

1989/90

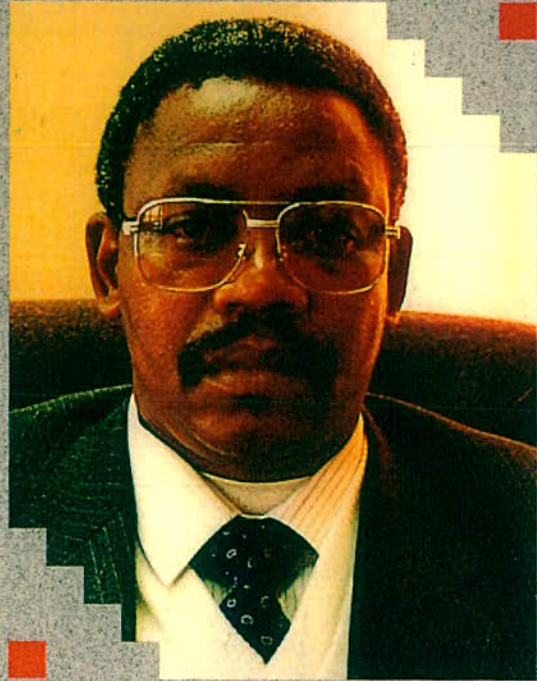
LESOTHO
HIGHLANDS
DEVELOPMENT
AUTHORITY

ANNUAL REPORT

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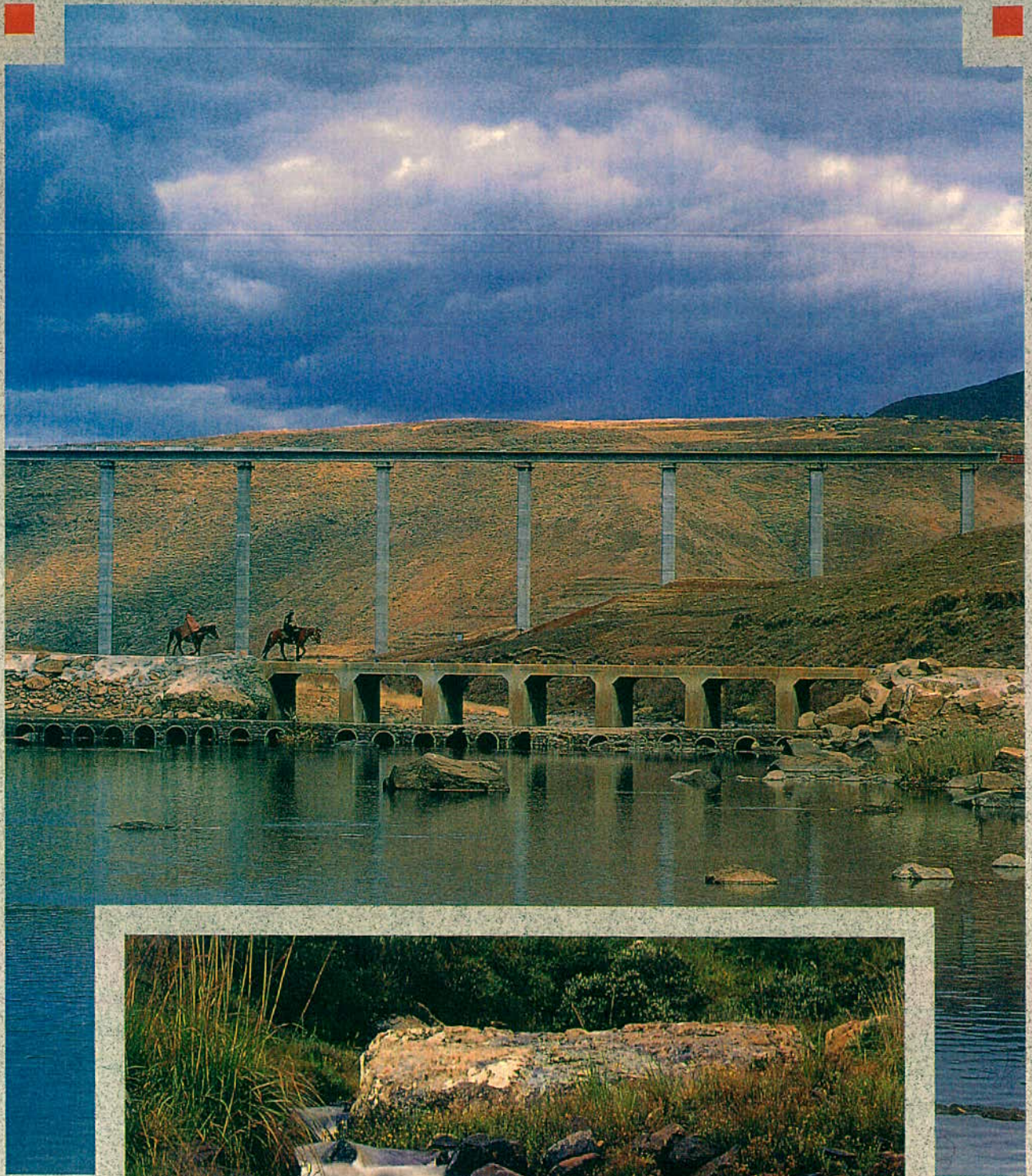
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*The Minister of Lesotho Highlands
Water and Energy Affairs,
The Honourable Major Reentseng Habi.*



*Mr T N Thokoa, Chairman,
Lesotho Highlands Development Authority.*



CHIEF EXECUTIVE'S STATEMENT

It gives me great pleasure to report on the progress which the Lesotho Highlands Development Authority has made with the implementation of the project in the year to 31 March 1990.

The design and preparation of tender documents for all major contracts and all geotechnical investigations have been completed. In the critical area of the environmental and social impacts of the project, a detailed Environmental Action Plan was prepared. Independent international experts in both the technical and environmental fields reviewed our output in these areas, and pronounced themselves satisfied.

The advanced roads, bridges, camps, power and telecommunications systems continued to make good progress, and all key facilities are expected to be available in time for the commencement of the dam and tunnel contracts.

Tender documents for the Katse Dam and transfer and delivery tunnels in Lesotho were issued on 16 October 1989, and tenders were scheduled for receipt by 20 April 1990.

In spite of the rapidly changing political situation internationally and in southern Africa, we are pleased to note that the project is continuing to attract serious interest from leading contractors and financiers.

The Engineering Project of Phase 1A, which commenced following the signing of the Treaty in 1986, has now drawn to a close. As we stand poised to start with the major construction activities, I believe we can be proud of



Mr M E Sole, Chief Executive, LHDA.

Lesotho Highlands Development Authority

our achievements in bringing the project to its present stage.

For this, I must express my gratitude to the staff and consultants of the LHDA, whose dedication and professionalism have made this possible to the LHDA Board and the Joint Permanent Technical Commission for their continuing support and contribution to the excellent working relationships which exist on the project.

A special word of thanks is also due to those of Lesotho's co-operating partners who have given assistance to the LHDA in implementing the project - in particular the World Bank and the European Community.

Finally, I would like to thank the Government of Lesotho for its on-going support at all levels of the project. We look forward to the continuation of this support in our efforts towards meeting the shared objective of furthering the development of Lesotho.

In the last annual report, I mentioned that the Lesotho Highlands Water Project "presents a great challenge with enormous benefits for Lesotho and its people." I am pleased to be able to report that in the intervening year we have moved to meet that challenge and we have also begun to see the realisation of some of the benefits.

Good progress has been made on the various engineering, geotechnical, environmental, financial and related

studies in this planning phase of the project. In addition, the construction of the advanced infrastructure commenced, leading to improved access for the people in the highlands region as well as the employment of hundreds of Basotho.

The LHDA recruited many staff during the year in order to prepare itself for the challenges ahead. We also commissioned a project management and organisation study and commenced the development of training programmes. We are confident that our commitment to the recruitment of high quality staff and to a strong training programme will result in a strong organisation capable of dealing efficiently with the task of implementing the project.

The LHDA celebrated its third birthday during the year under review. Although still young in years, it is my belief that the organisation is steadily maturing and laying the basis for a successful future. I would like to express my thanks to the Board, staff and consultants of the LHDA for their efforts in the past year, to the Joint Permanent Technical Commission, to the donor community which is providing assistance to Lesotho and the LHDA on the project, and in particular to the Government of Lesotho for its on-going support in this most important opportunity for Lesotho's development.

BOARD MEMBERS



Mr T N Thokoa, Chairman



Mr M E Sole, Chief Executive, LHDA



Mr J M Nthongoa



Mr B A Sekhonyana



Mr L T Tuoane



Mr T M Tsietsi



Mr M Mathibeli



Mr P K Moonyane



Mr T L Makhakhe



Mr S K Phafane

UPGRADING HUMAN RESOURCES

The Training Division was established towards the middle of 1988, and it was not until September of the same year that it received its full staff complement. For this reason 1989/90 was the year in which the Division was investigating the different aspects of training and started implementing its strategies.

Training was handled on three fronts, namely, to enhance the performance of existing LHDA staff and to satisfy future requirements; the training of labour for major construction works; and the rural development training, which focuses on the people in the Project Area as another way of compensation.

Substantial progress was made in arranging courses, sending candidates abroad for studies, and establishing the Construction Skills Training Project (CSTP).

LHDA staff development

A number of courses were arranged for LHDA staff. Computers are used extensively in LHDA, and with the installation of the Wang Mini Computer, the need for training personnel in the use of computer software increased substantially. Most of the training was therefore in the use of computers.

The summary of the courses conducted is as follows:

Category	No. of Participants
1. Managerial	17
2. Administrative	49
3. Computers	86
4. Technical	47
	<u>199</u>

In addition to the use of computer software, the two other areas of great concern have been in management development and the training of personal secretaries, and as a result in-house courses were conducted using outside resource persons in order to minimise the expenses.

Other courses have included seminars, workshops, conferences/conventions in Lesotho, RSA, and abroad.

Three engineers received construction attachment training in Kenya on a project similar to LHWP, while two others enrolled for part-time post-graduate studies in RSA.

Student sponsorships

This is a scheme aimed mainly at fulfilling the future engineering staff requirements of the Project. Candidates who qualify to be admitted to foreign universities are assessed for sponsorship. The initial intention was that at least fifteen (15) applications should be processed each year.

Sponsorship of this training is currently wholly dependent on international funding agencies, and the summary of the training is as follows:-

Commenced	ODA		EEC		Total
	Civil	Electr	Civil	Electr	
1987	2	2	0	0	4
1988	0	0	0	0	0
1989	2	2	1	3	8
Total	4	4	1	3	12

The total number of students in training is 11. One of them, studying electrical engineering, withdrew for health reasons.

Twelve students were assessed under EEC and three under ODA for the 1990/1991 academic year. The intention of the National Manpower Development Secretariat (NMDSA) was to place as many as possible of the EEC candidates in the SADCC countries.

Construction skills training

A steering committee was formed involving relevant government ministries and parastatals, and it produced a project document which was used to secure funding from DBSA.

The committee was then dissolved to make way for a smaller management committee with the mandate to advise LHDA on the implementation of this project.

Towards the end of the report period preparations were made for a consultancy to be commissioned to finalise the needs analysis, and to undertake investigations and the planning of the establishment of training centres.

Though delayed, training is still expected to start in time for the major construction. The overall LHWP Phase 1A programme was also delayed.

Rural development training

This training is part of both the Rural Development and Compensation Plans of the Environmental Division. A consultancy was commissioned in 1988 to make the initial investigations and recommendations.

During the report period the Environmental Division worked hard to get the above plans approved so that they could be implemented.

It is expected that once the plans are ready, the two Divisions will have to decide on how to implement the training programme.

PROJECT FINANCE

The engineering stage of Phase 1 of the Project is virtually complete and arrangements for construction are under way. In this respect the Capital Finance Division has been actively engaged in raising finance for various components and other related activities of the Project.

Water transfer component

Tender documents

- Tender documents, including ones for financial proposals, were approved by LHDA Management and issued on 16 October 1989. One of the key requirements in this regard was for the tenderers to put forward foreign finance to accompany their proposals. The type of finance accompanying the bids was, therefore, going to be a key consideration in the evaluation.
- Another important feature in the tender documents was the Security Documentation which outlined the following points:
 - The establishment of a Trust Account to provide a security mechanism for non-CMA (Common Monetary Area) lenders.

– The Deed of Undertaking entered into by RSA with the Trustee in which RSA will undertake to pay to the order of the Trustee, debt service payments in respect of all non-CMA loans.

- A programme of visits by the Lesotho delegation consisting of Government and LHDA officials was embarked upon with the aim of maintaining contact with the international financing agencies.

Tendering process

- A meeting was held in November 1989 for all prospective tenderers, who brought along their financial advisers, wherein the financing structure and strategy of the Project were explained. The tenderers were given the opportunity to ask questions on matters that presented difficulties to them.
- During the course of the tendering process contact was maintained with financing agencies, which included the export credit agencies and commercial banks, to answer and deal with queries that cropped up.
- Tenders were received and successfully opened on 20 April 1990.

World Bank (IBRD) Loan

- The World Bank pre-appraisal mission of February/March 1990 was successfully conducted.
- The World Bank published an amount of US\$110 million as the likely loan to be made available to the Project. This loan will be utilized in meeting expenditures incurred on Technical Assistance Contract for management of LHDA, engineering supervision and environmental matters.

- The World Bank has agreed in principle to participate in the off-shore trust mechanism.

Common Monetary Area (CMA) Finance

A three-phased strategy of raising finance in the CMA was adopted as detailed below.

Phase 1

Negotiations progressed well with a consortium of banks comprising Volks-kas Group and Rand Merchant Bank for a loan facility of M135-million. The relevant government bodies and officials have been approached to authorise LHDA to enter into this loan agreement. Proceeds of the loan will be used to finance administrative and related costs.

Phase 2

Common Monetary Area (CMA) banks were invited to submit proposals for an amount of M750-million required under this phase. The facility will be used to meet initial construction and compensation costs.

Phase 3

An estimated amount of M5 000-million is planned to be raised later in 1990 under this phase.

Hydropower component

- Following the Donor Conference of March 1989, the European Economic Community (EEC) which has pledged a substantial amount to the Project, and was appointed as coordinating donor in the process of mobilising funds.
- The 'Muela Hydropower Project was approved by the Energy Council of Ministers as a SADCC project, which position further facilitates its being considered



favourably by the donor community.

- A Financing Plan was prepared from the engineer's cost estimates.
- The process of appointing financial consultants was set in motion under the auspices of the EEC.
- Contact with the Arab Funding Agencies was also initiated during this period, with the view to solicit their interest and participation in the funding of the Project.
- Contact has been maintained actively with donor agencies who have already indicated interest in supporting the Project. These are:
 - European Economic Community (EEC)
 - European Investment Bank (EIB)
 - African Development Bank (ADB)

Advance infrastructure

Development Bank of Southern Africa (DBSA) Programme

- The total value of the loans signed by DBSA during this period stands at M206 269 000.
- The loans under negotiation with DBSA are valued at M327 329 660.

French Protocol IV

The Government of France made available to the LHDA through Protocol IV, signed by the Government of Lesotho in December 1989, an amount equivalent to FF 90-million to finance the construction of 132 kV line from Mabote to Maputsoe and associated costs. The amount was offered in a mix of soft loan and grant. This figure brings the total funding from the French Government to M58 411 000.

Sources of Finance secured as at 31 March 1990.

<i>Government of Lesotho</i>	<i>M</i>
Government of Lesotho contribution	5 760 000
European Development Fund	24 339 000
World Bank (IDA)	27 511 000
European Investment Bank	9 509 000
United Nations Development Programme	2 063 000
Government of France	62 120 000
UK Overseas Development Administration	2 947 000
German Centre for International Migration	1 412 000
United States Agency for International Development	159 000
<i>Sub total</i>	<i>135 820 000</i>
Government of South Africa	46 714 000
Development Bank of Southern Africa	206 269 000
Commercial Facilities	15 500 000
GRAND TOTAL	404 303 000

STUDIES AND ENGINEERING DESIGNS

The year has seen significant steps forward in implementation of the Lesotho Highlands Water Project (LHWP) and development of the Division. A significant accomplishment was the completion of tender documents for construction contracts for Water Transfer and Hydropower. Tenders have been called for Katse Dam, the Transfer Tunnel and Delivery Tunnel; with receipt of tenders set for 20 April 1990. Other contracts for engineering studies, design and construction have also been very active during the year.

Hydropower design contract

(Consultant - Gibb Sogreah Joint Venture - UK, France)

The hydropower project comprises an underground power house of 72 megawatt capacity. The viability of the project was confirmed by the economic and financial appraisal memoranda issued towards the end of 1989.

The Hydropower Design Contract comprises two stages.

Stage 1: Review of the overall optimisation of the water project and selection of the configuration of the hydropower plant. This stage was essentially completed at the beginning of 1988 and defined the principal features of the LHWP.

Stage 2: The detailed design of the hydropower project and preparation of tender documents started at the beginning of 1988 and was completed by the middle of 1989.

In June 1989, the Ministry of Highlands Water and Energy Affairs and LHDA participated in a SADCC Seminar where the 'Muela Hydropower Project was officially submitted and accepted as a SADCC Project.

For construction of the 'Muela Hydropower Project the work has been divided into ten (10) separate contract packages:

LHDA 129: Power Station Civil Works

LHDA 129A: Steel Lining and Gates

LHDA 130: 'Muela Dam

LHDA 131: Surface Operation Building

LHDA 132: Hydropower Operators' Village

LHDA 133: Mabote Despatch Centre

LHDA 134: Turbines, Generators and Ancillary Plant

LHDA 135: Transformers and 132 kV switchgear

LHDA 136: 132 kV Transmission Lines and Substation Bays

LHDA 137: Power Station By-pass

The construction of the 'Muela Hydropower Station is expected to start early in 1993 with calling of tender documents in early 1992.

Water transfer design contract

(Consultant - Lesotho Highlands Consultants - France, U.K., RSA)

The Contract was commenced in September 1987 by a consortium of French, British and South African consultants and was scheduled to last for 33 months. At the end of the reporting period the contract was essentially complete.

The work during the fiscal year covered the detailed design and



Katse Dam Site

preparation of tender documents for Katse Dam and the Transfer Tunnel which makes up the southern section of the Phase 1A features of the LHWP. Other major tasks included various geotechnical investigation at the site, hydraulic model testing of Katse Dam, and implementation of concrete testing programmes under the supervision of the Consultant.

Delivery tunnel in Lesotho

(Consultant - Highlands Delivery Tunnel Consultants - RSA)

This work was undertaken by Trans Caledon Tunnel Authority (TCTA) on behalf of the LHDA. The design was done by Highlands Delivery Tunnel Consultants (HDTC) as part of its overall Delivery Tunnel Design Contract with TCTA including the sections of the delivery tunnel in the RSA. The design work was carried out in conjunction with the water transfer and hydropower designs. Tender documents for construction of the Lesotho section of the tunnel, following approval by LHDA, were issued for competitive tender by LHDA in October 1989.

Construction of Katse Dam, the transfer tunnel and the delivery tunnel in Lesotho

The major construction works have been divided into four contract elements, namely;

1. Katse Dam

Comprising 180 m high concrete arch dam and associated works such as flood diversion tunnels.

2. Transfer Tunnel South

Comprising the southern portion of the 4,85 m diameter water transfer tunnel starting from the intake tunnel works on the Malibamats' o River near Mamohau, and running northward for some 19,5 kilometres.

3. Transfer Tunnel North

Comprising the 25 kilometres of the water transfer tunnel terminating at the proposed hydropower station at 'Muela.

4. Delivery Tunnel in Lesotho

Comprising 15,1 kilometres of 5,1 m diameter tunnel running from the intake in 'Muela tailpond reservoir to the Caledon River crossing works in the north.

Construction is planned to commence in late 1990, and be carried out over a period of six (6) years.

The tender documents were issued on 13 October 1989, by which time thirty-seven (37) consortia had been registered, comprising joint ventures of 88 international and 14 Republic of South African contractors.

A mandatory conference to explain the documents to the bidders and allow them to visit the proposed sites

Geotechnical investigations at Lets'eng Mine for tunnel design

(Contractor - ROGEL - RSA)

In order to study the long term effects of water on unlined tunnels in basalt, an exploratory adit was dewatered at the disused Lets'eng mine in November 1989, and certain core drilling was conducted underground in November and December 1989.

For design purposes, samples of basalt rock were taken and subjected to extensive testing to determine its durability and the possibility of leaving the tunnel unlined.

of the contract works was held from 22 to 26 November 1989. Twenty three consortia representing 76 companies, 62 of which were international and 14 RSA, attended the conference.

Tenders for these four contracts are due for return on 20 April 1990.

Consulting services for supervision of construction and preparation of construction drawings for Katse Dam, the transfer tunnel and the delivery tunnel in Lesotho.

These contracts will cover the required supervision of the construction of Katse Dam, the Transfer Tunnel and Delivery Tunnel South. The consulting services will be carried out under two contracts; one for the Katse Dam and Transfer Tunnel and one for the Delivery Tunnel South.

The terms of reference for these contracts were prepared by LHDA during the fiscal year. The Request for Proposal for Katse Dam and the Transfer Tunnel was issued to the design consultants, Lesotho Highlands Consultants (LHC) in December 1989. For the Delivery Tunnel South, the Request for Proposal was issued to HDTC and six international companies from USA, Canada and Europe in late November 1989. The bids were returned and are under evaluation at the end of the fiscal year.

Consultants will be appointed for these contracts later this year.

Lesotho Electricity Corporation Investment and Tariff Study

(Consultant - Oskar von Miller - Germany)

At the end of the fiscal year the final report and recommendations had been submitted and approved by both the LHDA and European Economic Commission (EEC), the sponsoring agency. The Study had received wide publicity among agencies who had expressed an interest in assisting with the development of the Lesotho Electricity Corporation (LEC). This final report, therefore, will serve as a reference study, assuring those agencies that the programmes of investment at the LEC were consistent with Government objectives and that they had been planned in concert with all other activities in Lesotho.

Economic Impact Study

(Consultant - Coopers and Lybrand Deloitte, U.K.)

The Study was first presented in April 1989. During the current year the Consultant carried out a supple-

mentary study. The objective of this supplement was to have this Study showing a clear Action Plan, with recommendations on how to maximise economic benefits from the LHWP.

Use of revenues from royalties study

(Consultant - Coopers and Lybrand Deloitte, U.K.)

The terms of reference for this Study were prepared for the Ministry of Planning in this fiscal year. The Study will be undertaken by the Consultants for the Ministry from June, 1990, for a period of 12 months. The purpose of the Study is to provide a recommended policy for implementing a programme for utilisation of the income from the Project so that the Government of Lesotho can meet its intended objective.

Design and supervision of 132kV transmission system and Maseru ring completion

(Consultant - Sogreah - France)

The LHDA, in association with the Lesotho Electricity Corporation (LEC), is responsible for the construction of the 132 kV Transmission System from the border near Maseru to Maputsoe. The primary purpose is to provide power for the construction of the dam and transfer tunnel. In addition, it will permit LEC to serve new customers in the Maputsoe and Leribe areas, and upon completion of the 'Muela Hydropower project, it will become part of the transmission system from 'Muela to Maseru.

Design work is now complete and the supervision of installation is in progress.

Construction contracts for LHWP construction power

There are two separate contract arrangements for supply of construction power. One contract is providing power from the Maseru area to Maputsoe through a 132 kV transmission system under LHDA Contract No.117. The second contract arrangement is to provide power to all of the construction and camp sites via a network of 132kV, 66kV 33kV and 11kV transmission systems under LHDA Contract No.118.

Contract 117: 132 kV Transmission System from Maseru to Maputsoe and Maseru Ring Completion

(Contractor - CEGELEC - France)

Design and Tender Documents for this Contract were completed in June 1989. Subsequently tenders were called and the Contract was awarded in December 1989 to CEGELEC.

The Contractor started mobilisation in January 1990 and was carrying out civil works at Mabote and Maputsoe at the end of this fiscal year.

Contract 118/1/2/3/4/5: Construction Power (132kV, 66kV, 33kV, 11kV)

During the year the design work and preparation of tender documents were completed. The contract for civil works for all sites was awarded and construction is under way. Tenders for four contract packages for the transmission lines and sub-station equipment have been received and are being evaluated. These contracts are due for award in the second quarter of 1990.

*LHWP communication system -
Design and Supervision
subscriber radio
communication system*

*(Consultant - British Teleconsult,
U.K.)*

*LHDA, in cooperation with Lesotho
Telecommunication Corporation
(LTC), is arranging for construction of
the communication system for LHWP.
The system will connect all work sites
and camps of the LHWP with the LTC
national network.*

*British Teleconsult was awarded the
consultancy contract for design and
supervision of construction in January
1990. The Consultant in conjunction
with the Technical Division has
carried out several studies, completed
the design and prepared tender
documents for construction. Tenders
will be called in the second quarter of
1990 for construction of the
communication system.*

Technical evaluation team

*The main construction contracts for
Katse Dam, Transfer Tunnel South,
Transfer Tunnel North and Delivery
Tunnel South are due to be submitted
by international contractors on 20
April 1990. To ensure a high level of
competence and an unbiased
evaluation of the tenders an
independent technical evaluation
team of seven international experts
has been engaged to carry out the
evaluation. These experts come from
Canada, France, Germany, RSA,
United Kingdom and United States.
This team will be convening its
meetings in Maseru starting in mid
April.*



Part of the Katse Village showing progress achieved.

ADVANCE INFRASTRUCTURE

*During the 1989/90 Financial Year
significant progress has been made
with the design, construction and
supervision of the Advance
Infrastructure Contracts which are
necessary to be completed prior to the
commencement of operations of the
main contractors for the Lesotho
Highlands Water Project.*

*By the end of March 1990, all the
Design Contracts had been awarded
with a total value of over M15-million.*

*Of the Construction Contracts, 14
had been awarded to a total construc-
tion value of nearly M300-million and
a further 12 contracts were in the
various stages of tendering and award.
Of those which have still to be
awarded, seven are Furniture
Contracts and five are Construction
Contracts, the value of contracts still
to be awarded is approximately M36-
million. It can be seen, therefore, that
nearly 90% by value of the
Construction Contracts had been
awarded by the end of the Financial
Year 1989/90.*

With regard to the supervision of these Construction Contracts, six Supervision Contracts had been awarded to a value of approximately M40-million, only one Supervision Contract is outstanding and this is expected to be approximately M3-million.

The situation with regard to Funding Loans for the above contracts is that 12 Funding Loans had been approved by the Development Bank of Southern Africa to a value of over M330-million, nine of these 12 loans had been signed, up to the end of March 1990, by all parties concerned. It is still necessary to conclude a further five loans in order to cover the total expenditure of the Advance Infrastructure Contracts handled by the Infrastructure Division. These five loans are already under consideration by the Development Bank of Southern Africa.

As regards the progress on construction up to the end of March 1990, the value of work performed by the various contractors was in excess of M150-million which represents over 45% of the total anticipated construction costs.

It should be noted that there is considerable participation by Basotho personnel and companies in the various contracts. In all the Supervision Contracts a minimum of 50% of these contracts has been awarded to Lesotho based International Consultants of which a minimum of 20% of the professional staff costs by value has been given to Basotho personnel.

Furthermore, one of the Design Contracts is being handled by a Basotho company and in one case the total supervision contract is also being handled by a Basotho company. Four of the Construction Contracts have been awarded to Basotho companies.

In addition to this, direct employment by the main contractors has reached over 2 000 job opportunities held by Basotho staff. This represents approximately 75% of the

total labour force of the contractor. A number of sub contractors, particularly in the building works, catering contracts, transport, etc. have been awarded to Basotho companies.

Despite the good progress being made on the construction contracts, it should be reported that during the 1989/90 financial year, several industrial/labour disputes have arisen. Close cooperation between LHDA and the appropriate Government Departments have ensured that these labour disputes have been settled by the relevant contractors as quickly as possible.

All of the construction contracts are taking place in conditions and areas which have posed particular problems for the contractors and supervising engineers. However, these problems have been overcome through cooperation between the parties concerned and LHDA and it is anticipated that facilities from the Advance Infrastructure Contracts will be available in time for use by the main contractors in the Lesotho Highlands Water Project.

Concern has, however, been expressed with regard to the progress on the southern portion of the Northern Access Road where the contractor has not yet performed satisfactorily. This matter is receiving urgent attention by LHDA and the supervising engineers.

Included in the Advance Infrastructure Contracts, was the construction of a major bridge crossing of the Malibamats'o River. This high technology, incrementally launched, pre-stressed bridge structure has proceeded according to schedule and is, and will be, one of the many outstanding engineering achievements associated with the Lesotho Highlands Water Project.

ENVIRONMENT AND SOCIAL ASPECTS

Conclusions

Overall progress during the year was good, as has been confirmed by both the IBRD pre-appraisal mission in February 1990, and the second visit of the panel of environmental experts in March 1990. The panel of experts concluded:

"The small staff has performed miracles in producing project descriptions, documentation, and in getting a wide variety of excellent consultants to compile very good reports. There can be few other comparable projects in the world, let alone Africa, where the standard of environmental planning has been as good as in the present case."

Scope of work

Socio-economic census Phase IA

This activity was carried over from the previous reporting year. The purpose of the study was to establish a benchmark against which the future socio-economic impacts of the LHWP can be compared. The report was distributed in two volumes in December 1989.

Adjudication

The purpose of this programme was to identify, measure and verify ownership of all land holdings and properties that will be flooded by the Katse and 'Muela reservoirs and some properties that will be taken up by quarry site establishments and spoil areas.

With EEC assistance, a survey firm was contracted to provide professional services and a senior officer of the Department of Lands, Survey and Physical Planning was seconded to provide land tenure advice in the field.

The contract was awarded in April 1989 and work began in May, 1989. The duration of the contract was seven (7) months. During the reporting period the number of fields surveyed was 1,538. Mapping was not complete, 160 ha arable land for Bokong and Malibamats'o Valleys were computed and mapped on cadastral maps.

- During the verification of properties to be inundated, the following settlements; Molefe Store, Ha Machaha, Mokurutloaneng and Ha Moqhalanako were noted to be below the full supply level, while Ha Ntoa, Lihalahaleng and Ha Suoane will be too close to the water level.
- A total of 92.08 ha was measured as arable land to be affected by the following works: Katse Township, Katse Substation, Operation centre, Maputsoe Substation, Hololo Substation, Caledon Crossing, Pitseng Substation and Caledonspoor.

Mapping

- Produced the Phase IA Project area map for inclusion in Gazette No. 23 of 1990.
- Produced the Katse and 'Muela local catchment base and Census maps.

Land and other properties acquisition

On a regular basis land and other private properties e.g. trees, kraals, toilets etc. are removed/disturbed by project related operations. Such properties and their ownership are recorded in the compensation register so that compensation can be effected.

A total land area acquired for purposes of implementing Contracts 103, 104 and 105 is 142.35 ha belonging to 601 persons.

Houses requiring repairs having been affected by implementing Contracts 103 and 104 are 5 and of varying sizes. Thirty (30) fruit trees and 128 other trees have also been affected. Eight (8) kraals belonging to 8 people were affected by Contract 103.

Demarcation of Reservoirs

The task is to mark on the ground the PMF line with beacons to enable the planners and local residents to visualize the extent of the reservoirs so that doubt be cleared relating to the risk of flooding. Local authorities are also assisted to avoid making any land allocations in the area of the reservoirs.

Contracts documents were designed, and tenders were evaluated. Contract award and completion will overlap into the next year as planned. The task of supervising the contracts will be the responsibility of the Technical Division.

Household Income, Consumption and Expenditure Survey

The purpose of the survey is to provide baseline information on the household earnings, consumption and expenditure patterns. This information will be useful in monitoring and evaluating the impacts of LHWP on living standards of the people in the project area.

By the end of the reporting year, the design and pre-testing of the questionnaire were completed. Data collection, analysis and report writing will be carried over to the next year.

Survey of the disabled

The study aims at establishing a baseline against which project related disability can be evaluated. The study was planned to run from April 1989 through to March 1990. At the end of the reporting period the study was completed and a report is available. The survey has established the present disability rate at 2.65%.

Social Study of the Directly Affected Communities

The study sought to determine the level of stress that the Communities of Roopa, Ha Machaha, Pelaneng and Ha Ntseli were experiencing. These are the communities that will either be relocated or have to host big numbers of construction labour force and/or experience unusual heavy project traffic.

The study was planned to start in May 1989 ending in March 1990. At the time of reporting the study was complete and a report circulated.

Health and Nutrition Survey of the under 5

This survey seeks to determine the health condition of children aged five (5) years and under; as a measure of standard of living, in the project area. The study was planned to commence in January 1990 through March 1990, but was subsequently contracted to a consultant.

Compensation

Compensation Policy

On 20 September 1989 the Government of Lesotho approved the LHDA compensation policy.

In making its decision, the Government stated that the effective date of the policy should be 1 August 1987; that the compensation regulations should be promulgated; and that the costs of the compensation policy should be project related.

Following this decision, the LHDA consultative working group on land acquisition and compensation held pitsos at Muela, Ha Lejone and Bokong Ha Kennan to present the approved policy to the public.

Compensation Regulations

The Environment Division together with the LHDA Legal Division and the office of the Attorney General worked on the Compensation Regulations to be promulgated by the Honourable Minister of Lesotho Highlands Water and Energy Affairs pursuant to Section 59(c) of the LHDA Order, 1986. At the end of the reporting period, these regulations had been sent to the Government Printer for gazetting.

Compensation Plan

Throughout the period, the Compensation Plan developed from a direct compensation approach to an all embracing (combining direct compensation and Rural Development) approach. It was decided to keep the Compensation Plan separate from the Rural Development Plan. The second draft of the Compensation Plan was completed by the end of the reporting period.

The Compensation Plan together with the Natural Environment and Heritage Plan, and the Rural Development Plan were the subject of lengthy negotiations with consultants appointed by the RSA Delegation to JPTC to review the Environment Division's plans for Phase IA of the LHWP. In March 1990 formal discussions took place in JPTC on the Division's plans. A series of agreements were minuted which at 31 March 1990 awaited formal ratification by the two governments.

The agreed scope and cost of the three plans are considered adequate to address most of the environmental, economic and social impacts of Phase 1A of the LHWP.

Compensation Payments

Grain Payments were made to households which have already lost arable land to LHWP infrastructure works. Cash payments to compensate households losing areas of arable land too small to qualify for grain payment were made.

Tables 2A and 2B provide summaries of grain and cash payments effected during the 1989/90 year.

Compensation/Replacement Housing

Replacement housing arrangements continued throughout the period. Ten (10) houses were built along the second half of the NAR, under contract LHDA 122. Another group of houses were identified for reconstruction along the route of the first half of the NAR, and tenders were received for their construction under contract LHDA 143 (not awarded at 31 March 1990).

Houses to be relocated along the NEAR were identified, and the tenders for their construction received (contract not awarded at 31 March 1990).

The contract for replacement housing at the Caledon crossing was awarded and implemented under earlier supervision arrangements. Work there was half complete at the end of the reporting period.

Plans were made for replacement housing at the Butha-Buthe and at Ha Mabote in Maseru, but tenders have not yet been invited for these contracts. At Ha Mabote, where a number of houses must be moved because of a new power line, the Mabote site end services project made replacement house sites available and the costs of this land acquisition were reimbursed to it by LHDA.

Compensation for Commercial Premises

The Thibeli woolshed owned by the Ministry of Agriculture, and the

Liphofung Trading Store would have been flooded by the Katse reservoir, but had to be relocated early because they were at risk from the NAR construction.

Cash payments were made to the owners, according to the compensation policy.

Labour Studies

The purpose of this study is to quantify the potential labour available, by level of skills, within the LHWP working area. The study was initiated in response to various discussions surrounding construction labour for LHWP.

SUMMARY TABLE ON COMPENSATION PAYMENTS EFFECTED DURING 1989/90 - YEAR

Table 2A
Grain Payments

Contract	No of people Compensated	No of Bags (70 kg Maize Bags)	Cost (M)
* NAR 103	114	891	31 270,32
NAR 104	12	65	2 688,00
** SAR 105	128	439	16 401,04
*** KAI	55	499	18 642,64
Totals:	309	1,894	69,002,00

Table 2B
Cash payments

Contract	No of People compensated	Costs(M)
NAR 103	69	6 900,00
NAR 104	9	900,00
SAR	185	18 500,00
Totals:	263	26 300.00

* NAR - Northern Access Road

** SAR - Southern Access Road

*** KAI - Katse Advanced Infrastructure

Progress on this study has been affected by changes in the engineer's estimates for the labour required for the main contracts. The study is scheduled to end in May 1990. Preliminary results indicate that there is an adequate supply of unskilled labour and a probability of appropriately skilled labour within the LHWP area. This implies that LHDA can safely require contractors to focus their employment of unskilled labour on the local communities.

Scheme

The Environment Division together with LHDA Legal Division and the office of Attorney General prepared an approval order for the LHDA scheme for Phase IA of the LHWP, originally submitted to the Honourable Minister, in terms of Section 35 of the LHDA Order, in September 1987. The Environment Division prepared maps of the scheme area, accompanied by detailed lists of the coordinates of the boundary.

The approval order was signed by the Honourable Minister of Lesotho Highlands Water and Energy Affairs on 14 February 1990.

Settlement Planning and Development

Principal planning areas during the report year were:

- (i) Katse village.
- (ii) Katse informal settlement and township expansion.
- (iii) Butha-Buthe LHWP Camp.

Principal areas of site acquisition were

- Advanced infrastructure sites for camps, depots, quarries and site works for contracts

103,104,108,114,115 and 117.

- Main work sites acquisition was planned to start in February,1990; but was rescheduled after the engineering programme.

Support to SDAs

The Lower Bokong Selected Development Area (SDA) was declared in June 1988. In September 1989 the SDA Management Committee was formed to advise the Minister of Interior on land allocation matters in the SDA.

Rural Development Plan Preparation Studies

Studies were planned to identify, Rural Development projects. Five studies were complete at the end of the reporting period with work continuing on the remaining two studies. Those completed were:

- (i) Rural Electrification.
- (ii) Animal Husbandry and Range Management.
- (iii) Community Forestry.
- (iv) Mountain Horticulture and Field Crops.
- (v) Tourism.

The project for development assistance outside Katse and 'Muela Catchments advanced to the stage of a concept paper.



Replacement housing for affected families

Archæology

Photo Recording Rock Art

During the reporting period work on the photographic and tracing programme was completed upon 19 sites with work continuing on a further 11 sites.

Palæontology

Planning for this programme was scheduled to run from January through March, 1990.

The programme for palæontology is closely linked to the tunnelling programme mainly at the Caledon River crossing. Planning for the work required to salvage any fossils was completed on schedule.

The EEC in Brussels has entered into a contract between itself and the University of Münster in Germany on behalf of Lesotho Government and LHDA. The programme will include provision of a Palæontologist to salvage fossils, train local staff, prepare and catalogue materials and also conduct a palæological study of the Phase I and III areas. The consultant has been to Lesotho to familiarise himself with the LHWP and has been given permission by the relevant Government authorities to study a fossil found at the Caledon River tunnel crossing site. The study will be undertaken in Germany.

Soil and Water Conservation

Soil Survey and Mapping

Soil samples were collected from 'Muela and Katse local catchments for analysis.

Erosion and Sedimentation

A detailed project proposal for the collection of baseline data and long-term monitoring the erosion and sedimentation rates in 'Muela and Katse dam watersheds was being finalised, at the time of reporting.

Rehabilitation

Rehabilitation of areas disturbed by geotechnical and other exploratory works was successfully carried out by the contractors and certified by the division.

Natural Environment and Heritage Plan (NEHP)

The NEHP was revised in October 1989. Further revisions of the NEHP in the light of the recent agreement between JPTC and LHDA on scope and cost allocation for the plan will be carried out in the following year.

Environmental Specifications

The division participated in defining and describing the environmental specifications in the tender documents for the dam and tunnel contracts 123, 124, 125 and 126. These specifications included environmental considerations such as flora and fauna, awareness programmes, treatment and rehabilitation of spoil dumps, quarries, borrow areas, road site cuts, labour accommodation standards, treatment of water and prevention of pollution, health and safety practices, and provision of medical services.

Biological Monitoring

Terms of reference were prepared for baseline surveys in the following areas: flora and fauna, epidemiology, Environmental reserves and awareness.

A programme to monitor the effects of Kao mine operations and other LHWP activities on Water quality in the streams was initiated. The programme has provided valuable data for quantifying the values of parameters to be monitored in relation to potential pollution from LHWP works.

Public Health

A study was made into the requirements for provision of medical services (first aid and clinics) in the dam and tunnel contracts. This study recommended upgrading of Leribe Hospital's intensive care facilities.

Natural Resource Information Systems

The United Nations Environment Programme (UNEP) in Nairobi has provided the LHDA with computer hardware and software for a Geographic Information System (GIS) to be used by LHDA and Government ministries in resource management.

The GIS was installed in the Environment Division and is now being used in a six-month pilot project.

Consultancy Studies

The following consultancy studies were commissioned during the reporting period.

- (a) "Muck Disposal and Rehabilitation options for spoil dumps and quarries" by the University of Cape Town.

- (b) "Upgrading of Leribe Hospital for Referral of LHWP patients" by Mr. N. Vermaak.
- (c) "Environmental Action Plan - A Synopsis" by Environmental Resources Limited.
- (d) "Wildlife and Transmission lines of the Hololo and Katse Systems" by Dr. J. Ledger.
- (e) "The legal and institutional framework of the Lesotho Highlands Water project; with special reference to the resolution of land acquisition and Compensation issues." by Okoth-Ogendo.
- (f) "General Environmental Concerns, including legislation and institutions related to the Lesotho Highlands Water project" by J. Ofori-Boateng.
- (g) Other studies conducted by Environment Resources Limited are Rural Electrification, Animal Husbandry and Range Management, Community Forestry, Mountain Horticulture and Field Crops, and Tourism.

Environment Action Plan Appraisal

Appraisal took place during the year as follows:

- (i) by consultants to the JPTC/RSA from July, 1989 through February 1990. A report was received in March 1990.
- (ii) by the World Bank Pre-appraisal mission in February/March 1990.
- (iii) by the panel of Environmental Experts (March 1990).
- (iv) by a World Bank consultant.

THE PROJECT & THE PUBLIC

The Lesotho Highlands Development Authority commenced the process for employing its first two permanent representatives in the Project area. These are Community Relations staff who will run offices at the Katse Village and the Butha-Buthe camp respectively.

These senior staff members will represent the Authority in the vicinity of the two vitally important work places - the Katse Dam and the Hydropower and Delivery Tunnel areas which form part of the entire north end part of the LHWP in Lesotho.

Working as part of the Public Relations Division the two employees are required to bring most services of the head office to the local communities, thereby speeding up availability of information from head office while quickly responding to urgent as well as normal needs of communities they serve.

Publications and Broadcasts

The Authority released a number of important publications in the past year. The first 16-page brochure was a Progress Report on the Third Anniversary of the Signature of the Treaty between the Kingdom of Lesotho and the Republic of South Africa. One was a 24-page brochure published jointly by the Authority and its counterpart institution in the Republic of South Africa, the Trans Caledon Tunnel Authority.

The LHDA published four quarterly editions of its journal "Mehloli". Circulation increased from the original 1500 to 2500. It covers matters related to water, energy and electricity in all Government and

private organisations while placing full emphasis on the Lesotho Highlands Water Project. "Mehloli" has received support from both readers and the local Lesotho business community who have contributed advertising amounting to many thousands of Maloti.

Thousands of Lesotho radio listeners heard twice weekly 15-minute broadcasts "Metsi a Lihlaba tsa Lesotho."

The once monthly radio quiz programme meant specifically for Secondary and High school students but designed also for participation by the general home audience, - "Thalaboliba" - hit Radio Lesotho airwaves eleven times for the first time in the year under review. Ten times the quiz competitions were recorded in front of live audiences in all ten districts of the country. The eleventh, held for the first time in Maseru on the 9 December 1989 offered prize monies that totalled M5 000 to the four finalists.

As with publications, a large proportion of prizes for the quiz programmes, which are educational in nature, came from sponsorships by local business people. In all radio quiz programmes paid out over M14 000 during the year. This kind of prize money earned the programme increased popularity. Thus more students and home listeners were persuaded to take a positive interest in the project.

In conjunction with recording of the quiz programmes, presentations on LHWP were made in each of the ten districts. Over 4000 people attended these presentations. They included teachers, students, local authority officials, public servants and members of the general public.

Local Economic Participation

A deliberate and determined drive was made to open all conceivable ways in which local Basotho entrepreneurs could participate in the Lesotho Highlands Water Project. To this end numerous meetings were held.

Under the auspices of the office of the Liaison Officer, Basotho entrepreneurs were organised to form three companies so that they can tender for jobs related to the Project. These were a transport organisation, furniture manufacturer and a women's mohair weaving company.

A catering company formed earlier in a similar manner was awarded a contract by one of the major contractors building advanced infrastructure projects at the Katse village.

Repatriated Basotho Mine workers - Miners and Dependence Welfare Association (MADWA) have derived benefits through the auspices of LHDA.

The assistance offered was in response to their application for 9000 repatriated experienced miners for employment during the construction of major works, especially tunnels. Aware of the fact that even during the peak period of construction not all of the applicants would be employed, alternative avenues were pursued to assist them, (especially those miners who will be adversely affected by the project). To this end a stone cutting training project was formulated and submitted to donors on their behalf. This project was adopted by German Agro Action. To date 90 mine workers have already been trained and provided with necessary tool kits. These trainees are now operating their small quarries in their respective home villages. The project operates in Leribe which was chosen for its proximity to Butha-Buthe and the willingness of the chief to provide accommodation free of charge to trainees. Each course consists of 15 trainees for a one-month period.



A trainee in stone masonry at work.

Liaison upon project plans and operations with those of Government, quasi-state and private institutions was strengthened during 1989/90. Twelve monthly co-ordination meetings were held with all Government ministries and relevant departments.

Through these meetings the following objectives were achieved :

- (1) Formulation of semi skills training project within the framework of Government policy.
- (2) Timely gazetting of SDA at Butha-Buthe.
- (3) Timely approval of English medium schools in Katse and Buthe-Buthe by Ministry of Education.
- (4) Approval of funds for construction of Police facilities within the project area by Ministry of Planning and Economic Affairs.

Moving of Graves

In early June 1989 12 bodies in the Mphosong area were exhumed and re-interred in new places to make way for a section of the Northern Access Road.

Four other graves were transferred at villages along the Northern Access Road.

COMPUTERISATION OF OPERATIONS

Labour Department Database System (LDDS)

When the Division was launched in 1988 it offered assistance to Government Labour Department to set up its Database System on all categories of labour available in country.

System Documentation and Testing

The programme and system documentation for the LDDS system were concluded in April 1989. System testing was also done and completed in April 1989 by the Computer Services Division.

Preliminary Activities

The funding of the SKILL Profile Project by USAID was made available to the Ministry of Social Welfare, Employment and Pensions (MSWEP) in mid-May 1989. Consequently the following project-related preliminary activities were undertaken :

- The upgrading of computer configuration at the Ministry.*
- The installation of LDDS application and the complementary IBM compatible software.*
- System and programme testing at the Ministry.*
- User staff training on the LDDS system.*

Evaluation of Royalties

Documentation of various royalty scenarios was handed over to the Economics Section of the Technical Division for evaluation.

Wang Installation and Commissioning

The Wang Processor was installed on 12 September 1989.

Geographic Information System (GIS)

The GIS application was installed for commissioning in April 1990.

Training

Software and application software training on the Wang applications was conducted by UNISKILLS for LHDA staff.

The Wang Office communication facility is now being fully utilised by divisional managers and the executive staff as a facility to expedite communication within LHDA.

MONITORING WATER RESOURCES

The Division's primary objective is monitoring of the measurement of primary raw water resources data through the existing data collection and hydrometric equipment. The second objective is the development of software for analysis and processing of the water resources data. The objectives were addressed during the year through the following activities:-

Organising and participating in the regular meetings with DWA/BKS, DWA/WEMMIN and other related organizations.

Providing briefs and water data to consultants and other related institutions within the LHWP area.

Processing and analysing the water resources data that has led to the publication of four (4) technical reports.

Seminars

LHWP - GIS Implementation

The Water Resources Division participated in demonstrations, courses and seminars that have led to the implementation of Geographic Information System (GIS) through the Environment Division.

Weather Radar Network Seminar

The Division participated in the seminar where experiences relating to the use of weather radar in various aspects including Water Resources were highlighted.

This participation has resulted in the undertaking of the feasibility study of implementing a weather radar in Lesotho.

IAHS - Symposium

The Water Resources Manager attended a symposium on the review of the latest developments in the fields of Water Resources and Hydrology that are related to the methodologies of developing the Water Resources Management and Reservoir Operations. The seminar/conference was organized by International Association of Hydrological Sciences (IAHS) in Baltimore USA.

4th SANHS - Symposium in Pretoria

The Water Resources Manager and Senior Hydrologist participated in the South African National Hydrological Symposium (SANHS) whose objective was to provide new and relevant information on the applications of hydrology and limnology in Water Resources Development and Conservation, at the same time identify directions for future developments in relation to the interphase and organizational communication between Water Resources practitioners and researchers in the broad fields of Hydrology, Water Resources and Water Quality.

LHWP - Advisory Working Group on Sedimentation and Erosion in the LHWP Area.

As a member of this working group several meetings were held in relation to the upgrading of the sediment monitoring network and environmental action.

Project coordination

LHDA - DWA/WEMMIN coordination

Through the agreements reached during the consultative meetings

between LHDA and DWA/WEMMIN several operations were commenced.

- The Matsoku River at Ha Seshote G42, and the Senqu River at Mokhotlong G6, water level and flow monitoring stations were reactivated after their destruction by March 1988 floods.
- An agreement was reached on the repair of the Bokong River at Bokong cableway.
- The Nqoe River at 'Muela water level monitoring station has been established as a non-recording hydrometric station.
- Six (6) location/sites were identified for the establishment of the proposed rainfall stations within the LHWP area.

Certain existing rainfall stations in the LHWP area are to be upgraded by instrumentation.

Provision of Water Resources Data

The consultants and other related institutions were provided with technical reports and raw data in order to undertake water related activities of the LHWP e.g.

- A study on the assessment of the impact of water abstractions from the rivers where the contractors are to establish work sites during the construction of the delivery tunnel and water transfer tunnel as well as the 'Muela hydropower complex was completed by the Division in consultation with the Technical Division.
- Further raw hydrological data has been provided to other consultants to undertake studies of similar nature.
- Information on rainfall characteristics within the LHWP area was provided in relation to the rainfall formula of the Infrastructure Contracts 103 and 104.

- The review of the climatic and hydrological data which is to be incorporated as an information package of the tender documents for the major contracts was prepared in consultation with the Technical Division.

Data Processing

Hydrological Database

This database has been updated through the digitisation of water level charts to obtain water level data and streamflow for the period February, March, and April 1990. The observers records have been used to complete missing water level data and the redigitisation of water level data which was required on some stations that indicated raw data discrepancies.

Rainfall Database

The raw daily rainfall data was updated up to November-February - March 1990 for the LHWP rainfall stations in Lesotho and RSA respectively. A software package was developed for analysis.

Sediment Database

This fully operational database has been updated up to November 1989, January, February and March 1990 periods. The analysis of the observers reliability has been also carried out. A software program has been developed for analysis.

A stochastic model for forecasting is in development.

Data Analysis

Technical Reports

The Water Resources data was analysed using the existing

hydrological software packages with graphic support to produce the following technical reports:-

- Grouping of rainfall stations in Lesotho for completing missing monthly data (November 1989).
- Feasibility study on the implementation of the Weather Radar produced by the United Nations Department of Technical Cooperation and Development (UNDTCD) under Les/86/009 in consultation with LHDA (November 1989).
- Stationarity of the raw rainfall data in the LHWP area (March 1990).
- Sediment monitoring in the LHWP area (May 1990).

LEGAL MATTERS

During the period under review, the Legal Division concentrated on -

- Preparation of the tender documents for the Water Transfer Contracts, preparation of the bidders' meeting and dealing with various legal aspects during the tender evaluation for Contracts 123 (Katse Dam), 124 (Transfer Tunnel South), 125 (Transfer Tunnel North), 126 (Delivery Tunnel South).

The Conditions of Contract were finalised in close cooperation with Technical Division, LHDA's consultants, Highlands Delivery Tunnel Consultants and specialised outside advisers. This stage of the contractual life of the Water Transfer Contracts will come to an

end with the final report on the legal evaluation of the tenders.

- A wide variety of insurance and insurance-related matters were addressed. Contract Works and Public Liability, Workmen's Compensation, LHDA's own insurance, Medical Aid and Pension Schemes, Group Life received attention. Terms, conditions and rates were reviewed and negotiated.

The insurance sector, being highly specialised from the legal point of view and highly competitive from the economic point of view, will remain one of the Division's main fields of activity. It requires constant adjustment to the changing risk exposure under the Project.

- An ever increasing flow of contractual questions requiring the Division's input were answered. Typical examples were sales and income tax, transport of explosives, work and residence permits, licence agreements, payment conditions for international sales of goods, bills of exchange and promisory notes, wayleaves and servitudes.

Legal problems included construction law, arbitration, labour relations, maintenance agreements, bank guarantees and loan agreements.

The Division cooperated with environmental lawyers in respect of legal institutions and regulations pertaining to environmental issues.

The Division attended negotiations, drafted and commented upon contracts and generally worked to protect Authority's best interests in a fair agreement with the other parties.

The Division was involved in various legislative activities such as the approval order for the implementation of Phase 1A of the Project, the Compensation Regulations and the Amendment to the Loans and Guarantees Act.

FINANCIAL STATEMENTS

Financial Statements *for the Year Ended 31 March 1990*

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Directors' Approval

The financial statements which appear on pages 30 to 39 were approved by the Board of Directors on 23rd October 1990 and are signed on its behalf by:

T N Thokoa
Chairman

M E Sole
Chief Executive

***Report of the Auditors
to the Members of the Board
of the Lesotho Highlands
Development Authority***

We have audited the financial statements set out on pages 30 to 39 for the year ended March 31, 1990 in accordance with generally accepted auditing standards.

To the best of our knowledge and belief and on information supplied to us, the financial statements reflect a true statement of the assets and liabilities of the Authority at March 31, 1990.

Peat Marwick
Chartered Accountants (Lesotho)

November 30, 1990

Balance Sheet at 31 March 1990

	Notes	31 March 1990		31 March 1989	
		M'000	M'000	M'000	M'000
ASSETS EMPLOYED					
Fixed Assets	4		317 864		160 022
Current Assets					
Advance Payments		9 110		2 320	
Other Receivables		560		250	
Cash on Deposit at Bank		3 798		2 431	
		<u>13 468</u>		<u>5 001</u>	
Current Liabilities					
Contract Payables and Accruals		34 582		35 612	
Retentions		8 856		3 333	
Other Payables and Accruals		1 966		420	
Short Term Loan		2 306		2 368	
		<u>47 710</u>		<u>41 733</u>	
Net Current Liabilities			<u>(34 242)</u>		<u>(36 732)</u>
			<u>283 622</u>		<u>123 290</u>
FINANCED BY:					
Capital Fund	5		73 831		56 978
Government of Lesotho Fund	6		57 102		27 310
Long Term Liabilities	7		152 689		39 002
			<u>283 622</u>		<u>123 290</u>

Statement of Changes in Financial Position for the Year Ended 31 March 1990

SOURCE OF FUNDS		M'000
Cost Related Payments	- Government of Lesotho	3 733
	- Government of Republic of South Africa	13 120
Government of Lesotho		29 792
Increase in Long Term Liabilities		<u>113 687</u>
		<u>160 332</u>
USES OF FUNDS		
Expenditure on Capital Work-in-Progress		
Administration		22 956
Construction		97 315
Engineering		24 640
Environment		864
Financing		12 067
Decrease in Net Current Liabilities		<u>2 490</u>
		<u>160 332</u>
DECREASE IN NET CURRENT LIABILITIES		
(Increase) in Advance Payments		(6 790)
(Increase) in Other Receivables		(310)
(Increase) in Cash on Deposit and at Bank		(1 367)
(Decrease) in Contract Payables and Accruals		(1 030)
Increase in Retentions		5 523
Increase in Other Payables and Accruals		1 546
(Decrease) in Short Term Loans		(62)
		<u>(2 490)</u>

Notes to the Financial Statements for the Year Ended 31 March 1990

1. COMMENCEMENT OF OPERATIONS

The Authority was established with effect from 24 October 1986 by the Lesotho Highlands Development Authority Order (No. 23) of 1986, and commenced operations immediately.

2. DESCRIPTION OF ACTIVITIES

The Authority is entrusted with the responsibility for the implementation, operation and maintenance of the Lesotho Highlands Water Project as defined in the Treaty on the Lesotho Highlands Water Project signed by the Government of the Kingdom of Lesotho and the Government of the Republic of South Africa on 24 October 1986.

The Authority is also conferred with general functions in relation to water resources, electricity, education and training of its employees, monitoring activities and land transactions.

The Authority is presently in the initial stages of construction of Phase 1A of the Lesotho Highlands Water Project. Construction of this Phase is presently scheduled to be completed in 1996. The principal physical features of Phase 1A in Lesotho are as follows:

- (a) A 182-metre high concrete arch dam on the Malibamats'o River at Katse.
- (b) A 55-km transfer tunnel north from the Katse reservoir to the Hydropower complex at 'Muela.
- (c) A 72-MW underground Hydropower complex at 'Muela.
- (d) A 15-km delivery tunnel north from 'Muela under the Mohokare (Caledon) River which forms the border between the Kingdom of Lesotho and the Republic of South Africa.
- (e) Associated infrastructure, including construction of new roads, upgrading and rehabilitation of existing roads, two new bridges, upgrading of border crossing facilities and new river crossings, camps, communications, power supply, etc.
- (f) Associated conservation, environmental and rural development activities.

Notes to the Financial Statements for the Year Ended 31 March 1990 (Continued)

3. PRINCIPAL ACCOUNTING POLICIES

The financial statements are prepared on the historical cost basis and incorporate the following principal accounting policies:

3.1 Capital Work-in-Progress

Costs incurred on the implementation of Phase 1A of the Lesotho Highlands Water Project are capitalised and shown as fixed assets on the balance sheet of the Authority. As construction will not be completed before 1996, no depreciation is charged.

Cost comprises all attributable costs of bringing the asset or group of assets to working condition for their intended use and includes, inter alia:

- (a) all costs of investigations, surveys, feasibility studies, engineering studies, preparation of designs, construction, construction supervision, procurement and commissioning;
- (b) the establishment and administration costs of the Authority;
- (c) the costs of any land or interest in land, and any improvements to such lands;
- (d) the costs of measures taken in order to ensure that members of local communities in Lesotho are not adversely affected by Project related activities, including compensation paid;
- (e) all finance charges (including interest payments, financing and foreign exchange cover charges and other charges) relating to finance raised to fund capital expenditure.

All costs incurred are apportioned to one or more of the following activities:

- (i) generation of hydro-electric power in the Kingdom of Lesotho ("Hydropower");
- (ii) delivery of water to South Africa ("Water Transfer");
- (iii) ancillary developments in the Kingdom of Lesotho ("Ancillary Developments").

The Government of the Kingdom of Lesotho is, by way of Cost Related Payments, responsible for the costs of the Hydropower and Ancillary Development activities. The Government of the Republic of South Africa is, by way of Cost Related Payments, responsible for the costs of the Water Transfer activities.

Notes to the Financial Statements for the Year Ended 31 March 1990 (Continued)

3.2 Pre-Establishment Costs

Costs incurred on the implementation of the Lesotho Highlands Water Project prior to the establishment of the Authority on 24 October 1986 have been included in Fixed Assets.

3.3 Foreign Exchange

Transactions in foreign currencies are converted to Maloti at the approximate exchange rates ruling at the date of the transaction.

Assets or liabilities denominated in foreign currencies are converted to Maloti at the exchange rate ruling at the balance sheet date.

Exchange differences are allocated to the cost of the related activity.

3.4 Cost Related Payments

Cost Related Payments from the Governments of Lesotho and South Africa are recognised and credited to the Capital Fund on the date due for payment.

Cost Related Payments become due when the relevant cost falls due for payment; provided that Cost Related Payments may be paid directly to contractors or consultants, or, where costs have been financed by way of loans shall be due for payment at the time such loans become redeemable.

Funds obtained on concessionary terms for the Water Transfer component shall, for the purpose of Cost Related Payments, be deemed to be loans at the interest rate and redemption terms applicable to loans of the International Bank for Reconstruction and Development.

3.5 Royalties

Royalties arising from the Lesotho Highlands Water Project, including advance royalty payments through the Southern Africa Customs Union, accrue to the Government of Lesotho and are therefore not reflected in the financial statements of the Authority.

3.6 Other Income

Other Income arising, such as interest earned, exchange gains and miscellaneous income, is credited to the cost of the activity to which it relates.

**Notes to the Financial Statements for the Year
Ended 31 March 1990 (Continued)**

4. **FIXED ASSETS**

Capital Work in Progress

Hydropower	<u>Balance</u> 1 April 1989 M'000	<u>Increases</u> During Year M'000	<u>Balance</u> 31 March 1990 M'000
Administration	5 223	788	6 011
Engineering	19 209	3 131	22 340
Environmental	10	14	24
Financing	<u>(275)</u>	<u>(200)</u>	<u>(475)</u>
	<u>24 167</u>	<u>3 733</u>	<u>27 900</u>
 Water Transfer			
Administration	26 158	22 168	48 326
Construction	55 796	97 315	153 111
Engineering	47 308	21 509	68 817
Environmental	597	850	1 447
Financing	<u>5 996</u>	<u>12 267</u>	<u>18 263</u>
	<u>135 855</u>	<u>154 109</u>	<u>289 964</u>
Total Fixed Assets	<u>160 022</u>	<u>157 842</u>	<u>317 864</u>

Included in financing fixed assets is M9 312 000 representing the finance costs attributable to funds obtained on concessionary terms of the Water Transfer Component, deemed to be loans with interest rates and redemption terms applicable to loans of the International Bank for Reconstruction and Development.

***Notes to the Financial Statements for the Year
Ended 31 March 1990 (Continued)***

5. CAPITAL FUND

	<u>Hydro power</u> M'000	<u>Water Transfer</u> M'000	<u>Total</u> M'000
Balance at 1 April 1989	24 167	32 811	56 978
Transfer from Government of Lesotho, representing Cost Related Payments on Hydropower	3 733	-	3 733
Cost Related Payments on Water Transfer paid directly by the Government of the Republic of South Africa	-	13 120	13 120
Balance at 31 March 1990	<u>27 900</u>	<u>45 931</u>	<u>73 831</u>

Total Water Transfer costs at 31 March 1990 amount to M289 963 964 of which M45 931 000 has been paid as shown above. The balance of M244 032 964 is to be discharged by future Cost Related Payments.

6. GOVERNMENT OF LESOTHO FUND

	M'000
Balance at 1 April 1989	27 310
Amounts provided by the Government of Lesotho	29 069
Less : Cost Related Payments on Hydropower transferred to Capital Fund	(3 733)
Add : Net Financing Income Accrued	<u>4 456</u>
Balance at 31 March 1990	<u>57 102</u>

**Notes to the Financial Statements for the Year
Ended 31 March 1990 (Continued)**

Note 6 (continued)

The total amount provided by the Government of Lesotho during the period is analysed by original source as follows:

ANALYSIS OF FUNDS PROVIDED BY THE GOVERNMENT OF LESOTHO

	<u>Balance</u> <u>1 April 1989</u>	<u>Increase</u> <u>During Year</u>	<u>Balance at</u> <u>31 March 1990</u>
	M'000	M'000	M'000
European Development Fund	14 229	4 351	18 580
European Investment Bank	6 161	584	6 745
Government of France	3 030	9 139	12 169
Government of Lesotho	4 594	1 210	5 804
International Development Association	15 465	11 310	26 775
Overseas Development Administration	1 635	1 916	3 551
United Nations Development Programme	1 233	404	1 637
United States Agency for International Development	199	-	199
Centre for International Migration	<u>75</u>	<u>155</u>	<u>230</u>
	<u>46 621</u>	<u>29 069</u>	<u>75 690</u>

The terms and conditions on which these amounts have been provided have not yet been determined.

Notes to the Financial Statements for the Year Ended 31 March 1990 (Continued)

7. LONG-TERM LIABILITIES

(i) Development Bank of Southern Africa - (DBSA)

<u>In respect of</u>	<u>Loan Amount</u> M'000	<u>Balance at 1 April 1989</u> M'000	<u>Balance at 31 March 1990</u> M'000
(a) Southern Access Road	24 818	19 563	21 511
(b) Northern Access Road Northern Portion	106 009	18 051	86 361
(c) Katse Bridge	2 904	2 092	2 643
(d) Northern Access Road Southern Portion	67 483	-	15 234
(e) Border Crossing Facilities	391	-	253
(f) Bridging Finance Facility	27 466	1 664	27 466

(ii) Trust Bank

Trust Bank Facility	1 527	-	1 527
		41 370	154 995
Less : Current Portion		2 368	2 306
		<u>39 002</u>	<u>152 689</u>

- (i) All DBSA loans are guaranteed by the Government of the Republic of South Africa.
- (a) Repayable over 20 years, including a 4 year grace period, and bearing interest at 8%.
- (b) Repayable over 22.5 years, including a 2.5 year grace period, and bearing interest at 8%.

***Notes to the Financial Statements for the Year
Ended 31 March 1990 (Continued)***

Note 7 (continued)

- (c) Repayable over 20 years, including a 4 year grace period, and bearing interest at 8%.
- (d) Repayable over 20 years, including a 2.5 year grace period, and bearing interest at 8%.
- (e) Repayable over 10 years, including a 2 year grace period, and bearing interest at 4%.
- (f) The Bridging Facility will be converted to a long term liability on 6 June 1990. The Bridging Facility bears interest at 21%.
- (ii) Repayable between June 1991 and June 1992 and bearing interest at 20%. This liability is secured against the Assets financed by Trust Bank

8. CAPITAL COMMITMENTS

Capital expenditure contracted for at 31 March 1990 amounted to M174 087 932. Finance has been secured as at 31 March 1990 to meet all of these commitments, including current liabilities.

9. TAXATION

In accordance with Section 29(1) of the Lesotho Highlands Development Authority Order (No.23) of 1986, the Authority is not liable to pay any sales tax payable under the Sales Tax Act 1982.

10. INCOME STATEMENT

An Income Statement has not been prepared as all expenditure and related income for the period has been charged to Capital Work-in-Progress.

