

External Evaluation of the MOZ.16 Programme

Support to vocational training in the water sector of Mozambique

May 2000

Prepared by:

François Brikké, IRC, Delft, The Netherlands
Maria Lucia Borba, IRC, Delft, The Netherlands
José Machado, University Eduardo Mondlane, Maputo, Mozambique
Virgilio Juvane, Ministry of Education, Mozambique

IRC International Water and Sanitation Centre

Access to water and sanitation are basic human rights. IRC's mission is to help people in developing countries to get the best water and sanitation services they can afford. Working with partners in developing countries, we aim to strengthen local capacities by sharing information and experience and developing resource centres. We emphasize the introduction of communication, gender, participation, community management and affordable technologies into water and sanitation programmes.

IRC's work focuses on the needs of developing countries in Africa, Asia and Latin America. In each region we work with partner institutions in selected countries to develop new approaches, ranging from empowering communities to make informed choices, to helping governments facilitate the process of development rather than construct and supply systems.

In a process of joint learning, local capacities are built in subject areas linked to those areas of IRC's expertise for which there is a local demand. Partner organizations receive support in the development of skills related to documentation and information, publication, research, training, advisory services and advocacy.

IRC is an independent, non-profit organization supported by and linked with the Netherlands Government, the United Nations Development Programme (UNDP), the United Nations Children's Fund (UNICEF), the World Health Organization (WHO), the World Bank and the Water Supply and Sanitation Collaborative Council.

IRC International Water and Sanitation Centre

P.O.Box 2869

2601 CW, Delft

The Netherlands

Tel. +31 (0)15 2192939

Fax +31 (0)15 2190955

E-mail: general@irc.nl

Website: www.irc.nl

LIBRARY IRC
PO Box 93190, 2509 AD THE HAGUE
Tel.: +31 70 30 689 80
Fax: +31 70 35 899 64

BARCODE: 16473

LO: 814 172 00

Table of contents

<i>Acknowledgements</i>	iii
<i>Abbreviations</i>	v
EXECUTIVE SUMMARY	VII
<i>Bibliographical Information</i>	vii
<i>Summary</i>	viii
1. INTRODUCTION	1
1.1 CONTEXT.....	1
1.2 OVERVIEW OF THE MOZ. 16 PROGRAMME.....	1
1.3 OBJECTIVES AND METHODOLOGY OF THE EVALUATION.....	2
2. FINDINGS OF THE EVALUATION	5
2.1 HUMAN RESOURCE DEVELOPMENT.....	5
<i>Sector needs and relevance</i>	5
<i>Scholarships</i>	6
<i>Employment</i>	7
2.2 INSTITUTIONAL DEVELOPMENT.....	8
2.3 CONCEPTION OF COURSES.....	10
<i>Improvement of course curricula</i>	10
<i>Monitoring of course development</i>	10
2.4 DECENTRALIZATION.....	11
2.5 GENDER.....	11
2.6 FINANCIAL MANAGEMENT AND SUSTAINABILITY.....	12
<i>Financial management</i>	12
<i>Efficient use of equipment</i>	13
<i>Financial sustainability</i>	14
2.7 RELATIONSHIPS.....	14
3. LESSONS LEARNED AND RECOMMENDATIONS	17
3.1 LESSONS LEARNED ABOUT THE PRESENT PROGRAMME.....	17
3.2 STRATEGIC ELEMENTS FOR THE FUTURE OF THE PROGRAMME.....	19
3.3 RECOMMENDATIONS.....	21
<i>General recommendations</i>	21
<i>Recommendations on Human Resource Development</i>	21
<i>Recommendations on Institutional Development</i>	22
<i>Recommendations on Course Conception</i>	24
<i>Recommendations on Monitoring</i>	24
<i>Recommendations on Decentralization</i>	24
<i>Recommendations on Gender</i>	25
<i>Recommendations on Financial Sustainability</i>	25
<i>Recommendations on Partnership Development</i>	26
ANNEXES	27
<i>Annex 1 : Terms of references</i>	28
<i>Annex 2 : Programme of evaluation mission</i>	32
<i>Annex 3 : List of people visited or contacted</i>	34
<i>Annex 4 : Methodological note</i>	36
<i>Annex 5 : Overview of sector labour force in 1995 (national)</i>	38
<i>Annex 6 : Sector labour force in 1998 (National and by province)</i>	39
<i>Annex 7 : Overview of CFPAS scholarships financed by Moz. 16 (1996-2000)</i>	43
<i>Annex 8 : Scholarships for medium level training</i>	45
<i>Annex 9 : Analysis of the Instituto Industrial de Maputo</i>	46
<i>Annex 10 : Bibliography</i>	50

Acknowledgements

The mission wishes to express its gratitude towards all the sector professionals who have actively contributed to this evaluation exercise, in Maputo, Beira, Chimoio, Pemba and Nampula. Their dedication and interest have been key indicators of the relevance of supporting human resource development in the water sector of Mozambique.

SDC staff and technical advisors as well as CFPAS management and staff have given a significant amount of their time and energy, not only in organizational matters and logistics but also in providing key information about the present programme and ideas about its future, for which the mission is thankful.

The personal involvement of the National Director of Water (DNA) in the final workshop, as well as of the Director of the Department of Rural Water (DAR), the Director of the Industrial Institute of Maputo (IIM), the Director of the Professional Training Centre for Water and Sanitation (CFPAS), representatives of the Ministry of Public Works and Housing (MOPH), representatives of the Netherlands Embassy, Águas de Moçambique, The Canadian Agency for International Development, and Helvetas has been appreciated and are considered as a key condition for the future of the Programme.

Finally, the mission wishes to recall the memory of late Nicole Bezençon who has been working as an SDC advisor in this Programme, in developing PEC (Community Participation and Education) activities at their initial stage, for which she has dedicated an important amount of energy and enthusiasm, and, therefore giving an orientation for the PEC related activities which CFPAS is pursuing now.

The evaluation mission

Abbreviations

AT	Assistência Técnica Technical Assistance
BM	Banco Mundial World Bank
CGBNM	Comissão de Gestão de Bolsas do Nível Médio Management Committee for Middle Level Scholarships
CFPAS	Centro de Formação Profissional de Água e Saneamento Professional Training Centre for Water and Sanitation
CIDA	Agência Canadiana de Desenvolvimento International Canadian International Development Agency
DA	Departamento de Águas Water Department
DAR	Departamento de Água Rural Department of Rural Water
DASU	Departamento de Água e Saneamento Urbano Urban Water and Sanitation Department
DNA	Direcção Nacional de Águas National Directorate of Water
DNRH	Direcção Nacional de Recursos Humanos National Directorate of Human Resources
DPOPH	Direcção Provincial de Obras Públicas e Habitação Provincial Directorate of Public Works and Housing
DRH (HRD)	Desenvolvimento de Recursos Humanos Human Resources Development
EPAR	Estaleiro Provincial de Água Rural Rural Water Workshop
ESAR	Estaleiro de Saneamento Rural Rural Sanitation Workshop
GOM	Governo de Moçambique Mozambican Government
IIM	Instituto Industrial de Maputo Maputo Industrial Institute
IRC	International Water and Sanitation Centre

	Centro Internacional de Água e Saneamento
Moz. 16.	Programa Suíço Moz. 16 Swiss Programme Moz. 16
NUFETI	Núcleo feminino do ensino técnico-industrial Technical-industrial centre for female education
NWP	National Water Policy Lei das Águas
MOPH	Ministério de Obras Públicas e Habitação Ministry of Public Works and Housing
O&M	Operação e Manutenção Operation and Maintenance
ONG	Organização não governamental Non-governmental organization
OGE	Orçamento Geral do Estado National Budget
PEC	Participação e Educação Comunitária Community Participation and Education
PNA	Política Nacional de Águas National Water Policy
PNDA	Programa Nacional de Desenvolvimento do Sector de Águas National Water Sector Development Programme
PNUD	Programa das Nações Unidas para o Desenvolvimento UNDP – United Nations Development Programme
PNSBC	Programa Nacional de Saneamento a Baixo Custo National Low Cost Sanitation Programme
PTAR (RWTP)	Plano de Transição da Água Rural Rural Water Transition Plan
SDC	Agência Suíça para o Desenvolvimento e a Cooperação Swiss Agency for Development Cooperation
UEM	Universidade Eduardo Mondlane Eduardo Mondlane University
UNICEF	Fundo das Nações Unidas para a Infância United Nations Children's Fund

Executive summary

Bibliographical Information

PROJECT NAME: External evaluation of Moz. 16

DONOR	SDC
REPORT TITLE	External Evaluation of Programme Moz. 16 "Support to vocational training in the water supply and sanitation sector of Mozambique"
SUBJECT NUMBER	
GEOGRAPHIC REGION	Mozambique, Africa.
SECTOR	Water supply and sanitation
CATEGORY	Timing : Final evaluation Subject of evaluation: Moz. 16 programme; support to vocational training for the sector in Mozambique.
CROSS-SECTIONAL THEMES	Institutional development; human resource development; decentralization; gender; monitoring; concept of curricula; sustainability; linkages
DATE	Field evaluation completed on 18 April 2000
COLLATION	50 pages, with 22 pages for the main report and 10 annexes
EVALUATION TYPE	External and independent evaluation; team composed of two international professionals and two national professionals
STATUS	Completed
AUTHORS	François Brikké, Maria Lucia Borba, José Machado, Virgilio Juvane
TYPE OF PROJECT	Bi – lateral
PROJECT EXECUTING AGENCY IN THE PROJECT COUNTRY	From 1996 to 1999 : CFPAS state run organization, but today, autonomous status; IIM : state –run organization; DAR : state – run organization
TYPE OF COOPERATION	Technical Cooperation

Summary

Subject description

The SDC financed MOZ. 16 programme (1996 – 2000) is supporting vocational training in the water sector of Mozambique, and is using mainly three organizations CFPAS (Professional Training Centre for Water and Sanitation), IIM (Industrial Institute of Maputo), and DAR (Department of Rural Water) as the main implementing partners for this purpose. The programme is articulated around three partial actions, called TA-1 (Technical Assistance “support to CFPAS”), TA-2 (Technical Assistance “support to IIM”), and TA-3 (Technical Assistance “support to PEC and DAR”). Its activities are ranging from scholarship financing, development of appropriate curricula, training of staff, publication of a journal and translations of publications, as well as institutional development.

Evaluation methodology

The mission has applied a participatory methodology, consisting in the consultation of a wide spectrum of partners involved directly or indirectly in the programme, through interviews and workshops in Maputo, as well as through field visits in Beira, Chimoio, Pemba and Nampula. Furthermore, a large number of relevant documents were made available by the Programme staff to the evaluation team for study.

Major findings

Moz. 16 programme has been instrumental in supporting a transition phase, during which CFPAS acquired a new autonomous status, improved its administration and accounting, as well as supporting leadership for change. The Hydraulic Nucleus was created in IIM/Hydraulic, which serves as a focal point and monitoring body. SDC has continued in a relevant way to support human resource development through scholarships for sector staff at basic and middle level and capacity –building of training staff.

A decisive move was made during this period to start with decentralization of activities towards the regions of Beira and Nampula, as well as to open the institutional “horizon” of CFPAS to other sector institutions abroad. Community development activities have been integrated in courses developed by the PEC section, and a translation programme has helped to make new concepts more readily available in Portuguese language, including gender.

Lessons learnt

SDC support to vocational training in the water sector of Mozambique is relevant and there is a major demand and interest for human resource development in the sector. However, there is also a need to orient this support towards sustainability, as without donor assistance CFPAS would not be able to continue to serve the sector as it is doing now. Financial issues are not only at stakes, but also marketing, expertise and quality control of services provided.

Scholarships contribute directly to human resource development, however, their management needs to be addressed at a higher level, including all interested parties (government and donors), and which should be linked to the development of a human resource development plan. The strategy of decentralization is more about deconcentration than decentralization, which needs to be resolved. Expertise on new issues need to be consolidated, especially on management, sanitation, gender, hygiene and participatory approaches. Information management in Portuguese language is of a great need and demand for the sector, and the initial steps taken towards the development of a sector resource centre is considered by the mission as particularly relevant not only for Mozambique but also for other Portuguese speaking countries.

In this context, the mission recommends to SDC to continue its support from a phase of transition to a phase of consolidation towards sustainability. Hence, technical assistance will need to be focussed on this objective in the coming years.

1. Introduction

1.1 Context

The water sector in Mozambique is undergoing important changes which have far reaching consequences not only in the improvement of water supply services, but also on institutions, approaches and processes. The sector will therefore modify the traditional way of providing water and sanitation services and new roles between State, Private Sector and Civil Society will have a clear impact on service delivery.

Under its National Water Policy (NWP) approved in 1995, the Government is undertaking a broad reform of water supply provision aimed at moving towards delegated management, and improving its regulation and financial planning. In December 1998, were approved the legal framework for private sector participation, a regulatory board for water, and a water tariff policy were all approved. With respect to urban water provision, the government completed the contracting out to full private sector management of water supply services in five major cities (Maputo, Beira, Quelimane, Nampula and Pemba) in November 1999.

With regard to rural water supply, the government has begun implementation of a Rural Water Transition Plan (RWTP). The plan, which will be extended to all provinces by 2002, aims at transforming the planning and delivery of rural water and sanitation services from a supply-driven model to a sustained demand responsive approach, characterized by community management, cost recovery and the involvement of the private sector. The government will also develop a national water resource management strategy and co-operative legal and institutional framework at the regional level. Two years ago the supply-driven approach was replaced by the demand responsive approach, a move which brought major changes.

SDC started its activities in the water sector in Mozambique in 1979, with "Construction of rural water infrastructure" in Cabo Delgado Province, executed by the Swiss NGO Helvetas. In 1986 started the support to the Vocational Training Centre for Water and Sanitation (CFPAS) and to the Hydraulic Courses of the Industrial Institute of Maputo (IIM/Hydraulic). Both institutions do training for basic and middle level water technicians.

1.2 Overview of the Moz. 16 Programme

The general objective of the programme (1996 – 2000) is to improve the well being of the population by improving water supplies throughout the country. This can be achieved through an effective and sustainable water supply and sanitation sector, staffed by people with the appropriate qualifications and able to respond to the expressed needs of the population and companies. The programme will help to achieve this objective, by supporting the improvement of the qualification of the people working in the sector.

Basically, the specific objectives of the programme are:

- to strengthen the capacity of CFPAS in training and management and in its capacity to respond to sector demand, as well as in adapting course curricula;
- to strengthen the capacity of CFPAS as a sector centre of excellence;
- to decentralize training activities at regional and / or provincial level;
- to contribute to human resource development and planning in general, as well as to manage scholarships in an optimum way;
- to strengthen the capacity of IIM/Hydraulic courses;

- to improve the capacity of PEC-DAR in providing conceptual inputs and in monitoring central and provincial training activities.

The programme is articulated around three partial actions, called TA-1, TA-2, and TA-3, and represents a total SDC assistance of 7.840.000 Swiss Francs (4.900.000 US\$), including the continuous technical assistance of three advisors, over the five years period 1996 – 2000.

Overview of the main activities and expenditures of the Moz. 16 Programme (1996 – 2000)

TA - 1 Support to CFPAS (2,336,000 US\$) 47.6 %		TA - 2 Support to IIM (798,000 US\$) 16.3%		TA - 3 Support to PEC & DAR (484,000 US\$) 9.9%		Technical assistance (1,214,000 US\$) 24.8%
Scholarships	19.8%	Scholarships	7.9%	Staff training	2.3%	Three permanent advisors, (2 expats + 1 local)
Staff training	5.9%	Staff training	1.9%	PEC Training	1.4%	
Functioning	2.8%	Nucleo Hidraulico	1.7%	Decentralized training	1.4%	
Decentralization	3.6%	Functioning	3.3%	CFPAS social exp.	2.8%	
Information / public.	5.8%	Decentralization	1.5%	Support PEC in DAR	2%	
HRD activities	2.7%					
Instit. Development	7%					

Total Swiss assistance over the five years = 4,900,000 US\$

The Vocational Training Centre for Water and Sanitation (CFPAS), the main partner of the Moz.16 Programme, was created in 1980 to respond to the needs in term of training in the water sector. It is responsible for organizing training and upgrading courses at basic and middle level and to provide technical support for water and sanitation companies. Besides the training in water supply, and sanitation, the CFPAS offers training and refreshing courses in accountancy, administration and community participation and education. The Programme gives its support to CFPAS through its Partial Action 1 (TA-1) and 3 (TA-3). The other CFPAS's partner is UNICEF.

Another partner is the Industrial Institute of Maputo (IIM), which is preparing middle level technicians in a wide variety of courses. The Moz.16 Programme gives its support to the specific IIM/Hydraulic courses, through its Partial Action 2 (TA-2). SIDA (Swedish International Development Agency) was partner of IIM until June 1998.

The third partner, the Department for Rural Water Supply (DAR), is responsible for rural water supplies throughout the country and in particular for the programme for community participation and education (PEC). The PEC courses have been integrated into CFPAS training activities since 1996. DAR is being supported by Partial Action 3 (TA-3) of the Programme. The main partners of DAR are WB (World Bank), SDC-Moz.37, CIDA (Canadian International Development Agency) and UNICEF.

1.3 Objectives and methodology of the evaluation

The relevance, efficiency, effectiveness and the impact of the Moz.16 Programme, with its 3 partial actions, had to be evaluated in order to prepare a new phase. The mission has retained the following definitions: relevance shows how appropriate the project is to the sector needs, setting and strategy; efficiency measures both the performance of a project and its ability to reach results without wasting time and resources; effectiveness shows how well the project objectives have been reached; impact shows what are the changes directly or indirectly resulting from project implementation.

According to the terms of reference, the evaluation has to come up with an analysis of the last four years and the appropriate recommendations in the following fields:

- Institutional development
- Human resource development
- Decentralization
- Gender
- Monitoring
- Concept of curricula
- Autonomy/sustainability of the programme-components and financial management
- Linkages with other training Institutions inside and outside Mozambique

The mission has applied a participatory methodology, through the consultation of a wide spectrum of partners involved directly or indirectly in the programme, with interviews and workshops in Maputo, as well as field visits in Beira, Chimoio, Pemba and Nampula . Furthermore, a large number of relevant documents were made available by the Programme staff to the evaluation team at hand for study. For further details see methodological note in Annex 4.

The evaluation team was composed of :

M. François Brikké, socio-economist and sanitary engineer, team leader (IRC, The Netherlands)

Ms Maria Lucia Borba, sociologist (IRC, The Netherlands)

M. José Machado, civil engineer (University Eduardo Mondlane, Maputo, Mozambique)

M. Virgilio Juvane, education planner (Ministry of Education, Mozambique)

2. Findings of the evaluation

This evaluation exercise is concerning the period 1996 – 2000, which can be described as a period of transition, and it has been characterized by important changes introduced in the water sector of Mozambique. The Programme Moz.16 has been instrumental in supporting the initiation of changes and putting them into practice. This has materialized into a progressive evolution and capacity-building of Moz.16 partners, however, this evolution is far from being completed, and will need to be consolidated in the coming years.

2.1 Human resource development

Sector needs and relevance

At the end of 1998 (see Annex 6), 4418 people were working in the public sector for water and sanitation; only 1.5% with a superior level, 6% a middle level and 13% a basic level and skills abilities, and only 14% out of the total are women. Facts for the private sector are not available, but they represented in 1998 essentially working for NGOs.

Moz. 16 programme has been supporting the development of this data, through the development of a human resource section in CFPAS, and a data bank on sector human resources. The mission believes that the experience gathered by this section together with the data collected could be useful instruments for sector human resource planning, at national and provincial levels, including scholarship planning. More links need to be made with the Human Resource Department of DNA.

The analysis of this data and the professional needs that derive from sector activities clearly indicate the relevance of supporting human resources development in general, and of vocational training in particular. Indeed, the sector is characterized by a great amount of staff with low qualification, and a great number of under-qualified staff occupying middle or higher levels of management. Moreover, new sector developments are requiring new working methodologies at community level, and new management dynamics at entrepreneurial level.

All provincial, national and international institutions met during the evaluation exercise have formulated the great need to improve human resource capacity, levels of qualification, and the integration of social and managerial skills with technical know-how. An emphasis is increasingly being given also to gender, hygiene and sanitation issues, for which insufficient training is given as a whole for sector staff.

Vocational training offers a unique opportunity for professionals to acquire and upgrade specific knowledge and skills, which the formal educational system does not provide. Moreover, it offers the possibility to adapt training to specific needs and demand, due its flexible nature, with for example the development of short courses. The water supply and sanitation sector requires a blend of cross disciplinary skills which combines engineering, technical operations, management, communication, economics and community outreach, including gender awareness, which is not addressed in conventional training.

Hence, supporting human resource development, institutional capacity - building and in particular vocational training in the water supply sector of Mozambique is relevant, however, the mission wishes to draw the attention on the importance to gradually contribute to human resource development which the country can sustain, both in expertise and financially.

Moz. 16 programme has contributed to human resource development in the following way:

- a) Financing of scholarships at basic level (total of 604, out of which: 310 long courses, 200 upgrading courses in Maputo and 94 in Beira and Nampula for the period) at CFPAS. Training was provided to professionals in the following fields: i) water pump mechanics, electricians, plumbers; ii) accountants and administrators; iii) community (PEC) workers. There are now three types of courses: long courses of 3 years and of 1 year and "à la carte courses" (2 to 4 weeks). Three-year courses included a general teaching in order to upgrade the academic level of professionals. There is a tendency now to decrease the number of scholarships from 3 year- courses to 1 year- courses, which the mission believes as relevant, since general teaching is not the normal mandate of a professional training centre, and since there is an increasing need to upgrade skills.
- b) Financing scholarships at middle level (128 from 1996 to 1999), originally for hydraulic courses exclusively, but with an increasing diversification and decentralization, in order to respond to sector needs, hence not only with IIM.
- c) Development of a data bank, as mentioned above.
- d) The development of an evaluation exercise on the impact of training, which shows that in general, that professional activities have been improved, after training is received. This exercise is also the opportunity to assess sector training needs.
- e) The progressive integration of social aspects in training (PEC).
- f) The introduction of follow-up procedures after training and the six months 'pre-professional insertion of middle level technicians' who graduate from the IIM/Hydraulic, in order to better integrate them in the labour market.
- g) Institutional development especially at CFPAS and IIM/Hydraulic through the support to studies and consultancies leading to innovations in their financial, administrative and pedagogic management and, in CFPAS, the support which resulted in its new organic statute.

However, some aspects still need to be resolved:

- Lack of a strategy on sector human resource development; there is also an insufficient co-ordination on sector human resource planning with DNA; this is needed in order to possibly adapt courses to real sector needs and demand.
- The development of short courses (2 to 4 weeks) are often considered by employers as awareness raising courses rather than for capacity building courses. It has been reported that the impact on work and skills development is not important; the conception of these courses might have to be revised, offering progressive training through several short courses, for example.
- Managerial positions at provincial level are still often occupied by either middle or basic level technicians with no background or insufficient skills on social and managerial issues.

Scholarships

One of the specific objectives of the programme is "*to enlarge the still very limited human resource basis by granting scholarships for long term studies and appropriate short term courses within the region to individuals selected on the basis of their qualifications and outstanding service to the sector*" and that "*efforts shall be made to move further toward a gender balance in regards to beneficiaries from training activities and scholarships*".

There are basically three types of scholarships: a) CFPAS scholarships which represented a total of 604 (of these, the Moz. 16 financed the graduation of 122 sector workers in courses of long duration – 1 and 3 years – from 1996 to 2000 - ¹ - 40% for women), which are managed by CFPAS and regional

¹ Source : CFPAS, 'Trabalhadores formados, financiados pelo programa Moz. 16- Cursos de longa duração 1996-2000.

scholarship commissions; b) scholarships for middle level technicians which represented a total of 128 from 1996 – 1999, (28% women) managed by CGBNM and regional scholarship commissions; c) scholarships for CFPAS, IIM and DAR staff, managed by the programme.

On this matter, Moz. 16 has contributed in the following way:

- a) Agreement between the Mozambican and Swiss Governments on the management of middle level scholarships through the establishment of a Scholarship Commission at DNA.
- b) Financing of scholarships as mentioned.
- c) The organization of regional seminars, during which were discussed the possibility of cost sharing and sector HRD needs
- d) Most of the staff from PEC / EPAR in the provinces are trained by CFPAS and staff in DPOPH, both by CFPAS and IIM.
- e) Moz. 16 contributed to improve the gender balance in scholarship distribution

The programme however has not managed to solve the following points:

- Lack of coherent strategy on human resource development and planning, which should serve as a basis for the elaboration of a plan for scholarships ;
- The agreement between DNA and SDC on the management of scholarships has the merit of establishing conditions for the scholarship eligibility, however the process of selection still needs to be improved in its implementation.
- The attribution of scholarships among provinces do not reflect a balanced development, although the programme has mentioned that UNICEF is catering for scholarships to other provinces.
- Cost sharing principles (contribution of water enterprise in transport or other costs) has been discussed positively in regional seminars, but in reality rarely put into practice.
- The contribution of national financial sources for scholarships does not appear clearly.
- There is some overlapping between Moz. 16 and Moz. 37 programmes on the scholarship issue.
- Regional scholarship Commissions need to be reinforced.
- Scholarships are still dependent on donor assistance which the government is not in a measure to replace with its own resources;
- Some individuals (6%) are starting to pay for long courses, but this source of income is still very low and is more for accounting and administration courses.
- Private firms, such as Águas de Moçambique in Maputo and the Provinces are potential clients, if courses correspond to their needs, but this needs a negotiation; but other small private bodies cannot afford to invest in HRD.
- Very little scholarships at higher level of education, which is however in great demand.

Employment

In general, according to the evaluation of impacts done by Moz.16 and the visits made by the mission, training had positive impacts on employment. Problems were mentioned however for people at very low academic level or of advanced age. The impact also varies according to long and short courses. Long courses have an impact whereas very short courses do not have a big impact on professional change. Short courses are however useful but they need follow-up, either by the employer or by the training centre, or both. The one-year PEC course was mentioned as having an important impact. Surprisingly, this course had to be cancelled in 1999 and 2000 because of insufficient number of participants. The programme will need to revise its marketing strategy in that respect.

Sixty to 70% of graduates from the IIM/Hydraulic have found a job rapidly in the sector. Some prefer to continue education at higher level or work in other sectors. It must be mentioned that the pre-

professional insertion, which lasts six months, are very well appreciated and are a direct contribution to future employment, although not guaranteed.

2.2 Institutional development

With the application of the National Water Policy, the role of the Government has been gradually withdrawing from its responsibility of direct provider of services and constructor of water supply systems leaving it to the private sector. DNA has already initiated a process of privatization of water enterprises and construction companies. DNA/DAR initiated since the end of 1998 the implementation of the Rural Water Transition Plan focussing on the definition and best way to apply the Demand Responsive Approach. Among this process, PEC is going through a transition of defining ways of working with communities and redefining its own structure.

Institutional development is an essential element in the programme and concerns mainly CFPAS, as the programme major partner and the IIM/Hydraulic, and to a certain extent the PEC Unit of DAR. SDC support has been mainly oriented to help CFPAS to adapt to a changing environment, in terms of institutional status, managerial capacity, information management, and integration of the principles of the new water policy, as well as to assist the IIM/Hydraulic in constituting its management nucleus.

Concretely, this support has materialized in the following way:

CFPAS

- a) Support in the finalization of the new organic statute of CFPAS, which gives an autonomous status to the Centre, which is a pre-requisite for running the Centre more as an enterprise than as a public body attached to the Estate bureaucracy.
- b) Support to the organization of internal meetings, seminars on the preparation of the new organic statutes of CFPAS and on sustainability issues has helped to raise consciousness about market awareness and the demand-responsive approach.
- c) International visits and training of Director, has contributed to changes of leadership style and management culture, and a progressive awareness of what autonomy requires.
- d) The development of "à la carte" courses, where a price tag and quality is required, has considerably helped to raise awareness about new market requirements.
- e) Contracting of audits for the regularization of the accounting system and management of funds has been essential to revise a system, which was not performing well; this has led to the development of computerised accounting system.
- f) Contracting of legal advice has helped to clarify contractual aspects of CFPAS.
- g) Contribution of SDC advisors to organizational behaviour change, improvement of administration procedures and the progressive installation of professional ethics for financial management (see paragraph 2.6).
- h) Support to staff motivation (lunch expenses) and capacity building through training and possible reconversion has contributed to retain staff.
- i) Translations of relevant documents (from IRC) into Portuguese.
- j) The editing / production and distribution of the Revista Água is one the very positive achievements of the Programme, and is very appreciated in the field. In fact it could become a capacity-building tool as well as a tool for technical information exchange and human resource planning.
- k) Strengthening of the PEC Unit of CFPAS has given a new energy and capacity to offer professional PEC related assistance and services not only within CFPAS but also outside CFPAS.
- l) Contribution to functioning costs.

IIM

(See annex 9)

- a) The setting-up of the Hydraulic Nucleus for the financial and pedagogic management of the IIM/Hydraulic, which has also become a focal point
- b) Organization of a data bank on students and their follow-up
- c) Introduction of pre-professional insertion in water enterprises for graduates.
- d) Staff training, sent abroad for courses has helped to upgrade knowledge and job motivation.
- e) The setting up of the Management Committee for Middle Level Scholarships in the DNA and of the Sub-committees in Beira and Nampula Provinces.

DAR

- a) DAR staff dealing with PEC activities have benefited from training opportunities, as well as implementation of joint activities (example: the O&M Management course)
- b) Support to the re-structuring of the DAR Section of Communication and Dissemination, the section dealing with the PEC.

The mission has however noted the following bottlenecks or issues not resolved by the programme :

- The notion of competition, which implies that there are possible other institutions on the same market offering same products and services, is not yet clear to all staff in CFPAS. The CFPAS is not yet used to work in a more entrepreneurial basis, in an autonomous way as it has for a long time benefited from a quasi-monopolistic position.
- Moz. 16 did not introduce yet support to : the notion of client satisfaction, quality control of services given, assessment of staff performance, price mechanisms, and cost consciousness, which are pre-requisites in order to confront a market.
- All staff have not benefited from training and capacity building, which creates a certain disequilibrium within the institution (both CFPAS and IIM); this linked to the fact that there is no human resource development plan or career path. Besides, management could think about more financial incentives for staff, which today only benefits a few. This last item could go hand in hand with more income generating activities, for which the mission has noted an interest among professional staff of both institutions.
- PEC nucleus is overloaded with work; there is a need to reinforce it.
- Supporting lunches is good but it is quite imbedded within a long-term strategy, although in 2000 cost sharing to the amount of 20% is being introduced.
- Due to the organic nature of IIM, being a government –education organization, it has been difficult for Moz.16 to introduce new principles of demand – driven approach and market approach.
- The mission has noted that the Instituto Industrial e Commercial de Beira is managed as an empresa and is generating income and high motivation of staff, which could give some examples for the IIM.
- Moz. 16 has not been instrumental in introducing new principles within the structural change of DAR, but some seminars have helped to orient some of the implementation.
- There has been an insufficient emphasis given to the development of documentation support in CFPAS (except for PEC). This has been ignored in IIM. Considering the fact that documentation is part of what a possible resource centre should be able to offer to the outside world, this issue should receive more attention in the future. A positive effort is the recent initiative to modernize the library.
- The promotion or distribution of translated documents is not successful, although CFPAS is sending these documents to various DPOPH. It seems that the distribution stops there.
- The programme could make the Revista Agua more financially sustainable, and go on with the present efforts made in that sense (ex: paid advertisement).

- There is limited use of e-mail and Internet , which today are important tools for information exchange and dissemination.
- The mission has also noted the awareness and motivation of the Nucleo Hidraulico of IIM, created and stimulated by Moz.16, to start with income-generating activities. Unfortunately, these have not started yet.

2.3 Conception of courses

Improvement of course curricula

Moz. 16 has contributed to the improvement of course curricula in the following way :

- a) Curriculum revue of the IIM/Hydraulic, with an extension of the practical side.
- b) PEC courses are introducing gender issues, as well as community development, participatory approaches and now also hygiene education.
- c) Survey done in 1998 on course impact, which helped to give insight into courses impact.
- d) Decentralization of some courses in order to be closer to demand and realities
- e) AFRIDEV and PEC short courses are well appreciated.

Still to be resolved :

- The process of validation of new course curricula in a long and difficult process
- The provinces have given some comments on the improvement of existing courses, but there is no feed back.
- The revision of the curriculum of the IIM course was not significant and resulted in little changes; it is a pity because there are great needs to integrate social, managerial and technical issues, which are the day to day realities of sector professionals.
- There is insufficient quality control of courses
- CFPAS courses, excluding PEC courses have only a few field component, with visits to communities, which makes courses are bit outside realities; this is an issue which would plead in favour of decentralization, where field experiences could be easier to organize.
 - Some new issues are not sufficiently included in courses such as demand driven approach, community management (and not participation), decentralization, private sector involvement.
 - Sanitation , which is a key issue, is not treated with enough attention in courses.

Monitoring of course development

Contributions of Moz. 16 :

- a) Surveys every three years on course impact by visits to former students and employers.
- b) Regional seminars in order to detect necessities in regions in terms of training
- c) Development of a data bank on human resources, already mentioned, by province, age, gender, and academic qualification.
- d) Data bank on graduates and their follow-up for pedagogical purposes. Still to be resolved :
 - The every three years survey should be coupled with a regular and systematic monitoring (course by course), as it is done in other training institutes elsewhere.
 - Not enough consultations with EPARs and Águas de Mozambique on staff necessities and impact / follow-up of courses
 - New sector demands and necessities are not systematically incorporated in courses.
 - Monitoring of the course contents (relevance, content, and quality of presentation) is not monitored regularly both at CFPAS and IIM.

2.4 Decentralization

Decentralization makes sense in a country like Mozambique, not only because of distances, but also because of the need to develop capacities in other provinces of the country, as well as to make better use of resources (financial and human), to be closer to realities and needs, to organize relevant field trips, and to avoid moving professional adults far away from their families for a long time.

Decentralization is also part of government strategy for the sector, which gives more responsibility to provincial directorates.

Contributions of Moz. 16 to decentralization :

- a) Moz.16 has been instrumental in starting the decentralization process of training at regional level, and this effort should be applauded, despite all the difficulties it has encountered.
- b) Two training centres (classrooms) were rehabilitated in Beira and Nampula, and at the same time Regional focal points (staff from DPOPH) were appointed.
- c) PEC and AFRIDEV short courses have been successful.
- d) Implementation of regional seminars and consultations in order to collect information and attract candidates for courses.
- e) Creation of regional scholarship commissions.
- f) Allocation of scholarships for middle level technicians in Beira and Nampula.

Still to be resolved:

- Initial conditions have been created but need to be consolidated, especially the issue of decentralization itself. It appears to the mission that the way decentralization of training has been conceived is more as an expansion of CFPAS, or deconcentration, rather than decentralizing, which implies working with partners, with shared budget responsibilities and more use of local staff and expertise. CFPAS could play the role of facilitator in this process.
- Decentralization activities require an enormous organizational effort now, which is done from Maputo.
- Decentralization is more seen as at regional level (central and northern) rather than at provincial level ; there is a demand also at provincial level which could be looked at.
- Marketing of courses is not using new efficient marketing techniques, which require anyway a systematic and organized follow-up. It has been reported to the mission that when advertising about courses, not much was said about the contents.
- Not enough trainers are trained at provincial level (which opens a « market » for CFPAS on training of trainers' courses.
- In general, participants and sponsors report the poor organization of the courses, and the DPOPH report problems of finance with Maputo. Some courses (for example, fiscalização) have been badly prepared and organized. This gives a negative image to the donor community and to the provinces, about professionalism and the capacity of CFPAS of running such courses. There is a definite need to install strict quality control procedures regarding logistics and course contents.

2.5 Gender

Gender is an element of the programme. It appears more explicitly and receives much more attention in the proposal for phase 7 than in the earlier proposal for phase 6. This shows already a progress in relation to the intention and willingness of introducing gender also at implementation and operation levels. In the proposal for phase 7, gender equity is explicitly mentioned as an element of development. It also mentions women as the target where priority attention should be given in water supply systems. When such importance is given to gender at policy and proposal levels, it is more

feasible to create a basis for the implementation of gender sensitive strategies and approaches at operational levels.

Among the contributions of Moz. 16 can be listed the following:

- a) Gender awareness has been initially developed by Nicole Bezençon, and further developed by CFPAS - PEC staff together with SDC technical assistance. The Technical Advisor TA3 followed a Gender Briefing Programme at IRC in Holland, and produced an action plan with a view to introduce gender within the three Moz. 16 partners, at different levels. The plan of action resulting from this training programme will help to introduce gender at policy level and in the strategic planning of the three partners. However, the PEC trainers have either not been trained or need upgrading on new developments concerning gender and equity.
- b) The PEC course curriculum (1 and 3 years) includes Gender and Development. This opens space for more reflective thinking on the concept of gender and its translation into practice. The same topic is also included in short courses given by the PEC trainers.
- c) The number of female graduates in CFPAS in long courses (3 years and Diploma), supported by Moz. 16 scholarships, increased from 96 to 98, diminished in 99 and it is expected to grow again in the year 2000. However, the scholarships offered to women are mostly for the PEC course and not for the more technical areas, which lead to higher level positions in the sector.
- d) In IIM/Hydraulic, there has been an increase in the gender balance for the allocation of scholarships.
- e) The data on the water sector labour force developed by the Human Resources section of the CFPAS shows the number of graduates and scholarships desegregated by sex, hence an important element for planning in a gender perspective;
- f) The Moz. 16 programme, through its TA2/IIM, has made available financial resources to NUFETI, an organization which aims at motivating young women to enrol in the IIM;
- g) Two of the 12 IRC books translated into Portuguese with support from the Moz. 16 programme are books on gender in water and sanitation programmes.

The mission wishes however to highlight the following limitations:

- Still only 10% of the IIM/Hydraulic students are women.
- Women face many difficulties in order to participate in a CFPAS course. This is recognized in an article published in the Revista Água – 1997, entitled “Women have priority: but not all that shines is gold”. There is little affirmative action from the side of CFPAS to reduce these difficulties.
- The support to NUFETI aims at motivating young women to enrol in the IIM courses in general and in the IIM/Hydraulic courses in particular. However, the effort to support NUFETI has not showed the intended results. NUFETI has not been able to implement the planned activities in the short term and, results in the middle term are a marked gender imbalance in IIM/Hydraulics in terms of teachers and students enrolment.
- At the level of concrete strategies and implementation, there is a response but it is still weak.

2.6 Financial management and sustainability

Financial management

Moz.16 has significantly contributed to the improvement of management processes and procedures at CFPAS, which was a major work, having to go from a state-run and donor assisted organization to more autonomous organization. However, still a lot remains to be done. Concerning the IIM/Hydraulic, management is still very centralized at Director's office, and the institution, being a public body, cannot change itself easily to new managerial practices, although some possibilities should be sought with the Hydraulic Nucleus.

The Moz.16 programme has contributed in the following way to improve management:

- a) After the conducting of audits in CFPAS, a new computerized accounting system has been installed.
- b) There has been support to improve administrative procedures within CFPAS, including filing and bookkeeping.
- c) The programme has introduced a three months budgeting system, through which CFPAS submits a financial plan every three months to SDC. SDC then agrees to finance once justification of previous months has been given. This has helped to introduce more financial autonomy to CFPAS as well as to put in place an accounting system based on receipts and control of expenditures.
- d) SDC support has been very participatory in problem solving and on general management issues, which has considerably helped CFPAS management.
- e) A cost study will be carried out in 2000.
- f) Hydraulic Nucleus capacity-building on financial and managerial issues.
- g) Transparent monitoring of the use of funds with IIM.

The mission has however noted the following pitfalls, which need to be solved:

- Low cost consciousness about various activities, which makes pricing of services a difficult issue.
- Prices are still somehow subsidised since the centre is running with major assistance from donors. The price will need to be revised in order to cover all costs and to correspond to market prices.
- Cost consciousness should be raised not only at management level but also at staff level. Staff has expressed to the mission their wish to be more involved in budgetary planning and also to manage a budget for their department.
- CFPAS needs to acquire a competitive and a more pro-active attitude to gain contracts as well to develop negotiating skills with various partners at all levels. This leads directly to the need of developing marketing aptitudes and mechanisms.
- Financial planning and analysis needs to be improved as well, in order to support decision-making and problem solving.
- Management of personnel is also an important asset of good management. CFPAS would gain by introducing better team spirit and positive thinking and motivation in personnel. This can also be done in delegating some responsibilities to personnel.

Efficient use of equipment

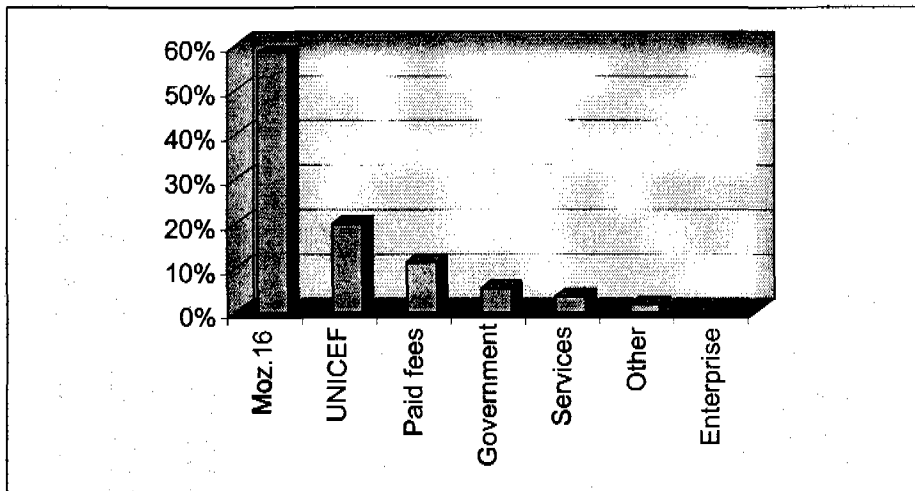
Equipment such as pedagogical equipment are widely used and appreciated by both staff and students. However "oficinas" have mentioned that their equipment needs maintenance, or renewal.

The mission believes that laboratories, both at CFPAS and IIM/Hydraulic are underused. The latter could be much better exploited and generate income, despite the fact that IIM and CFPAS are already sometimes using their laboratory, workshops and consultancy capacities to provide some services to diverse governmental and private organizations. In the IIM/Hydraulic, the staff of the Hydraulic Nucleus convened to the mission positive ideas on how to make the two laboratories (Hydraulic and Hydro-chemist) more profitable.

Financial sustainability

One way to assess financial sustainability is to estimate what will happen when donor assistance is over. The answer for IIM/Hydraulic normal activities would still continue. In the case of CFPAS the situation is very different. As the graphic below shows, CFPAS is still heavily dependent on external assistance (mainly SDC and UNICEF), and its financial sustainability is therefore quite low.

Overview of CFPAS yearly income (1999)



MOPH has confirmed to the mission that the government will gradually stop its financial assistance to CFPAS after a period of three years. Since donor assistance is not likely to last forever, and in the context of a greater autonomy, the issue of financial sustainability should be one of the major objectives for the future of CFPAS.

Financial sustainability will require that the items “services”, “paid fees” and “enterprise” become the major sources of income, and this can gradually be done with: a) a shift of the donor’s approach from donor-driven (directly financially assisting the organization) to client-driven (donor buying services); b) better marketing; c) increased planning and negotiations with major “clients” and partners; d) improve the quality of services provided; e) negotiating with the government (particularly the Ministry of Education) their position as a financial partner, especially due to the fact that CFPAS is not only providing professional training but has also been a substitute to the Ministry of Education for general education in many long term courses; f) increasing income generating activities (new courses and more profitable use of equipment, such as laboratory, and of available expertise).

2.7 Relationships

Moz.16 has been instrumental in opening the institutional “horizon” of CFPAS, which consisted in expanding its network of institutional relationships. CFPAS is focussing to strengthen partnerships with well recognized regional and international training institutions such as NETWAS (Networking for Water and Sanitation, Nairobi, Kenya), IWSD (Institute of Water and Sanitation Development, Harare, Zimbabwe), ITN (International Training Network for Water and Sanitation in Africa) and IRC (International Water and Sanitation Centre, Delft, The Netherlands), in order to expand its market and update its capacity and knowledge on new trends in the water and sanitation sector and to become a reference centre for the Portuguese speaking countries in Africa. Furthermore, the IIM is strengthening

linkages with other institutions in order to keep up-to-date with the dynamics of the sector, as University of Eduardo Mondlane, DNA, CFPAS and the Private Sector in Mozambique and with the Instituto Superior de Engenharia (the Higher Level Engineering Institute) in Lisbon, Portugal. NETWAS, IWSD and IRC have been contacted by the mission and all have expressed their interest to co-operate more actively with CFPAS in the future. Besides, CFPAS has been invited to be part of international exchange programme on resource centre development (STREAM). There are also possibilities to be sought with the neighbouring South African organizations.

Moz.16 has been instrumental in supporting the development of two international courses at high level, organized jointly by CFPAS and IRC of the Netherlands, in which participated professionals coming from Mozambique, Angola, Capo Verde and Guinea Bissau. Besides the fact that CFPAS has gained a lot in organizing such courses, it has considerably contributed to raise the profile of Mozambican institutions, and particularly CFPAS, in being instrumental to new sector developments. This is a unique Portuguese speaking African initiative of the sort, which should be continued. The possibility of linking up with an electronic network of information, in Portuguese, should be considered. CFPAS could have a co-ordinating role to play in this context and all PALOPs could benefit from it.

The mission however believes that it is also important for CFPAS to consolidate its network within Mozambique, especially with IIM and the University of Eduardo Mondlane, with whom possible joint activities could be developed in the future especially in the view of the development of a sector resource centre. This "intellectual" network could be coupled with a more "commercial" network with water enterprises, DPOPH and donor agencies. The mission also believes that building a network of relationships is not enough. Some of these relationships need to develop into real partnerships, which need to be formalized into an institutional agreement and a plan of activities as well as in the development of joint project proposals.

3. Lessons learned and recommendations

3.1 Lessons learned about the present programme

The mission has summarized the lessons learned in terms of relevance, efficiency, effectiveness and impact in the table that can be found on the next page. It has been based on an analysis of the findings presented in chapter 2, using the following methodological guideline.

Relevance shows how appropriate the programme is to the sector needs, setting and strategy.

Key indicators for relevance are:

- Human resources development
- Conception of courses
- Institutional capacity – building
- New developments, including demand responsive approach, decentralization, private sector involvement, community management, gender, cost recovery, and participatory planning

Efficiency measures both the performance of the programme and its ability to reach results without wasting time and resources. Key indicators for efficiency are :

- Performance
- Use of resources
- Management / monitoring of the programme

Effectiveness shows how well the programme's objectives have been reached. Basically, the specific objectives of the project are:

- to strengthen the capacity of CFPAS in training and management
- to strengthen the capacity of IIM/Esp. Hidr in training and management
- to strengthen the capacity and expertise of CFPAS to respond to sector demand, as well as in adapting course curricula
- to strengthen the capacity and expertise of IIM / Hydr. to respond to sector demand, as well as in adapting course curricula
- to strengthen the capacity of CFPAS as a sector centre of excellence
- to decentralize training activities at regional and / or provincial level
- to contribute to Human resource development and planning in general, as well as to manage scholarships in an optimum way
- to improve the capacity of PEC-DAR in providing conceptual inputs and in monitoring central and provincial training activities

Impact shows what are the changes directly or indirectly resulting from the implementation of the programme. Key indicators for impact are:

- *Sustainability*, both financially and institutionally
- *Expertise*, in terms of the capacity of CFPAS, IIM and PEC-DAR to generate and disseminate skills and knowledge for sector professionals,
- *Employment*, in terms of the ability of trainees to find a job, and of the ability of employers to find adequately trained professionals
- *Network*, showing the interlinkages between various national and international sector institutions for knowledge development, capacity-building and resource generation.

Issue	Item	Level	Comments
Relevance	Human resource development (sector)	●●●	Moz. 16 has contributed directly to sector HRD through 604 scholarships at basic level, and 128 at middle level; however management of scholarship needs to be improved. The development of a sector labour force data bank is considered as a positive contribution as well, but not shared enough with partners
	Course conception	●●	Development of new short courses in order to respond to sector demand; however, adaptation of curricula is a slow and cumbersome process; quality control is needed.
	Institutional development	●●	Moz. 16 has been instrumental in supporting CFPAS progressively adapt to changes, although there is still a lot to do; staff training is relevant. Nucleo Hidraulico of IIM exists but not many activities Pas claire!. Relationships have been developed with other organizations in Mozambique and abroad, but still need to be formalized.
	New sector developments	●	Apart from supporting new status and management for CFPAS, and the development of PEC activities, still insufficient integration of new sector developments in course curricula and contents as well as in knowledge of staff.
Efficiency	Performance	●●	Planned activities over the programme period have been realized, with some exceptions and delays, particularly concerning DAR and translations. However not enough is done to monitor the quality of the completion of the activities.
	Use of resources	●	Equipment such as laboratory, library, pumps are not sufficiently used. Furthermore, the mission believes that SDC financial assistance should be used as a trigger for development, going from donor driven to client driven.
	Management / monitoring	●●●	The management of Moz. 16 has been very efficient, and the three advisors have actively contributed to its success, by adapting efficient financial monitoring practices, but also by adopting a "participatory" management style.
Effectiveness	Management capacity of CFPAS	●●	Good start in support to CFPAS management improvement (computerized accounting; three months budgeting; support to administration; positive leadership), but not yet cost conscious and working as an enterprise.
	Management capacity IIM/Hydraulic	●	Monitoring and data collection has been developed, but very little manoeuvre to take any decision or take initiatives; no control on budget. Núcleo Hidr. Some capacity, but no space to develop it.
	Expertise of CFPAS / market needs	●●	PEC is the main driving force to integrate new sector developments and respond to market needs; other courses need to be as effective; staff expertise needs to be upgraded
	Expertise of IIM / market needs	●●	IIM/Hydr. responds well in terms of technical training needs, but still needs to respond the important needs at tecnico medio level, on management, social, sustainability and sanitation issues
	CFPAS as a centre of excellence	●	CFPAS has started to develop international courses and diffuse information through the Revista Água, but a lot remains to be done in terms of expertise, knowledge generation, documentation centre and electronic network.
	Decentralization	●	Decentralization has started, but a lot remains to be done in terms of formalizing procedures and partnerships, planning and quality control of courses
	Human resources planning	●●	CFPAS has developed a data bank on sector labour force and needs, however not shared with DNA, nor sufficiently used for actual planning
	Conceptual capacity of PEC/DAR	-	Moz. 16 's support was more oriented towards specific activities and building up a relationship between CFPAS and DAR
Impact	Sustainability	-	CFPAS present financial situation will still support (but in a different way) in order to reach sustainability, whereas IIM goes on even without the programme
	Increased level of expertise	●●	Apart from PEC activities, the programme has moderately contributed to increase level of expertise; still needs on many of the new issues brought in by the new water policy
	Employment	●●	The great majority of students find an employment after training. But employers mention the need to have more managers and facilitators
	Network of partners	●●	Networking has started which is good. Some (not all) of the (key) relationships need to become partnerships in order to have some of the network become active and effective. Need to be in pace with what is happening in the sector, particularly through the Internet.

Legend - : poor level ● : low level ●● : moderate level ●●● : high level

3.2 Strategic elements for the future of the programme

The phase 1996-2000 is characterized by a period of transition, during which initial changes were brought about as a result of the New Water Policy and institutional restructuring. The mission believes that the next phase should focus on the consolidation of these changes in order to reach sustainability, therefore going:

“from a phase of transition to a phase of consolidation”.

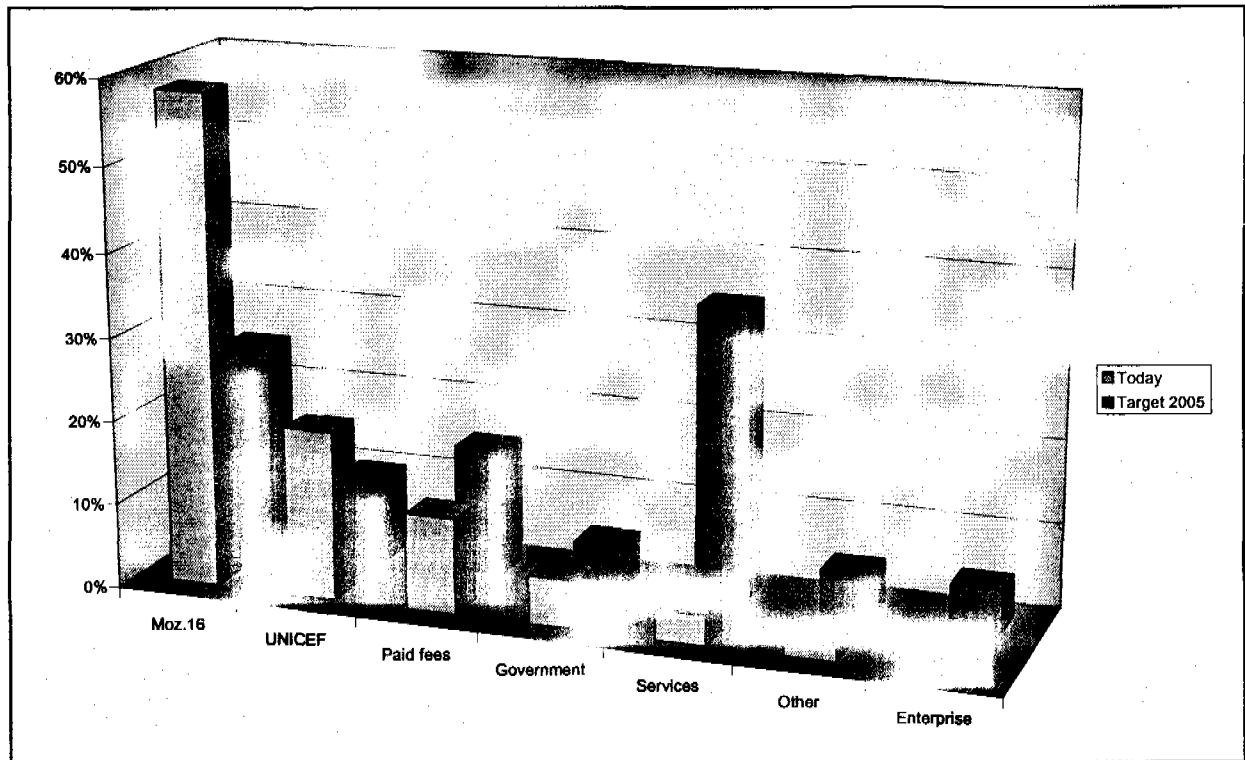
The mission proposes that a future phase of the Programme should focus on the following aspects:

- Consolidate management capacity (new structure CFPAS, administration, planning, monitoring, cost consciousness);
- Consolidate financial sustainability (revising price policy; marketing; securing activities; investing in quality control; increased income generating activities);
- Consolidate expertise (staff capacity building, curriculum development; manual development; awareness of new developments, including gender, sanitation and hygiene, participatory approaches, and management);
- Formalize partnerships (establishing an advisory board with national and international partners; partnerships with provinces; joint venture for selling of services);
- Consolidate decentralization (partnerships with provinces and decentralization of budgets; contracts; TOT);
- Develop and consolidate role of reference centre for the sector in partnership between CFPAS-IIM-DNA-UEM (through Internet, Web page, Revista de Agua and upgrading of documentation unit);
- Optimize costs (through: a) combination of similar activities in one plan of activities, for example decentralization IIM and CFPAS; b) improving communication channels (thus time and money) with network of computers of key partners; c) possible joint ventures for income generating activities between CFPAS-IIM-UEM; d) training of trainers courses, especially at provincial level; e) revision of scholarship strategy and policy).

The mission believes that SDC could still be instrumental in accompanying this consolidation at least for the coming three years, before thinking of an eventual progressive phasing out. Phasing out now would jeopardize the changes started already, and most of all would put the situation of CFPAS in danger. The present team is well appreciated by the local counterparts and has a good thorough knowledge of what has been going on. However, in order to improve its effectiveness, SDC assistance can be revised in the following way:

1. **Focusing technical assistance**, meaning that technical assistance is all geared towards reaching a sustainability objective, not only concerning financial aspects, but also concerning institutional and expertise aspects; focusing also implies that there is a gradual shift from the strong "institutional-linked" assistance of the present programme (each partial action being linked in the present programme to an institution) to a more "issue-linked" assistance (where issues such as management and financial sustainability, or partnerships with decentralization, or development of expertise with resource centre development are essential, as they are cross-cutting issues).
2. **Adapting a different approach from donor to client**, meaning that SDC could gradually use the services of CFPAS or IIM as part of a project, and therefore become a client; or assist potential users of CFPAS services (see simulation table)

Simulation exercise for a new income distribution for CFPAS



Moz.16 and UNICEF (to be negotiated) could shift part of their approach into the one of a client of services, in order to gradually move from a donor-driven and dependant assistance, and help CFPAS to work on the basis of a more entrepreneurial approach. Companies in the water sector are not likely to increase sharply their contribution, as many are being privatized and have other short-term financial priorities (with exception of Águas de Mozambique, who could be a client).

3. **Increasing effectiveness of technical assistance** by different means:

- a) making better use of present team, which has a good knowledge of the situation, but which could adapt its assistance to a new focus;
- b) relocate management of programme, which would give a clear indication to CFPAS that the programme is now aiming for sustainability;
- c) rethink the attachment of the SDC advisor to IIM as skills are needed on cross-cutting areas like partnership development, monitoring and decentralization;
- d) direct SDC assistance to PEC is still essential but it could be linked to quality control and marketing;
- e) make better use of available expertise within Mozambique, by first making an inventory of available expertise;
- f) arrange contractual agreements for "backstopping" activities (three missions of two weeks per year over a period of three years, for example) on specific issues which the team cannot handle and where there is no available expertise in Mozambique. These arrangements should be made with known organizations, either from Africa or Europe, preferably with an organization or two which could become institutional partners in the long term;
- g) scholarship could be centralized into one common Fund;
- h) on a long time perspective, following the development of activities in the coming five years, the programme could help develop a project proposal for the expansion and renewal of CFPAS site and buildings (to be submitted for example to the European Union);
- i) the assistance will definitely have to go through a redefinition of financial priorities as proposed in the table below:

Proposed trend for the future of the programme

Cost item	Moz.16 Contribution In 1000 US\$	Proposed trend	Comments
TA-1 (CFPAS)	2336		
Scholarships	973	↘	Scholarships are kept but managed differently; but, long courses (3 years) reduced, and increased number of cost-sharing scholarships
Staff training	290	↗	Expertise to be strengthened (gender, sanitation, hygiene, management)
Functioning	136	↘	Financing through cost recovery in prices set for services
Decentralization	175	↗↗	More activities at provincial level, with formalization of partnerships
Info. management	285	↗↗	Important for the development of resource centre
HRD section	131	↔	With clarification of role on HRD planning
Instit. development	346	↗↗	With strong emphasis on financial sustainability
TA-2 (IIM)	798		
Scholarships	386	↔	Scholarships are kept but managed differently
Staff training	92	↔	Expertise on management and social issues needed
Functioning	160	↘	To phase out
Decentralization	82	↔	To be coupled with other decentralization activities
Nucleo Hidraulico	78	↔	More space for income generation activities and information management
TA-3 (PEC & DAR)	484		
PEC staff training	113	↗	Staff presently overloaded; need more people with expertise
PEC material	69	↗	Production of material incorporating new messages and concepts
Social expenses	66	↔	To be borne by CFPAS with incentives gradually in a later stage pas tres claire
Decentralization	98	↔	To be coupled with other decentralization activities
Support to DAR	138	↔	Development of joint activities
Technical assistance	1214	↔	With Increased effectiveness and focus

Legend ↘: decrease ↔: no change ↗: increase ↗↗: important increase

3.3 Recommendations**General recommendations**

In general, the mission recommends the continuation of the programme for the following reasons:

- there is a need to consolidate and sustain the changes which have been introduced;
 - human resource development is still very relevant in Mozambique, and training institutions will still need assistance in order to consolidate their capacity to upgrade human resources at all levels;
 - human resource development is high on the agenda of sector planners and donor agencies.
- However, the programme will also need to adapt some of its focus and approach.

Recommendations on Human Resource Development

- Considering the fact that human resource development and planning for the sector is still at an initial stage, the mission recommends the following :
 - To assist in the development and regular upgrading of a human resource strategy for the sector together with DNA, using expertise and data developed by CFPAS, which then could be used as a basis for scholarship strategy and training / course curricula development.

- To assist water enterprises, provincial directorates and projects in the development of human resource development .
2. Scholarships are an essential tool of government and donor assistance to human resource development and a long term solution cannot be sought by one project or donor only, especially when several are implied. The mission therefore recommends the following :
- To start a national consultation between MOPH, Ministry of Education, DNA, and key donors in order to constitute a common strategy and policy for the management of scholarships at all academic levels for the water supply and sanitation sector. Scholarships could be either given directly to training institutions, to water enterprises that will choose their training or to individuals through appropriate mechanisms, especially a wide dissemination of information about scholarships available.
 - To link the management and attribution of scholarships with the human resource development strategy for the sector as well as to a balanced development by provinces with a gender perspective. It is essential that scholarships are responding to sector priorities and necessities.
 - To improve the definition of roles and responsibilities between central and provincial management of scholarships.
 - To continue with the effort of introducing cost sharing scholarships.

Recommendations on Institutional Development

1. Considering the fact that the new autonomous status of CFPAS has just been officially put in place, the mission recommends that SDC gives support to the implementation of the new organic statute, especially on the following points:
- ***Improving administration.*** Continue support to upgrading of administration procedures and organization; upgrade administrator's skill; budgeting; financial analysis; personnel management; communication within the organization; performance monitoring; and team building.
 - ***Development and consolidation of expertise.*** Clearly indicate chosen area of expertise, and develop/promote it; proposed area of expertise: low-cost community water supply and sanitation; technical operations for all systems; domestic and collective water treatment; community development, including gender awareness; monitoring and evaluation; hygiene education; training of trainers; participatory methodologies; information management; human resources assessment and planning. All other areas should be done in partnership with another institution having that expertise.
 - ***Training of staff*** on area of expertise. Training of staff is needed. PEC is likely to face greater demand. Also staff capable of running training of trainers courses and also capable of organizing course – programme and logistics.
 - ***Draw up inventory of available external capacity.*** Constitute a pool/inventory of potential resources persons on chosen area of expertise, as well as on other areas.
 - ***Improve planning.*** To be considered: year planning; planning per department; planning of weekly and daily activities; planning of human resources development for the sector; planning and programming of training activities in provinces; keeping track of time; and avoiding delays; human resources development and monitoring, and communicating results to DAR and the Management Committee for Middle Level Scholarships.
2. Considering that IIM/Hydraulic needs to be acquiring more responsibility in order to gain motivation and develop activities, the mission recommends :
- ***To support the strengthening of the Hydraulic Nucleus*** in terms of financial, structural and monitoring responsibility, as it is already done elsewhere (in Mozambique and abroad) within similar type of organizations.

- **To support activities of NUFETI** in order to effectively continue to reach a gender balance in human resource development for the sector.
- **To develop income generating activities** in an organized way, making profit out of equipment and laboratories, possibly creating joint ventures with CFPAS and UEM; develop a pricing policy for services given, which is attractive enough for professionals. All activities should benefit IIM by providing relevant information and documentation. The argument that says that consultancies keep people away from their institution could be balanced by a positive return in terms of better salaries, motivation and especially by an increased expertise.
- **To support the adaptation of courses to middle level technicians' needs..** Actions suggested here are the assessment of what are the professional needs and task of the middle level technician in the field; possibly adapt courses to include social and management element which are of great demand; pursue that these modifications are accredited by the Ministry; development of short courses and courses 'à la carte' for middle level technicians, involving expertise from outside if necessary.

3. DAR Section of Communication and Dissemination should participate in the future water sector reference centre. However, a solution has to be found for the present under-staffing situation of this Section.

- **Monitoring** of sector developments should be a new activity to be implemented also by the Section with a view to introducing those in DAR/PEC policies and strategies.
- The mission also recommends to **consolidate the institutional links** between CFPAS, DAR and UEM, by motivating staff and management in developing joint project proposals and combining complementary expertise.

4. Considering that the development of sector resource centre is one of the future objective of CFPAS, the mission recommends the following :

- **Partnership development.** The success of this activity will rely on the co-ordination and complementarity of expertise and experience of CFPAS-IIM-UEM-DAR, which would be co-ordinated by CFPAS to start with, as it has already started some activities in that direction. This partnership has to be structured, organized and paid for in the beginning through donor support.
- **Development of a Documentation Centre.** Buying of documents; subscription to relevant magazines; translations of further documents; acquiring copies of project reports and other documents from donor and NGO community in Maputo; all this should be inventorized in a computerized manner. The establishment of an electronic network of sector relevant information in Portuguese should be a priority to benefit the sector in Mozambique and in the other PALOP countries.
- **Website development.** Website including information about documentation unit, or where to access to relevant regularly updated information, linkages to other websites in the sector; information on sector projects and in Mozambique and the other PALOP countries; information about courses and scholarship; information about recent developments and key issues; information about actors and human resource development, etc.
- **Consolidation of Revista "Água".** It is proposed to rename the Revista as "ÁGUAS" and not "ÁGUA" in order to reflect all water-related and cross cutting issues. It should be more frequent and less thick, unless special issues are proposed. There has been a considerable amount of comments made which should be taken into account. The Revista should include publicity, and study the possibility of a subscription fee. Possible use of the magazine as a learning and teaching tool, using it to inform about job demands and offers, about projects in the sector in Mozambique. Give space for other writers from other projects, and possibly put the Revista Águas on the net. In July/August 2000 a new issue will appear taking some of the above already into consideration.

- **Pro-active steps taken to join the reference centres network** . Links with ITN centres and the STREAM project have already started.

Recommendations on Course Conception

1. Considering the need to continuously adapt courses to professional needs and realities, the mission recommends the following :
 - **To link course development with** human resource planning and development, as well as with sector needs identification.
 - **To develop a system** in CFPAS and IIM for course curriculum revision and quality control (capacity building of responsible groups for quality control; organization of forums for the exchange of experience; development and disseminate principles of verification and quality of curriculum development).
 - **To reinforce within CFPAS the capacity to formulate strategies** for the management and planning of courses.
 - **To assist CFPAS in the establishment of continuous education**, since this is a professional educational system which is frequently demanded by enterprises and which corresponds better with realities of a firm.
 - **To support CFPAS in the development of field experience** in courses; more emphasis should be given to practical experience.
 - **To support the development of management and social courses** at middle level technicians.
 - **To support the pre-professional insertion or 'práticas profissionais'** as one means of getting new ideas from the field on innovations in curricula conception to adapt IIM/Hydraulic courses to new developments.

Recommendations on Monitoring

1. Monitoring is an important aspect of course development. The mission recommends the following on monitoring, which could be done jointly between CFPAS, IIM and DAR :
 - **To monitor sector developments** with new concepts and developments, which could considerably help to develop the contents of manuals and guidelines.
 - **To monitor the market development**, in order to see how demand is evolving and adapt to realities.
 - **To monitor managerial aspects** on relevance of pedagogy, finance, number of students trained per gender, age and province, and administration.
 - **To monitor effectiveness of courses** giving feed-back from courses, development of key indicators, such as level of satisfaction, career path, additional training needs, elements most useful from training, etc., as well as monitoring relevance of PEC activities at community level by involving PEC workers more.

Recommendations on Decentralization

1. Due to the fact that decentralization is part of the government sector strategy and that it has some positive comparative advantages (see paragraph on decentralization) compared to centralized courses, the mission proposes the following recommendations :
 - **Clarify the decentralization strategy** and objective: should it be deconcentration or decentralization? The mission recommends to opt for a decentralization of activities, whereby regions and provinces have more responsibility in planning and budgeting and where especially CFPAS is playing the role of a facilitator as well as working on a contractual basis

with provincial partners. These partners at regional level should be the two already chosen training centres in Beira and Nampula, but at provincial levels they could also be projects or local donors or NGOs

- **Continue to inventorize capacities** at regional level and build capacities if needed through training of trainers.
- **Contribute to human resource development** at regional or provincial level. For that, a good linkage would be the Dutch new programme for decentralized training, TRETU.
- **Consolidate the role and capacity of the regional focal points** in order to have a real counterpart at regional level.
- **Consolidate mechanisms for quality control** and systematic monitoring of organization and content of courses given in provinces.
- **Revise the marketing strategy** and involve more negotiating with projects, and use more modern system of communication technology for course marketing, as well as involving directly focal points in marketing efforts.

Recommendations on Gender

1. Considering that : a) gender equity is an integral part of the agreements between the Mozambican and Swiss Governments; b) education of women helps to improve sector performance in general and health and hygiene and the education of children in particular; c) gender equity does not only mean an arithmetic balance between the number of men and women, but that it also is an indicator of social progress; d) not educating and promoting the employment of 50% of the population will fail to consider the contribution of a large proportion of the capacity to the labour force; e) positive actions towards women involvement contribute to changing gender discrimination and stereotypes; f) joint decision making by both men and women contributes to a balanced and equitable development, the mission recommends the following :

- **At policy level**, to ensure that gender equity is within main objectives of project development, that decision makers are gender sensitive, that gender is explicitly mentioned in policy documents and that statistics desegregate gender aspects
- **At strategy level**, introduction of relevant guidelines for the introduction of gender awareness in programmes and projects, as well as include gender awareness in the future development CFPAS, with a budget attached.
- **At institutional level**, recruit gender sensitive and gender skilled professionals in key positions of the organizations; promote a seminar on gender awareness between CFPAS, IIM and DAR, in order to identify specific activities to include gender awareness in course programmes; develop a monitoring system for gender equity; support efforts made by NUFETI, in order to increase women's enrolment and promotion to higher levels of education and training; motivate a non gender-biased environment and teaching material; offer some gratification for women involvement and possibly organize courses at provincial level which help them to be closer to their families; sensitize and train staff on gender; inclusion of gender aspects in course's curricula;
- **At community level**, development of participatory techniques which are gender and poverty sensitive. All statistical figures desegregated by gender.

Recommendations on Financial Sustainability

1. Considering the importance of financial sustainability for the future of CFPAS, the mission recommends that SDC supports the strengthening of the capacity on the following aspects :

- **Raising cost consciousness.** That departments in CFPAS have their own budget; follow recommendations of cost study currently in implementation; systematic cost effectiveness of

decisions made and cost control; stability of cost items when negotiating contracts with partners or clients)

- **Revising price policy.** Implement market price versus present subsidized price; price covering all costs; price being competitive in a market; possible ability and willingness to pay survey; adapt prices to various products and clients; clearly show chosen price policy to partners without changing in a short term.
- **Improving marketing.** Inventory of market, willingness to pay, assessment of training needs and financial sources, use of Web page for advertisement, advertisement of services and products offered by CFPAS, assessment of competitors comparative advantage, determine a pricing policy; quality control; barometer of client satisfaction; response to requests or comments.
- **Securing activities.** Establishment of plans or 'contrato de programa' with partners, including DNA, and donors. This requires lobbying and negotiating contracts, participating in major sector events; being aware of major projects; visiting at least once a year all major partners, with a clear agenda; preparing format for contractual agreements; developing jointly HRD plans.
- **Developing income-generating activities.** Services, courses 'à la carte', consultancies, studies, profitable use of equipment and laboratory, in a joint effort CFPAS – IIM - UEM in order to be able to better respond to various demands and to create a synergy. .
- **Investing in quality control .** Quality is the best passport of an organization for future activities. Quality control includes setting norms, controlling work preparation and implementation, motoring its efficiency and effectiveness, and having an outsider specialized in the area to check relevance and quality of work / service produced the first time.

2. Considering the fact that the development of financial means is also important for IIM/Hydraulic, the mission recommends that the Nucleo Hidraulico starts developing a strategy for income generating activities, using its equipment and laboratories.

Recommendations on Partnership Development

1. Considering that partnership developments are an essential element of the future of both CFPAS and IIM/Hydraulic, the mission recommends the following :
 - **To formalize partnerships** in the form of agreements or joint project proposal and joint ventures not only with foreign partners but also with national partners at national and provincial level.
 - **To optimize channels of communication** with all partners, through Internet, but also through regular consultations.
 - **To constitute an advisory board or panel** composed of national and international partners, which would meet once a year, in order to advise on new sector developments, advise on activities, and advise on conceptual matters or specific missions. Proposed partners (UEM-IIM-DAR- NETWAS-ISWD-ITN Centres in general, and IRC)
 - **To establish an electronic network** (between IIM-CFPAS-UEM-DAR and Nucleo CFPAS Beira and Nampula). This will need to invest in computer equipment and carry out some training on use of Internet, and WebPages. The linkage with a network containing relevant sector information in Portuguese should be taken in serious consideration.

Annexes

Annex 1 : Terms of references

Terms of Reference for the External Evaluation of Moz.16: Vocational Training in the Water Sector in Mozambique (Final Version, Maputo, 18/11/99)

1. Background: History and actual Situation of the Program

1.1 General situation in the water-sector

Under its National Water Policy (NWP) approved in 1995, the Government is undertaking a broad reform of water supply provision aimed at moving towards delegated management, and improving its regulation and financial planning. In December 1998, the legal framework for private sector participation, a regulatory board for water, and a water tariff policy were all approved. With respect to urban water provision, the government completed the contracting out to full private sector management the water supply services in five major cities (Maputo, Beira, Quelimane, Nampula and Pemba) in November 1999. The government has commenced tariff adjustments to ensure the improvement and sustainability of water provision. An integrated water, sanitation and hygiene strategy is under preparation and will be completed by mid-2001.

With regard to rural water supply, the government has begun implementation of a Rural Water Transition Plan (RWTP). The plan, which will be extended to all provinces by 2002, aims at transforming the planning and delivery of rural water and sanitation services from a supply-driven model to a sustained demand responsive approach, characterised by community management, cost recovery and the involvement of the private sector. The government will also develop a national water resource management strategy and co-operative legal and institutional framework at the regional level.

SDC started its activities in the water sector in Mozambique in 1979, with "Construction of rural water infrastructure" in Cabo Delgado Province, executed by the Swiss NGO Helvetas. 2 years ago the supply-driven approach was replaced by the demand responsive approach, a move which brought major changes.

In 1986 started the support to the Vocational Training Centre for Water and Sanitation (CFPAS) and to the Hydraulic Courses of the Industrial Institute of Maputo (IIM). Both institutions do training for basic and medium water technicians.

Since 1989 an Institutional Support Programme works within the National Directorate of Water and Sanitation (DNA), which is part of the Ministry of Public Works and Housing (MOPH).

1.2 General Context of the Program (See Annexe 1, analyse SEPO)

The Vocational Training Centre for Water and Sanitation (CFPAS), the main partner of the Moz.16 Program, was created in 1980 to respond to the needs in term of training in the Water Sector. It is responsible for organising training and upgrading courses at basic and medium level and to provide technical support for water and sanitation companies. Besides the training in water supply and sanitation, the CFPAS offers training and refreshing courses in accountancy, administration and community participation and education. The Program gives its support to CFPAS through its Partial Action 1 (TA-1) and 3 (TA-3). The other CFPAS's partner is UNICEF.

Another partner is the Industrial Institute of Maputo (IIM), which is preparing middle level technicians in a wide variety of courses. The Moz.16 Program gives its support to the specific hydraulics course, through its Partial Action 2 (TA-2). SIDA (Swedish International Development Agency) was partner of IIM until June 1998.

The third partner, the Department for Rural Water Supply (DAR), is responsible for rural water supplies throughout the country and in particular the program for community participation and health education (PEC). The PEC courses have been integrated into CFPAS training activities since 1996. DAR is being supported by Partial Action 3 (TA-3) of the Program. The main partners of DAR are WB (World Bank), SDC-Moz.37, CIDA (Canadian International Development Agency) and UNICEF.

At the end of 1995, 4667 people were working in the public sector for water and sanitation; only 1.3% with a superior level, 5% a middle level and 13 % a basic level and skills abilities.

With the application of the National Water Policy, the role of the Government has been gradually withdrawing from its responsibility of direct provider of services and constructor of water supply systems leaving it to the private sector. DNA has already initiated a process of privatisation of water enterprises and construction companies. DNA/DAR initiated since the end of 1998 the implementation of the Rural Water Transition Plan focussing on the definition and best way to apply the Demand Responsive Approach. Among this process, PEC is going through a transition of defining its way of working with communities and redefining its own structure. CFPAS, as part of DNA, is also going through this reform process, clarifying its own role, working on the way of becoming autonomous and foreseen the implementation of a legal status.

The sector will modify the traditional way of providing water and sanitation services. New roles between State, Private Sector and Civil Society will have a clear impact on service delivery of water and sanitation. Therefore, CFPAS, as the program's major partner, should dynamically respond to the demand of the sector at both national and provincial level to become competitive and not loose the market in the water sector while loosing its monopoly as the sector's training institution. CFPAS is focussing to strengthen partnerships with well recognized regional and international training institutions such as NETWAS (Networking for Water and Sanitation, Nairobi, Kenya), IWSD (Institute of Water and Sanitation Development, Harare, Zimbabwe), ITN (International Training Network for Water and Sanitation in Africa) and IRC (International Reference Centre for Water and Sanitation, Delft, The Netherlands), in order to expand its market and update its capacity to approach new trends in the water and sanitation sector and to become a reference centre for the Portuguese speaking countries in Africa.

The IIM, as an Institution of the GOM, is not aiming to become autonomous but is focussing in optimizing the use of its human and physical resources. In order to keep up-to-date with the dynamics of the sector, the IIM is strengthening linkages with other institutions as University of Eduardo Mondlane, DNA, CFPAS and the Private Sector. IIM and CFPAS are also focussing in using their laboratories, workshops and consultancy capacities to provide some services to diverse governmental and private organizations.

2. Evaluation objectives:

The efficacy, efficiency, relevance and the impact of the Moz.16 Program, with its 3 partial actions, has to be evaluated in order to prepare a new phase.

The Evaluation has to come up with an analysis of the last four years and the appropriate recommendations in the following fields:

- Institutional Development
- Human resource Development
- Decentralisation
- Gender
- Monitoring
- Concept of curricula
- Autonomy/sustainability of the programme-components and financial management
- Linkages with other training Institutions inside and outside Mozambique

3. Key questions:

Desenvolvimento Institucional

1. Em que medidas o Moz.16 tem apoiado a desenhar e a implementar o processo de reestruturação das Instituições e os seus novos papeis, de acordo com o princípio da procura e da concorrência no mercado?
2. Qual tem sido o apoio para o Desenvolvimento Institucional e para a retenção dos quadros?
3. Qual tem sido o apoio do Moz.16 à Comissão de Gestão das Bolsas da DNA no processo da atribuição das bolsas de estudo, numa perspectiva de auto-sustentabilidade?

Optimização e Desenvolvimento dos Recursos Humanos

1. Qual é o impacto e a influência da formação no Desenvolvimento das Instituições depois dos formados serem reintegrados nos seus empregos?
2. O Moz.16 terá respondido às necessidades específicas para um eficiente Desenvolvimento dos Recursos Humanos dos parceiros?
3. Qual é o impacto das bolsas financiadas pelo Moz.16 na formação básica, média e superior dos Recursos Humanos a nível das províncias e da DNA?

Concepção dos cursos

1. O Moz.16 tem apoiado na concepção dos curricula dos cursos para responder às necessidades do sector?
2. O Moz.16 tem apoiado para criar as bases de avaliação da eficiência e da eficácia das aulas práticas e dos estágios na formação?

Descentralização

1. O Moz.16 tem apoiado para criar as condições necessárias à implementação da descentralização?
2. O apoio do Moz.16 na selecção dos cursos corresponde às necessidades das províncias?
3. O Moz.16 tem apoiado devidamente a divulgação dos cursos descentralizados?

Género

1. O Moz.16 tem incentivado a abordagem de género no Desenvolvimento dos Recursos Humanos do Sector de Águas?

Gestão financeira, alocação de fundos e auto-sustentabilidade

1. A metodologia usada pelo Moz.16 para assegurar o Desenvolvimento da Gestão Financeira e o sistema de alocação de fundos, foram os mais adequados, de modo a produzir nos trabalhadores uma mentalidade independente e tendente a favorecer a auto-sustentabilidade?
2. O Programa Moz.16 tem apoiado no desenvolvimento de acções que permitam dar uma base financeira aos parceiros, com vista a assegurar a sustentabilidade dos cursos?
3. As bases financeiras existentes são suficientes para determinar o ajustamento do valor das bolsas e o número de bolseiros, face às necessidades de formação do sector de águas, na óptica da auto-sustentabilidade e da continuidade desta acção?
4. Será que a estrutura de Gestão do Programa está de acordo com os objectivos que se pretendem e que existem mecanismos para optimizar e reduzir os custos?

Monitoria

1. O Moz.16 tem contribuído para a criação dum sistema de monitoramento que dá aos formadores e aos parceiros um "feedback" de modo a adaptar os cursos às necessidades do Sector?

Rentabilização dos equipamentos

1. Qual tem sido o apoio do Moz.16 para uma melhor eficácia e eficiência da utilização dos equipamentos financiados, na óptica da rentabilização e da sustentabilidade dos cursos?
2. A aquisição do equipamento, material didáctico e bibliográfico pelo Moz.16, produziu efeitos positivos para o desenvolvimento dos cursos ministrados?

Ligações

1. Será que a colaboração e a coordenação do Moz.16 com outras Instituições do Sector de Água em Moçambique (parceiros, doadores) tem contribuído para criar sinergias entre as mesmas?
2. Qual tem sido o apoio do Moz.16 para fortalecer as ligações e a coordenação entre os parceiros e outras Instituições do Sector ao nível nacional e internacional?

Prioridade A = Questão a ser avaliada pelos Avaliadores Externos

Prioridade B = Questão a ser avaliada internamente (auto-avaliação), com o apoio de um Consultor local

4. Methods and steps to implement the Evaluation

A large number of relevant documents are at hand for study.

Field-visits to Nampula or Beira
 Interviews with key-players in the education and water-sector
 Resource-persons for consultations
 Preliminary elaboration of basic documents for the evaluation

5. The Evaluation team

A mixed team composed of Expats and Mozambicans with the following profile:

Main knowledge	Speciality
<ul style="list-style-type: none"> • HID • Sustainability/Autonomy • Gender • PMET 	<p>Education and Training; water & sanitation Sector Financial management, decentralisation</p> <p>Moderation workshops, reporting</p>

6. Timing

Final TOR's	November 99
Composition of the Evaluation Team	December 99
Evaluation in Mozambique	March/April 2000
Feedback/Workshop	At the end of Evaluation
Final report of Evaluation	May 2000

Time frame for the team:

Teambuilding	2 working-days
Briefing HQ and COOF	2 w.days
Travel	3 w.days
Evaluation in Moz., incl. restitution	15 w.days
Reporting	4 w.days

7. Report

The report should contain not more than 20 pages (without annexes), include an executive summary (following the DAC standard), a brief explanation of the research methods used, and the details findings. Part 1 deals with the evaluation of Phase VII, and indicates lessons learnt. Part 2 contains some specific strategic and operational recommendations. The report should be ready by May 2000.

Annex 2 : Programme of evaluation mission

- 26/03/00 Chegada François Brikké e Maria Lúcia Borba a Maputo
Encontro com os demais membros da missão José Machado e Virgílio Juvane
Reunião de todos os membros da missão para discussão e definição da metodologia de trabalho
- 27/03/00 Reunião nos escritórios da SDC/Maputo para apresentação da metodologia.
Presentes: Bernard Huwiler, coordenador de água e saneamento; Pierre-Olivier Henry, Coordenador do Programa Moz 16 e AT 1 – CFPAS; Carla Costa, AT2 – IIM; Ana Lucia Obiols, AT 3 – PEC/DAR; Thomas Greminger – Encarregado de Negócios a.j. e Coordenador da SDC
- 28/03/00 Marcação de encontros e entrevistas
Entrevistas com
Carlos Noa (PNSBC)
Vitoria Diogo (DNRH-MOPH)
Carlos Macoo(Director CFPAS)
Magalhaes Miguel (Plan DNA)
João Alfinete/ Cesar Cuna (Departamento Pedagógico CFPAS)
Horácio Romero (Departamento de Recursos Humanos CFPAS)
- 29/03/00 Seminário com funcionários do CFPAS
- 30/03/00 Entrevistas com
Kees Metselaar (RNE)
Jaime Matshihe (DNA)
Maria Imós (Bibliotecária do.CFPAS)
Carla Costa (AT 2 IIM)
- 31/03/00 Entrevistas com
Bento Mualoja (Com.Nac.Bolsas DNA)
Ivone Amaral (Chefe do DAR)
André Uandela DAR/PEC
Inácio Chilengue DAR/PEC
Pierre-Olivier Henry (coordenador do Programa Moz 16 e AT 1)
Ana LuciaObiols (AT 3)
Bernard Huwiler (SDC Água e Saneamento)
- 01/04/00 Reunião da Equipe de Avaliação: Primeira Síntese
- 02/04/00 Descanso
- 03/04/00 Reunião no IIM. Presentes: Eng. Carla Costa (AT 2), Eng. Samuel Vasco (Director do IIM), Eng. Catarina..(Chefe do Departamento de Construção), Eng. Fernando Nhampossa (Chefe da Especialidade de Hidráulica)
Entrevista com:
Sr Derik Irkin (Coordenador do Programa Suíço Moz 37)
- 04/04/00 Entrevista com
Sr Yves Dallier (Director de Recursos Humanos, Empresa Águas de Moçambique)
Sra Claudette Lavalee ACDI Assessor do Sector Social
- 05/04/00 Entrevista com
Prof. Carmo Vaz – Universidade Eduardo Mondlane
- 06/04/00 Entrevista com UNICEF
- 07/04/00 Reunião da Equipe de Avaliação: organização da informação recolhida

Programa Beira – 03/04/00 – 07/04/00

- 03/04/00 Chegada a Beira, Província de Sofala
Eng. João Godinho, Director Provincial de Obras Públicas e Habitação
Eng. José Luís, Director do Centro de Formação Profissional da Beira
Tentativa de encontrar a Sra Magdalena da Cooperação Austríaca
Preparação do Seminário de Avaliação do Programa MOZ 16
- 04/04/00 Seminário de Avaliação do Programa MOZ 16
Sr António Samo – Director Geral da Geo-Austral Ltda e com assessor Geo-Austral

Sr Joaquim Magumisse – Chefe do Departamento de Recursos Humanos/DPOPH-Sofala
 Visita ao Centro de Formação Profissional da Beira com o Sr José Luís, Director

- 05/04/00 Chegada a Chimoio, Província de Manica
 Sr Carlos Cuambo, Chefe do Departamento de Água e Saneamento da DPOPH de Manica
 Sr Afonso Tiago Tembo, Director do EPAR Manica
 Sr Felix William Telfer, Director (Empresa de)Águas de Chimoio
 Sr Director Provincial da DPOPH de Manica
- 06/05/00 Chegada ao ESAR (estaleiro de saneamento) do distrito de Nhamitanga
 Sr Chissora – Chefe ESAR.
 Chegada à comunidade de Dondo, em companhia da Sra Maria Xitula, do PEC
 Discussão com o representante do Grupo de Manutenção/Comité de Águas da comunidade.
 Retorno a Beira – trabalho de organização da informação recolhida.
- 07/04/00 Organização da informação recolhida.
 Chegada a Maputo
- 08/04/00 Reunião Equipe de Avaliação
- 09/04/00 Descanso

Programa Pemba / Nampula 09/04/00 – 13/04/00

- 09/04/00 Partida para Pemba
- 10/04/00 – Reunião DPOPH, EPAR, PEC
- 11/04/00 Reunião Helvetas e partida para Nampula
- 12/04/00 Reunião DPOPH, PEC, Cooperação suíça, projectos holandeses
- 13/04/00 Regresso a Maputo
- 10/04/00 Reunião Núcleo de Hidráulica do IIM. Presentes: Juscelino Macama, Professor de Hidráulica Geral; Teodósia Chicama, Assistente Laboratório de Hidráulica; Alberto Itsamba, Chefe do Núcleo e Professor de Hidroquímica.
 Sr Fernando Pililão - CARE International – Mozambique
 Sr Edmundo Jossefa – DNA/ Consulto PNDA para Recursos Humanos, Assessor
- 11/04/00 Reunião com o grupo do PEC: Carlota Muianga, Carlos Mumguabe e Ana Lúcia Obiols
- 12/04/00 Organização da Informação recolhida
- 13/04/00 Reunião Equipe da Missão
 Organização da Informação recolhida
- 14/04/00 Seminário com os estudantes do CFPAS. Ver lista de participantes em anexo
- 15/04/00 Reunião da Equipe
 Preparação Seminário Final
- 16/04/00 Preparação Seminário
- 17/04/00 Seminário Final e Debriefing: programa e lista de participantes em anexo
- 18/04/00 Debriefing Cooperação Suíça em Maputo
 Partida de François Brikké e Maria Lúcia Borba para a Europa
- 29/05/00 François Brikké: Debriefing SDC em Berna

Annex 3 : List of people visited or contacted

Alda Jorge Conseilhier Formação / informação
 Amaral, Ivone -Chefe do DAR
 Bland Stuart, Consilhoero ao DA, Pemba
 Boerkamp Johan, DPOPH/DE, Nampula
 Carmo Vaz – Universidade Eduardo Mondlane
 Chicama, Teodósia, Assistente do Laboratório de Hidráulica
 Chilengue, Inácio DAR/PEC
 Chissora – Chefe ESAR.
 Costa, Carla, AT2 – IIM
 Cuambo, Carlos, Chefe do Departamento de Água e Saneamento da DPOPH de Manica
 Dallier, Yves -Director de Recursos Humanos, Empresa Águas de Moçambique
 Drmot Carty, WATSAN Officer, UNICEF
 Diogo, Vitoria -DNRH-MOPH
 Director Provincial da DPOPH de Manica
 Director Provincial da DPOPH de Pemba
 Director Provincial da DPOPH de Nampula
 Favre Roland, Substituto de Stuart Bland, Pemba
 Gijselhart Henk, SAS Nampula Godinho, João, Director Provincial de Obras Públicas e Habitação
 Gregoire Michel, Cooperação Suissa, Nampula
 Greminger, Thomas– Encarregado de Negócios a.j. e Coordenador da SDC
 Henry, Pierre-Olivier, Coordenador do Programa Moz 16 e AT 1 – CFPAS
 Huwiler, Bernard - SDC Água e Saneamento
 Ikin, Derrick Owen - Coordenador do Programa Suíço Moz 37
 João Alfinete/ Cesar Cuna Departamento Pedagógico CFPAS
 Joaquim Magumisse – Chefe do Departamento de Recursos Humanos/DPOPH-Sofala
 Jossefa, Edmundo– DNA/ Consulta PNDA para Recursos Humanos, Assessor
 Lavalee, Claudette ACDI Assessor do Sector Social
 Lengsfeld Melchior - Conselheiro PEC, Pemba
 Luis, José, Director do Centro de Formação Profissional da Beira
 Machado Gabriel, CBE
 Macama, Juscelino, Professor de Hidráulica Geral do IIM, Membro do Grupo de Hidráulica
 Macoo, Carlos -Director CFPAS
 Mechisso Lembrença – Chefe de la Repartição de Recursos Humanos, DNA
 Membro do grupo de manutenção, Comunidade de Dondo, Província de Sofala
 Metselard Kees, Sector specialist, Embassy of the Netherlands
 Miguel, Magalhaes -Plan DNA
 Mirtcheva, Ekatarina - Chefe do Departamento de Construção
 Mualoja, Bento - Com.Nac.Bolsas DNA
 Muchanga Emilio, DNA
 Muianga, Carlota, formadora do PEC
 Muianga, Américo -(National Director DNA
 Mumguabe, Carlos, formador do PEC
 Nhampossa, Fernando -Chefe da Especialidade de Hidráulica
 Noa, Carlos, PNSBC
 Obiols, Ana Lucia, AT 3 – PEC/DAR
 Pililão, Fernando - CARE International – Mozambique
 Professores de CFPAS
 Ramos, Chefe dept; Agua DPOPH Nampula
 Romero, Horácio - Departamento de Recursos Humanos CFPAS
 Rufino, Latifo, Chefe EPAR, Pemba
 SAS project staff and management

Samo, António– Director Geral da Geo-Austral Ltda e com assessor Geo-Austral
Seminário de Beira (lista participantes em anexo do relatório)
Seminário Final (lista participantes em anexo do relatório)
Seminário com estudantes do CFPAS (lista participantes em anexo)
Seminário de profissionais do CFPAS (lista de participantes em anexo)
Telfer, Felix William, Director (Empresa de)Águas de Chimoio
Tembo, Afonso Tiago, Director do EPAR Manica
Tsamba, Alberto, Professor de Hidroquímica., Chefe do Núcleo de Hidráulica
Uandela, André, DAR/PEC
Vasco, Samuel (Director do IIM)
Vas carmo, Consultec, Maputo
Waite – Chefe do PEC, Pemba
Xitula, Maria, animadora do PEC de Sofala

Annex 4 : Methodological note

MOZ. 16 is supporting vocational training and is using mainly CFPAS, IIM, and DAR as the main implementing partners for this purpose. The evaluation of MOZ.16 is articulated around 4 main criteria: relevance, efficiency, effectiveness and impact.

1. Relevance

Relevance shows how appropriate the project is to the sector needs, setting and strategy.

Human resources development

The mission will assess the Human resources situation and its evolution for different professional category and level, as well as identify Human resource needs as expressed by actors concerned. The mission will then evaluate the relevance of the vocational training activities to Human resource needs, both at national and provincial level.

Conception of courses

The mission will assess the skills and knowledge required for various professional categories, and inventorize the various courses designed. The mission will then evaluate the relevance of course curricula to sector needs.

Institutional capacity – building

The mission will assess the institutional capacity of existing institutions to implement vocational training activities at national and provincial levels as well as the needs for institutional capacity building. The mission will then evaluate the relevance of the project to these capacity-building needs.

New developments

The mission will assess the new developments which are introduced by the new sector policies and strategies, particularly linked to the demand approach, decentralization, private sector involvement, community management, gender, sustainable cost recovery, and participatory planning. The mission will then evaluate the relevance of vocational training activities and course contents to these new developments.

2. Efficiency

Efficiency measures both the performance of a project and its ability to reach results without wasting time and resources.

Performance

Performance is the ability to reach results. The project has grouped these results into major groups : institutional development; training activities including course curricula development, HRD database and scholarships; decentralization of training activities to provinces; and linkages with other institutions and projects.

Use of resources

The mission will assess the planned financial budgets versus financial expenditures. It will also evaluate the financial management efficiency (financial controls and monitoring, capacity to resolve problems, bureaucracy, financial dependency on external assistance).

In addition to financial resources, should be evaluated the efficiency of equipment financed by the project (pedagogical and technical as well as vehicles), in terms of its usefulness, use and maintenance.

3. Effectiveness

Effectiveness shows how well the project objectives have been reached. Basically, the specific objectives of the project are:

- to strengthen the capacity of CFPAS in training and management and in its capacity to respond to sector demand, as well as in adapting course curricula
- to strengthen the capacity of CFPAS as a sector centre of excellence
- to decentralize training activities at regional and / or provincial level
- to contribute to Human resource development and planning in general, as well as to manage scholarships in an optimum way
- to strengthen the capacity of IIM in hydraulic courses
- to improve the capacity of PEC-DAR in providing conceptual inputs and in monitoring central and provincial training activities

4. Impact

Impact shows what are the changes directly or indirectly resulting from project implementation. The mission will evaluate as far as possible the following changes, which are in fact the desired long-term effects of the project:

- a) "Sustainability", both financially and institutionally
- b) "Expertise", in terms of the capacity of CFPAS, IIM and PEC-DAR to generate and disseminate skills and knowledge for sector professionals, both in content and geographically
- c) "Employment", in terms of the ability of trainees to find a job, and in terms of the ability of employers to find adequately trained professionals
- d) "Network", showing the interlinkages between various national and international sector institutions for knowledge development, capacity-building and resource generation.

Annex 5 : Overview of sector labour force in 1995 (national)

**Trabalhadores do Sector de
Águas
Informação
recolhida em 1995
Total Nacional
Distribuição Sexo, Idade e
Habilitações Académicas**

Sexo	Idade	Habilitações Académicas								Totais
		Até 5ª Classe	6ª e 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.	S/I	
Feminino	Até 25 anos	1	27	45	3	3			3	82
	26 a 30	18	62	73	5	3	17	2	6	186
	31 a 40	44	104	80	7	3	9	3	7	257
	41 a 50	25	17	4	2	1			3	52
	51 ou mais	7	3						1	11
	S/I		3	1					3	7
Total Sexo Feminino		95	216	203	17	10	26	5	23	595
Masculino	Até 25 anos	61	58	79	4	6	22	1	17	248
	26 a 30	169	230	193	7	6	63	17	18	703
	31 a 40	708	355	249	14	17	100	33	66	1542
	41 a 50	667	122	63	3	4	17	3	29	908
	51 ou mais	471	27	19		1	2	1	37	558
	S/I	59	14	5	1		2	1	31	113
Total Sexo Masculino		2135	806	608	29	34	206	56	198	4072
Totais		2230	1022	811	46	44	232	61	221	4667

Annex 6 : Sector labour force in 1998 (National and by province)

Trabalhadores do Sector de Águas

Informação recolhida em 1998

Total Nacional

Distribuição Sexo, Idade e Habilitações Académicas

Sexo	Idade	Habilitações Académicas								Totais
		Até 5ª Classe	6ª e 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.	S/I	
Feminino	Até 25 anos	0	1	10	6	2	0	0	1	20
	26 a 30	3	26	53	5	3	0	0	4	94
	31 a 40	46	124	122	12	6	22	5	10	347
	41 a 50	29	37	21	0	2	1	0	4	94
	51 ou mais	12	3	1	0	1	0	0	1	18
	S/I	0	8	4	0	1	0	0	3	16
Total Sexo Feminino →		90	199	211	23	15	23	5	23	589
Masculino	Até 25 anos	13	24	17	8	3	5	0	7	77
	26 a 30	69	87	94	6	11	41	3	17	328
	31 a 40	485	399	342	24	24	133	44	62	1513
	41 a 50	657	159	93	3	4	33	12	45	1006
	51 ou mais	595	53	24	0	2	5	1	48	728
	S/I	96	18	10	2	3	4	0	44	177
Total Sexo Masculino →		1915	740	580	43	47	221	60	223	3829
Totais →		2005	939	791	66	62	244	65	246	4418

Trabalhadores do Sector de Águas
 Informação recolhida em 1998
 Província de Cabo Delgado
 Distribuição Sexo, Idade e Habilitações Académicas

Sexo	Idade	Habilitações Académicas								Totais
		Até 5ª Classe	6ª e 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.	S/I	
Feminino	Até 25 anos				1					1
	26 a 30		1	1						2
	31 a 40	1	1	9	1	2				14
	41 a 50		2	1						3
	51 ou mais									0
	S/I								1	1
Total Sexo Feminino		1	4	11	2	2	0	0	1	21
Masculino	Até 25 anos			2	1	1				4
	26 a 30	2	5	2			2			11
	31 a 40	38	20	29	2	3	5	3		100
	41 a 50	44	6	7				1	1	59
	51 ou mais	28	1	1						31
	S/I	15	2	5			2		1	25
Total Sexo Masculino		128	34	46	3	4	9	4	2	230
Totais		129	38	57	5	6	9	4	3	251

Trabalhadores do Sector de Águas
 Informação recolhida em 1998
 Província de Gaza
 Distribuição Sexo, Idade e Habilitações Académicas

Sexo	Idade	Habilitações Académicas								Totais
		Até 5ª Classe	6ª e 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.	S/I	
Feminino	Até 25 anos				3					3
	26 a 30		3	7						10
	31 a 40	6	14	12				1		33
	41 a 50	5	1	2						8
	51 ou mais	4								4
	S/I									0
Total Sexo Feminino		15	18	24	0	0	1	0	0	58
Masculino	Até 25 anos		2	2		2	2			8
	26 a 30	7	7	8	1	2	2			27
	31 a 40	45	24	19			8	2		98
	41 a 50	59	8	3			2			70
	51 ou mais	61	9	2						72
	S/I	2							2	4
Total Sexo Masculino		174	48	34	1	4	14	2	2	279
Totais		189	66	58	1	4	15	2	2	337

Trabalhadores do Sector de Águas
 Informação recolhida em 1998
 Província de Nampula
 Distribuição Sexo, Idade e Habilitações Académicas

Sexo	Idade	Habilitações Académicas								Totais
		Até 5ª Classe	6ª e 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.	S/I	
Feminino	Até 25 anos				1					1
	26 a 30	1	3	6	1					11
	31 a 40	2	6	19	1					28
	41 a 50	1	2							3
	51 ou mais	1				1				2
	S/I									0
Total Sexo Feminino		5	11	25	3	1	0	0	0	45
Masculino	Até 25 anos	2	3	4	2					11
	26 a 30	8	7	6		1	8		1	31
	31 a 40	41	40	44	3	4	6	1	1	140
	41 a 50	84	17	11	1				1	114
	51 ou mais	83	5	3		1				92
	S/I	3	1						1	5
Total Sexo Masculino		221	73	68	6	6	14	1	4	393
Totais		226	84	93	9	7	14	1	4	438

Trabalhadores do Sector de Águas
 Informação recolhida em 1998
 Província de Zambézia
 Distribuição Sexo, Idade e Habilitações Académicas

Sexo	Idade	Habilitações Académicas								Totais
		Até 5ª Classe	6ª e 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.	S/I	
Feminino	Até 25 anos				2					2
	26 a 30		1	2						3
	31 a 40	1	13	5						19
	41 a 50	1	4							5
	51 ou mais									0
	S/I									0
Total Sexo Feminino		2	18	9	0	0	0	0	0	29
Masculino	Até 25 anos	1	2	1						4
	26 a 30	6	12	3			5			26
	31 a 40	21	30	25	1	1	4	1		83
	41 a 50	32	18	3			2			53
	51 ou mais	36	4	2			1			43
	S/I	3	2						5	10
Total Sexo Masculino		99	66	34	1	1	12	1	5	219
Totais		101	84	43	1	1	12	1	5	248

Trabalhadores do Sector de Águas
 Informação recolhida em 1998
 Província de Niassa
 Distribuição Sexo, Idade e Habilitações Académicas

Sexo	Idade	Habilitações Académicas							Totais	
		Até 5ª Classe	6ª a 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.		S/I
Feminino	Até 25 anos			1					1	2
	26 a 30		1	1						2
	31 a 40		5	3						8
	41 a 50	1		1						2
	51 ou mais									0
	S/I									0
Total Sexo Feminino		1	6	6	0	0	0	0	1	14
Masculino	Até 25 anos			1			1		2	4
	26 a 30	3	4	4			4			15
	31 a 40	11	7	12	2		5	2	2	41
	41 a 50	16	4	5			1		2	28
	51 ou mais	16	2	1					1	20
	S/I									0
Total Sexo Masculino		48	17	23	2	0	11	2	7	108
Totais		47	23	29	2	0	11	2	8	122

Trabalhadores do Sector de Águas
 Informação recolhida em 1998
 Província de Tete
 Distribuição Sexo, Idade e Habilitações Académicas

Sexo	Idade	Habilitações Académicas							Totais	
		Até 5ª Classe	6ª a 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.		S/I
Feminino	Até 25 anos				1	1				2
	26 a 30	1	4	7	2				1	15
	31 a 40	6	11	3	3		2			25
	41 a 50	2	1							3
	51 ou mais	1								1
	S/I									0
Total Sexo Feminino		10	17	10	6	1	2	0	2	48
Masculino	Até 25 anos	5	1		3		1			10
	26 a 30	11	10	3	3	3	3		1	34
	31 a 40	33	34	27	7	2	7		3	113
	41 a 50	49	12	7	1	2			2	73
	51 ou mais	44	3	1						48
	S/I	16	4	1	2				16	39
Total Sexo Masculino		158	64	39	16	7	11	0	22	317
Totais		168	81	49	22	8	13	0	24	365

Trabalhadores do Sector de Águas
 Informação recolhida em 1998
 Província de Manica
 Distribuição Sexo, Idade e Habilitações Académicas

Sexo	Idade	Habilitações Académicas							Totais	
		Até 5ª Classe	6ª a 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.		S/I
Feminino	Até 25 anos									0
	26 a 30		1	1						2
	31 a 40	3	7	4						14
	41 a 50	1	1	1		1				4
	51 ou mais		1							1
	S/I		8	4						11
Total Sexo Feminino		4	16	10	0	2	0	0	0	32
Masculino	Até 25 anos		1	1						2
	26 a 30	4	2	3			5			14
	31 a 40	23	17	13			3			56
	41 a 50	30	9	4						43
	51 ou mais	21	3	3			1			28
	S/I	42	6	3		3			1	55
Total Sexo Masculino		120	38	27	0	3	9	0	1	198
Totais		124	54	37	0	5	9	0	1	230

Trabalhadores do Sector de Águas
 Informação recolhida em 1998
 Província de Sofala
 Distribuição Sexo, Idade e Habilitações Académicas

Sexo	Idade	Habilitações Académicas							Totais	
		Até 5ª Classe	6ª a 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.		S/I
Feminino	Até 25 anos				1					1
	26 a 30	1		4	1					6
	31 a 40	7	10	10		1	2			30
	41 a 50		6			1				7
	51 ou mais		1							1
	S/I									0
Total Sexo Feminino		8	17	15	1	2	2	0	0	45
Masculino	Até 25 anos	3	8	2						13
	26 a 30	8	15	10	1	3	1			38
	31 a 40	88	52	37	2	3	12	3	1	198
	41 a 50	113	22	13		1	2	2	1	154
	51 ou mais	85	9	3				1		98
	S/I	7	2						11	20
Total Sexo Masculino		304	108	65	3	7	15	6	13	521
Totais		312	125	80	4	9	17	6	13	566

Trabalhadores do Sector de Águas
 Informação recolhida em 1998
 Província de Inhambane
 Distribuição Sexo, Idade e Habilitações Académicas

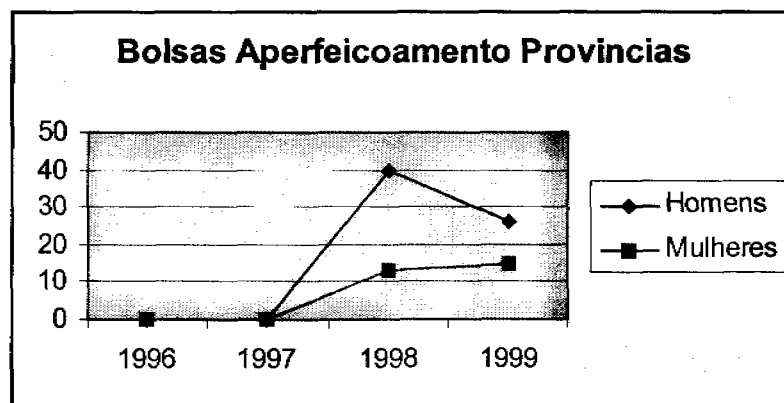
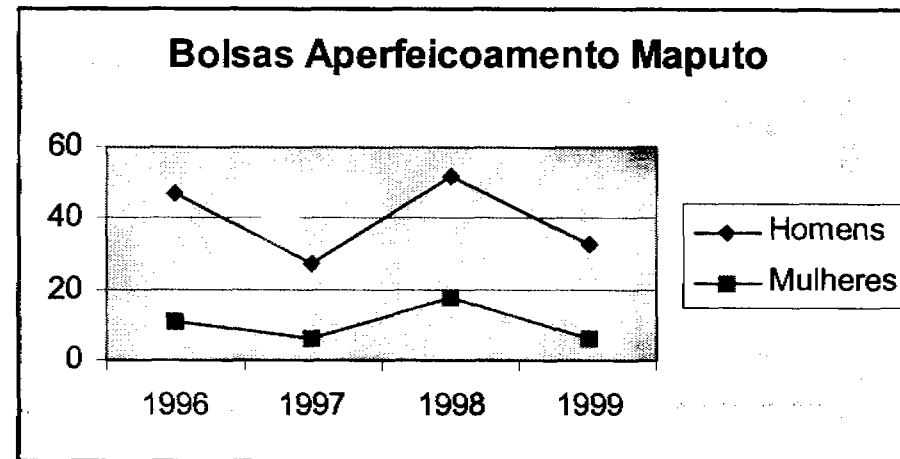
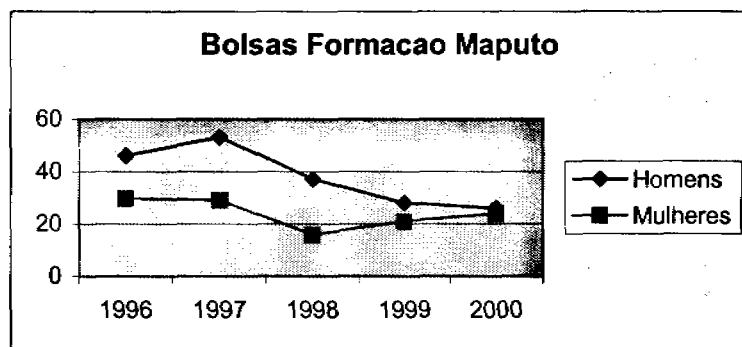
Sexo	Idade	Habilitações Académicas							Totais	
		Até 5ª Classe	6ª e 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.		S/I
Feminino	Até 25 anos			2	1					3
	26 a 30		5	10						15
	31 a 40	3	8	5						16
	41 a 50	2	2							4
	51 ou mais	1								1
	S/I									0
Total Sexo Feminino		6	15	17	1	0	0	0	0	39
Masculino	Até 25 anos	1	1							2
	26 a 30	5	1	6		1	2			15
	31 a 40	46	22	14			6			88
	41 a 50	39	7	3			1			50
	51 ou mais	40	3	3						46
	S/I	2					1		3	6
Total Sexo Masculino		133	34	26	0	1	10	0	3	207
Totais		139	49	43	1	1	10	0	3	246

Trabalhadores do Sector de Águas
 Informação recolhida em 1998
 Província de Maputo
 Distribuição Sexo, Idade e Habilitações Académicas

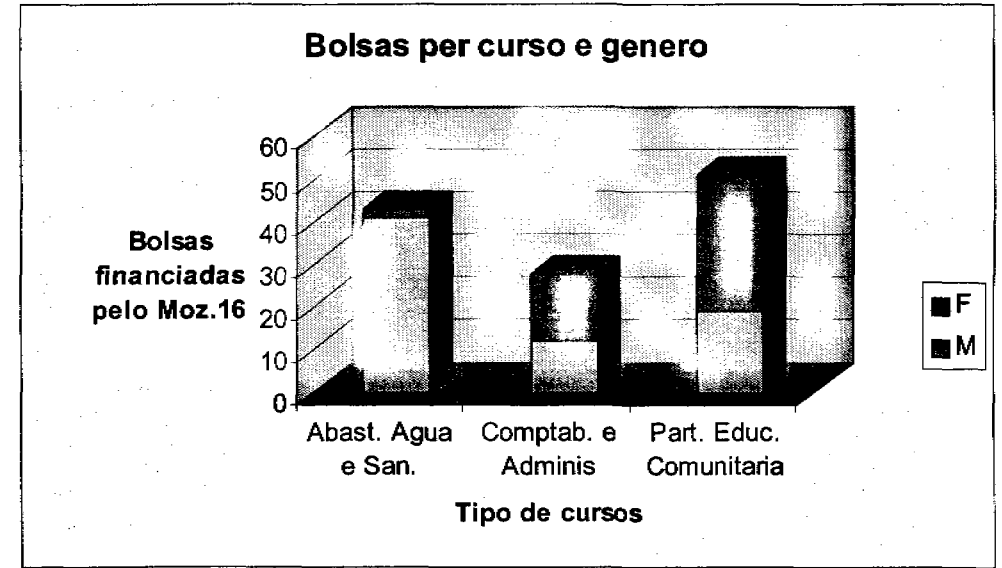
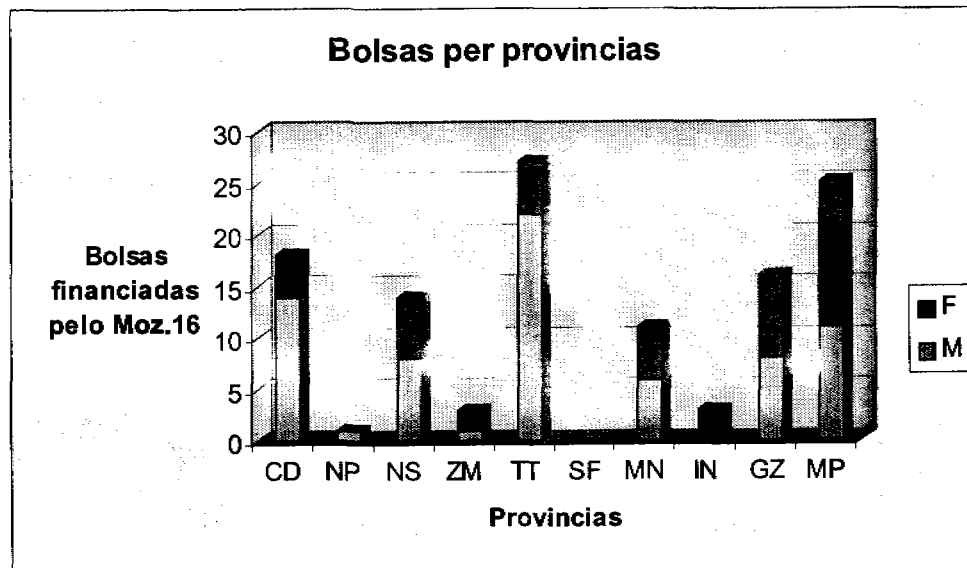
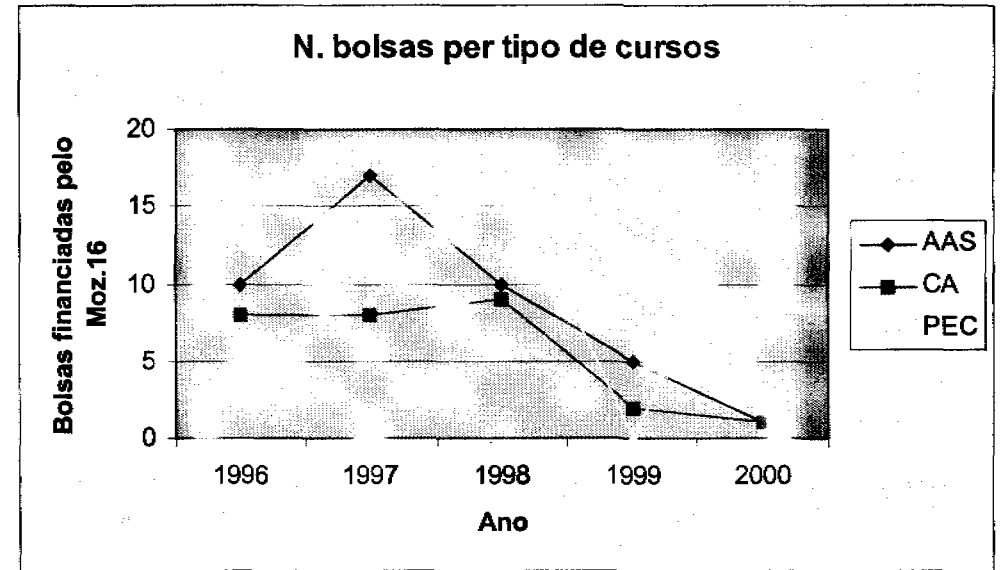
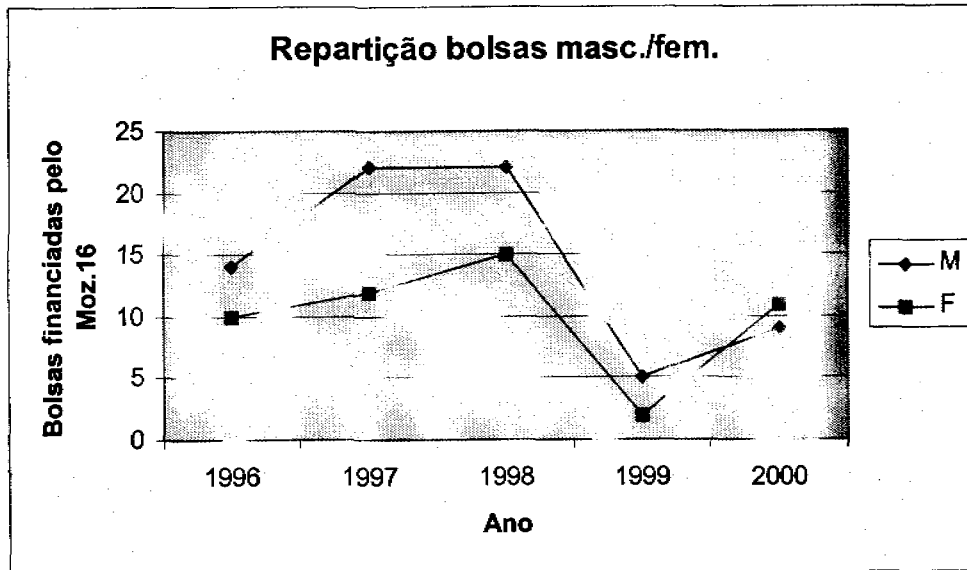
Sexo	Idade	Habilitações Académicas							Totais	
		Até 5ª Classe	6ª e 7ª	8ª a 9ª	10ª	11ª e 12ª	Téc. Médios	Téc. Sup.		S/I
Feminino	Até 25 anos		1	1	2	1				5
	26 a 30		7	14	1	3			3	28
	31 a 40	17	49	52	7	3	17	5	10	180
	41 a 50	18	18	16			1		4	55
	51 ou mais	5	1	1					1	8
	S/I		1						1	2
Total Sexo Feminino		38	77	84	10	7	18	5	19	258
Masculino	Até 25 anos	1	6	4	2		1		5	19
	26 a 30	15	24	49	1	1	9	3	15	117
	31 a 40	139	153	122	7	11	77	32	55	568
	41 a 50	191	80	37	1	1	25	9	38	362
	51 ou mais	180	14	5		1	3		47	250
	S/I	6	1	1			1		4	13
Total Sexo Masculino		532	258	218	11	14	116	44	184	1357
Totais		570	335	302	21	21	134	49	183	1615

Annex 7: Overview of CFPAS scholarships financed by Moz. 16 (1996-2000)

Total : 604

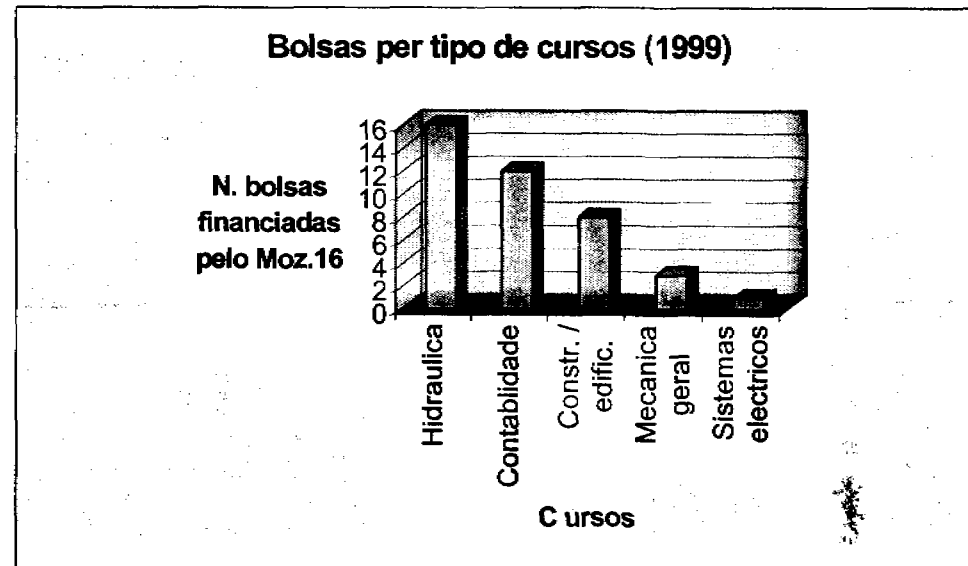
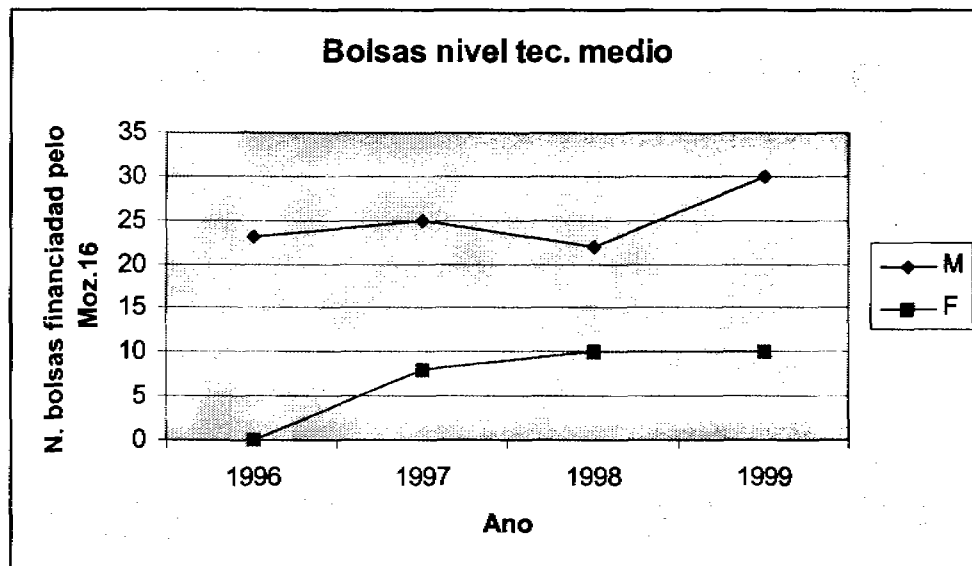


Total of long courses (1996 – 2000) : 122 (72 masc. / 50 fem.)



Annex 8 : Scholarships for medium level training

Total number (1996 – 1999) : 128



Annex 9 : Analysis of the Instituto Industrial de Maputo

Constatações quanto à relevância, eficiência, eficácia, e o impacto do Programa Moz 16 para as actividades da Especialidade de Hidráulica do IIM

Relevância:

Formação de recursos humanos

O Moz 16 contribui para a formação de técnicos do sector de águas e o financiamento de bolsas de estudo.

- Bolsas/ano dos trabalhadores do sector de águas. O MOZ 16 financia as bolsas atribuídas pela DNA para os técnicos do sector para frequentarem cursos em Maputo, Beira e Nampula.

- Crescimento do número de bolsas

do Programa Moz 16 nos últimos 10 anos:

1990 – 1 bolsa

1991- 2 bolsas

1992- 17 bolsas

2000- 40 bolsas (28 para Maputo, 6 para Beira, 6 para Nampula).

Distribuição das 40 bolsas:

14 = Hidráulica

12 = Contabilidade

08 = Construção/edificações

03 = Mecânica geral

01 = Sistemas Eléctricos

02 = ?

No período 1996-2000 o valor das bolsas representa praticamente 50% do apoio do Moz 16 ao IIM/Especialidade de Hidráulica (ver quadro “Moz.16 – Estrutura das Despesas e Tendências Futuras”).

- A formação do sector de água capacita os trabalhadores das empresas de água, da DNA, dos EPARes e de outras instituições.

De 130 a 140 alunos, 10% mulheres, recebem formação na Especialidade de Hidráulica que tem o apoio institucional do Moz 16

Apoio directo às práticas pré-profissionais, ou estágios de 6 meses de duração, ajudam a integração dos estudantes no ambiente de trabalho.

Apoio às visitas de estudo, palestras, elaboração de manuais.

Não é feita qualquer acção efectiva que motive a matrícula de raparigas no curso de Hidráulica. Não há discriminação positiva para conferir bolsas a raparigas e/ou ajudar a que venham ao IIM.

Infelizmente o NUFETI não tem alcançado os seus objectivos de elevar o nível da participação feminina.

- Formação do corpo docente através de:

Apoio à formação em engenharia para os docentes de nível médio

Cursos curtos: inglês, informática, participação em seminários

Visitas pelo país para contacto com o sector

Concepção do currículo da Especialidade de Hidráulica

- O currículo não inclui atitudes ou habilidades para o trabalho com comunidades, nas empresas ou no sector em geral.
- A revisão curricular que houve com o apoio do Moz 16 não trouxe mudanças profundas.
- ‘Gestão & economia’ e ‘Aspectos de saneamento’ foram incluídos após a revisão curricular, por iniciativa do Núcleo de Hidráulica.
- Palestrantes são convidados para assuntos da actualidade.
- Prática é feita nos laboratórios de Hidráulica e de Hidroquímica e no campo durante práticas pré-profissionais.

A adequação da formação às necessidades do sector se dá mais através das palestras, práticas e visitas do que através de um currículo actualizado. Durante as visitas às províncias, constatou-se que há satisfação com a formação oferecida pelo IIM e os empregadores pensam que o currículo está adequado às necessidades do sector. Somente em alguns casos foi dito que o currículo deveria focalizar aspectos de gestão (de empresas, de projectos) e de saneamento.

De 60 a 70% dos graduados do IIM/Especialidade de Hidráulica são absorvidos pelo mercado de trabalho. A não absorção pelo mercado de trabalho deve-se em parte à crescente saturação do mercado em Maputo em

termos de técnicos médios, formados nos moldes tradicionais, e nas províncias ao cada vez maior nível de exigência dos próprios graduados em termos das condições de trabalho e às dificuldades de integração no ambiente.

Desenvolvimento Institucional

Devido ao apoio do Moz 16, a Especialidade de Hidráulica ocupa um lugar privilegiado dentro do IIM. Alguns consideram que isto tem gerado problemas de relacionamento com os demais grupos. Os aspectos do apoio que contribuíram para o desenvolvimento institucional e a capacitação da Especialidade de Hidráulica são:

- A formação do Núcleo de Hidráulica (membros são mulheres e homens), criado por influência directa da Assistência Técnica do Moz 16. O Núcleo se ocupa da:
 - Gestão do funcionamento da Especialidade de Hidráulica
 - Planificação e programação das necessidades de apoio pelo MOZ 16 à especialidade
 - Organização do arquivo das fichas cadastrais
 - Apoio a toda actividade académica, como: práticas pré-profissionais, inserção de professores, o apoio ao Chefe da Especialidade
- A capacitação dos membros do Núcleo de Hidráulica em:
 - Gestão académica e financeira transparente
 - Apoio ao funcionamento da Especialidade
 - Apoio à organização do arquivo dos alunos
- O equipamento da Especialidade de Hidráulica
 - Equipamento dos laboratórios de Hidráulica e Hidroquímica
 - Equipamento de todo o necessário para o funcionamento
- Formação dos professores para maior desenvolvimento institucional – pontos positivos:
 - O apoio à formação dos docentes de nível médio para que adquiram nível superior
 - Formação de docentes através de visitas, palestras, cursos curtos
 - Introdução da regra para contratar apenas docentes que já tenham o nível superior
- Contratação e formação de duas técnicas responsáveis assistentes nos dois Laboratórios da Especialidade de Hidráulica, e sua capacitação como Engenheiras em curso superior.
- O ponto fraco no desenvolvimento institucional é a baixa motivação por parte dos docentes que só permanecem no IIM durante o tempo mínimo para dar aulas. Todos são obrigados a ter um segundo (às vezes até mais importante) trabalho dado o baixo salário como docente do IIM.

Novos desenvolvimentos

Assuntos relativos a novos desenvolvimentos do sector de água de Moçambique não estão incluídos no currículo da Especialidade de Hidráulica.

- Assuntos da actualidade (como princípio da procura, descentralização, privatização, participação e gestão comunitária, género) podem ser tratados em palestras. Há certa flexibilidade para contratar palestrantes. Não estão incluídos no currículo.
- Para um maior equilíbrio de género, o Moz 16 apoia o NUFETI: núcleo feminino do ensino técnico-industrial para a realização de:

Campanhas nas escolas através de vídeos sobre a profissão do técnico em hidráulica

A realização do Dia Aberto para atrair raparigas para conhecerem a Especialidade;

Apoio com material para as raparigas que se matriculam: calculadoras, etc.

Redução das mensalidades para raparigas

Implementar cursos complementares da educação da mulher: cozinha, costura, maquilhagem.

Palestras nas Províncias.

No entanto, nada disso foi implementado até o momento ainda que o Moz 16 tenha disponibilizado os fundos necessários. A missão pode constatar que a falta de dinamismo no NUFETI pode estar influenciado pela demasiada centralização da Direcção do IIM no maneio dos fundos e das actividades do NUFETI.

Eficiência

Desempenho

- Moz 16 introduziu o acompanhamento trimestral dos gastos para a Especialidade de Hidráulica, o que contribui para a eficiência no uso dos fundos e para o controle da realização das actividades em comparação com os resultados a serem alcançados.
- número de bolsas cresceu consideravelmente desde que o sistema de bolsas foi implementado.
- O esforço de colocação de graduados no mercado de trabalho é às vezes ineficiente por falta de planeamento sistemático (por esforço da AT2, conseguiu-se 7 postos de trabalho em províncias mas somente 3 graduados se interessaram).

- Há sub-utilização dos laboratórios da Especialidade pelo mercado de empresas e organizações do sector.
- Recursos financeiros colocados à disposição e não utilizados como caso do NUFETI
- Recursos financeiros para ao funcionamento da Especialidade (transporte para professores e alunos, subsídio salarial para professores da Especialidade e para a Direcção do IIM, compra de carteiras) que já não se justificam e sem ter em conta a sustentabilidade.

Ligações para maior eficiência no uso de recursos

- com o CFPAS- os alunos do IIM vão às oficinas do CFPAS, professores do IIM dão aula no CFPAS
- com a DNA- técnicos da DNA dão aula no IIM mas é limitado o envolvimento com a DNA;
- com a Universidade Eduardo Mondlane - professores do IIM dão aula na universidade e esta às vezes usa os laboratórios do IIM; os professores do IIM fazem a supervisão do trabalho de alunos da universidade.
- com o sector privado: MOZAL – Empresa Mozambique Aluminium usa o laboratório de hidroquímica e paga pelo serviço. Foram assinados acordos com empresas construtoras e indústrias.
- Com o Moz 37: o Moz 37 ajuda a colocação nas Províncias dos graduados, até o seu enquadramento.

Eficácia

- 60% a 70% dos graduados são absorvidos pelo mercado de trabalho e as práticas pré-profissionais jogam um papel importante.
- O Núcleo de Hidráulica contribui para a gestão académica e funcional da Especialidade e graças ao papel da Assistência Técnica do Moz 16 foi capacitado para funcionar de maneira sustentável
- A formação dos docentes em nível superior garante a continuidade da eficácia da formação
- Falta maior autonomia de funcionamento para a Especialidade de Hidráulica frente à Direcção do IIM.
- A falta de um uso óptimo dos laboratórios para aumentar a sua rentabilidade.
Taxa de utilização dos laboratórios pelos alunos: 72 horas em cada semestre (4 horas por semana) = utilização adequada.
Taxa de utilização dos laboratórios por externos: baixa = equipamentos sub-utilizados

Impacto no sector:

- De 60 a 70% dos técnicos formados pela Especialidade de Hidráulica são absorvidos pelo sector de água. Os demais graduados preferem continuar com estudos na Universidade ou se dirigem a outros sectores.
- A categoria de técnicos (tabela “Trabalhadores do sector de água – 1995-1998, segundo sexo e habilitações académicas”) médios está entre as que mais cresceu no sector de água. É interessante notar que de 1995 para 1998 houve uma mudança na estrutura de categorias: diminui a % de trabalhadores com o nível mais elementar e aumenta a % de trabalhadores com nível médio.
- Em 1998 há um sério desequilíbrio entre o número de técnicos médios do sector de águas em Maputo (134 técnicos médios) e de todas as demais províncias juntas (110 técnicos médios). As bolsas financiadas pelo Moz 16 no ano 2000 na Especialidade de Hidráulica do IIM são 28 para Maputo e 12 para Beira e Nampula.

Conclusões

Relevância do apoio do Moz 16 ao IIM, sua eficiência, eficácia e impacto.

- Os aspectos mais importantes do apoio do Programa Moz 16 para a formação dos técnicos de nível médio do sector de águas é
 - Directamente, o apoio à formação de técnicos através de bolsas, práticas pré profissionais, visitas ao terreno, palestras
 - Indirectamente, o apoio à formação de uma equipe de gestão académica e funcional na Especialidade de Hidráulica, ou o ‘Núcleo de Hidráulica’
Ainda que criado de maneira informal, o Núcleo desempenha um papel importante e a sua capacitação para gestão académica e funcionamento da Especialidade contribui para o desenvolvimento institucional e a sustentabilidade da Especialidade.
- Ainda que o currículo não tenha sido revisto para adaptar-se aos novos desenvolvimentos, o Núcleo de Hidráulica tem tomado iniciativas para introduzir inovações no currículo. De maneira geral, ainda que o currículo seja demasiado técnico, a formação responde às necessidades do sector. No entanto, já se escutam pedidos para a introdução de novos conhecimentos (gestão de projectos e de empresas, saneamento, plantas de tratamento de água, mais atenção para elementos de construção).

- Muito foi feito em termos de organização da informação sobre os alunos e sobre os graduados. Mas falta um monitoramento mais sistemático da eficácia do desempenho em termos de formação e absorção dos graduados pelo sector.
- Ainda faltam acções positivas para maior descentralização da formação e da absorção pelo sector sobretudo nas províncias.
- Há muita centralização e burocracia por parte da Direcção do IIM, o que impede maior motivação e dinamismo e motivação. Falta autonomia de gestão financeira dos recursos gerados/ que possam vir a ser gerados. A rentabilização dos laboratórios e o dinamismo do NUFETI sofrem directamente desta centralização. Maior autonomia pode gerar maior motivação para a geração de receita.
- A Especialidade de Hidráulica é vista pelas demais especialidades e departamentos como um sítio privilegiado, dado o apoio do Moz 16 e os desenvolvimentos decorrentes deste apoio. Em vez de isolar-se, a maior ligação com as outras especialidades do Departamento de Construções e com os demais Departamentos pode servir como estímulo à renovação dos demais, e exercer influência positiva para maior eficiência do próprio IIM e sua transformação em instituição mais dinâmica.

Annex 10 : Bibliography

- Acordo do Programa Moz.16, 7ª Fase
- Relatórios anuais do Programa Moz.16, 1995-1996-1997-1998-1999
- Estudo sobre o Conceito Global da Formação no Sector de Águas e o Papel do CFPAS – CBE, 1998
- Relatórios dos 3 seminários regionais de Chimoio, Nampula e Maputo sobre a Formação no Sector de Águas e o Envolvimento dos Utentes na Planificação e Financiamento dos Cursos – CFPAS, 1998
- Estatuto Orgânico do CFPAS (Draft ou Versão final se aprovada !!)
- Relatório do seminário do MOPH sobre as Estratégias para a Sustentabilidade dos CFP's do MOPH (1999)
- Eventualmente o Estudo comparativo dos CFP's do MOPH
- Documento sobre as Perspectivas de colaboração entre os Programas Moz.02, 16 e 37 - SDC 1998
- Inquéritos realizados a Empresas do sector e Ex-Graduados
- Avaliação da Eficiência do Funcionamento da Especialidade de Hidráulica – CBE, 1994
- Desenvolvimento de Meios de Ensino Aprendizagem – CBE, 1996
- Auditoria ao Instituto Industrial de Maputo – Ernst & Young, 1996
- Implementação da Especialidade de Hidráulica no Curso Nocturno, Julho de 1996
- Desenvolvimento do Sistema de Práticas Pré-Profissionais – CBE, 1997
- Dossier da revisão curricular dos cursos do IIM, 1997
- Melhoramento da Qualidade do Processo de Ensino-Aprendizagem – CBE, 1998
- Regulamento de Bolsas de Estudo para trabalhadores do Sector de Água, Agosto 1994
- Relatórios anuais da Comissão de Gestão de Bolsas do Nível Médio da Direcção Nacional de Águas, 1996, 1997 e 1998
- Plano de transição de Água Rural
- Relatório do Seminário de discussão de Mecanismos de Participação Comunitária de Bilene – CBE 1999 (Draft)
- Relatório do Primeiro Encontro Intersectorial sobre a Participação Comunitária de Pemba, SDC – 1998
- Projecto Integrado de Água e Saneamento e Educação Sanitária na Zona de Matola Gare na Província de Maputo. DPOPH-Maputo e CFPAS, 1999 (Draft)
- Programa de Água, Saneamento e Promoção da Higiene. Plano de Operação do Programa 1999-2001, UNICEF e GOV de Moçambique
- Relatório da visita de Mvula Trust, Núcleo do PEC/CFPAS, 1999
- Estudo de Disposições Institucionais para o Abastecimento de Água Rural e Saneamento em Moçambique. COWATER – 1996
- TA Requirements in the Rural Water Sector in Mozambique. Assessment of Priorities and Needs, DAR-1998
- Diagnostico da Situação de Abastecimento de Água à População Rural dos Distritos de Funhaloro e Mabote, Província de Inhambane, SÚSTEM, 1999