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**OMAN FISHERIES DEVELOPMENT AND MANAGEMENT PROJECT**

**1994 WORK PLAN**

**OMAN FISHERIES DEVELOPMENT AND MANAGEMENT PROJECT**

**AID Project Number 272-0106-C-00-100-00**

**Contract Number PIO/T 272-0106-3-0005**

**JANUARY - DECEMBER 1994**

**PREPARED BY:**

**CHEMONICS INTERNATIONAL CONSULTING DIVISION**

**SUBMITTED TO**

**OMANI-AMERICAN JOINT COMMISSION  
FOR ECONOMIC & TECHNICAL COOPERATION**

**AND**

**DIRECTORATE GENERAL OF FISHERIES RESOURCES  
MINISTRY OF AGRICULTURE AND FISHERIES  
SULTANATE OF OMAN**

**FEBRUARY 15, 1994**



مشروع تنمية وإدارة الثروة السمكية في عمان  
**FDMP** Oman Fisheries Development and Management Project

April 25, 1994

Dr. Michael Cremer  
Project Officer, Oman FDMP  
Omani-American Joint Commission  
PO Box 3001 Ruwi 112  
Sultanate of Oman

Reference: FDMP 1994 Work Plan

Dear Dr. Cremer:

Attached please find the final draft of the FDMP 1994 Work Plan. This is the final draft of this document.

Sincerely yours,

Dr. John A. Dorr III  
Chief of Party

Attachment

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مشروع تنمية وإدارة الثروة السمكية في عمان  
**FDMP** Oman Fisheries Development and Management Project

April 25, 1994

H.E. Sheikh Abdullah bin Ali Bakathir  
Director General  
Directorate General of Fisheries Resources  
Ministry of Agriculture and Fisheries  
Al Khuwair

Reference: FDMP 1994 Work Plan

After compliments:

I am pleased to attach the final draft of the FDMP 1994 Work Plan, in both English and Arabic.

If you should have any questions or comments concerning this document, please do not hesitate to contact me.

After final compliments,

Dr. John A. Dorr III  
Chief of Party

Attachments

cc: Mr. Hamad bin Hamdan al-Yahyai, Project Coordinator, DGFR

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## ***LIST OF ABBREVIATIONS***

<b>ad -</b>	<b>Ad hoc activity</b>
<b>C -</b>	<b>Currently contracted</b>
<b>CEES -</b>	<b>Center for Environmental and Estuarine Studies</b>
<b>CHEM -</b>	<b>Chemonics International Consulting Division</b>
<b>COP -</b>	<b>Chief of Party</b>
<b>CST -</b>	<b>Computer skills training</b>
<b>DFA -</b>	<b>Department of Fisheries Affairs</b>
<b>DFR -</b>	<b>Department of Fisheries Resources</b>
<b>DFS -</b>	<b>Department of Fisheries Statistics</b>
<b>DGFR -</b>	<b>Directorate General of Fisheries Resources</b>
<b>ELT -</b>	<b>English language training</b>
<b>FDMP -</b>	<b>Fisheries Development and Management Project</b>
<b>L -</b>	<b>Local</b>
<b>LOE -</b>	<b>Level of effort</b>
<b>LT -</b>	<b>Long-term</b>
<b>MSFC -</b>	<b>Marine Science and Fisheries Center</b>
<b>O -</b>	<b>Offshore</b>
<b>OJT -</b>	<b>On-the-job training</b>
<b>OST -</b>	<b>Operational skills training</b>
<b>P/M -</b>	<b>Person-months</b>
<b>ST -</b>	<b>Short-term</b>
<b>STT -</b>	<b>Short-term technical training</b>
<b>TA -</b>	<b>Technical assistance</b>
<b>TA/1 -</b>	<b>COP/Fisheries Advisor (J. Dorr)</b>
<b>TA/2 -</b>	<b>Training Advisor (T. Crosby)</b>
<b>TA/3 -</b>	<b>Data Collection and Analysis Specialist (M. Bouhlel)</b>
<b>TA/4 -</b>	<b>Fishery Management and Stock Assessment Specialist</b>
<b>TBA -</b>	<b>To be arranged</b>
<b>TC -</b>	<b>Third country</b>
<b>TR -</b>	<b>Training assistance</b>

## 1994 WORK PLAN

### OMAN FISHERIES DEVELOPMENT AND MANAGEMENT PROJECT

JANUARY - DECEMBER 1994

#### A. INTRODUCTION

The general objective of the redesigned Oman Fisheries Development and Management Project is to provide training and technical assistance that will improve the ability of the Directorate General of Fisheries Resources (DGFR) to conduct research and stock assessment, and to manage, conserve, and develop Oman's fisheries and fishery resources. To achieve this end, activities are focused on (1) research and stock assessment/management, and (2) statistics and database development. Technical assistance continues to emphasize training; technical advisors assume only those operational duties that relate to the on-the-job training they are to provide.

#### 1. Production of Fishery Management Plans

The formulation of two fishery management plans is an important output of the FDMP related to the objective outlined above. Valuable in themselves, these plans may also be used as models for future development of management plans for other fisheries, and the process of their production will involve considerable training of DGFR staff. The bulk of work on these plans must be completed during 1994, and has been scheduled in this work plan.

We propose that the following decisions/actions be taken to produce these two fishery management plans:

- a. Model fishery management plans will be produced for the following two fisheries:
  - Industrial multispecies demersal trawl fishery
  - Traditional kingfish fishery
- b. One task force, with DGFR staff and FDMP technical advisors assigned as permanent members, will be formed to produce both of these management plans. Additional FDMP consultants, representatives from the public and private sector of Oman, and other individuals will be drawn into the task force on a temporary basis when additional expertise is required. *NOTE: We suggest that H.E. the Director General serve as the chairman of the task force, and that a senior director or an advisor to the DGFR serve as the coordinator.*

- c. Production of these plans will require extensive analysis and assimilation of information on catch, effort, value, biology, and status (i.e., stock assessment) for the fish resources which support these two fisheries. Therefore, we propose to utilize 40 percent of the time of the Data Collection and Analysis Specialist, and 60 percent of the time of the Fishery Management and Stock Assessment Specialist to accomplish this work. They will work with Omani staff members who are supporting task force activities.
- d. When required, the FDMP will enlist the technical support of the short-term advisors with experience in the development of such plans and their components (e.g., management alternatives, economics, enforcement, etc.). The need for some of this assistance has already been identified and is scheduled in this work plan. Additional assistance will be procured as required. The contractor will confer with the DGFR and the OAJC to identify technical assistance needs, to prepare scopes of work, and to select appropriately qualified short-term personnel.

## **2. 1994 FDMP Work Plan**

The current work plan reflects changes resulting from the technical redesign, completed in February 1993, and follows the general outline for annual work plans as specified in the project contract. All scheduled activities of the project are listed: specific dates and ascribed responsibilities are given for the calendar year 1994, and activities to be completed in later years are so designated. Enumeration of activities follows that of the technical redesign document, which is included in the work plan as Appendix A.

Because the emphasis of the project is concentrated on training in all its aspects, details of training are contained throughout, not only in the activity table and the various lists and tables of trainees, but also in Appendices B and C, which contain the schedules for computer training and English language training, respectively.

Procurement of commodities is programmed to support certain activities. To supplement Section E, Commodities Procurement, details of projected FDMP procurement are given in Appendix D.

**B. SCHEDULE OF ACTIVITIES DURING 1994 (Reference: FDMP Technical Redesign, Appendix A)**

The following five-part GANTT chart presents a listing of all activities that are scheduled during the remainder of the project. This listing reflects the activities approved in the FDMP Technical Redesign document (Appendix A). The Technical Advisors, categories of short-term technical/training assistance, person-months, and the schedule associated with each activity are included in the tables. Activities to be implemented after 1994 are so indicated, and monthly scheduling of these activities will be included in the 1995 work plan.

**1. DGFR OPERATIONAL SKILLS**

**Objective 1: To strengthen job-related technical English language skills in all departments of the DGFR**

Activity	TA/ST	P/M	1994													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1a. Conduct in-country training courses in Intermediate Technical English	TR/ST/L	5.8*	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1b. Conduct in-country training courses in Advanced Technical English	TR/ST/L	3.6*	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1c. Conduct in-country training courses in Scientific English for computing and statistics	TR/ST/L	0.95*														
1d. Conduct in-country training courses in Scientific English for biological research	TR/ST/L	0.65*														■
ad Conduct English language training in Salalah	TR/ST/L	9.5														

ad = ad hoc activity

\* Courses provided in Muscat by Polyglot Institute: 14 sections of 100 hours each, making a total of 11.1 person-months.

**B. SCHEDULE OF ACTIVITIES DURING 1994 (cont'd)**

**1. DGFR OPERATIONAL SKILLS (cont'd)**

**Objective 2: To strengthen job-related computer skills in all departments of the DGFR where computing equipment is available. Courses to be given again in 1995 as needed.**

Activity	TA/ST	P/M	1994													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
2a. Provide an introduction to computers and MS-DOS	TR/ST/L	0.4*	■													
2b. Conduct training in word processing using Word (English)	canceled															
2c. Conduct training in word processing using Al-Katib	completed															
2d. Conduct training in word processing using WordPerfect (English)	canceled															
2e. Conduct training in word processing using ArabWord	TR/ST/L	0.27*	■	■												
2f. Conduct training in English keyboard skills	canceled															
2g. Conduct training in Arabic keyboard skills	completed															
2h. Conduct training in the use of basic Lotus 1-2-3	TR/ST/L	0.27*						■								
2i. Conduct training in the use of basic DBase IV	TR/ST/L	0.14*														
2j. Conduct training in the use of Harvard Graphics	TR/ST/L	0.14*														
2k. Conduct training in the use of networks for network users	completed															
2l. Conduct training in the use of advanced DOS	TR/ST/L	0.14*														
2m. Conduct training in the use of advanced word processing using Word	1995															
2n. Conduct training in advanced word processing using Al-Katib	TR/ST/L	0.27*														
2o. Conduct training in advanced word processing using WordPerfect (English and Arabic)	1995															
2p. Conduct training in advanced word processing using ArabWord	TR/ST/L	0.27*														
2q. Conduct training in the operation and use of selected printers and plotters	see OJT/S 425															
2r. Conduct training in the advanced use of Lotus 1-2-3	TR/ST/L	0.14*														
2s. Conduct training in the advanced use of DBase IV	TR/ST/L	0.14*														
2t. Conduct training in the use of PC Tools utility software	TR/ST/L	0.08*														
2u. Conduct training for staff who will provide network support to other system users (NOVELL: Engineer) (NOVELL: Administrator)	TR/ST/L TR/ST/L	0.72 0.24														
2v. Conduct training for MSFC Library staff in SOUTRON (replaces FOXBASE)	vendor	0.4	■	■												
2w. Conduct training in the use of selected tape back-up systems	TR/ST/L	0.06	■													
2x. Conduct training in the use of selected CD-ROM systems	TBA															
2y. Conduct training in the operation of 4th Generation Languages (ORACLE, replaces training in UNIX Systems)	TR/ST/L	0.26*														
2z. Conduct training in advanced DBase IV programming	TR/ST/L	0.23*														
ad. Conduct Computer Skills Training in Salalah	TR/ST/L	1.21														

\* Courses provided in Muscat by National Training Institute: approximately 2.75 trainer person-months.

NOTE: For the detailed schedule of these activities, see Appendix B, FDMP Computer Skills Training Course Calendar - 1994, on page 48 of this work plan.



**B. SCHEDULE OF ACTIVITIES DURING 1994 (cont'd)**

**2. MARINE SCIENCE AND FISHERIES CENTER (cont'd)**

**Objective 5: To develop a National Fish-Ageing Laboratory that will produce time-series data on the age of selected species of fish and shellfish**

Activity	TA/ST	P/M	1994													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
5a. Equip a laboratory and train staff in the preparation of fish and shellfish samples for analysis of age	ST/US	1														
5b. Conduct training in general techniques for ageing specific species of fish and shellfish	ST/US	1														
	ST/US or TC	1														
5c. Conduct training in the use of age data for analysis of population dynamics and stock assessment	TA/3	0.5														
	TA/4	0.5														

**Objective 6: To develop the capability for computer-assisted fisheries research and stock assessment**

Activity	TA/ST	P/M	1994													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
6a. Establish a computer system to support fisheries research activities	completed															
6b. Improve computer skills in the use of MSFC operating systems, word processing (Arabic and English), spreadsheet, database, and graphics software, and tape drives	completed															
6c. Install computer programs already available at the MSFC in stock assessment on the MSFC network (e.g., ELEFAN, LSFA, etc.)	completed															
6d. Conduct training in the use of computer-assisted stock research/management techniques appropriate to the needs of Oman, using available data on Oman's fishery whenever possible	TA/4	1														
6e. Provide training to long-term participants in computer-assisted research and stock assessment techniques including CANOFISH	restructured*															
6f. Install CANOFISH and associated hardware at the MSFC	restructured*															
6g. Provide training at the MSFC in the use of CANOFISH and application to assessment and management of Oman's fishery resources, utilizing national databases whenever possible	restructured*															

\* Other technical assistance and training will be substituted for these activities (see Optional ST/TA in Section C.3., page 10.)

**B. SCHEDULE OF ACTIVITIES DURING 1994 (cont'd)**

**3. DEPARTMENT OF FISHERIES STATISTICS**

**Objective 1: To produce revised and consolidated national fisheries data that are stored on a safe medium which allows easy access for historical analysis**

Activity	TA/ST	P/M	1994													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1a. Establish a computer network (LAN) to support the production of fishery statistics and related information	completed															
1b. Revise and consolidate the national fisheries database, and store it on a safe medium that allows easy access for historical analyses	TA/3 service	0.5 C														
1c. Develop the abilities of staff to operate, manage, and utilize newly consolidated systems and databases	TA/3	1.5														

**Objective 2: To produce subdatabases containing summary information on sardines, shrimp, and company activities**

Activity	TA/ST	P/M	1994													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
2a. Produce subdatabases containing summary information on sardines, shrimp, and activities of companies	TA/3	0.5														

**Objective 3: To expand data collection and analyses to respond to main user requests**

Activity	TA/ST	P/M	1994													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
3a. Produce catch, value, effort, and CPUE spatial and temporal data for the traditional fishery partitioned by species, gear, and boat type	TA/3	1														
3b. Estimate sampling errors or obtain other measures of known variability for all (estimated) parameters, and determine sample-size requirements (e.g., number of boat or site samples, etc.) based on specified bounds on the error of estimates	completed															
3c. Improve estimates of the following specific parameters in the priority indicated:  1. Industrial trawler discards 2. Effort for industrial trawlers (hauls) and longliners (hooks)  and, obtain estimates of the following other parameters as time permits:  3. Beach seine catch and effort data 4. Shrimp catch and effort 5. In conjunction with the MSFC, investigate methods of assessing stock exploitation using, for example, information on age/length frequency, sex and maturation, size-related fecundity, etc. for important species	TA/3 ST/US	1 1														

**Objective 4: To provide Omani staff with improved and/or new skills required to operate upgraded DFS systems**

Activity	TA/ST	P/M	1994													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
4a. Develop the abilities of staff to reprogram the national database as necessary to add variables or produce new summaries	TA/3	0.3														
4b. Improve staff computer skills in the use of DFS operating systems, word processing (Arabic and English), spreadsheet, database, and graphics software, and tape drives	service	DGFR 2a-2														
4c. Improve technical writing skills in English and Arabic for technical report writing and preparation of the 1993 DFS Annual Work Plans and budgets (to be revised)	TA/3 service	0.5 1														
4d. Conduct a workshop in fall 1993 on data collection survey sampling methodology, and another workshop in fall 1994 on calculations for estimating national statistical parameters, and estimation of sampling errors	TA/3	0.7														

service = Service contract with local firm  
C = Currently contracted

**B. SCHEDULE OF ACTIVITIES DURING 1994 (cont'd)**

**4. DEPARTMENT OF FISHERIES AFFAIRS**

**Objective 1. To develop the capabilities of the DFA in computer-assisted compilation, storage/retrieval, and presentation of national fishing data pertaining to:**

- Vessel specifications
- Registration
- Licensing – commercial, traditional, recreational
- Surveillance – at sea, port, and inland
- Violations
- Penalties
- Data on catch, effort, discards, biology, etc.

Activity	TA/ST	P/M	1994														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1a. Assist in the development of procedures for computer-assisted compilation, storage/retrieval, analysis, and presentation of data	service	C															
1b. Provide training in the operation of the computer-assisted compilation, storage/retrieval, analysis, and presentation systems developed through Activity 1a	service	C															

**Objective 2: To develop the capability of on-board vessel observers in the collection of biological data in support of research, stock assessment and database development activities**

Activity	TA/ST	P/M	1994														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
2a. Conduct training in the identification of relevant demersal and pelagic fish species	completed																
2b. Conduct further training in fish species identification and fishing gear/techniques	TA/S	0.25															
2c. Conduct training in on-board collection of biological data	completed																
2d. Conduct training of trainers in the on-board collection of biological data	completed																
2e. Provide assistance in the photography of fish for the Fish Catalogue that will be used in the identification of fish caught by industrial trawlers and other fisheries	completed																

service = Service contract with local firm  
 C = Currently contract

**B. ACTIVITIES SCHEDULED DURING 1994 (cont'd)**

**5. DEPARTMENT OF FISHERIES RESOURCES**

**Objective 1: To assist with establishment of codes of practice, and procedures for improving the quality of fish products for local sale or for export**

Activity	TA/ST	P/M	1994														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1a. Assess the extent to which codes and/or procedures for quality control are currently in effect within the industrial/commercial and traditional fishing sectors	completed																
1b. Design and recommend measures for the implementation of suitable quality control programs in the industrial/commercial sector, based on accepted international standards and practices, and including an evaluation of the social and economic feasibility of recommended measures	completed																
1c. Identify specific measures for improving the handling and preservation of fish products by traditional fishermen and fish transporters	ST/JS	2															
1d. Design OJT programs for Department staff that will enable them to implement quality control measures identified in Activity 1c, in cooperation with DGFR extension activities	ST/JS	DFR 1c															

**Objective 2. To build upon the understanding of costs, earnings, marketing, and distribution of products associated with traditional demersal and large pelagic fisheries**

Activity	TA/ST	P/M	1994														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
2a. Assist in the design and analysis of results of survey(s) of costs, earnings, marketing, and distribution of products associated with traditional demersal and large pelagic fisheries	ST/JS	2															

**C. ANNUAL LEVEL-OF-EFFORT FOR SHORT-TERM TECHNICAL ASSISTANCE FOR 1994-1995**

The following table summarizes by year the level-of-effort (LOE) for short-term technical personnel for the remainder of the project (1994-1995). The total LOE for short-term assistance matches that shown in section B. Tables B and C were drawn from the FDMP Technical Redesign document (Appendix A of this document).

**1. 1994**

Technical Assistance Activity	Period	Job Category	Vendor (P/M)	Consultant (P/M)
MSFC 1c. Literature Search Workshop	Oct	CHEM/ST/L		0.5
MSFC 1f. Library Computer Reprogramming	Mar	Service	1	
MSFC 1f. Library System Review	Jun	CHEM/ST/L		0.25
MSFC 2c. Technical Writing Shortcourse	Oct	Service	1	
MSFC 3c. Fish Management Alternative Workshop	Oct - Dec	SLAVIN/ST/US		2
MSFC 3d. Design of Fishery Management Plans	Jan - Feb	CHEM/ST/US		2
MSFC 3d. Fishery Management Plan Production	Oct - Dec	SLAVIN/ST/US		2
MSFC 5a. Fish/Abalone Age Sample Prep Training	Jul	CHEM/ST/TC or US		1
MSFC 5a. Fish Aging Training	Oct - Nov	CHEM/ST/US		1
MSFC 5b. Abalone Aging Training	Oct - Nov	CHEM/ST/TC or US		1
MSFC 6f. CANORSH Installation	restructured*			(0.5)
MSFC 6g. CANORSH Applications Training	restructured*			(1)
DFS 1b. Database Reprogramming	Jan - Mar	Service	contracted	
DFS 3c. Statistical Parameter Improvements	Sep - Oct	SLAVIN/ST/US		1
DFA 1a/1b. Database Development	Apr - May	Service	contracted	
DFR 1c. Fish Handling & Preservation	Sep - Oct	SLAVIN/ST/US		2
DFR 2a. Marketing & Cost Surveys	May - Jun	SLAVIN/ST/US		2
STT Laboratory Methods	Jan	CHEM/ST/L	contracted	
STT Marine Resource Biology	Mar - Jun	CHEM/ST/L		1.5
<b>Totals</b>			<b>2</b>	<b>18.35</b>

**2. 1995**

Technical Assistance Activity	Period	Job Category	Vendor (P/M)	Consultant (P/M)
DFS 4c. Technical Writing Shortcourse	Jan	Service	1	
STT Laboratory Methods (Salalah/Muscat)	TBA**	CHEM/ST/L		1
STT Laboratory Equipment Installation & Training (Salalah)	TBA***	CHEM/ST/L		2
<b>Totals</b>			<b>1</b>	<b>3</b>

**3. Optional Short-Term Technical Assistance**

Technical Assistance Activity	Period	Job Category	Vendor (P/M)	Consultant (P/M)
MSFC 3d. Fishery Economics	TBA, 94	CHEM/ST/US		1
MSFC 3d. Fishery Enforcement	TBA, 94	CHEM/ST/US		1
MSFC 6d. Stock Assessment Training (OSU)	Jun - Aug 94	CHEM/ST/US		3
MSFC 6d. Stock Assessment Training (FAO)	TBA, 94	CHEM/ST/US		1
Computer Programming Assistance to MSFC 4a; DFS 1a-c; DFA 1a-b	Jun - Dec	Service	7	
<b>Totals</b>			<b>7</b>	<b>6</b>

\* Other technical assistance and training will be substituted for these activities. See No. 3 in the table above.

\*\* Training will be conducted in Muscat if facilities are unavailable in Salalah.

\*\*\* Subject to timely construction of laboratory and procurement of laboratory equipment.

( ) Person months not included in totals because this assistance has been restructured.

**D. SUMMARY OF LEVEL OF EFFORT OF LONG-TERM TECHNICAL ADVISORS BY PROJECT COMPONENT, JANUARY-DECEMBER 1994**

The following table summarizes the 1994 level of effort measured in months for long-term personnel. Please note that the Fisheries Management and Stock Assessment Specialist (TA/4) will join the project in March.

Designation	Position	Manpower Development and Training	Fisheries Resources Management	Project Management and Coordination	Distribution of Time		Total LOE
					MAF	MSFC	
TA/1	COP and Fisheries Advisor		6.00	6	75%	25%	12.00
TA/2	Training Advisor	11		1	100%		12.00
TA/3	Data Collection and Data Analysis Specialist		12.00		60%	40%	12.00
TA/4	Fishery Management and Stock Assessment Specialist		9.25			100%	9.25
	Total LOE	11	27.25	7			45.25

## E. COMMODITY PROCUREMENT

The following table summarizes the commodities to be purchased during the remainder of the project (1994-1995). The year and estimated amount of these purchases are noted along with the scheduled activities which these commodities will support. Additional details on these commodity procurements and budget allocations are presented in Appendix D.

Commodities to be Procured during 1994-1995

Associated Activity	Procurement	Budget (US\$)	Source	Year
DGFR 2a-z MSFC 6a DFS 1a DFA 1a-b	Computer procurement	5		
MSFC 1f	Library resources	18,272	O	1994
MSFC 5a	Fish aging equipment	4,104	O/L	1994
DGFR 2a-z MSFC 1f MSFC 6a MSFC 1e,5a DFS 1a	Computer software	0		
MSFC 1e,5a DGFR 2a-z	Lab and image analysis equipment and supplies*	50,000	O/L	1994,1995
DFA 2e	Training equipment and supplies	12,435	O/L	1994,1995
ad hoc	Salalah laboratory equipment	200,000	O/L	1994,1995

O = Offshore source

L = Local source

\* These materials are to include equipment and supplies required to support specific research activities at the MSFC. These activities include, for example, FDMP thesis research, or FDMP assistance to research and development of management plans for specific fisheries (MSFC Activities 1e, 2b, 3d).

## F. FDMP PROJECT TRAINING ACTIVITY INDEX

Short-term training scheduled during the project is listed in the FDMP Project Training Activity Index on the following five pages. In addition to correlating training to the relevant activity contained in the project revision, this table gives the 1994 status of individual training courses as well as estimating the number of registrants or trainees expected to participate in each. Details of this training are presented in individual course descriptions available from the training advisor.

### 1. English Language Training Courses

Activity #	Course Number and Name	Number Trainees
DGFR 1a	ELT 101: Intermediate Technical English	56
DGFR 1b	ELT 102: Advanced Technical English	40
DGFR 1c	ELT 201: Scientific English for Computers and Statistics	8
DGFR 1d	ELT 202: Scientific English for Biological Research	8
ad hoc	SELT 101; 102; 201; and 202: English Language Training in Salalah	150*

Total ELT Trainees in 1994: 262\*

### 2. Computer Skills Training Courses

#### a. Basic Computer Training

Activity #	Course Number and Name	Number Trainees
DGFR 2a	CST 100: Introduction to Computers & MS-DOS (English)	completed (4/93)
DGFR 2a	CST 105: Introduction to Computers & MS-DOS (Arabic)	16
DGFR 2b	CST 110: Word Processing WORD (English)	canceled
DGFR 2c	CST 115: Word Processing Al-Kattib (Arabic)	completed (10/93)
DGFR 2d	CST 120: Word Processing WordPerfect (English)	canceled
DGFR 2e	CST 125: Word Processing ArabWord (Arabic)	16
DGFR 2f	CST 130: English Keyboard Skills	canceled
DGFR 2g	CST 135: Arabic Keyboard Skills	completed (12/93)
DGFR 2h	CST 140: Basic LOTUS 1-2-3	16
DGFR 2i	CST 150: Basic DBase IV	8
DGFR 2j	CST 160: Harvard Graphics	8
DGFR 2k	CST 170: Network Training for Users	completed (9/93)
Subtotal CST Trainees in 1994:		64

\* Total number of registrants

2. Computer Skills Training Courses (cont'd)

b. *Advanced Computer Training*

Activity #	Course Number and Name	Number Trainees
DGFR 2l	CST 200: Advanced DOS	8
DGFR 2m	CST 210: Advanced WORD	not offered in 1994
DGFR 2n	CST 215: Advanced Al-KATTIB	8
DGFR 2o	CST 220: Advanced WordPerfect (English & Arabic)	not offered in 1994
DGFR 2p	CST 225: Advanced ArabWord	8
DGFR 2q	OJT/S 425: Plotters and Printers	completed
DGFR 2r	CST 240: Advanced LOTUS 1-2-3	8
DGFR 2s	CST 250: Advanced DBASE IV	8
DGFR 2t	CST 260: Utilities Software: PC TOOLS	8
DGFR 2u	CST 275: Novell: Administrator	4
DGFR 2u	CST 375: Novell: Engineer	4
DGFR 2v	CST 280: Soutron (replaces Foxbase Programming)	2
DGFR 2w	CST 290: Hardware: Tape Back-Up	4
DGFR 2x	CST 295: Hardware: CD-ROM	not offered in 1994
Subtotal CST Trainees in 1994:		62

c. *Expert Training*

Activity #	Course Number and Name	Number Trainees
DGFR 2y	CST 310: 4th Generation Languages (Oracle) replaces Unix	6
DGFR 2z	CST 350: Advanced DBase Programming	4
Subtotal CST Trainees in 1994:		10

d. *Ad Hoc Computer Skills Training*

Activity #	Course Number and Name	Number Trainees
ad hoc	Computer Skills Training in Salah	75*
Subtotal ad hoc CST Trainees in 1994:		75*

\* Total number of registrants

Total CST Trainees in 1994:

211\*

### 3. Operational Skills Training

#### a. *Marine Science and Fisheries Center*

<u>Activity #</u>	<u>Course Number and Name</u>	<u>Number Trainees</u>
MSFC 1b	OST/M 120: Basic Statistics and Sampling	completed (11/93)
MSFC 1c	OST/M 130: Workshop: Literature Search	8
MSFC 1d	OST/M 140: Basic Research Methodology	4
MSFC 1f	OST/M 160: Workshop: Library Management	2
MSFC 2a	OST/M 210: Workshop: Elements of Research Proposals	6
MSFC 2c	OST/M 220: (see ELT 101, 102, 201)	-
MSFC 2c	OST/M 230: Workshop: Technical Writing	6
MSFC 3c	OST/M 330: Workshop: Fisheries Management Alternatives	10
MSFC 5a	OST/M 521: Age Sample Preparation (finfish)	completed (7/93)
MSFC 5a	OST/M 522: Age Sample Preparation (abalone)	4
MSFC 5b	OST/M 523: Finfish Aging Techniques	4
MSFC 5b	OST/M 524: Abalone Aging Techniques	4
MSFC 5c	OST/M 525: Age Data and Stock Assessment	4
MSFC 6b	OST/M 620: (see CST courses)	-
MSFC 6d	OST/M 640: Computerized Stock Assessment	4
MSFC 6g	OST/M 670: CANOFISH Applications to Oman Stock Assessment	restructured
<b>Total MSFC Operational Skills Trainees in 1994:</b>		<b>56</b>

#### b. *Department of Fisheries Statistics*

<u>Activity #</u>	<u>Course Number and Name</u>	<u>Number Trainees</u>
DFS 1c	OST/S 130: Database and System Use	6
DFS 4b	OST/S 420: (see CST courses)	-
DFS 4c	OST/S 430: (see ELT 101, 102 & 201)	-
DFS 4d	OST/S 440: Workshop: Data Collection	12
DFS 4d	OST/S 445: Workshop: Data Analysis	completed (11/93)
<b>Total DFS Operational Skills Trainees in 1994:</b>		<b>18</b>

### 3. Operational Skills Training (cont'd)

#### c. Department of Fisheries Affairs

Activity #	Course Number and Name	Number Trainees
DFA 2a	OST/A 210: Identification of Demersal and Pelagic Species	completed (5/93)
DFA 2b	OST/A 220: Identification of Species and Fishing Gear	20
DFA 2c	OST/A 230: Biodata Collection	completed (12/93)
DFA 2d	OST/A 240: On-Board Training of Trainers for Biodata Collection	completed (12/93)
<b>Total DFA Operational Skills Trainees in 1994:</b>		20

#### d. Department of Fisheries Resources

Activity #	Course Number and Name	Number Trainees
DFR 1d	OST/R 140: Workshop: Quality Control	completed (12/93)

**Total Operational Skills Trainees in 1994: 94**

### 4. On-the-Job Training

#### a. Marine Science and Fisheries Center

Activity #	Course Number and Name	Number Trainees
MSFC 1e	OJT/M 150: Specific Research Projects	6
MSFC 2b	OJT/M 220: Research Grant Proposal Writing	6
MSFC 3b	OJT/M 320: Fishery Management Task Force	8
MSFC 3d	OJT/M 340: Fishery Stock Assessment & Mgmt Plan Models	8
MSFC 4a	OJT/M 410: Consolidation of Fishery Stock Databases	3
MSFC 6a	OJT/M 610: Computer Network Development	completed (12/93)
MSFC 6c	OJT/M 630: Fishery Computer Program Installation	completed (10/93)
MSFC 6d	OJT/M 640: Computerized Stock Assessment	2
MSFC 6f	OJT/M 660: Installation of CANOFISH	restructured
<b>Total MSFC On-the-Job Trainees in 1994:</b>		33

4. On-the-Job Training (cont'd)

b. Department of Fisheries Statistics

Activity #	Course Number and Name	Number Trainees
DFS 1a	OJT/S 110: Computer Network Development	completed (12/93)
DFS 1b	OJT/S 120: Revision and Consolidation of Databases	5
DFS 1c	OJT/S 130: Database and System Use	5
DFS 2a	OJT/S 210: Establishment of New Subdatabases	5
DFS 3a	OJT/S 310: Data Categorization and Production	2
DFS 3b	OJT/S 321: Sample-Error Estimation	completed (11/93)
DFS 3b	OJT/S 322: Sample-Size Determination	completed (11/93)
DFS 3c	OJT/S 330: Improving Parameter Estimation in Priority Areas	11
DFS 4a	OJT/S 410: Reprogramming National Database	5
DGFR 2q	OJT/S 425: Printers and Plotters	12
<b>Total DFS On-the-Job Trainees in 1994:</b>		<b>45</b>

c. Department of Fisheries Affairs

Activity #	Course Number and Name	Number Trainees
DFA 1a	OJT/A 110: Database Development	4
DFA 1b	OJT/A 120: Database Use	4
DFA 2c	OJT/A 210: Photography of Fish	completed (12/93)
<b>Total DFA On-the-Job Trainees in 1994:</b>		<b>8</b>

d. Department of Fisheries Resources

Activity #	Course Number and Name	Number Trainees
DFR 1a	OJT/R 110: Assessment of Current Quality Control Situation	completed (11/93)
DFR 1b	OJT/R 120: Recommendations for Improving Quality Control	completed (11/93)
DFR 1c	OJT/R 130: Recommendations on Handling & Preservation	6
DFR 2a	OJT/R 210: Cost, Earnings, Mktg & Distribution Survey(s)	6
<b>Total DFR On-the-Job Trainees in 1994:</b>		<b>12</b>

**Total On-the-Job Trainees in 1994: 98**

**Grand Total: Short-term Trainees and Registrants in 1994: 665**

**G. SHORT-TERM TECHNICAL TRAINING PROGRAMS (STT)**

The following tables summarize information on programs, trainee numbers, schedules, course duration, and location of short-term training anticipated during the remainder of the project. Some adjustments to the schedule may be required depending on circumstances at the time, such as a trainee's availability or a program's schedule. All local training assistance will be provided by local companies under service contracts except that noted with an asterisk (\*), which will be provided as technical assistance by short-term local-hire professionals.

**1. 1994**

NUMBER TRAINEES	PROGRAM	SCHEDULE	TRAINEE P/M	LOCATION	
				IN-COUNTRY	OUT-OF-COUNTRY
2	Computer Proficiency Certificate (cont'd)	7 Aug 93 - 14 Jun 94 Jul	7.16 0.48	Muscat	
4	Laboratory Technology with Chemical Analysis (cont'd)*	Sep 93 - Jan 94	0.6	Muscat	
1	Algal Culture (Oceanic Institute of Hawaii)	Jan - Feb	2		USA
1	Fisheries Law	Jan - Oct	9		Egypt
2	Fishing Gear Technology	Feb - May	6		Morocco
12	Fishery Statistics Internship	Mar - Apr Jul - Aug Sep - Oct	24		USA
8	Marine Resource Biology*	Mar - Jun	4.5	Muscat	
3	Administration	Mar - Jun Jul - Oct Jul - Aug	7		Jordan
1	Mariculture (Auburn University)	Mar - Jul	5		USA
3	Artisanal Fishing (Extension Service)	Mar - Dec	21		Tunisia
1	Computer Maintenance	Apr	0.3	Muscat	
1	Biological Oceanography	Jun-Jul	1		USA
1	Abalone Resource Management	Jun-Aug	3		USA
2	Study Tour, Seminar, or Policy Conference - Coastal Zone Management - Fisheries Resource Mgt	Jul	2		USA
2	Computer Programming	Jul 94 - Mar 95	10		USA
1	Project Analysis (USDA)	Aug - Nov	4		USA
6	Fishery Resources Internships - Quality Control (2) - Project Planning & Mgt - Marketing - Food Processing - Computerization of Catch Quotas	Sep - Dec	18		USA
1	Inventory Control	Oct	0.3	Muscat	
1	Library Science	TBA	1.02	Muscat	
1	Seafood Technology	TBA	3		USA
1	Fish Aggregation Devices (FAD)	TBA	3		USA
1	Library Science Internship	position open	5		USA
<b>66</b>			<b>139.36</b>		

**2. 1995**

NUMBER TRAINEES	PROGRAM	SCHEDULE	TRAINEE P/M	LOCATION	
				IN-COUNTRY	OUT-OF-COUNTRY
1	Training of Trainers	Feb - Mar	1		USA
2	Computer Programming (cont'd)	Jul 94 - Mar 95	6		USA
4	Laboratory Technology with Chemical Analysis	TBA	2.5	Sablah/Muscat	
<b>7</b>			<b>9.50</b>		

## H. ACADEMIC TRAINING PROGRAMS

### 1. IN THE USA

Listed in the panels below are the names, institutions, and fields of study of all participants sponsored by FDMP in long-term training, either in progress, or scheduled.

#### a. Enrolled in Ph.D. Graduate Degree Program

NO	NAME	UNIVERSITY	FIELD OF STUDY
1	Hilal Muh'd AL-MUKHAINI	University of Rhode Island	Resource Economics

#### b. Enrolled in M.Sc. Graduate Degree Programs

NO	NAME	UNIVERSITY	FIELD OF STUDY
2	Hilal Muh'd AL-SHAQSI	U of Southern Mississippi	Marine Science
3	Ahmad Muh'd AL-MAZROOEI	U of Southern Mississippi	Marine Science
4	Muhammad Sa'id AL-HINAI	New Hampshire College	Business Administration
5	Younis Khalifa AL-AKHZAMI	North Carolina Central U	Management Information Systems
6	Salih Zahran AL-HINAI	U of Maryland/Eastern Shore	Marine Science
7	Sa'ud Hamud AL-HABSI	NOVA University	Coastal Zone Management
8	'Abid 'Arifa AL-KULAIB	New Hampshire College	Computer Information Systems
9	Ahmed Salim AL-MASROORY	Florida Institute of Technology	Oceanography
10	Hilal Sa'ud AMBUSAIID	Oregon State University	Fisheries Stock Assessment
11	Nadia 'Ali Dawud AL-RAIESI	Oregon State University	Fisheries Stock Assessment
12	Kadhim Muh'd AL-BAHRANI	University of Rhode Island	Marine Policy
13	Nashwa 'Ali AL-MAZROOIE	University of Georgia	Consumer Economics
14	'Adil Muh'd AL-QASIMI	University of Rhode Island	Food Science & Nutrition
15	Tariq 'Abdullah BAHAJAJ	University of Rhode Island	Resource Economics

#### c. Enrolled in B.Sc. Undergraduate Degree Program

NO	NAME	UNIVERSITY	FIELD OF STUDY
16	Muh'd Hassan AL-MURAZZA	St. Louis University	Fisheries Economics

#### d. Admitted but not yet Matriculated in Degree Programs

NO	NAME	UNIVERSITY	DEGREE & FIELD OF STUDY
17	Thabit Zahran AL ABDESSALAAM	Oregon State University	Ph.D., Biology
18	Sulaiman Salim AL-SALIMY	University of Arkansas (conditional)	B.Sc., Computer Science

## H. ACADEMIC TRAINING PROGRAMS (cont'd)

### 2. IN THE REGION

Listed in the panels below are the names, institutions, and fields of study of participants sponsored in long-term training directly by OAJC. This training is being conducted in Egypt.

#### a. Enrolled in Master's Degree Programs

NO	NAME	UNIVERSITY	FIELD OF STUDY
1	'Ali 'Abdullah AL-'ALAWY	Suez Canal University	Fisheries Extension
2	'Abdullah Muhammad AL-HADDABI	Suez Canal University	Fisheries Science (Quality Control)
3	'Issa Muhammad AL-FARSI	Suez Canal University	Fish Culture
4	Ism'a'il Ibrahim AL-FARSI	Suez Canal University	Fisheries Science
5	Fatma Rashid AL-KYIMI	Suez Canal University	Fish Biology (Stock Assessment)
6	Jum'a Muhammad AL-MA'MARY	Suez Canal University	Marine Biology
7	Ali Nasr AL-'AZRI	Suez Canal University	Marine Biology (Reef Ecology)
8	Muallam Salim RA'FEET	Suez Canal University	Fisheries Science (Gear Technology)
9	'Alawi Mohamed BU BAKR	University of Alexandria	Maritime Law

#### b. Enrolled in Bachelor's Degree Programs

NO	NAME	UNIVERSITY	FIELD OF STUDY
10	Sami Sa'id AL-JARRADY	Suez Canal University	Fisheries Science
11	Khalid Salim AL-MUAMRY	Suez Canal University	Fisheries Science
12	Majid Khalifa AL-KINDI	Suez Canal University	Fisheries Science
13	Said Rashid AL-MAAWALI	Suez Canal University	Fisheries Science
14	Ibrahim Hamed AL-RYAMI	Suez Canal University	Fisheries Science

**H. ACADEMIC TRAINING PROGRAMS (cont'd)**

**2. IN THE REGION (cont'd)**

**c. Enrolled in Diploma Programs\***

NO	NAME	UNIVERSITY	FIELD OF STUDY
15	Marlam Mohamed AL-BALUSHI	Suez Canal University	Marine Science
16	Ahmed Khalid AL-'AISRY	Suez Canal University	Marine Science
17	Lubna Hamoud AL-KHARUSI	Suez Canal University	Marine Science
18	Shinain Rashid AL-BURAYKI	Suez Canal University	Fisheries
19	Naar Sayf AL-KYUMI	Suez Canal University	Fisheries
20	Hussain Moh'd Ridha MOHAMMED	Suez Canal University	Agricultural Economics
21	'Aziz Hamad AL-KHATIRI	Suez Canal University	Fisheries
22	Salim 'Abdullah AL-RASBI	Suez Canal University	Fisheries
23	'Abdullah Mubarak AL-'URAYMI	Suez Canal University	Fisheries
24	Hamad Mohamed AL-GHAYLANI	Suez Canal University	Fisheries
25	Ahmad Harib AL-HUSNI	Suez Canal University	Fisheries
26	'Arif MuhainAL-YAFI'I	Suez Canal University	Fisheries
27	'Abdulrahim Ahmed AL-OJAILI	Suez Canal University	Agricultural Economics

**d. Nominated for Diploma Programs**

NO	NAME	UNIVERSITY	FIELD OF STUDY
28	Mas'ud 'ali KASHUB	Alexandria University	Fishery Law

\* Diploma programs offer postbaccalaureate training, but do not grant master's degrees.

## ***I. REPORTS SCHEDULED DURING 1994***

Listed below are all technical, DGFR, and other reports presently scheduled for 1994. These reports are FDMP deliverables, which will summarize or contain much of the project's 1994 output.

<b><u>TECHNICAL REPORTS</u></b>	<b><u>SUBMISSION DATE</u></b>
Semiannual Report (July 1 - December 31, 1993) including Quarterly Financial Report - Ten (October 1 - December 31, 1993) Quarterly Personnel Report - Ten (October 1 - December 31, 1993)	January 31 January 31
Quarterly Progress Report - Eleven (January 1 - March 31, 1994) and Quarterly Financial Report - Eleven (January 1 - March 31, 1994) Quarterly Personnel Report - Eleven (January 1 - March 31, 1994)	April 30 April 30
Semiannual Report (January 1 - June 30, 1994), including Quarterly Financial Report - Twelve (April 1 - June 30, 1993) Quarterly Personnel Report - Twelve (April 1 - June 30, 1993)	July 31 July 31
Quarterly Progress Report - Thirteen (July 1 - September 30, 1994 and Quarterly Financial Report - Thirteen (July 1 - September 30, 1994) Quarterly Personnel Report - Thirteen (July 1 - September 30, 1994)	October 31 October 31
<b><u>REPORTS TO THE DGFR</u></b>	
FDMP Monthly Report to the DGFR (December 1993) FDMP Training Program Monthly Report (December 1993)	January 08 January 13
FDMP Monthly Report to the DGFR (January 1994) FDMP Training Program Monthly Report (January 1994)	February 07 February 14
FDMP Monthly Report to the DGFR (February 1994) FDMP Training Program Monthly Report (February 1994)	March 08 March 13
FDMP Monthly Report to the DGFR (March 1994) FDMP Training Program Monthly Report (March 1994)	April 06 April 13
FDMP Monthly Report to the DGFR (April 1994) FDMP Training Program Monthly Report (April 1994)	May 07 May 14
FDMP Monthly Report to the DGFR (May 1994) FDMP Training Program Monthly Report (May 1994)	June 07 June 13
FDMP Monthly Report to the DGFR (June 1994) FDMP Training Program Monthly Report (June 1994)	July 06 July 13
FDMP Monthly Report to the DGFR (July 1994) FDMP Training Program Monthly Report (July 1994)	August 07 August 14
FDMP Monthly Report to the DGFR (August 1994) FDMP Training Program Monthly Report (August 1994)	September 07 September 14
FDMP Monthly Report to the DGFR (September 1994) FDMP Training Program Monthly Report (September 1994)	October 05 October 12
FDMP Monthly Report to the DGFR (October 1994) FDMP Training Program Monthly Report (October 1994)	November 07 November 14
FDMP Monthly Report to the DGFR (November 1994) FDMP Training Program Monthly Report (November 1994)	December 07 December 14
<b><u>OTHER SCHEDULED REPORTS</u></b>	
Annual Work Plan 1995 (draft)	November 02

**J. FDMP 1994 BUDGET**

**1. BY MAJOR COMPONENT (January - December 1994)**

<b>Cost Category</b>	<b>Technical Assistance Module US\$</b>	<b>Oman Support Unit US\$</b>	<b>Home Office Support US\$</b>	<b>Total US\$</b>
<b>Technical Assistance</b>				
Salaries, Fringe Benefits, Overhead, Travel, Transportation, Allowances				
-- Long-term Expatriate	808,365			808,365
-- Short-term Expatriate	331,886			331,886
-- Local Hire		157,008		157,008
-- Home Office			425,001	425,001
<b>Subtotal</b>	<b>1,140,251</b>	<b>157,008</b>	<b>425,001</b>	<b>1,722,260</b>
<b>Other Direct Costs</b>				
General and Administration	73,966		45,193	119,159
Fixed Fee (including subs)				111,218
				239,553
<b>Total Technical Assistance</b>	<b>1,214,217</b>	<b>157,008</b>	<b>470,194</b>	<b>2,192,191</b>
<b>Commodities</b>	<b>285,235</b>			<b>285,235</b>
<b>Training</b>	<b>1,218,207</b>			<b>1,218,207</b>
-- Long-term U.S.				
-- Long-term Third Country				
-- Short-term U.S.				
-- Short-term Third Country				
-- Short-term Oman				
<b>TOTAL CONTRACT</b>	<b>2,717,660</b>	<b>157,008</b>	<b>470,194</b>	<b>3,695,633</b>

**J. FDMP 1994 BUDGET (cont'd)**

**2. SUMMARY BUDGET (January – December 1994)**

<b>Cost Item</b>	<b>Work Plan Budget (U.S. DOLLARS)</b>
I. SALARIES	561,357
II. FRINGE BENEFITS	97,831
III. OVERHEAD	353,982
IV. TRAVEL/TRANSPORTATION	130,719
V. ALLOWANCES	296,898
VI. OTHER DIRECT COSTS	95,569
VII. TRAINING	646,165
VIII. COMMODITIES	285,235
IX. SUBCONTRACTS	912,742
<b>TOTAL COSTS</b>	<b>3,380,498</b>
X. GENERAL & ADMINISTRATIVE	111,218
XI. TOTAL	<b>3,491,717</b>
XII. FIXED FEE	203,916
<b>XIII. COSTS PLUS FIXED FEE</b>	<b>3,695,633</b>

**K. 1994 OUT-OF-COUNTRY LEAVE SCHEDULE FOR FDMP TECHNICAL ADVISORS**

The table below summarizes all out-of-country leave to be taken by the Technical Advisors during 1993. In-country leave has not been scheduled and is not included in the table.

TA	Type	Period	Duration (work days in Oman)	Total	Entitlement*
TA/1 (Dorr)	R & R	Jun 25 - Jul 27	24	34	36.47 days
	Annual	Sep 10 - 21	10		
TA/2 (Crosby)	R & R	July 9 - Aug 10	25	25	32.40 days
	Annual	--	-		
TA/3 (Bouhlef)	R & R	Jun 18 - Jul 13	19	19	53.60 days
	Annual	--	-		
TA/4**	Annual	TBA	TBA	TBA	20 days

\* 1994 Entitlement = 1993 Leave Balance + 1994 Annual Leave  
 Note: No eligibility for Home Leave

(TA/1)  $36.47 = 10.47 + 26$

(TA/2)  $32.40 = 6.40 + 26$

(TA/3)  $53.60 = 27.60 + 26$

(TA/4)  $20 = 0 + 20$

\*\* Will begin work the fourth week of March 1994.

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**I. DGFR Operational Skills**

**Objective 1: Strengthen job-related technical English language skills in all departments of the DGFR**

**Activity 1a - Conduct in-country training courses in Intermediate Technical English**

**Inputs:**

Training - ELT 101: Intermediate Technical English  
Jan-May 1993, Sep-Dec 1993, Jan-May 1994,  
Sep-Dec 1994

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

**Activity 1b - Conduct in-country training courses in Advanced Technical English**

**Inputs:**

Training - ELT 102: Advanced Technical English  
Jan-May 1993, Sep-Dec 1993, Jan-May 1994,  
Sep-Dec 1994

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

**Activity 1c - Conduct in-country training courses in Scientific English for computing and statistics**

**Inputs:**

Training - ELT 201: Scientific English for  
Computers and Statistics  
Sep-Dec 1993, Sep-Dec 1994

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

**Activity 1d - Conduct in-country training courses in Scientific English for biological research**

**Inputs:**

Training - ELT 202: Scientific English for  
Biological Research  
Sep-Dec 1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

**Outputs of Objective 1:** increased English language skills demonstrated by improved scores on pre/post course examinations; more proficient computer skills learned from reading software manuals; production of technical reports written by Omani staff

**Objective 2: Strengthen job-related Computer Skills in all departments of the DGFR where computing equipment is available**

**Activity 2a - Provide an introduction to computers and MS-DOS**

**Inputs:**

Training - CST 100: Introduction to Computers and MS-DOS (English)

1993

CST 100: Introduction to Computers and MS-DOS (Arabic)

1993

Technical Assistance - Local

Training Institute

(TR/ST/L)

Commodities - training materials

**Activity 2b - Conduct training in wordprocessing using Word (English)**

**Inputs:**

Training - CST 110: Wordprocessing WORD (English)

1993

Technical Assistance - Local Training Institute

(TR/ST/L)

Commodities - training materials

**Activity 2c - Conduct training in wordprocessing using AL-KATTIB**

**Inputs:**

Training - CST 115: Wordprocessing AL-KATTIB (Arabic)

1993

Technical Assistance - Local Training Institute

(TR/ST/L)

Commodities - training materials

**Activity 2d - Conduct training in wordprocessing using WORDPERFECT (English)**

**Inputs:**

Training - CST 120: Wordprocessing WordPerfect (English)

1993

Technical Assistance - Local Training Institute

(TR/ST/L)

Commodities - training materials

**Activity 2e - Conduct training in Wordprocessing using ArabWord**

**Inputs:**

Training - CST 125: Wordprocessing ArabWord (Arabic)

1993

Technical Assistance - Local Training Institute

(TR/ST/L)

Commodities - training materials

Activity 2f - Conduct training in English keyboard skills  
Inputs:

Training - CST 130: English Keyboard Skills  
1993  
Technical Assistance - Local Training Institute  
(TR/ST/L)  
Commodities - training materials

Activity 2g - Conduct training in Arabic keyboard skills  
Inputs:

Training - CST 135: Arabic Keyboard Skills  
1993  
Technical Assistance - Local Training Institute  
(TR/ST/L)  
Commodities - training materials

Activity 2h - Conduct training in the use of basic  
LOTUS 1-2-3

Inputs:

Training - CST 140: Basic LOTUS 1-2-3  
1993  
Technical Assistance - Local Training Institute  
(TR/ST/L)  
Commodities - training materials

Activity 2i - Conduct training in the use of basic DBASEIII+  
and DBASEIV

Inputs:

Training - CST 150: Basic DBASEIII+ and DBASEIV  
1993  
Technical Assistance - Local Training Institute  
(TR/ST/L)  
Commodities - training materials

Activity 2j - Conduct training in the use of Harvard  
Graphics

Inputs:

Training - CST 160: Harvard Graphics  
1993  
Technical Assistance - Local Training Institute  
(TR/ST/L)  
Commodities - training materials

Activity 2k - Conduct training in the use of networks for  
network users

Inputs:

Training - CST 170: Network Training for Users  
1993  
Technical Assistance - Local Training Institute  
(TR/ST/L)  
Commodities - training materials

Activity 2l - Conduct training in the use of advanced DOS  
Inputs:

Training - CST 200: Advanced DOS  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2m - Conduct training in the use of advanced  
wordprocessing using WORD

Inputs:

Training - CST 210: Advanced WORD  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2n - Conduct training in advanced wordprocessing  
using AL-KATTIB

Inputs:

Training - CST 215: Advanced AL-KATTIB  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2o - Conduct training in advanced wordprocessing  
using WordPerfect (English and Arabic)

Inputs:

Training - CST 220: Advanced WordPerfect (English  
and Arabic)  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2p - Conduct training in advanced wordprocessing  
using ArabWord

Inputs:

Training - CST 225: Advanced ArabWord  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2g - Conduct training in the operation and use of  
selected printers and plotters

Inputs:

Training - OJT/S 425: Printers and Plotters  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2r - Conduct training in the advanced use of  
LOTUS 1-2-3

Inputs:

Training - CST 240: Advanced LOTUS 1-2-3  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2s - Conduct training in the advanced use of  
DBASEIII+ and DBASEIV

Inputs:

Training - CST 250: Advanced DBASEIII+ and DBASEIV  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2t - Conduct training in the use of PC TOOLS  
utility software

Inputs:

Training - CST 260: Utilities Software: PC TOOLS  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2u - Conduct training for staff who will provide  
network support to other system users

Inputs:

Training - CST 270: Network Support  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2v - Conduct training for MSFC Library staff in  
programming using FOXBASE

Inputs:

Training - CST 280: FOXBASE Programming  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2w - Conduct training in the use of selected tape  
back-up systems

Inputs:

Training - CST 290: Hardware: Tape Back-up  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2x - Conduct training in the use of selected CD-ROM systems

Inputs:

Training - CST 295: Hardware: CD-ROM  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2y - Conduct training in the operation of Unix Systems (to be done if the decision is made to install CANOFISH at the MSFC)

Inputs:

Training - CST 310: Unix System  
1994

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

Activity 2z - Conduct training in advanced dBase programming

Inputs:

Training - CST 350: Database Programming  
1993

Technical Assistance - Local Training Institute  
(TR/ST/L)

Commodities - training materials

**Outputs of Objective 2:** increased skills in familiarity and use of computer systems and processing of information, wordprocessing (English and Arabic), spreadsheets, database management, graphics, network systems, utility software, printing and storage hardware and processes, Unix system operation for using the University of Maryland CANOFISH fisheries stock assessment and management program, and the ability for Omani staff to reprogram the national fisheries database as needed

## II. Marine Science and Fisheries Center

### Objective 1: To upgrade staff research skills

Activity 1a - conduct long-term academic training to upgrade staff research skills

Inputs:

Training - LTT  
1992-97  
Technical Assistance -  
Commodities -

Activity 1b - conduct courses in basic statistics and sampling in conjunction with MSFC staff workshops and training on stock assessment

Inputs:

Training - OST/M 120: Basic Statistics and Sampling  
1993  
Technical Assistance - TA/LT: DT  
Commodities - training materials

Activity 1c - conduct workshop on literature search techniques, including those for MSFC, USIS, and Oman inter-loan systems

Inputs:

Training - OST/M 130: Workshop: Literature Search  
1994  
Technical Assistance - TA/ST/L, 0.5 pm  
Commodities -

Activity 1d - conduct workshop and training on the basic elements of research methodology including problem identification, prioritization, statistical issues, planning, and logistics

Inputs:

Training - OST/M 140: Basic Research Methodology  
1994  
Technical Assistance - TA/LT: JD, MB  
Commodities -

Activity 1e - OJT on specific research projects including research on specific fishery resources

Inputs:

Training - OJT/M 150: Specific Research Projects  
1993-95  
Technical Assistance - TA/LT: JD (small-pelagics)  
DT's replacement  
TA/ST/US, CEES/OTHER, 1 pm  
Commodities -

Activity 1f - Upgrade the research-support capabilities of the MSFC library

**Inputs:**

Training - OST/M 160: Workshop: Library Management  
1993  
Technical Assistance - TA/ST/L, system review, 0.25 pm  
TA/ST/L, reprogramming, 1 pm  
Commodities - subscriptions to ASFA, Bibliofile, books,  
journals, filing materials, purchase and  
install bibliographic software

**Outputs of Objective 1:** increase in skills as measured on pre/post tests and assignments; increase in the reference base and skills of the library staff to support research activities at the MSFC

**Objective 2:** To develop the ability for key staff to produce research proposals, programs, and plans, and contribute to the preparation of technical reports

**Activity 2a** - Conduct a workshop on the elements of a research proposal

**Inputs:**

Training - OST/M 210: Workshop: Elements of Research Proposals  
1994  
Technical Assistance - TA/LT: JD, MB  
Commodities -

**Activity 2b** - Develop a minimum of two research proposals in association with Activity 2a via OJT

**Inputs:**

Training - OJT/M 220 : Research Proposal Writing  
1994  
Technical Assistance - TA/LT: JD, MB  
Commodities

**Activity 2c** - Improve English technical writing skills and conduct a workshop in Technical Writing in conjunction with production of the 1993 MSFC Section Work Plans and Budgets

**Inputs:**

Training - OST/M 220: ELT 101, 102, 201  
1993  
OST/M 230: Workshop: Technical Writing  
1994  
Technical Assistance - TA/LT: JD, DT  
TA/ST/L, 1 pm  
Commodities -

**Outputs of Objective 2:** a minimum of two research proposals submitted to the Fisheries Research Fund; drafts of 1993 MSFC Work Plans and Budgets produced by Section Heads in a form that requires only minor editing by the MSFC Director

**Objective 3:** To develop in coordination with other departments of the DGFR, two Fishery Management Plans that will serve as models for the development of future plans for other fisheries

**Activity 3a** - Provide recommendations to the MAFW/DGFR on the activation, composition, and mandate of a Fishery Management Committee

Inputs:

Training -  
Technical Assistance - TA/LT: JD  
Commodities -

**Activity 3b** - Establish and operate a Fishery Management Plan Task Force for (a) the industrial multi-species demersal trawl fishery, and (b) a second traditional fishery

Inputs:

Training - OJT/M 320: Fishery Management Task Force  
1993-94  
Technical Assistance - TA/LT: JD, MB, DT/DT's  
replacement  
Commodities -

**Activity 3c** - Conduct a workshop on management alternatives for the development of marine fisheries stock management plans for (a) the industrial multi-species demersal trawl fishery, and (b) a second traditional fishery

Inputs:

Training - OST/M 330: Workshop: Fishery Management  
Alternatives  
1994-95  
Technical Assistance - TA/LT: DT's replacement  
TA/ST/US, CEES/OTHER, 1 pm  
Commodities -

**Activity 3d** - Produce and submit to the Fishery Management Committee, fishery stock assessment and management plans for (a) the industrial multi-species demersal trawl fishery, and (b) a second traditional fishery, in a manner so as to provide models and OJT for the development of additional such plans for other fisheries.

**Inputs:**

Training - OJT/M 340: Fishery Stock Assessment and Management Plan Models

Technical Assistance - TA/LT: DT's replacement  
TA/ST/US, CEES/OTHER, 2 x 1 pm

Commodities -

**Outputs of Objective 3:** recommendations to the DGFR on the composition and role, and responsibilities of a Fishery Management Committee; formation of a Fishery Management Plan Task Forces for two specified fisheries; two model fishery management plans with associated stock assessment programs prepared by Omani staff with technical assistance and submitted to the Fishery Management Committee by March 1995.

**Objective 4:** Consolidate fishery-resource databases and documentation at the MSFC

**Activity 4a** - Provide OJT and technical assistance in the consolidation of fishery-stock databases

**Inputs:**

Training - OJT/M 410: Consolidation of Fishery Stock Databases  
1993

Technical Assistance - TA/LT: DT,

Commodities -

**Outputs of Objective 4:** consolidation and documentation of all major databases in standard format by mid-1994

**Objective 5:** Develop a National Fish Ageing Laboratory that will produce time-series data on the age of selected species of fish and shellfish

**Activity 5a** - Equip a laboratory and train staff in the preparation of fish and shellfish samples for analysis of age

**Inputs:**

Training - OST/M 521: Laboratory - Sample Preparation (finfish)

OST/M 522: Laboratory - Sample Preparation (abalone)

early 1993

Technical Assistance - TA/ST/US, Brothers, 1 pm  
TA/ST/TC, Shepherd, 1 pm

Commodities - age and growth equipment and supplies

**Activity 5b** - Conduct training in general techniques for ageing specific species of fish and shellfish

**Inputs:**

- Training - OST/M 523: Fish Ageing Techniques  
OST/M 524: Abalone Ageing Techniques  
early 1993
- Technical Assistance - TA/ST/US, Brothers, 1 pm  
TA/ST/TC, Shepherd, 1 pm
- Commodities - included in Activity 5a

**Activity 5c** - Conduct training in the use of age data for analysis of population dynamics and stock assessment

**Inputs:**

- Training - OST/M 525: Age Data and Stock Assessment  
1995
- Technical Assistance - included in Activity 6d
- Commodities -

**Outputs of Objective 5:** ongoing production of data on the age of selected species of fish and shellfish by Omani staff by mid-1993; demonstrable increase in the understanding of fish and shellfish ageing techniques; contributions to technical reports and fishery management plans

**Objective 6:** Develop the capability for computer-assisted fisheries research and stock assessment

**Activity 6a** - Establish a computer system to support fisheries research activities

**Inputs:**

- Training - OJT/M 610: Computer Network Development  
Mar-Apr 1993
- Technical Assistance - TA/LT: DT, MB
- Commodities - computer procurement

**Activity 6b** - Improve computer skills in the use of MSFC operating systems, word processing (Arabic and English), spreadsheet, database, and graphics software, and tape drives

**Inputs:**

- Training - OST/M 620: CST Courses  
1993
- Technical Assistance -
- Commodities - training materials

**Activity 6c** - Install computer programs already available at the MSFC in stock assessment on the MSFC network (e.g., ELEFAN, LSFA, etc.)

**Inputs:**

- Training - OJT/M 630: Fishery Computer Program  
Installation  
Apr 1993
- Technical Assistance - TA/LT: DT
- Commodities -

Activity 6d - Conduct training in the use of computer-assisted stock research/management techniques to the needs of Oman, using available data on Oman's fishery whenever possible

Inputs:

Training - OST/M 640: Computerized Stock Assessment  
OJT/M 640: Computerized Stock Assessment  
1994  
Technical Assistance - TA/LT: DT's replacement  
Commodities -

Activity 6e - Provide training to long-term participants in computer-assisted research and stock assessment techniques including CANOFISH

Inputs:

Training - Training in CANOFISH for LTTs in USA at  
CEES/OTHER  
1994  
Technical Assistance - included in training budget  
Commodities -

Activity 6f - Install CANOFISH and associated hardware at the MSFC

Inputs:

Training - OJT/M 660: Installation of CANOFISH  
1994  
Technical Assistance - TA/ST/US, CEES/OTHER, 0.5 PM  
Commodities - CANOFISH, related hardware in computer  
procurement

Activity 6g - Provide training at the MSFC in the use of CANOFISH and application to assessment and management of Oman's fishery resources, utilizing national databases whenever possible

Inputs:

Training - OST/M 670: CANOFISH Applications to Oman  
Stock Assessment  
1994-95  
Technical Assistance - TA/ST/US, CEES/OTHER, 1 pm  
Commodities -

**Outputs of Objective 6:** a computer system installed at the MSFC, connected to existing machines with system-support software, and a core of staff trained in the operation of this system, by mid 1993; computer programs installed; staff trained in the application of computer-assisted stock assessment techniques utilizing MSFC data; participants capable of utilizing CANOFISH for stock assessment; installation of CANOFISH on MSFC system; installation of CANOFISH on MSFC system

### III. Department of Fisheries Statistics

**Objective 1:** Produce revised and consolidated national fisheries data that are stored on a safe medium which allows easy access for historical analyses

**Activity 1a** - Establish a computer network (LAN) to support the production of fishery statistics and related information

**Inputs:**

Training - OJT/S 120: Computer Network Development  
Mar-Apr 1993

Technical Assistance - TA/LT: DT, MB

Commodities - computer procurement

**Activity 1b** - revise and consolidate the national fisheries database, and store it on a safe medium that allows easy access for historical analyses

**Inputs:**

Training - OJT/S 110: Revision and Consolidation of Databases  
Apr-Aug 1993

Technical Assistance - TA/LT: DT, MB

TA/ST/L, 6 pm

Commodities -

**Activity 1c** - Develop the abilities of staff to operate, manage, and utilize newly consolidated systems and databases

**Inputs:**

Training - OST/S 120: Database and System Use  
OJT/S 120: Database and System Use  
1993-1994

Technical Assistance - TA/LT: MB

Commodities -

**Outputs of Objective 1:** a LAN network system installed at the DFS; a revised and consolidated national fishery database, stored on a safe medium that allows easy access for historical analyses

**Objective 2:** Produce subdatabases containing summary information on sardines, shrimp, and Company activities

**Activity 2a** - Produce subdatabases containing summary information on sardines, shrimp, and Company activities

**Inputs:**

Training - OJT/S 210: Establishment of New Subdatabases  
1993

Technical Assistance - TA/LT: DT, MB  
TA/ST/L, 1 pm  
Commodities -

**Outputs of Objective 2:** subdatabases containing summary information on sardines, shrimp, and Company activities

**Objective 3:** Expand data collection and analyses to respond to main user requests

**Activity 3a** - Produce catch, value, effort, and CPUE spatial and temporal data for the traditional fishery partitioned by species, gear, and boat type

Inputs:

Training - OJT/S 310: Data Categorization and Production  
1993-94

Technical Assistance - TA/LT: DT, MB  
TA/ST/US, CEES/OTHER, 1 pm

Commodities -

**Activity 3b** - Estimate sampling errors or obtain other measures of known variability for all (estimated) parameters, and determine sample-size requirements (e.g., number of boats or sites samples, etc.) based on specified bounds on the error of estimates

Inputs:

Training - OJT/S 321: Sample-Error Estimation  
OJT/S 322: Sample-size Determination  
1993-95

Technical Assistance - TA/LT: DT, MB  
TA/ST/US, included in 3a

Commodities -

**Activity 3c** - Improve estimates of the following specific parameters in the priority indicated:

- Industrial trawler discards
- Effort for industrial trawlers (hauls) and longliners (hooks)

and, obtain estimates of the following other parameters as time permits:

- Beach seine catch and effort data
- Shrimp catch and effort
- In conjunction with the MSFC, investigate methods of assessing stock exploitation using, for example, information on age/length frequency, sex and maturation, size-related fecundity, etc. for important species

**Inputs:**

Training - OJT/S 330: Improving Parameter Estimation in  
Priority Areas  
1993-95  
Technical Assistance - TA/LT: DT, MB, JD  
TA/ST/US, CEES/OTHER, 1 pm  
Commodities -

**Outputs of Objective 3:** catch, value, effort, and CPUE  
spatial and temporal data for the traditional fishery  
partitioned by species, gear, and boat type; sampling error  
of known variability, and sample size requirements;  
estimates of fishing and stock parameters

**Objective 4:** Provide Omani staff with improved and/or new  
skills required to operate upgraded DFS  
systems

**Activity 4a** - Develop the abilities of staff to reprogram  
the national database as necessary to add  
variables or produce new summaries

**Inputs:**

Training - CST  
OJT/S 410: Reprogramming National Database  
mid-1993  
Technical Assistance - TA/LT: DT, MB  
Commodities -

**Activity 4b** - Improve staff computer skills in the use of  
DFS operating systems, word processing (Arabic  
and English), spreadsheet, database, and  
graphics software, and tape drives

**Inputs:**

Training - CST  
OST/S 420: CST Courses  
1993-1994  
Technical Assistance - TA/LT: MB  
Commodities -

**Activity 4c** - Improve technical writing skills in English  
and Arabic for technical report writing and  
preparation of the 1993 DFS Annual Work Plans  
and Budgets

**Inputs:**

Training - OST/S 430: ELT 101, ELT 102, ELT 201  
1993  
Technical Assistance - TA/ST/L, 1 pm  
Commodities -

Activity 4d - Conduct a workshop in fall 1993 on data collection survey sampling methodology, and a another workshop in fall 1994 on calculations for estimating national statistical parameters, and estimation of sampling errors

**Inputs:**

Training - OST/S 440: Data Collection

Fall 1993 and Fall 1994

OST/S 445: Workshop: Data Analysis

Fall 1994 and Fall 1994

Technical Assistance - TA/LT: MB (Data Collection)

DT's replace. (Data Anal.)

Commodities -

**Outputs of Objective 4:** ability of Omani staff to reprogram national fishery statistics database; increased computer skills and technical writing ability; bilingual tables and graphs produced for the 1992 Statistical Yearbook; assistance with provided in guiding the preparation of the 1992 Statistical Yearbook

#### **IV. Department of Fisheries Affairs**

**Objective 1: Develop the capabilities of the DFA in computer-assisted compilation, storage/retrieval, and presentation of national fishery data pertaining to:**

- Vessel specifications
- Registration
- Licensing - commercial, traditional, recreational
- Surveillance - at sea, port, and inland
- Violations
- Penalties
- Data on catch, effort, discards, biology, etc.

**Activity 1a - Assist in the development of procedures for computer-assisted compilation, storage/retrieval, analysis, and presentation of data**

**Inputs:**

- Training - OJT/A 110: Database Development  
Sep-Oct 1993
- Technical Assistance - TA/ST/L, 2 pm
- Commodities - computer procurement

**Activity 1b - Provide training in the operation of the computer-assisted compilation, storage/retrieval, analysis, and presentation systems developed through Activity 1a**

**Inputs:**

- Training - OJT/A 120: Database Use  
1993
- Technical Assistance - included in Activity 1a
- Commodities -

**Outputs of Objective 1:** development of procedures for computer-assisted compilation, storage/retrieval, and presentation of national fishery data; Omanis trained in the knowledge of these procedures.

**Objective 2: Develop the capability of on-board vessel observers in the collection of biological data in support of research, stock assessment, and database development activities**

**Activity 2a - Conduct training in the identification of relevant demersal and pelagic fish species**

**Inputs:**

- Training - OST/A 210: Identification of Demersal and Pelagic Species  
Apr-Jun 1993, Apr-Jun 1994
- Technical Assistance - TA/LT: MB
- Commodities - training materials

Activity 2b - Conduct further training in fish species identification and fish gear/techniques

Inputs:

Training - OST/A 220: Identification of Species and Fishing Gear  
Apr-Jun 1993 and Apr-Jun 1994  
Technical Assistance - TA/LT: MB  
Commodities - training materials

Activity 2c - Conduct training in on-board collection of biological data

Inputs:

Training - OST/A 230: 201 Biodata Collection  
Apr-Jun 1993 and Apr-Jun 1994  
Technical Assistance - TA/ST/US, 2 pm  
Commodities - training materials

Activity 2d - Conduct training of trainers in the on-board collection of biological data

Inputs:

Training - OST/A 240: On-Board Training of Trainers for Biodata Collection  
Apr-Jun 1993 and Apr-Jun 1994  
Technical Assistance - included in Activity 2c  
Commodities - training materials

Activity 2e - Provide assistance in the photography of fish for the Fish Catalogue that will be used in the identification of fish caught in by industrial trawlers and other fisheries

Inputs:

Training - OJT/A 210: Photography of Fish  
1993-94  
Technical Assistance - TA/LT: MB  
Commodities - photographic equipment and supplies

Outputs of Objective 2: demonstrated increase in ability to identify species based on pre/post-test results; increase in ability of on-board Observers to compile biological data; Omani staff capable of training others in on-board collection biological data; photographs of fish for Fish Catalogue

## V. Department of Fisheries Resources

**Objective 1:** Assist with establishment of codes of practice, and procedures for improving the quality of fish products for local sale or export

**Activity 1a** - Assess the extent to which codes and/or procedures for quality control are currently in effect within the industrial/commercial and traditional fishing sectors

**Inputs:**

Training - OJT/R 110: Assessment of Current Quality Control Situation  
Oct-DEC 1993

Technical Assistance - TA/ST/US, 2 pm  
Commodities -

**Activity 1b** - Design and recommend measures for the implementation of suitable quality control programs in the industrial/commercial sector, based on accepted international standards and practices, and including an evaluation of the social and economic feasibility of recommended measures

**Inputs:**

Training - OJT/R 120: Recommendations for Improving Quality Control  
Oct-Dec 1993

Technical Assistance - included in Activity 1a  
Commodities -

**Activity 1c** - Identify specific measures for improving the handling and preservation of fish products by traditional fishermen and fish transporters

**Inputs:**

Training - OJT/R 130: Recommendations on Fish Handling and Preservation

Technical Assistance - TA/ST/US, 2 pm  
Commodities -

**Activity 1d** - Design OJT programs for Department staff that will enable them to implement quality control measures identified in Activity 1c, in cooperation with DGFR extension activities

**Inputs:**

Training - OST/R 140: Workshop: Quality Control  
Technical Assistance - included in Activity 1c  
Commodities -

**Outputs of Objective 1:** recommended measures for the implementation of suitable quality control programs in the private sector; an evaluation of the social and economic feasibility of these measures; identified measures for improving the handling and preservation of fish products by traditional fishermen and fish transporters; OJT programs for Department staff that will enable them to implement recommended quality control measures

**Objective 2:** Build upon the understanding of costs, earnings, marketing, and distribution of products associated with traditional demersal and large pelagic fisheries

**Activity 2a** - Assist in the design and analysis of results of survey(s) of costs, earnings, marketing, and distribution of products associated with traditional demersal and large pelagic fisheries

**Inputs:**

Training - OJT/R 210: Cost, Earnings, Marketing and Distribution Survey(s)  
Sep-Dec 1994

Technical Assistance - TA/ST/US, 2 trips x 1 pm  
Commodities -

**Outputs of Objective 2:** data on costs, earnings, marketing, and distribution of products associated with traditional demersal and large pelagic fisheries

## APPENDIX B. FDMP ENGLISH LANGUAGE TRAINING COURSE CALENDAR JANUARY 1994 – MAY 1995

**1. Muscat** 1994

Course #	Course Name	JANUARY					FEB	MARCH			APRIL			MAY	
		1-5	8-12	15-19	22-26	29-31		5-9	19-23	26-30	2-6	9-13	16-20	23-27	30-4
ELT 101	Intermediate Technical English	3 sections						3 sections			3 sections				
ELT 102	Advanced Technical English	1 section						1 section			1 section				
ELT 201	Scientific English for Statistics														
ELT 202	Scientific English for Biology														

**2. Dhofar Region** 1994

Course #	Course Name	JANUARY					FEB	MARCH			APRIL			MAY	
		1-5	8-12	15-19	22-26	29-31		5-9	19-23	26-30	2-6	9-13	16-20	23-27	30-4
BELT 101	Intermediate Technical English							3 sections			3 sections				
BELT 102	Advanced Technical English							1 section			1 section				
BELT 201	Scientific English Reading & Composition														

Shaded areas indicate sections of instruction; blank areas within sections indicate holidays.

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1995

DECEMBER				JANUARY					FEBRUARY				MARCH			
3-7	10-14	17-21	24-28	31-4	7-11	14-18	21-25	28-1	4-8	11-15	18-22	25-1	4-8	11-15	18-22	25-29
2 sections																
1 section																

1995

DECEMBER				JANUARY					FEBRUARY				MARCH			
3-7	10-14	17-21	24-28	31-4	7-11	14-18	21-25	28-1	4-8	11-15	18-22	25-1	4-8	11-15	18-22	25-29
1 section																
2 sections																
1 section																



## APPENDIX C. FDMP COMPUTER SKILLS TRAINING COURSE CALENDAR - 1994

### 1. CBT 100 SERIES (Muscat)

COURSE	COURSE NAME	PROVIDED BY	JANUARY					FEBRUARY				MARCH				APRIL			
			1-6	8-12	15-19	22-26	29-31	6-9	12-16	19-23	26-28	6-9	12-16	19-23	26-31	6-9	12-16	19-23	26-31
CBT 100*	Intro. to Computers and MS-DOS	NTI																	
CBT 110	Word Processing: WORD for Windows	NTI																	
CBT 115*	Word Processing: AL-KATTB	NTI																	
CBT 120	WP: WordPerfect for Windows (Bilingual)	NTI																	
CBT 125*	WP: AsadWord	NTI																	
CBT 140	Book: LOTUS 1-2-3 for Windows with Safety (Bilingual)	NTI																	
CBT 150	Book: DBASE IV	NTI																	
CBT 160	Harvard Graphics for Windows	NTI																	

### 2. CBT 200 and 300 SERIES (Muscat)

COURSE	COURSE NAME	PROVIDED BY	JANUARY					FEBRUARY				MARCH				APRIL				
			1-6	8-12	15-19	22-26	29-31	6-9	12-16	19-23	26-28	6-9	12-16	19-23	26-31	6-9	12-16	19-23	26-31	
CBT 200	Advanced DOS	NTI																		
CBT 210*	Advanced AL-KATTB	NTI																		
CBT 220*	Advanced AsadWord	NTI																		
CBT 240	Adv LOTUS 1-2-3 for Windows with Safety	NTI																		
CBT 250	Advanced DBASE IV	NTI																		
CBT 260	UNIX Software: PC TOOLS	NTI																		
CBT 270	NOVELL Administrator	CTC or MCE																		
CBT 280**	SOLTRON replaces FOXBASE	BITAC																		
CBT 290	Hardware: Tape Back-up	BBB																		
CBT 310	4th Generation Languages (ORACLE) replaces Unix System	NTI																		
CBT 340	Advanced DBASE Programming	NTI																		
CBT 370	NOVELL Engineer	CTC or MCE																		

### 3. SCBT SERIES (Doha)

COURSE	COURSE NAME	PROVIDED BY	JANUARY					FEBRUARY				MARCH				APRIL				
			1-6	8-12	15-19	22-26	29-31	6-9	12-16	19-23	26-28	6-9	12-16	19-23	26-31	6-9	12-16	19-23	26-31	
SCBT 310*	Intro. to Computers and MS-DOS	***																		
SCBT 320*	Windows	***																		
SCBT 330*	Arabic Word for Windows	***																		
SCBT 340*	Excel	***																		
SCBT 350	FOXPRO Database	***																		
SCBT 360	FOXPRO Programming	***																		

 One section of eight lessons

\* Instruction in Arabic

\*\* Vendor provided

\*\*\* To be substituted





**APPENDIX D. 1994 WORK PLAN BUDGET**

FDMP Equipment Procurement Status  
Expenditures Planned 1/93 to 5/95 (US DOLLARS)

Category/Items	9th Qtr Jul-Sep	10th Qtr Oct-Dec	Appropriated/ Expended through 1993	Planned 94/95	Total	Budget	Balance
<b>A. Computer Equipment</b>	0	164,995	164,995	0	164,995	165,000	5
<b>B. Library Resources</b>							
ICES/IMS			85				
FNI			72				
Australian Fisheries			80				
Bibliofile			2,250				
LC MARC			2,180				
AFS References			68				
ASFA	1,995		1,995				
ASFA 94/95				3,190			
Reference Texts (est.)				10,000			
Subtotal	1,995	0	6,728	13,190	19,918	25,000	5,082
<b>C. Fish Aging Equipment</b>							
Nov/Dec 92 Purchases			13,994				
Jan 93 to date purchases	199		602				
November 93 planned purchases		6,300	6,300				
Subtotal	199	6,300	20,896	0	20,896	25,000	4,104
<b>D. Computer Software</b>							
Training							
Bilingual Soutron Library Sys		17,344	17,344				
MSFC Library							
Upgrades (Printers + RAM)		2,760	2,760				
Image Analysis							
Subtotal	0	20,104	20,104	0	20,104	20,000	(104)
<b>E. Lab/Image Analysis E&amp;S</b>	0	0	0	50,000	50,000	50,000	0
<b>F. Training Equip/Supplies</b>							
Otolith Manuals			72				
Photographic supplies			232				
Otolith texts	147		147				
Modem		1,302	1,302				
Books			94				
Observer Training Supplies	1,289	260	1,549				
Micron orifice tube		383	383				
Arabic Text	65		65				
Lab chemicals		2,604	2,604				
Office/File Furniture			1,117				
Subtotal	1,501	4,549	7,565	0	7,565	20,000	12,435
<b>G. Salaiah Lab Equipment</b>	0	0	0	200,000	200,000	200,000	0
<b>Totals</b>	<b>3,695</b>	<b>195,948</b>	<b>220,288</b>	<b>263,190</b>	<b>483,478</b>	<b>505,000</b>	<b>21,522</b>

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مشروع تنمية وإدارة الثروة السمكية في عمان  
FDMP Oman Fisheries Development and Management Project

February 15, 1994

H.E. Sheikh Abdullah bin Ali Bakathir  
Director General  
Directorate General of Fisheries Resources  
Ministry of Agriculture and Fisheries  
Al Khuwair

Reference: Final Draft: 1994 FDMP Annual Work Plan

After compliments:

I am pleased to submit, for your approval, the final draft of the 1994 FDMP Work Plan in English and Arabic. This work plan addresses all concerns that you raised during our meeting on February 8, 1994, including those on data consolidation, fishery management plans, and on-the-job training in research.

If you should have any further questions or comments concerning this work plan, please do not hesitate to contact me. Please inform me if you require additional copies of the document.

I look forward to receiving your approval of this work plan.

Thank you.

After final compliments,

Dr. John A. Dorr III  
Chief of Party

Attachments

cc: Dr. Michael Cremer, Project Officer, OAJC

**Chemonics Industries Incorporated** (Muscat Branch)

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كيمونيكس انديستريز انكوربورييتد (معرض مسقط)

ص.ب. ٢٥٩ - الرمز البريدي : ١١٨ - مجمع الحارثي - سلطنة عمان

ص.ت. ١/٣٤١٥١/٠ - هاتف : ٦٠٠٣٧٦ / ٦٠٠٤٩١ / ٦٠٠٣٩٧ - فاكس : ٦٠٠٤٤٧

مكتب مدينة قابوس هاتف : ٦٠٣١٢٩ / ٦٠٣٠٧٦ - فاكس : ٦٠٢٩٨٩

مركز العلوم الحديثة والسمكية هاتف : ٧٣٩٥١٣ / ٧٣٩٥٢٧ - فاكس : ٧٣٩٥٢٢

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