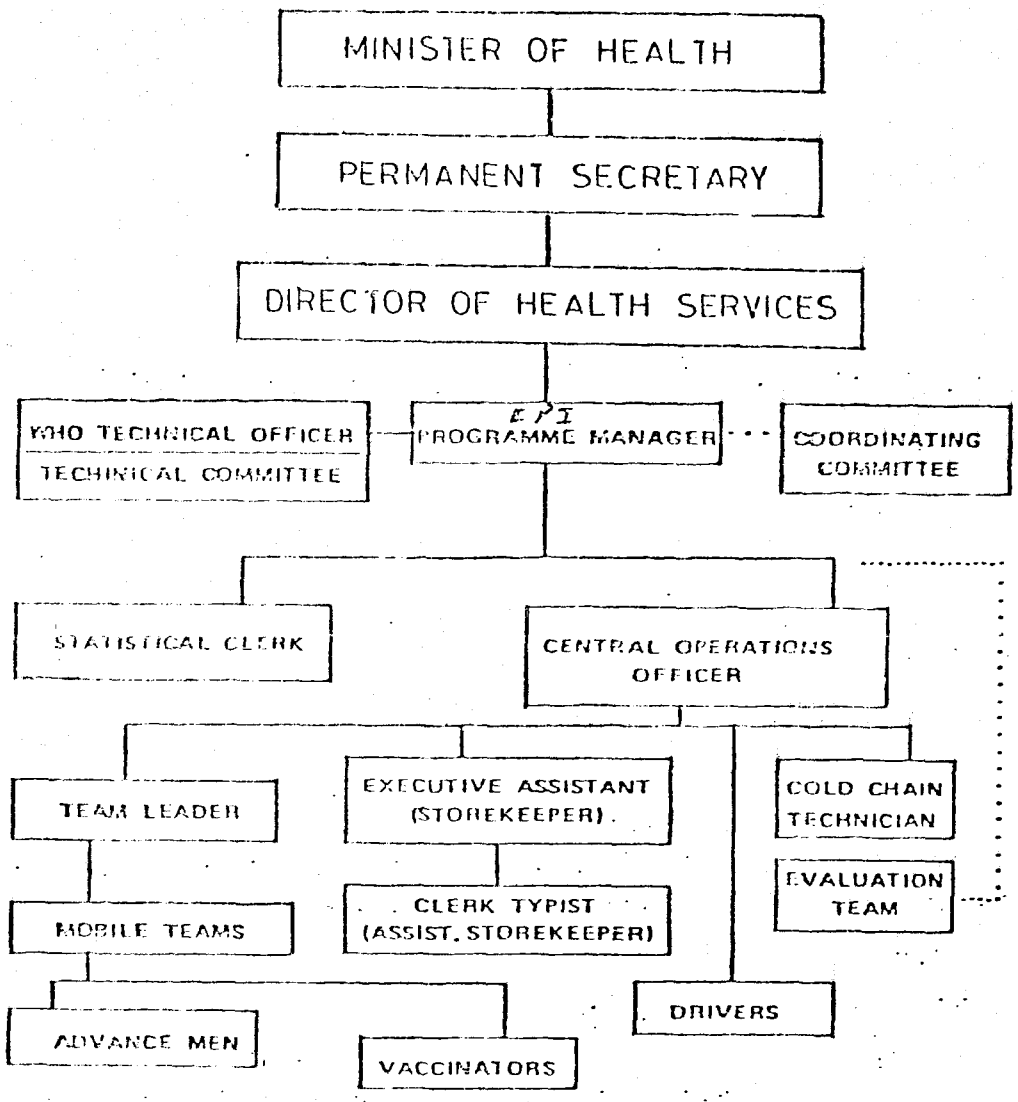
Year	BCG	DPT 1	DPT 3	OPV 1	OPV 3	Measles	Number New borns
1979	40199	45837	34740	30922	14661	12467	44700
1980	32634	34409	24450	35085	23660	19351	45600
1981	101325	41551	30846	61290	43031	48863	46500
1982	60757	52847	51447	58180	52707	72385	49728
TREND:	Significant Increase	Moderate Increase	Significant Increase	Significant Increase	Significant Increase	Significant Increase	

Source: MOH - Report of a joint evaluation of primary health care, May 1984

KINGDOM OF LESOTHO

HEALTH SERVICES DEVELOPMENT PROJECT

ORGANIZATION CHART OF THE EPI UNIT



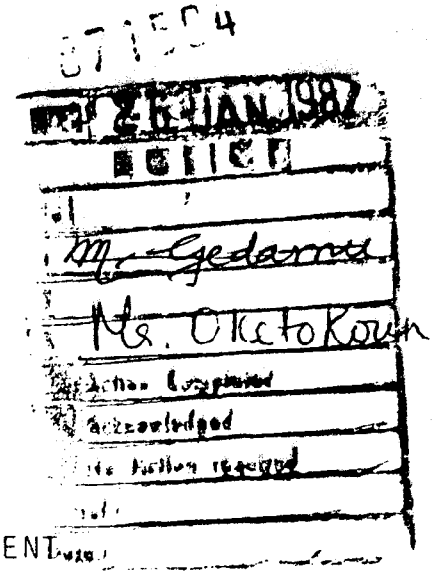
KINGDOM OF LESOTHO

HEALTH SERVICES DEVELOPMENT PROJECT

Project's staff

Designation	No.	Major Responsibility
Programme Manager	1	Management
Central Operations Officer	1	Supervision
MCH/FP/EPI Supervisor	1	Supervision
Assistant Executive Officer	1	Stores and Salaries
Statistical Clerk	1	Collection and Compilation of data
Secretary/Typist	1	Secretarial work
Cold Chain Technicians	3	Repairs & Maintenance of refrigerators
Assistant Cold Chain Technician	1	Driver/Operator
Drivers	8	Driving
Team Leaders	6	Supervising Vaccinators
Vaccinators	10	Vaccinate

COMMENTS FROM THE BORROWER



[illegible]
23263 AFDEV CI
JAN 26 1997 0745

4357 HEALTH LO

FROM: MINISTRY OF HEALTH

TO : 23263 AFDEV CI

ATT: SS OMARI

PLANNING AND RESEARCH DEPARTMENT

RE: POST EVALUATION OFSQP HEALTH PROJECT

REPORT OK. SATISFIED WITH FINDINGS AND CONCLUSIONS. NO COMMENTS.

FAILURE TO RESPOND EARLIER HIGHLY REGRETTED.

BEST REGARDS

P. TS'OENE
FOR PRINCIPAL SECRETARY
23RD JANUARY, 1987.

[illegible]
23263 AFDEV CI
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