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SULTANATE OF OMAN

THE STUDY
ON
AGRICULTURE DEVELOPMENT PROJECT
IN
THE NEJD REGION

FINAL REPORT

VOLUME II :
APPENDIX

OCTOBER 1989

JAPAN INTERNATIONAL COOPERATION AGENCY

国際協力事業団

20297

VOLUME II

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GLOSSARY AND ABBREVIATIONS

Arabic Glossary

Ain	Spring
Falaj	Water distribution system under or above ground
Jabal	Mountain
Sabkha	Salt-flat
Wadi	Valley or drainage channel in an arid region (normally dry)
Wali	Local Governor

Abbreviation for Units and Terms

Measurements

Length

mm	Millimetre
cm	Centimetre
m	Metre
km	Kilometre

Area

sq.cm	Square Centimetre
sq.m	Square Metre(s)
sq.km	Square Kilometre
ha	Hectare
fd	Feddan = 0.42 ha
MSM	Million Square Metre

Volume

l	Litre
cu.m	Cubic Metre
MCM	Million Cubic Metre
bal	1 barrel = 36 U.K. gallon
gal	1 U.K. gallon = 4.546 litre

Weight

mg	Milligram
g	Gram
kg	Kilogram
ton	Metric Ton

Others

μ S/cm	Micro siemens per centimetre
mS/cm	Milli siemens per centimetre
pH	Potential Hydrogen
EC	Electric Conductivity
El	Elevation above the mean sea level
sec	Second
min	Minute
hr	Hour
Min	Minimum
Max	Maximum
°C	Degree Centigrade
°F	Degree Fahrenheit
%	Percent
FY	Fiscal Year
a.	Annum = Year
mon	Month
G.D.P.	Gross Domestic Product
ELF-MT	Extremely Low Frequency Magneto-Telluric
VES	Vertical Electric Sounding
UER	Umm Er Radhuma

Currency Conversion

R.O. (Rial Omani)	1 R.O. = 2.60 U.S.\$
U.S.\$ (U.S. Dollar)	1 U.S. \$ = 0.384 R.O.

Abbreviation of Organization Names

CCEWR	Council for Conservation of Environment and Water Resources, Oman
DC	Development Council, Oman
MAF	Ministry of Agriculture and Fisheries, Oman
DGIA	Directorate General of Irrigation Affairs
DGA	Directorate General of Agriculture
DGF	Directorate General of Fisheries
DGAFS	Directorate General of Agriculture and Fisheries in Salalah
MCI	Ministry of Commerce and Industry, Oman
MC	Ministry of Communications, Oman
DGCAM	Directorate General of Civil Aviation and Meteorology
DGM	Directorate General of Meteorology
MD	Ministry of Defense, Oman
GSA	Government Survey Agency
MDA	Ministry of Diwan Affairs, Oman
MEWR	Ministry of Environment and Water Resources, Oman
DWRR	Directorate of Water Resources Research
MEY	Ministry of Education and Youth Affairs, Oman
MEW	Ministry of Electricity and Water, Oman
DGW	Directorate General of Water
DRW	Directorate of Rural Water Supply
MFA	Ministry of Foreign Affairs, Oman
MH	Ministry of Health, Oman
MINF	Ministry of Information, Oman
MI	Ministry of Interior, Oman
DTA	Directorate of Tribal Affairs
MOH	Ministry of Housing
MNC	Ministry of National Heritage and Culture, Oman
MPM	Ministry of Petroleum and Minerals, Oman
MPT	Ministry of Posts, Telegraphs and Telephones, Oman

MSL	Ministry of Social Affairs and Labour, Oman
DGNS	Directorate General of National Statistics
MSWD	Ministry of State and Wali of Dhofar, Oman
PCDESR	Planning Committee for Development and Environment in the Southern Region, Oman
PDO	Petroleum Development, Oman
PAWR	Public Authority for Water Resources, Oman
PAMAP	Public Authority for Marketing Agricultural Produce, Oman
WRC	Water Resources Council, Oman
MFAJ	Ministry of Foreign Affairs, Japan
MCJ	Ministry of Construction, Japan
MAJF	Ministry of Agriculture, Forestry & Fisheries, Japan
JICA	Japan International Cooperation Agency
FAO	Food and Agriculture Organization, United Nations
WMO	World Meteorological Organization, United Nations
WHO	World Health Organization, United Nations
UAE	The United Arab Emirates
GCC	The Gulf Cooperation Council
HALCROW	Sir William Halcrow & Partners
TAYLOR	John Taylor and Sons
GIBB	Sir Alexander Gibb & Partners
HARZA	The Harza Engineering Company Limited
GDC	Groundwater Development Consultants
HYDRO	Hydroconsultants

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INTRODUCTION

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Work Flow of the Study

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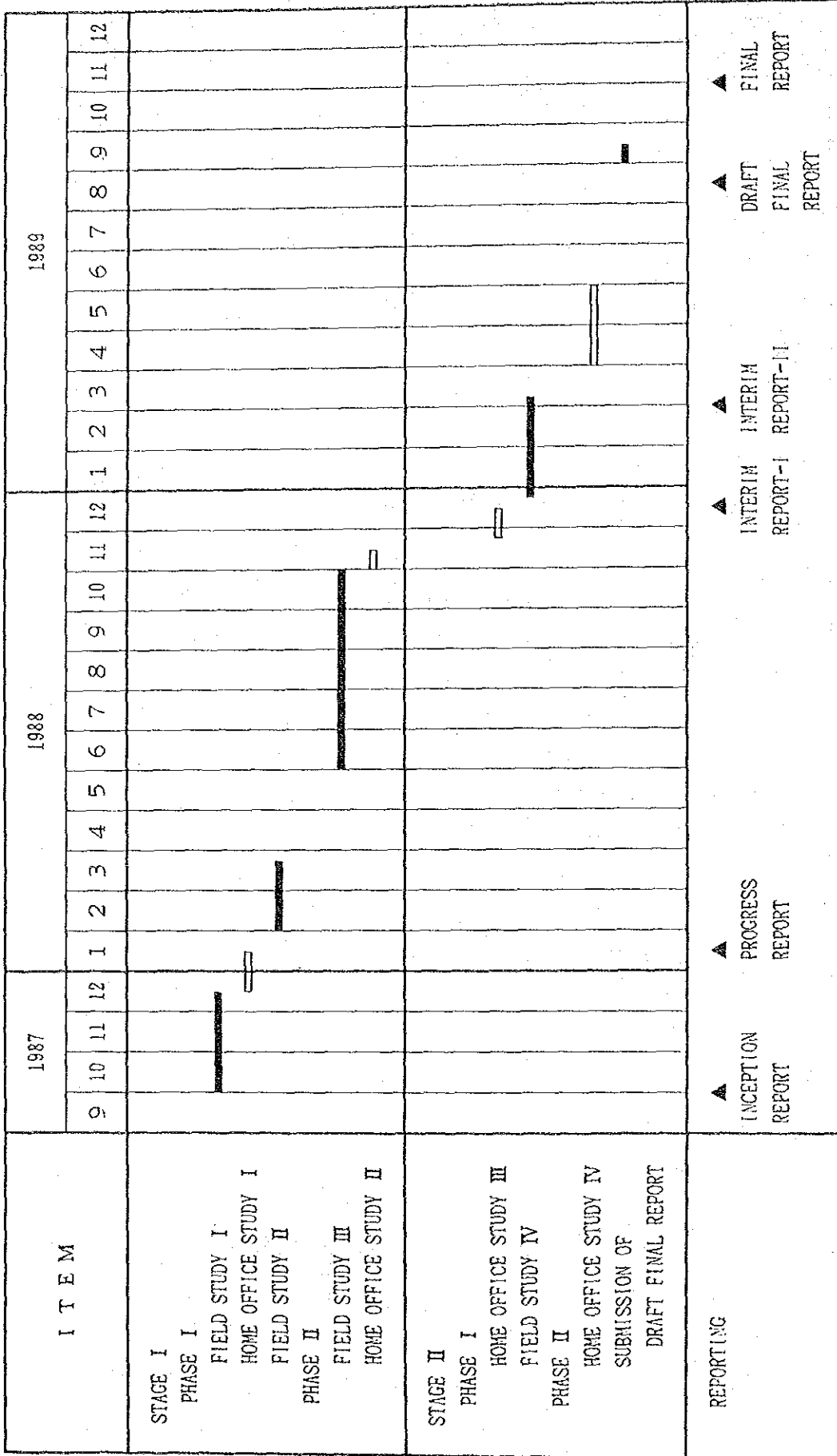
TABLE A-1.1.1

TABLE A-1.1.1 Overall Work Items

Japanese Fiscal Year	Study Stage	Study Phase	Work Stage	Work Item
1987	Stage I	Phase I	Field Study I	<ul style="list-style-type: none"> • Field surveys (meteorology, groundwater, electrical prospecting, soil, agriculture) • Preparation of well drilling work • Selection of promising agriculture development area and pilot farm site • Selection of observation and test well drilling sites
			Home Office Study I	<ul style="list-style-type: none"> • Data analysis of field study I • Selection of a drilling contractor
			Field Study II	<ul style="list-style-type: none"> • Drilling of observation well • Water-gauge installation in existing wells
			Field Study III	<ul style="list-style-type: none"> • Observation and test well drilling • Pumping tests of observation and test wells • Geo-chemical groundwater survey • Existing well surveys
			Home Office Study II	<ul style="list-style-type: none"> • Analyses of groundwater surveys • Formulation of subsequent study work
1988	Stage II	Phase I	Home Office Study III	<ul style="list-style-type: none"> • Estimation of development potentiality of groundwater • Preparation of study scope for agriculture development
			Field Study IV	<ul style="list-style-type: none"> • Surveys necessary for agriculture development guideline • Surveys necessary for pilot farm plan • Problem-screening and clarification • Outlining of pilot farm plan
			Home Office Study IV	<ul style="list-style-type: none"> • Formulation of agriculture development guideline • Formulation of pilot farm plan • Project evaluation
			Field Study V	<ul style="list-style-type: none"> • Submission of draft final report
			Home Office Work Completion	<ul style="list-style-type: none"> • Final report preparation
1989	Stage II	Phase II	Field Study V	<ul style="list-style-type: none"> • Submission of draft final report
			Home Office Work Completion	<ul style="list-style-type: none"> • Final report preparation

FIG. A-1.1.1

FIG. A-1.1.1 Overall Work Flow of the Study



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Study Team Members and Assignment

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TABLE A-1.2.1 Study Team Members

MEMBERS OF ADVISORY COMMITTEE

Name	Assignment	Remarks
Mr. MOMIKURA Yoshimasa	Chairman	Ministry of Agriculture, Forestry and Fisheries
Mr. SUGAWARA Toshio	Member (Geology/Groundwater)	Ministry of Agriculture, Forestry and Fisheries
Mr. TACHIBANA Takashi	Member (Irrigation/Drainage)	Ministry of Agriculture, Forestry and Fisheries
Mr. BAN Yoshiyuki	Member (Farming program)	Ministry of Agriculture, Forestry and Fisheries

MEMBERS OF THE STUDY TEAM

Name	Assignment
Mr. TANAKA Makoto	Team Leader
Mr. SAKAMOTO Takao	Irrigation/Drainage Facility Plan
Mr. USHIKI Hisao	Hydrology/Meteorology Geology
Mr. MIYOSHI Fukujiro	Groundwater (Electrical prospecting)
Mr. OSHIKA Yuusuke	Groundwater (Boring)
Mr. SUZUKI Shinji	Agronomy
Mr. KUSAKA Hayata	Soil Survey
Mr. SUZUKI Seishiro	Survey/Facility Plan/Cost-Estimate
Mr. ONODA Fumiaki	Agro-economy/Project evaluation

FIG. A-1.2.1 Assignment Schedule

Assignment	Name	1 9 8 7														
		Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.		
Team Leader	TANAKA Makoto								21							
Irrigation / Drainage Facility Plan	SAKANOTO Takao									14					25	8
Hydrology / Meteorology	USHIKI Hisao									14						
Geology	USHIKI Hisao									14						
Groundwater (Electrical prospecting)	HIYOSHI Fukujiro										8				25	15
Groundwater (Boring)	OSHIIKA Yuusuke										8					
Agronomy	SUZUKI Shinji										8					
Soil Survey	KUSAKA Hayata											14				

Assignment	Name	1 9 8 8														
		Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.		
Team Leader	TANAKA Makoto													15	7	
Irrigation / Drainage Facility Plan	SAKANOTO Takao				2	2								23		7
Hydrology / Meteorology	USHIKI Hisao							31		29				23		7
Geology	USHIKI Hisao									29				23		7
Groundwater (Boring)	OSHIIKA Yuusuke				2					26						
Agronomy	SUZUKI Shinji													7		7
Soil Survey	KUSAKA Hayata													23		7
Survey / Facility Plan	SUZUKI Seishiro													23		7
Cost-Estimate	SUZUKI Seishiro													7		7
Agro-economy	ONODA Fumaki															
Project Evaluation	ONODA Fumaki															

Assignment	Name	1 9 8 9														
		Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.		
Team Leader	TANAKA Makoto							30	13							
Irrigation / Drainage Facility Plan	SAKANOTO Takao							30	13							
Hydrology / Meteorology	USHIKI Hisao							30	13							
Geology	USHIKI Hisao							30	13							
Agronomy	SUZUKI Shinji															
Soil Survey	KUSAKA Hayata															
Survey / Facility Plan	SUZUKI Seishiro															
Cost-Estimate	SUZUKI Seishiro															
Agro-economy	ONODA Fumaki															
Project Evaluation	ONODA Fumaki															

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Officials Concerned

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I. TECHNICAL PERMANENT COMMITTEE

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Chairman of Technical Permanent Committee
Director General of Irrigation Affairs, M.A.F.

H.H. Barghash bin Ghalib Al Said
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Mr. Bernard Blasco
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Mr. W. Donald Davison Jr.
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Mr. G.C. Tibbits
Director of Regional Offices Department, C.C.E.W.R..

Mr. Nasir bin Mohmed Al Ghilani
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Mr. Suleiman bin Shambaih Al Bulushi
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V. MINISTRY OF AGRICULTURE AND FISHERIES

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H.E. Sheikh Ibrahim bin Hamad bin Suleimen Al Harthy
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Mr. Omar bin Saced Al Marhoon
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Mr. Ahnaf bin Omar Al Zubeidi
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Mr. Ali Mohamed Al Amri
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Director of Animal Wealth Department
D.G. Agriculture and Fisheries, Southern Region

Mr. Salem bin Said Abdul Aziz Al Shanfari
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Department of Agriculture Res.

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Mr. Mousalem Bin Ahmed Tabouk
Mr. Abdullah Bin Faraj Abdoun
Mr. Ahmed Bin Jamain Al-Marhoon

VI. COUNCIL FOR CONSERVATION OF ENVIRONMENT AND
WATER RESOURCES

MUSCAT

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Minister of Environment and Water Resources and
Deputy Chairman of the Council

H.H. Barghash bin Ghalib Al Said
Director General of Water Resources Research

Mr. William Doyol
Technical Secretary

Mr. G.C. Tibbits
Director of Regional Offices Department

Mr. John A. Kay
Director of Water Resources Exploration

Mr. W. Donald Davison Jr.
Head of Special Studies

Mr. Sigeo Suizu
Hydrologist, Capital District Office
JICA Expert

SALALAH

Mr. James R. Jones
District Chief

Mr. Solomio N. Limos
Hydrogeologist

Mr. Mohammed Aslam Zahid
Hydrologist

VI. PLANNING COMMITTEE FOR DEVELOPMENT ENVIRONMENT
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Secretary General

Dr. Rowan Mactaggart
Regional Planner and Technical Coordinator

Dr. Robert Whitcombe
Ecologist

Mr. Peter Oates
Economist

Mr. Mohammed Awadh Basheer
Economist

VIII. MINISTRY OF ENVIRONMENT AND WATER RESOURCES

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Geologist, Water Resources Department

IX. MINISTRY OF PETROLEUM AND MINERALS

MUSCAT

Mr. Suleiman bin Shambaih Al Bulushi
Director of Gas Affairs

Mr. Mohamed bin Abdul Khaliq Jafer
Geologist, Gas Affairs

Mr. A.K. Abu Risher
Adviser, Gas Affairs

SALALAH

Mr. Khaled bin Ahmed Zingl
Director of Geological Survey

Dr. Kidwal Hayatt

Geologist

Mr. Mohammed Ishaq Khalifah

Geologist

X. PETROLEUM DEVELOPMENT OMAN

Dr. David H. Parker

Hydrogeologist

XI. PUBLIC AUTHORITY FOR MARKETING AGRICULTURAL PRODUCE

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Director of Marketing and Sales

Mr. Suleman bin Amer Al Muharazi

Director of Statistical and Research Department

Mr. Mohamed bin Qamber Awdh

Statistical Officer, Statistical Department

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Organization Charts

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SULTANATE OF OMAN
 MINISTRY OF
 AGRICULTURE AND FISHERIES

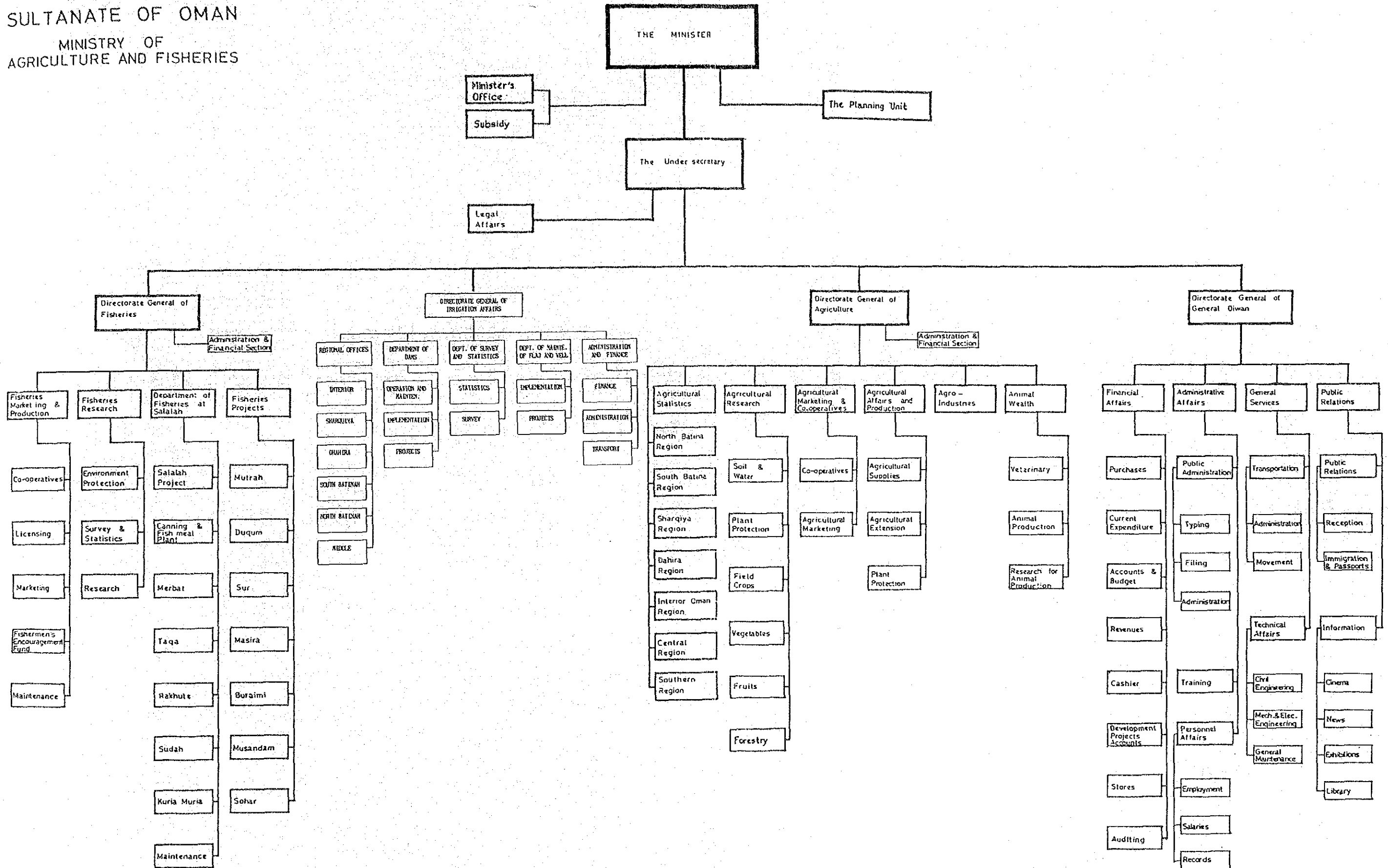


FIG. A-1.4.2 Organization Chart of M.E.W.R

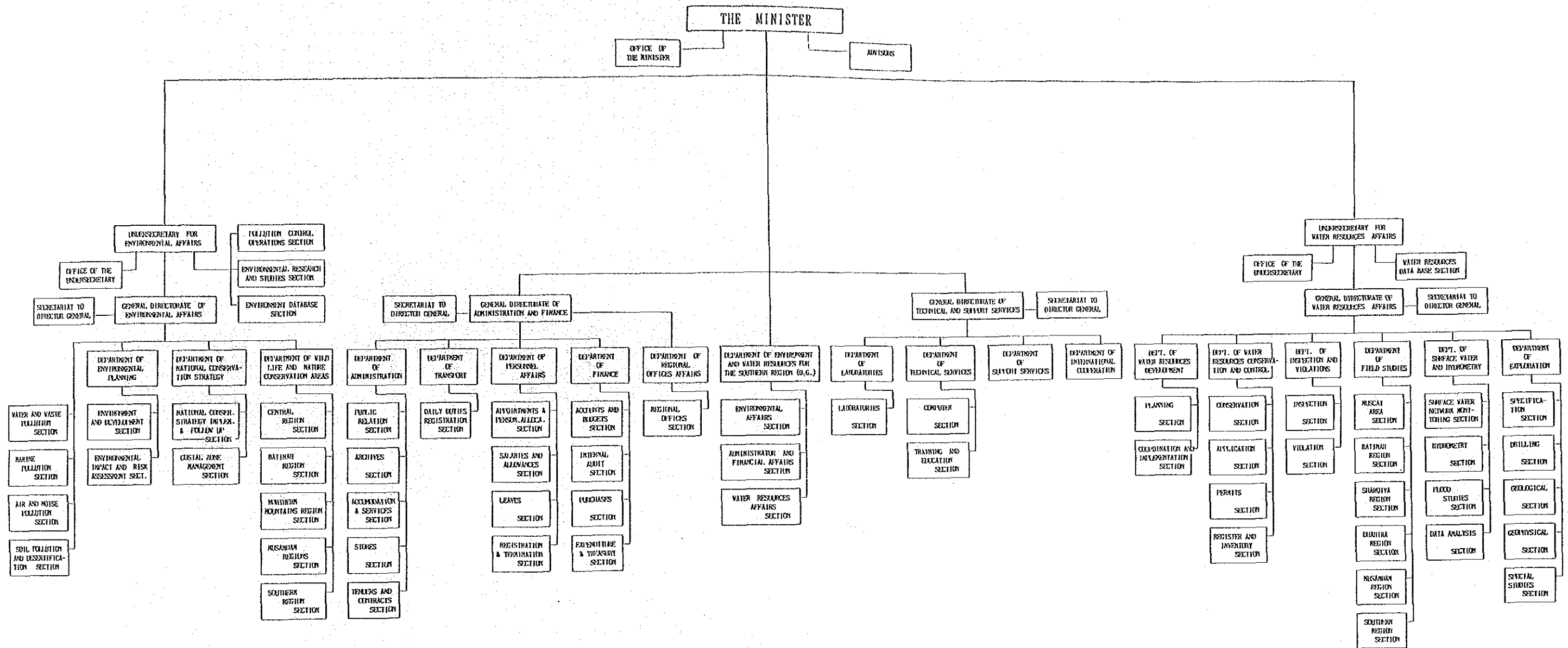


FIG. A-1.4.3 Organization Chart of C.C.E.W.R

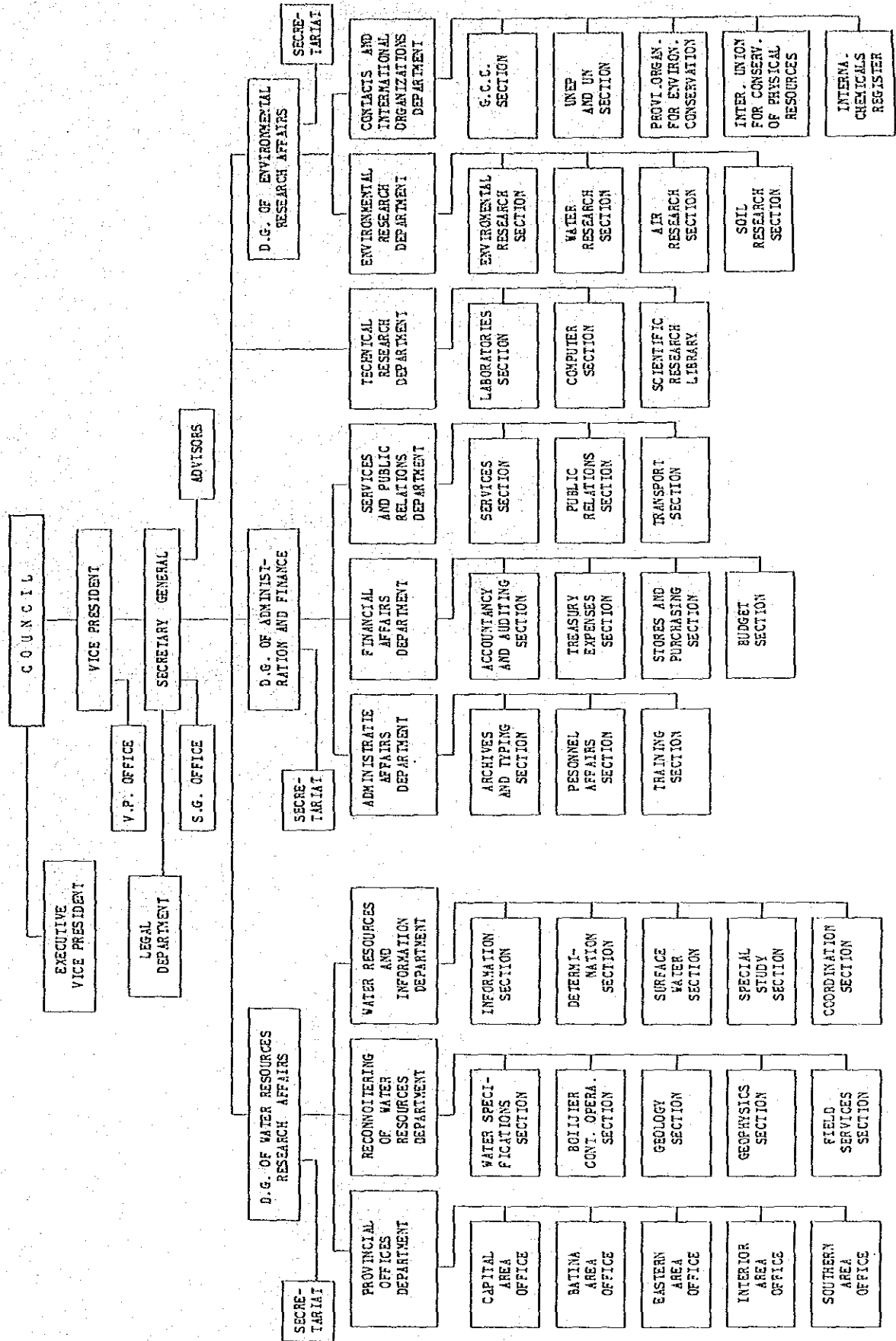


FIG. A-1.4.3

FIG. A-1.4.4 Organization Chart of P.C.D.E.S.R

Organizational Structure
of PCDESR

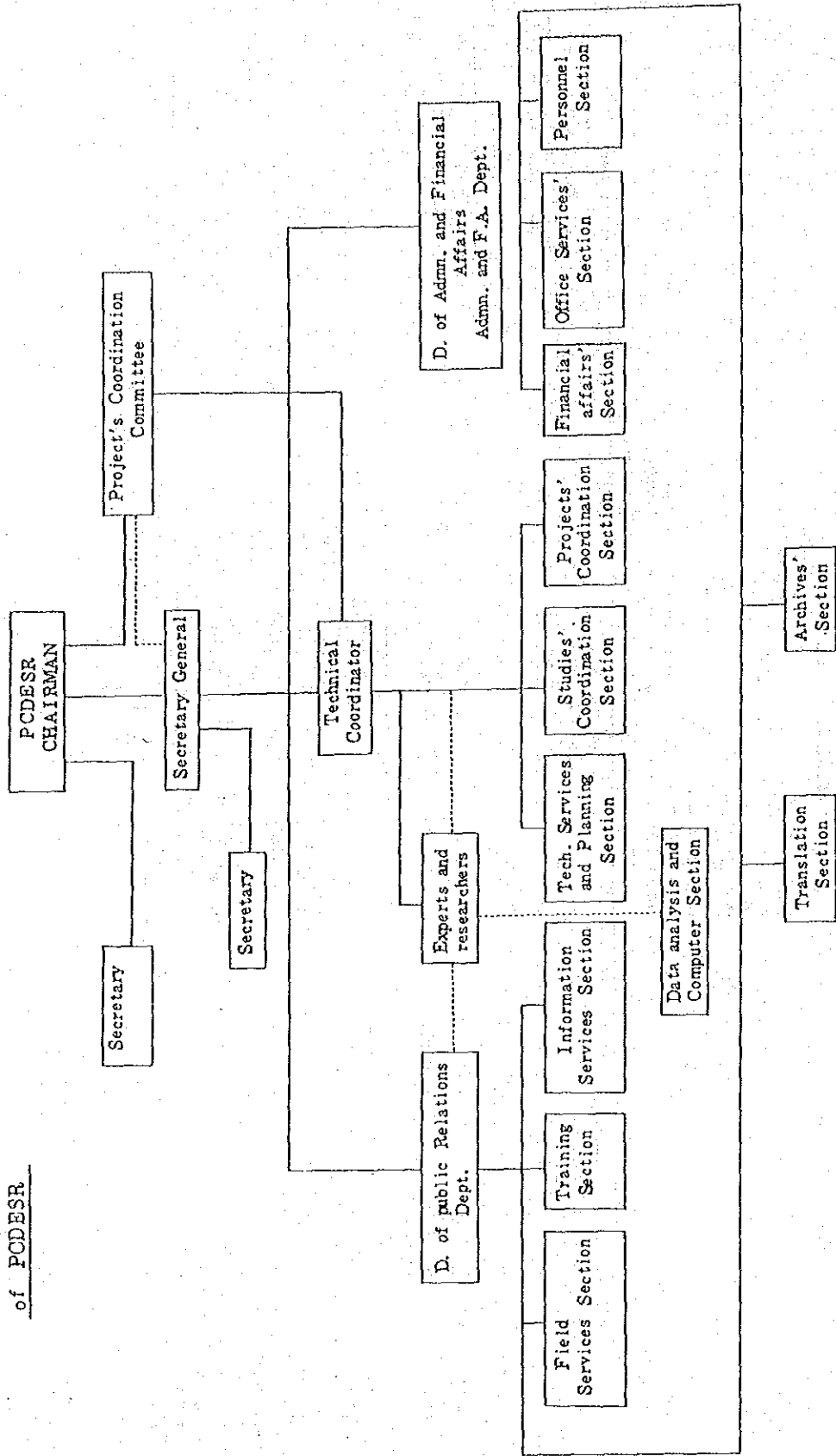


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TABLE A-2.1.1 Summary of Recorded Imports and Exports

(Unit: Million Rial Omani)

Year	Total Recorded Imports	Exports			
		Oil	Non-oil Exp.	Re-export	Total
1975	264.3	488.1	1.1	N.A.	489.2
1980	598.2	1,244.6	4.6	45.3	1,294.5
1981	790.3	1,526.4	6.5	88.9	1,621.5
1982	926.5	1,409.6	7.7	109.5	1,526.8
1983	860.9	1,346.6	10.6	110.0	1,467.2
1984	949.2	1,401.0	17.2	109.3	1,527.5
1985	1088.9	1,597.0	22.9	97.4	1,717.3
1986	916.7	981.0	26.6	85.1	1,092.7
1987	700.7	1,328.0	39.0	84.9	1,451.9

Source : Statistical Year Book 1988

TABLE A-2.1.2 Agriculture Sector Sharing in Whole Trade

SUMMARY OF RECORDED IMPORTS AND EXPORTS

Item	Import		Oil	Agri.*	Export		Total
	Agri.*	Total			Others	Re-export	
Value (M.R.O.)	130.5	700.7	1328.0	19.6	19.4	84.9	1451.9
Share (%)	18.6	100.0	91.5	1.4	1.3	5.8	100.0
Growth Rate (%/Annum 1982-87)	5.4	- 5.6	- 2.3	20.3	226.8	0.8	1.8

* Include Food and Live Animals

Source: Statistical Year Book

TABLE A-2.1.3 Non-Oil Exports (in percentage)

(Unit : %)

Commodities	Year			
	1981	1985	1986	1987
Live Animals	1.0	5.7	8.5	12.7
Fish Fresh and Frozen	39.8	38.4	36.6	30.2
Meal and Flour of Wheat and Meslin	12.7	5.3	2.4	0.1
Fruits and Vegetables	1.8	1.0	1.0	1.1
Citrus Fruits, Fresh or Dried	41.5	15.1	13.9	4.8
Other Commodities	3.2	34.5	37.6	51.1
Total Exports	100.0	100.0	100.0	100.0

Source : Statistical Year Book 1988

TABLE A-2.1.4 Non-Oil Exports (in Rials Omani)

(Unit : 1,000 R.O.)

Commodities	Year			
	1981	1985	1986	1987
Live Animals	67.0	1,296.9	2,259.2	4,979.8
Fish Fresh and Frozen	2,619.7	8,763.6	9,720.6	11,804.0
Meal and Flour of Wheat and Meslin	838.6	1,210.1	645.8	23.8
Fruits and Vegetables	117.1	218.0	273.6	435.5
Citrus Fruits, Fresh or Dried	2,733.5	3,461.3	3,687.1	1,875.0
Other Commodities	208.4	7,883.8	10,012.8	19,941.9
Total Exports	6,584.3	22,833.7	26,599.1	39,060.0

Source : Statistical Year Book 1988

TABLE A-2.1.5 Non-Oil Exports by Country of Destination

(Unit : Thousand Rial Omani)

Commodities	Year	U. A. E	Qatar	Kuwait	Saudi Arabia	Bahrain	Lebanon	Jordan	Others	Total
Live Animals	1981	46.2	20.8	-	-	-	-	-	-	67.0
	1985	1,258.3	22.3	10.3	3.6	1.0	-	-	0.4	1,296.9
	1986	2,203.7	34.2	15.9	0.4	5.0	-	-	-	2,259.2
	1987	4,901.2	46.4	17.7	4.0	10.5	-	-	-	4,979.8
Fish Fresh and Frozen	1981	377.8	156.3	60.1	732.9	-	-	117.0	1,175.6	2,619.7
	1985	808.8	218.2	120.4	1,147.5	126.4	-	793.1	5,549.2	8,736.6
	1986	637.0	244.4	279.9	1,188.6	58.5	21.3	241.9	7,049.0	9,720.6
	1987	1,392.8	191.2	153.0	1,377.0	56.6	12.6	296.2	8,324.6	11,804.2
Meal and Flour of Wheat and Meslin	1981	838.6	-	-	-	-	-	-	-	838.6
	1985	859.1	267.9	-	283.1	-	-	-	-	1,210.1
	1986	266.1	-	-	379.8	-	-	-	-	645.8
	1987	23.8	-	-	-	-	-	-	-	23.8
Fruits and Vegetables	1981	100.2	15.1	-	-	-	-	-	1.8	117.1
	1985	194.6	1.6	1.8	0.4	-	-	-	19.6	218.0
	1986	269.3	4.3	-	-	-	-	-	-	273.6
	1987	426.1	1.9	7.5	-	-	-	-	-	435.5
Citrus Fruits, Fresh and Dried	1981	426.4	128.5	1,718.7	14.8	211.8	-	-	169.2	2,733.5
	1985	953.5	183.5	1,036.3	169.3	251.1	-	-	887.6	3,461.3
	1986	701.5	168.2	1,059.2	85.3	232.0	-	-	1,440.9	3,687.1
	1987	723.6	143.5	20.7	74.3	30.2	-	-	882.7	1,875.0
Other Commodities	1981	194.0	7.4	-	0.1	6.9	-	-	-	208.4
	1985	814.2	119.2	0.3	25.6	83.0	-	-	6,841.5	7,883.8
	1986	510.7	50.0	-	36.6	50.6	-	-	9,364.9	10,012.8
	1987	628.1	13.6	8.9	262.1	31.5	-	-	18,997.7	19,941.9
Total Exports	1981	1,983.2	329.1	1,841.8	747.8	218.8	-	117.0	1,346.6	6,584.3
	1985	4,689.5	812.7	169.1	1,629.5	461.5	-	793.1	14,278.3	22,833.7
	1986	4,588.2	501.1	1,355.0	1,690.7	346.1	21.3	241.9	17,854.8	26,599.1
	1987	8,095.6	396.6	207.8	1,717.4	128.8	12.6	296.2	28,205.0	39,060.0

TABLE A-2.1.6 Re-export Goods Value (In Riials Omani)

(Unit : 1,000 R.O.)

Items	Year			
	1981	1985	1986	1987
Food and Live Animals	2,139.1	4,431.9	3,843.6	1,509.1
Beverage and Tobacco	6,747.8	852.4	649.8	175.3
Crude Materials, Inedible, except Fuels	707.5	1,497.8	1,686.0	2,423.0
Mineral Fuels, Lubricants and Related Materials	283.3	95.3	1,323.1	279.7
Animal and Vegetable Oils and Fats	53.9	189.6	109.5	115.6
Chemicals	486.8	952.9	1,705.2	2,377.0
Manufactured Goods	8,274.4	4,014.2	3,969.8	5,042.8
Machinery and Transport Equipment	62,888.1	66,837.4	59,229.6	60,764.0
Miscellaneous Manufactured Articles	3,006.0	3,955.1	3,910.0	3,384.6
Commodities and Transaction not classified elsewhere	4,556.3	14,576.3	8,646.2	8,786.3
Total	88,923.2	97,402.9	85,072.8	84,857.4

Source : Statistical Year Book 1988

TABLE A-2.1.7 Re-export Goods Value (In percentage)

(Unit : %)

Items	Year			
	1981	1985	1986	1987
Food and Live Animals	2.4	4.6	4.5	1.8
Beverage and Tobacco	7.6	0.9	0.8	0.2
Crude Materials, Inedible, except Fuels	0.8	1.5	2.0	2.9
Mineral Fuels, Lubricants and Related Materials	0.3	0.1	1.6	0.3
Animal and Vegetable Oils and Fats	0.1	0.2	0.1	0.1
Chemicals	0.5	1.0	2.0	2.8
Manufactured Goods	9.3	4.1	4.7	5.9
Machinery and Transport Equipment	70.5	68.6	69.6	71.6
Miscellaneous Manufactured Articles	3.4	4.1	4.6	4.0
Commodities and Transaction not classified elsewhere	5.1	14.9	10.1	10.4
Total	100.0	100.0	100.0	100.0

Source : Statistical Year Book 1988

TABLE A-2.1.8 Export and Re-export Value

(Unit: 1,000 R.O.)

Items	1981			1985			1986			1987		
	Re-export	Omani Origin Export	Total	Re-export	Omani Origin Export	Total	Re-export	Omani Origin Export	Total	Re-export	Omani Origin Export	Total
Food and live animal	2,139.1	6,549.5	8,688.6	4,431.9	15,587.5	20,019.4	3,843.6	16,854.1	20,697.7	1,509.1	19,580.8	21,089.9
Beverages and tobacco	6,747.1	18.5	6,765.6	852.4	380.3	1,232.7	649.8	364.7	1,014.5	175.3	385.2	560.5
Crude materials, inedible	707.5	15.8	723.3	1,497.8	305.0	1,802.8	1,686.0	232.9	1,918.9	2,423.0	16.5	2,439.5
Mineral fuels, lubricant and related materials	263.3	-	263.6	95.3	0.6	95.9	1,323.1	-	1,323.1	279.7	-	279.7
Animal and vegetable oils and fats	53.9	-	53.9	189.6	-	189.6	109.5	-	109.5	115.6	-	115.6
Chemicals	486.8	-	486.8	952.9	-	952.9	1,705.2	-	1,705.2	2,377.0	-	2,377.0
Manufactured goods	8,274.4	-	8,274.4	4,014.2	6,560.3	10,574.5	3,969.8	9,147.4	13,117.2	5,042.8	9,589.1	14,631.9
Machinery and transport equipment	62,688.1	-	62,688.1	66,837.4	-	66,837.4	59,229.6	-	59,229.6	60,764.0	-	60,764.0
Miscellaneous manufactured articles	3,006.0	-	3,006.0	3,955.1	-	3,955.1	3,910.0	-	3,910.0	3,384.6	-	3,384.6
Commodities and transaction	4,556.3	-	4,556.3	14,576.3	-	14,576.3	8,646.2	-	8,646.2	8,786.3	9,483.5	18,269.8
Total	88,923.2 (93.1 %)	6,583.8 (6.9 %)	95,507.0 (100.0%)	97,402.9 (81.0 %)	22,833.7 (18.0 %)	120,236.6 (100.0%)	85,072.8 (76.2 %)	26,599.1 (23.8 %)	111,671.9 (100.0%)	84,857.4 (68.5 %)	39,055.1 (31.5 %)	123,912.5 (100.0%)

Source : Statistical Year Book 1988

TABLE A-2.1.9 Recorded Imports Value

SITC Sections	Value in Thousand Riads Omani				Percentage of Total Value			
	1981	1985	1986	1987	1981	1985	1986	1987
Food and Live Animal	64,602	124,123	128,912	130,519	10.7	11.4	14.2	18.6
Beverages and Tobacco	19,417	17,878	16,876	14,524	2.5	1.6	1.8	2.1
Crude Materials, Inedible, except Fuels	11,382	14,605	12,052	8,970	1.4	1.3	1.3	1.3
Mineral Fuels, Lubricants and Related Materials	103,342	19,710	26,267	20,919	13.1	1.8	2.9	3.0
Animal and Vegetable Oils and Fats	2,566	4,488	2,326	2,770	0.3	0.4	0.2	0.4
Chemicals	27,403	43,058	42,692	48,497	3.5	4.0	4.7	6.9
Manufactured Goods	146,225	240,861	175,732	120,211	18.5	22.1	19.2	17.1
Machinery and Transport Equipment	312,637	454,957	377,267	255,318	38.6	41.8	41.1	36.4
Miscellaneous Manufactured Goods	57,239	140,980	107,276	78,902	7.2	13.0	11.7	11.3
Articles Not Classified	25,533	28,264	26,274	20,107	3.2	2.6	2.9	2.9
Total	790,346	1,088,934	916,674	700,729	100.0	100.0	100.0	100.0

Source : Statistical Year Book 1988

TABLE A-2.1.10 Recorded Imports Classified by Regions and Principal Countries of Export

(Unit : %)

Region and Country	1981	1982	1983	1984	1985	1986	1987
Western Europe	29.9	36.1	38.8	39.8	39.6	44.9	39.3
United Kingdom	14.5	14.4	18.7	16.6	16.4	17.9	14.7
West Germany	4.3	8.3	7.3	9.6	7.8	9.0	8.0
Netherlands	2.5	3.0	3.3	3.1	3.1	4.0	4.5
France	2.4	3.3	2.2	2.9	3.7	3.6	3.6
Italy	1.9	1.7	2.1	2.3	3.0	3.2	2.5
Sweden	0.7	0.7	0.6	0.7	1.4	1.7	1.1
Belgium	0.7	1.0	0.9	0.8	1.0	1.0	0.7
Switzerland	0.8	0.6	0.8	0.9	0.9	1.0	1.0
Denmark	0.9	0.8	0.8	0.7	0.7	0.8	0.9
Spain	0.2	0.9	0.8	0.6	0.5	0.9	0.8
Others	1.0	1.4	1.3	1.6	1.1	1.8	1.5
Middle East	24.8	22.2	18.3	19.0	23.2	20.8	24.1
United Arab Emirates	15.9	14.0	17.5	17.7	21.1	18.7	21.0
Iran	—	—	—	—	..	..	..
Kuwait	0.9	0.9	0.1	0.2	0.2	0.2	0.4
Lebanon	0.1	0.1	0.1	0.1	..	..	..
Bahrain	7.4	6.5	0.3	0.3	0.5	0.5	0.8
Others	0.5	0.7	0.3	0.7	1.4	1.4	1.9
Other Asia	32.8	29.6	31.2	30.5	28.6	23.1	25.4
Japan	22.6	20.7	22.0	21.3	20.2	14.4	15.2
India	2.6	2.2	2.3	2.3	2.3	2.3	3.7
Singapore	2.7	2.0	1.9	2.0	1.5	1.5	1.7
China	0.7	0.7	0.5	0.5	0.4	0.4	0.5
Pakistan	0.5	0.6	1.2	1.2	1.1	1.0	0.4
Malaysia	0.8	0.6	0.6	0.5	0.6	0.6	0.8
South Korea	1.2	0.7	0.5	0.7	0.7	1.1	0.9
Hong Kong	0.6	0.6	0.7	0.5	0.4	0.3	0.3
Thailand	0.2	0.5	0.3	0.4	0.4	0.5	0.6
Burma	—	—	—	—	..	..	0.2
Others	0.9	1.0	1.2	1.2	1.0	1.0	1.1
America	8.7	8.8	8.5	8.5	6.6	8.4	7.6
United States	7.7	8.0	7.7	7.5	5.7	7.6	6.7
Brazil	0.2	0.1	0.1	0.4	0.5	0.5	0.3
Others	0.8	0.7	0.7	0.6	0.4	0.3	0.6
Oceania	2.0	2.2	2.3	1.9	1.9	2.5	3.2
Australia	1.5	1.5	1.9	1.5	1.5	2.0	2.6
Others	0.5	0.7	0.4	0.4	0.4	0.5	0.6
Eastern Europe	0.8	0.1	0.1	—	0.1	0.1	0.2
Romania	0.2	—	0.1	—	..	..	..
U.S.S.R.	—	—	—	—	—	—	—
Poland	0.6	0.1	—	—	—	—	—
Others	—	—	—	—	0.1	0.1	0.2
Africa	1.0	1.0	0.8	0.3	..	0.2	0.2
Kenya	0.6	0.7	0.3	0.1	..	..	0.1
Liberia	—	—	—	—	—	—	—
Uganda	—	—	—	—	—	—	—
Others	0.4	0.3	0.5	0.2	..	0.2	0.1
Total All Countries	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source : Statistical Year Book 1988

TABLE A-2.1.11 Capital Area Consumer Price Index of Main Foods

(Basic prices equal to Average prices for the period July - December 1987)

Items	Year							
	1980	1981	1982	1983	1984	1985	1986	1987
Fresh and dried vegetables	101.8	105.2	88.4	92.5	72.0	63.9	47.6	63.9
Frozen vegetables	101.7	103.9	78.0	78.9	70.0	67.6	78.7	85.3
Fresh and dried fruits	104.6	112.6	119.2	124.2	105.0	90.6	100.5	98.7
Canned vegetables	116.6	130.8	134.2	134.9	124.1	100.1	110.9	116.0
Canned fruits	104.6	114.6	115.8	117.3	115.0	126.4	142.3	150.6
Fresh/evaporated milk	118.0	120.3	120.6	119.0	116.2	113.6	124.0	125.8
Fresh/frozen meat	110.1	122.1	138.5	127.2	121.5	121.3	131.3	138.6
Chicken-frozen	112.6	112.0	105.3	100.0	95.3	96.9	90.9	89.9
Eggs	147.3	155.2	165.5	166.4	142.4	144.1	159.2	146.6
Frozen fish	108.3	112.3	138.9	145.0	124.9	108.3	123.7	125.0
Rice, Basmati, Pakistan	102.3	103.4	105.7	104.6	85.6	94.7	106.7	112.7
Rice, Basmati, India	110.5	117.2	129.0	131.7	122.8	123.4	144.1	148.5
Rice, Uncle Bens, U.S.A.	106.4	109.1	117.4	117.3	115.8	113.3	127.8	130.8
Wheat flour, Domestic	127.7	118.4	125.8	123.0	116.1	106.2	108.3	106.2
Wheat flour, Imported	104.1	122.2	127.8	123.7	118.6	104.1	106.5	107.1
All food items	104.1	122.2	127.8	123.7	118.6	104.1	106.5	107.1

Source : Statistical Year Book 1988

TABLE A-2.1.12 Capital Area Consumer Price Index of Food, Beverage and Tobacco

- Average Value, July - December 1978 = 100 -

Items	Year							
	1980	1981	1982	1983	1984	1985	1986	1987
Cereal Products	108.0	111.3	116.1	114.8	103.0	102.7	111.4	113.9
Meat and eggs	115.9	123.6	132.5	124.6	116.7	117.3	123.3	125.5
Fish	104.2	110.4	131.5	135.6	118.9	105.5	121.0	121.9
Milk and milk products	114.3	121.8	132.5	128.0	116.3	110.5	116.6	118.5
Fruits and nuts	103.8	113.4	118.0	121.6	108.8	103.9	115.7	117.9
Vegetables	103.4	111.8	99.1	102.1	85.0	75.1	67.3	79.7
Sugar and Confectionary	163.1	188.6	151.7	126.7	110.0	93.9	101.8	101.3
Spices and salt	122.0	116.0	118.6	119.5	117.3	112.3	121.7	119.3
Fats, edible oils and ghee	118.8	123.7	121.5	127.2	132.0	125.8	136.7	147.3
Tea and Coffee	101.5	105.3	98.1	93.5	96.1	94.9	108.5	107.2
Beverages	119.1	119.6	134.1	137.5	137.4	139.2	143.1	141.4
Other food items	110.5	120.6	116.5	109.3	102.6	93.8	108.1	113.5
Cigarettes and tobacco	126.2	143.0	178.6	190.7	191.4	196.0	228.8	225.1
All food items	112.7	120.4	123.9	121.8	111.9	107.7	115.4	118.3

Source : Statistical Year Book 1988

TABLE A-2.1.13 Price Indices of Building Materials

March 1974 = 100

Materials	Index at End of Year								
	1975	1980	1981	1982	1983	1984	1985	1986	1987
Ordinary Portland Cement (Bagged)	115	137	128	95	64	76	79	76	66
White Cement	119	145	148	133	109	84	87	86	83
Mild Steel Bars	64	97	89	66	60	59	62	66	73
Hard Wood	88	124	169	125	117	111	113	113	114
Soft Wood	93	87	70	66	54	46	41	51	52
Ply Wood	75	108	171	140	118	104	106	120	156
Sand	126	158	163	190	200	177	126	131	107
Crusher	127	152	152	129	130	97	60	63	47
Pre-cast Concrete Blocks	142	165	159	158	145	126	95	91	95
Glass	146	112	126	100	104	151	78	83	89
PVC Pipes	119	136	159	154	152	115	117	126	114
Cast Iron Pipes	121	117	124	138	134	165	154	153	107
Pitch Fibre Pipes	130	122	185	190	153	126	159	154	137
Emulsion Paint	149	236	276	207	223	167	183	168	118
Gloss Paint	140	190	225	191	176	172	162	171	183
Cement Wash	116	152	217	213	210	178	175	211	235

APPENDIX A-2.2
Agricultural Statistics

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TABLE A-2.2.22	Dates Processed and the Final Production at Dates Factory (Nizwa & Rustaq) 2 - 28

TABLE A-2.2.1 Imports of Agricultural Production

Goods	1987 (1,000Ton)	Growth Rate(1982-87) (% /Annum)
Live Animals	11.2	24.1
Meat and Meat Preparation	38.2	9.9
Dairy Products and Eggs	40.6	9.2
Fish and Fish Preparations	1.8	12.5
Cereals and Cereal Preparations	293.0	5.8
Fruits and Vegetables	65.3	5.0
Sugar and Sugar Preparations and Honey	31.1	11.9
Coffee, Tea, Cocoa, Spices and Manufactures Thereof	9.4	5.2
Feeding-Stuff for Animals	22.1	-3.3
Miscellaneous Food Preparations	17.4	19.3
Total	530.1	6.2

Source:Statistical Year Book

TABLE A-2.2.2 Export by Crop

Crop	Quantity Ton	Growth Rate %/Annum
Potato	14.6	1.6
Beans	2.0	16.7
Tomato	4,048.3	25.7
Lime, Citrus	1,212.7	7.6
Banana	315.7	29.0
Dates Fresh	502.6	11.9
Dates Dry	2,104.9	20.1
Water Melon	1,568.7	17.9
Others	10.1	19.0
Hay and Green Fodder	7,749.5	37.6
Total	17,529.1	21.5

Source: Quarterly Bulletin on Foreign Trade
Statistics (June 1988)

TABLE A-2.2.3 Comparison of Imports with Omani Origin Export on Live Animal

(Unit : Million R.O.)

Items	1981		1985		1986		1987	
	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.
Live animals	1.6	0.1	3.3	1.3	3.1	2.3	5.2	5.0
Meat and meat preparation	14.9	—	20.3	—	21.7	—	20.4	—
Dairy products and eggs	13.9	—	19.6	—	21.1	—	21.9	—
Fish and fish preparation	0.8	2.6	0.9	8.8	1.1	9.7	0.8	11.8
Cereals and cereal preparation	18.2	0.8	25.5	1.2	24.0	0.6	25.4	—
Fruits and vegetables	18.8	2.9	32.8	3.7	34.5	4.0	31.9	2.3
Sugar, Sugar preparation	5.6	—	4.2	—	5.5	—	4.7	—
Coffee, tea, cocoa	6.3	—	8.5	—	8.0	—	10.1	—
Feeding stuff for animal	1.2	0.2	2.2	0.6	3.2	0.3	1.4	0.5
Miscellaneous food preparation	3.4	—	6.8	—	7.7	—	8.7	—
Total value	84.7	6.5	124.1	15.6	129.9	16.9	130.5	19.6
Gross trading value	93.2		139.7		146.8		150.1	
Share (%)	90.1	0.9	88.8	11.2	88.5	11.5	86.9	13.1

Source : Statistical Year Book 1988

TABLE A-2.2.4 Percentage of Imports and Omani Origin Export on Food and Live Animal

(Unit : %)

Items	1981		1985		1986		1987	
	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.
Live animals	1.9	1.0	2.7	8.3	2.4	13.4	4.0	25.4
Meat and meat preparation	17.6	—	16.4	—	16.7	—	15.6	—
Dairy products and eggs	16.4	—	15.8	—	16.2	—	16.8	—
Fish and fish preparation	0.9	40.0	0.7	56.2	0.8	57.7	0.6	60.3
Cereals and cereal preparation	21.5	12.8	20.5	7.8	18.5	3.8	19.5	0.1
Fruits and vegetables	22.3	43.5	26.4	23.6	26.6	23.5	24.4	11.5
Sugar, Sugar preparation	6.6	—	3.4	—	4.2	—	3.6	—
Coffee, tea, cocoa	7.4	—	6.8	—	6.2	—	7.7	—
Feeding stuff for animal	1.4	2.7	1.8	4.1	2.5	1.6	1.1	2.7
Miscellaneous food preparation	4.0	—	5.5	—	5.9	—	6.7	—
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source : Statistical Year Book

TABLE A-2.2.5

Gross Domestic Product by Kind of Activity at Current Price

Million Rial Omani

Economic Activity	1980	1981	1982	1983	1984	1985	1986	1987
A) Industries								
Agriculture & Fisheries	52.6	62.1	66.1	80.6	89.0	93.7	95.9	105.4
Agriculture	37.2	40.5	45.7	53.5	57.1	67.5	68.2	70.6
Fisheries	15.4	21.6	20.4	27.1	31.9	26.2	27.7	34.8
Mining & Quarrying	1,280.5	1,476.4	1,424.7	1,402.0	1,468.6	1,683.9	1,072.4	1,413.0
Crude Oil	1,267.2	1,456.1	1,402.0	1,370.7	1,427.8	1,639.1	1,024.6	1,362.0
Natural Gas	12.3	17.7	18.9	25.8	33.6	36.0	38.5	42.7
Mining	-	-	-	0.1	2.5	2.4	4.1	4.9
Quarrying	1.0	2.6	3.8	5.4	4.7	6.4	5.2	3.4
Manufacturing	15.6	27.0	39.6	49.7	72.1	82.3	103.1	111.5
Oil Refinery	-	-	-	4.1	13.0	9.9	8.6	10.1
Others	15.6	27.0	39.6	45.6	59.1	72.4	94.5	101.4
Electricity and Water	16.0	18.7	21.3	24.0	32.7	36.8	40.3	43.5
Electricity	12.7	13.9	15.9	16.5	25.2	27.1	29.7	28.0
Water	3.3	4.8	5.4	7.5	7.5	9.7	10.6	15.5
Construction	117.8	144.9	16.8	187.4	226.9	242.2	220.8	137.0
Wholesale, Retail Trade, Restaurants & Hotels	188.3	251.3	299.5	315.7	369.0	428.0	383.2	327.3
Wholesale and Retail Trade	183.1	242.4	288.8	303.0	354.3	412.2	366.4	311.0
Restaurants and Hotels	5.2	8.9	10.7	12.7	14.7	15.8	16.8	16.3
Transport, Communication and Storage	38.3	53.8	64.9	72.9	84.5	99.6	103.4	97.7
Transport	32.1	42.0	49.6	53.3	60.2	68.2	68.7	64.1
Communication	6.2	11.8	15.3	19.6	24.3	31.4	34.7	33.6
Financing, Insurance, Real Estate & Business Services	162.8	206.6	231.2	250.1	275.9	295.9	281.2	267.1
Banking	31.1	44.7	51.8	56.4	66.3	73.9	78.5	74.3
Insurance	3.3	4.3	10.0	7.2	12.2	17.0	15.0	17.0
Real Estate Services	106.9	130.8	137.3	152.4	154.1	159.4	143.8	146.5
Business Services	21.5	26.8	32.1	34.1	43.3	45.6	43.9	29.3
Community & Personal Services	13.0	16.9	20.7	25.4	31.6	36.0	38.5	40.4
Less : Imputed Bank Service Charges	24.6	39.0	43.9	49.6	59.2	63.6	71.2	70.3
Sub-Total	1,860.3	2,218.7	2,293.9	2,358.2	2,591.1	2,934.8	2,267.6	2,472.6
B) Producers of Government Services								
General Administration and Defence	153.0	206.1	234.5	280.9	332.9	373.0	382.8	390.5
Other Government Services	41.6	54.4	70.5	79.1	91.0	104.9	113.0	119.4
Sub-Total	194.6	260.5	305.0	360.0	423.9	477.9	495.8	509.9
Plus : Import Duties	8.6	11.3	14.7	21.7	31.7	41.1	37.0	26.9
GDP at Purchaser's Values	2,063.5	2,490.5	2,613.6	2,739.9	3,046.7	3,453.8	2,800.4	3,009.4

Source : Statistical Year Book 1987

TABLE A-2.2.6 Gross Domestic Product by Industrial Origin

Million Current Rial Omani

	1967	1968	1969	1970	1971	1972	1973	1974	1975
Agriculture & Fishing	14.3	15.1	16.0	16.6	16.8	17.0	16.7	17.4	20.2
Mining (Oil)	15.6	59.4	81.7	71.6	73.9	76.4	94.5	389.0	486.8
Manufacturing	0.1	0.1	0.1	0.2	0.2	0.3	0.6	2.0	2.1
Construction	8.3	7.3	7.7	8.5	20.4	22.6	24.0	58.0	70.8
Transport & Communication	0.3	0.3	0.4	0.7	2.1	3.2	4.4	12.3	23.5
Electricity and Water	-	-	-	0.1	0.3	0.7	0.9	1.2	1.8
Wholesales & Retail Trade	0.8	0.9	1.2	1.6	2.8	3.8	8.3	27.2	38.5
Banking	0.1	0.2	0.3	0.6	0.7	0.8	0.9	3.5	9.8
Ownership of Dwellings	1.2	1.2	1.3	1.5	2.1	2.5	2.9	4.8	9.3
Public Administration & Defence	0.6	1.3	1.8	2.3	4.1	11.0	13.1	46.4	53.0
Services	0.8	0.9	0.9	1.0	1.7	2.5	3.1	6.7	8.4
Total GDP at Market Prices	42.1	86.7	111.4	104.7	125.1	140.8	169.4	568.5	724.2
Less : Indirect Taxes	0.8	1.0	1.2	1.1	1.1	1.6	1.7	2.3	2.5
GDP at Factor Cost	41.3	85.7	110.2	103.6	124	139.2	167.7	566.2	721.7

TABLE A-2.2.7 Gross Domestic Products by Sector at Current Price

Sector	1987 M.R.O.	Share-1 %	Share-2* %	Growth Rate** %/Annum
Agriculture	83.8	3.9	6.8	9.1
Mining				
Oil	905.7	42.3		12.4
Others	29.4	1.4	2.4	23.3
Manufacturing	84.3	3.9	6.8	22.8
Electricity, Gas & Water	95.4	4.5	7.7	29.4
Construction	144.5	6.7	11.7	0.3
Trade, Hotel, Restaurant	191.9	9.0	15.5	-3.1
Transport, Communications	80.3	3.7	6.5	9.4
Banking, Real Estate,				
Business Services	231.8	10.8	18.7	7.4
Personal Services	36.1	1.7	2.9	14.6
Producers of Government				
Services	259.6	12.1	21.0	8.0
Less: Imputed Bank Service				
Charges	57.9			10.4
Total	2084.9	100.0	100.0	9.0

* Except Oil ** 1982-87
Source: Statistical Year Book

TABLE A-2.2.8 Area under Cultivation by Region

Region	Total Number of Holdings ^①	Total Area of Farms		Total Area under Cultivation ^③		②/①		③/①	
		ha	%	ha	%	ha	ha		
Muscat and Batinah	19,778	46,126	55.3	20,750	50.6	2.33	1.05		
Musandam	2,156	1,120	1.3	1,030	2.5	0.52	0.48		
Western Hajar	6,336	2,624	3.2	1,955	4.8	0.41	0.31		
Eastern Hajar	4,686	1,956	2.3	1,235	3.0	0.42	0.26		
Jau and Buraimi	1,980	1,312	1.6	885	2.2	0.66	0.45		
Dhahirah	6,094	7,202	8.6	3,303	8.0	1.18	0.54		
Interior	11,154	14,495	17.4	5,167	12.6	1.30	0.46		
Sharqiya & Ja'alan	11,066	5,818	7.0	4,285	10.4	0.53	0.39		
Southern Region	1,826	2,707	3.3	2,414	5.9	1.48	1.32		
Total	65,076	83,360	100.0	41,024	100.0	1.28	0.63		

Source : Statistical Year Book 1987

TABLE A-2.2.9

Total Area under different Types of Vegetables and Crops by Regions

Area in Hectares

Type of Vegetables/ Crops.	Total Cultivated Area	Region								
		Batinah	Musandam	Western Hajar	Eastern Hajar	Jou and Buraimi	Dhahirah	Interior	Sharqiya & Ja'alan	Southern Region
Onion	537.02	208.78	0.44	49.28	13.20	22.22	102.08	126.72	9.24	5.06
Watermelon	409.84	255.86	0.44	8.80	19.80	2.20	25.52	20.68	20.02	56.32
Cucumber	9.46	0.88							0.68	7.92
Tomato	331.32	93.94		0.88		2.20	22.66	51.70	14.52	145.42
Chilly	222.86	9.02		0.22		0.22		191.40	1.54	20.46
Potatoes	126.50	27.28		6.60	1.32	0.66	0.44	17.38	15.62	57.20
Other Vegetables	502.48	121.66	0.22	9.02	16.50	18.48	42.80	144.32	37.18	112.20
Total	2,139.28	717.42	1.10	74.80	50.82	45.98	193.60	552.20	98.78	402.58
	100.0 %	33.5 %	0.1 %	3.5 %	2.4 %	2.1 %	9.1 %	25.8 %	4.6 %	18.9 %
Alfalfa	3,698.64	1,079.10	13.20	217.36	98.34	33.22	418.44	754.60	795.96	288.42
Wheat	301.62	5.06		38.06		1.32	133.10	124.08		
Barley	144.98	83.82		10.12	0.22	2.42	2.20	42.02	4.18	
Sorghum	684.18	30.14		254.98	8.80	1.54	119.24	135.96	85.58	27.94
Other Crops	24.20	7.48		1.10			0.22	15.40		
Total	4,833.62	1,205.60	13.20	521.62	107.36	38.50	673.20	1,072.06	885.72	316.36
	100.0 %	25.0 %	0.3 %	10.8 %	2.2 %	0.8 %	13.9 %	22.2 %	18.3 %	6.5 %
Total Area under Cultivation	6,972.90	1,923.02	14.30	596.42	158.18	84.48	866.80	1,624.26	984.50	720.94
	100.0 %	27.6 %	0.2 %	8.6 %	2.3 %	1.2 %	12.4 %	23.3 %	14.1 %	10.3 %

Source : Statistical Year Book 1988

TABLE A-2.2.10 Production of Vegetables and Fruits from Production Extension Centres and Experimental Farms

Quantity in Tons

Area	Vegetables			Fruits			Total		
	1981	1982	1983	1981	1982	1983	1981	1982	1983
Batinah (%)	27.7 (27.8)	37.8 (39.0)	0.7 (2.5)	3.7 (15.2)	6.8 (14.5)	2.1 (12.2)	31.4 (25.3)	44.6 (31.0)	2.8 (6.3)
North (%)	0.1 (0.1)	1.4 (1.5)	0.7 (2.5)	3.4 (13.9)	3.9 (8.3)	2.1 (12.2)	3.5 (2.8)	5.3 (3.7)	2.8 (6.3)
South (%)	27.6 (27.7)	36.4 (37.5)	N.A. (N.A.)	0.3 (1.3)	2.9 (6.2)	N.A. (N.A.)	27.9 (22.5)	39.3 (27.3)	N.A. (N.A.)
Interior (%)	28.5 (28.5)	37.0 (38.1)	23.9 (85.4)	5.2 (21.3)	18.5 (39.5)	10.3 (59.9)	33.7 (27.1)	55.5 (38.6)	34.2 (75.5)
Southern (%)	43.6 (43.7)	22.2 (22.9)	3.4 (12.1)	15.5 (63.5)	21.5 (46.0)	4.8 (27.9)	59.1 (47.6)	43.7 (30.4)	8.2 (18.2)
Total (%)	99.8 100.0	97.0 100.0	28.0 100.0	24.4 100.0	46.8 100.0	17.2 100.0	124.2 100.0	143.8 100.0	45.2 100.0

Quantity in Tons

Area	Vegetables				Fruits				Total			
	1984	1985	1986	1987	1984	1985	1986	1987	1984	1985	1986	1987
Batinah (%)	0.3 (3.3)	4.7 (32.6)	3.8 (22.0)	0.9 (11.0)	4.8 (26.5)	9.6 (47.5)	104.2 (85.4)	45.2 (54.1)	5.1 (18.8)	14.3 (41.3)	108.0 (77.5)	46.1 (50.2)
North (%)	0.3 (3.3)	N.A. (N.A.)	N.A. (N.A.)	- (-)	4.8 (26.5)	4.2 (20.8)	88.7 (72.7)	11.1 (13.3)	5.1 (18.8)	4.2 (12.1)	88.7 (63.7)	11.1 (12.1)
South (%)	N.A. (N.A.)	4.7 (32.6)	3.8 (22.0)	0.9 (11.0)	N.A. (N.A.)	5.4 (26.7)	15.5 (12.7)	34.1 (40.8)	N.A. (N.A.)	10.1 (29.2)	19.3 (13.8)	35.0 (38.1)
Interior (%)	2.8 (31.1)	7.2 (50.0)	8.5 (49.1)	5.1 (62.2)	6.8 (37.6)	9.3 (46.0)	13.9 (11.4)	27.1 (32.4)	9.6 (35.4)	16.5 (47.7)	22.4 (18.1)	32.2 (35.1)
Southern (%)	5.9 (65.9)	2.5 (17.4)	5.0 (28.9)	2.2 (26.8)	6.5 (35.9)	1.3 (6.5)	3.9 (3.2)	11.3 (13.5)	12.4 (45.8)	3.8 (11.0)	8.9 (6.4)	13.5 (14.7)
Total (%)	9.0 100.0	14.4 100.0	17.3 100.0	8.2 100.0	18.1 100.0	20.2 100.0	122.0 100.0	83.6 100.0	27.1 100.0	34.6 100.0	139.3 100.0	91.8 100.0

Source : Statistical Year Book 1988

TABLE A-2.2.11

Total Area under Permanent Crops by Type
and Number of Trees

Crop	Number of Trees		Area in Hectares
	Total	Producing	
Dates (%)	7,991,238 (65.9)	5,201,966 (70.8)	20,194.08 (71.8)
Limes (%)	784,630 (6.5)	508,904 (6.9)	2,034.12 (7.2)
Bananas (%)	2,661,780 (21.9)	12,221,122 (16.6)	1,989.68 (7.1)
Mangoes (%)	356,004 (2.9)	155,166 (2.1)	2,956.96 (10.5)
Coconuts (%)	101,684 (0.8)	85,470 (1.2)	304.92 (1.1)
Papaya (%)	104,324 (0.9)	72,314 (1.0)	254.98 (0.9)
Others (Fruits) (%)	136,994 (1.1)	102,960 (1.4)	394.02 (1.4)
Total Area (%)	12,136,652 (100.0)	7,348,902 (100.0)	28,128.77 (100.0)

TABLE A-2.2.12 Live stock Population by Area

Number and Percentage

Region	Goats	Cows	Sheep	Camels	Donkeys
Muscat and Batinah	179,915 25.8 %	15,034 12.0 %	60,799 44.8 %	2,872 4.0 %	3,213 28.9 %
Musandam	26,537 3.8 %	272 0.2 %	3,083 2.3 %	162 0.2 %	49 0.4 %
Western Hajar	44,905 6.5 %	4,905 3.9 %	10,733 7.9 %	29 -	1,469 13.2 %
Eastern Hajar	24,361 3.5 %	2,426 1.9 %	7,568 5.6 %	49 0.1 %	792 7.1 %
Jua & Buraimi	31,652 4.5 %	1,991 1.6 %	4,004 3.0 %	2,956 4.2 %	105 0.9 %
Dhahirah	90,447 13.0 %	7,975 6.3 %	14,918 11.0 %	3,380 4.8 %	557 5.0 %
Interior	88,059 12.6 %	7,505 6.0 %	12,491 9.2 %	1,165 1.6 %	839 7.6 %
Sharqiya & Ja'alan	104,074 15.0 %	7,856 6.2 %	18,081 13.3 %	6,510 9.1 %	3,317 29.8 %
Southern	108,249 15.3 %	77,922 61.9 %	3,977 2.9 %	54,365 76.0 %	786 7.1 %
Total	696,199 100.0 %	125,886 100.0 %	135,654 100.0 %	71,488 100.0 %	11,127 100.0 %

* Results of Agriculture Sample Survey in 1982

Source : Statistical Year Book 1987

TABLE A-2.2.13 Production of Oman Sun Farm from Vegetables by Kind

Quantity in Kilogram

Period	Tomatoes	Cucumber	Cabbage	Cauli- flower	Egg Plant	Other	Total
1984	104,646	24,865	183,350	56,718	56,770	17,084	443,433
1985	87,039	150,613	111,811	29,145	82,018	191,781	652,407
1986	22,350	142,675	138,861	51,468	44,181	177,369	576,904
1987	54,804	86,782	170,739	31,246	28,000	307,868	679,439

Source : Statistical Year Book 1987

TABLE A-2.2.14 Production of Oman Sun Farm by Kind of Product

Period	Vegetables (kg)	Hay Bales (Number)	Dairy Production		
			Milk (l)	Yoghurt(l)	Laban (l)
1984	443,433	448,733	964,930	7,581	—
1985	652,407	407,902	1,377,438	188,301	—
1986	576,904	448,800	1,178,158	230,248	—
1987	679,439	424,734	1,265,642	255,837	108,330

Source : Statistical Year Book 1987

TABLE A-2.2.15 Production Farms, Research Stations and Extension Centres

Type of Farm/Station	1975	1980	1981	1982	1983	1984	1985	1986	1987
Production Farms	6	8	8	8	8	8	8	8	8
Research Stations (Agriculture)	7	5	5	5	5	5	5	5	5
Research Stations (Animal Husbandry)	—	2	2	2	2	3	3	3	3
Extension Farms	3	2	2	—	—	—	—	—	—
Extension Centres	27	35	35	34	32	32	32	35	38
Nursery (Garden)	—	2	2	2	2	2	2	2	2
Nursery (Fruits)	—	2	2	2	2	2	2	2	2
Total	43	56	56	53	51	52	52	55	58

TABLE A-2.2.16 Fertilizer distributed to Farmers

Quantity in Ton

Type	1975	1980	1981	1982	1983	1984	1985	1986	1987
Ammonium Sulphate	1,492.1	2,033.0	1,067.7	1,936.6	1,339.9	810.3	697.0	946.6	736.3
Complex Fertilizer	256.7	1,905.3	1,629.6	2,819.2	2,450.9	1,669.4	2,474.3	2,001.9	1,570.4
Others	40.2	132.1	-	-	-	-	3,750.0	1,750.0	2,482.3
Total	1,789.0	4,070.4	2,697.3	4,755.8	3,790.8	2,479.7	6,921.3	4,698.5	4,789.0

Source : Statistical Year Book 1987

TABLE A-2.2.17 Improved Seeds and Seedling distributed through Extension Centres

Type of Seeds/Seedlings	Unit	1980	1981	1982	1983	1984	1985	1986	1987
Onion	ton	1.8	2.3	2.5	2.8	2.5	2.3	2.1	2.2
Raddish	"	3.2	5.2	5.0	4.6	4.8	4.7	4.5	4.3
Watermelon	"	2.0	2.6	2.4	2.5	2.5	2.5	2.6	2.3
Cucumber	"	0.3	0.4	0.4	0.6	0.5	0.5	0.3	0.4
Tomato	"	0.9	1.4	1.3	1.4	1.4	1.7	1.0	1.0
Sweetmelon	"	0.5	0.9	0.8	1.0	1.1	1.2	1.0	0.8
Okra	"	0.5	1.1	1.1	1.5	1.4	1.4	1.4	1.2
All Types of Marrow	"	0.4	0.6	0.6	0.9	0.8	0.8	0.8	0.6
Cabbage	"	0.4	0.5	0.5	0.7	0.7	0.8	0.6	0.5
Carrot	"	0.4	0.4	0.5	0.5	0.4	0.6	0.5	0.5
Egg Plant	"	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2
Beet-root	"	-	0.1	0.1	0.1	0.1	0.1	-	0.1
Spinach	"	0.1	0.2	0.3	0.5	0.3	0.3	0.3	0.2
Cauliflower	"	0.1	1.0	0.1	0.2	0.1	0.2	0.1	0.1
Chilly	"	0.4	0.5	0.5	0.7	0.5	0.4	0.5	0.4
Potatoes	"	33.0	43.5	17.2	82.0	44.7	71.3	63.9	128.3
Wheat Seeds	"	4.3	3.6	3.0	11.0	49.2	32.9	31.5	27.8
Barley Seeds	"	-	-	-	1.4	1.8	2.0	3.2	3.3
Others	"	0.4	0.6	0.7	1.0	1.4	15.3	6.5	8.5
Total	"	48.8	65.1	37.2	113.7	114.4	139.2	121.0	182.7
Fruit	Number	27,683	39,320	21,665	16,885	9,960	16,760	22,066	13,777
Ornamental Plants	"	23,699	29,048	63,581	29,998	24,594	16,017	30,549	22,853
Total	"	51,382	68,368	85,246	46,883	34,554	32,777	52,615	36,630

Source : Statistical Year Book 1987

TABLE A-2.2.18 Number and Value of Water Pumps Distributed to Farmers

Value in Thousand Rial Omani.

Agricultural Area	1983		1984		1985		1986		1987	
	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value
Batinah	624	199.0	1,234	417.3	652	242.1	196	85.6	18	20.0
North	272	83.9	525	165.3	185	65.4	58	21.7	12	9.0
South	352	115.1	709	252.0	467	176.7	138	63.9	6	11.0
Dhahirah	7	2.2	141	49.8	80	34.3	25	14.6	—	—
Interior	61	21.5	212	97.2	108	48.8	64	32.0	1	1.0
Sharqiya	47	16.7	167	67.6	114	51.9	56	33.1	48	46.0
Southern	—	—	38	14.1	28	9.9	17	7.3	—	—
Musandam	—	—	80	22.9	—	—	62	14.8	—	—
Muscat	—	—	—	—	—	—	—	—	7	7.0
Total	739	239.4	1,872	668.9	982	387.0	420	187.4	74	

Source : Statistical Year Book 1987

TABLE A-2.2.19 Tractor Services Distributed and Tractor Hours Rendered to Farmers

Agricultural Area	Number of Tractor Services Distributed							Number of Tractor Hours						
	1981	1982	1983	1984	1985	1986	1987	1981	1982	1983	1984	1985	1986	1987
Batinah	44	39	35	30	24	19	33	35,567	31,928	31,014	26,329	19,283	16,769	20,813
North	22	21	19	12	10	8	14	20,943	17,367	17,795	16,693	12,219	9,728	12,108
South	22	18	16	18	14	11	19	14,624	14,561	13,219	9,636	7,064	7,041	8,705
Dhahirah	8	9	10	10	5	5	9	6,525	6,605	8,207	6,887	5,203	2,092	3,647
Interior	28	33	32	32	24	21	25	16,728	24,228	21,544	19,355	15,063	14,551	16,363
Sharqiya	13	11	12	12	7	6	13	9,090	8,867	5,909	4,993	3,880	3,056	6,502
Southern	16	15	13	12	12	13	13	11,687	12,745	13,939	12,226	12,946	13,738	14,017
Total	109	107	102	96	72	64	93	79,597	84,373	80,613	69,795	56,375	50,206	61,342

Source : Statistical Year Book 1987

TABLE A-2.2.20 Spraying Machines Distributed to Farmers

Value in Thousand Rial Omani

Agricultural Area	1981		1982		1983		1984		1985		1986		1987	
	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value
Batinah	940	N. A.	166	N. A.	1,095	103.6	854	22.1	861	69.5	291	36.6	720	116.3
North	249	N. A.	57	N. A.	387	47.5	266	8.0	349	33.2	189	10.5	420	67.8
South	691	N. A.	109	N. A.	708	56.1	588	14.1	512	36.3	182	26.1	300	48.5
Dhahirah	413	N. A.	12	N. A.	184	9.7	183	2.3	322	19.4	160	9.5	130	21.0
Interior	277	N. A.	N. A.	N. A.	382	22.6	415	6.5	424	29.1	200	26.1	210	33.9
Sharqiya	232	N. A.	116	N. A.	186	10.6	452	3.3	279	14.9	125	13.5	100	16.2
Southern	284	N. A.	51	N. A.	219	13.1	214	4.5	114	7.9	40	3.1	40	6.5
Total	2,146	159.0	345	9.6	2,066	159.6	2,118	38.7	2,069	140.8	816	88.8	1,200	193.9

Source : Statistical Year Book 1987

TABLE A-2.2.21 Number and Value of Tractors distributed to Farmers

Value in Thousand Rial Omani

Agricultural Area	1983		1984		1985		1986		1987	
	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value
Batinah	48	53	36	38.3	45	69	8	19.2	1	7
North	13	15.1	17	18.6	18	35	4	11.3	—	—
South	35	37.9	19	19.7	27	34	4	7.9	1	7
Dhahirah	9	9.2	11	11.2	16	20.5	—	—	—	—
Interior	75	28.7	74	17.6	56	18.6	—	—	—	—
Sharqiya	21	19.6	19	20.3	14	15.0	2	5.2	3	11
Southern Area	—	—	1	2.2	—	—	—	—	—	—
Total	153	110.5	141	89.6	131	123.1	10	24.4	4	18

Source : Statistical Year Book 1987

TABLE A-2.2.22 Dates Processed and the Final Production at Dates Factory (Nizwa & Rustaq)

Quantity in Ton
Value in Rial Omani

Year	Dates Purchased			Quantity Proc- essed	Final Production		
	Value ①	Quantity ②	Price ①/②		Value ③	Quantity ④	Price ③/④
1980	123,801	599	207	588	260,309	535	487
1981	130,558	749	174	477	388,322	470	826
1982	177,111	1,318	134	1,471	550,751	1,457	378
1983	175,464	1,189	148	1,099	525,991	1,089	483
1984	200,164	1,488	135	1,182	560,569	1,147	489
1985	224,128	1,259	178	1,483	634,367	1,422	446
1986	300,762	1,269	237	920	735,417	897	820
1987	209,219	1,271	165	1,331	605,801	1,263	480

Source : Statistical Year Book 1987

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APPENDIX A-3.1

General Outline of the Area

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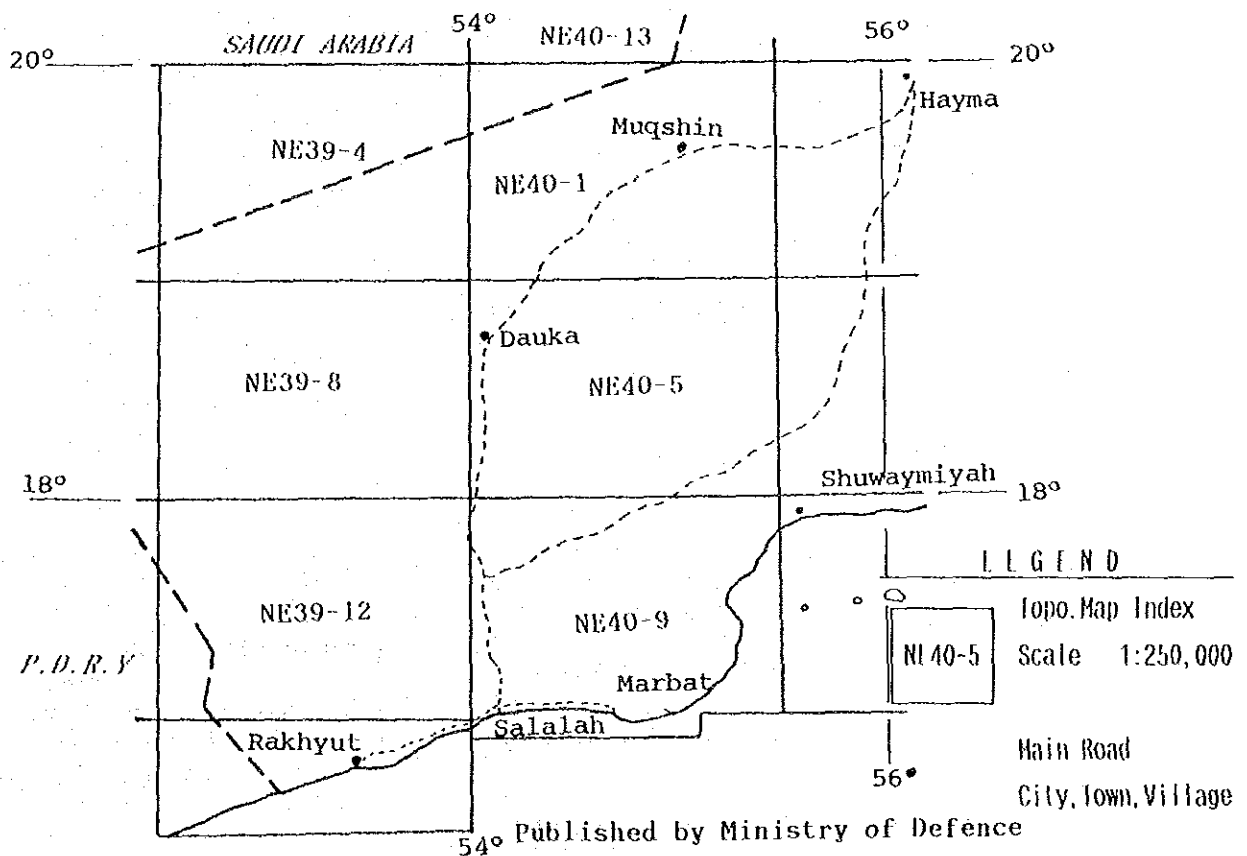
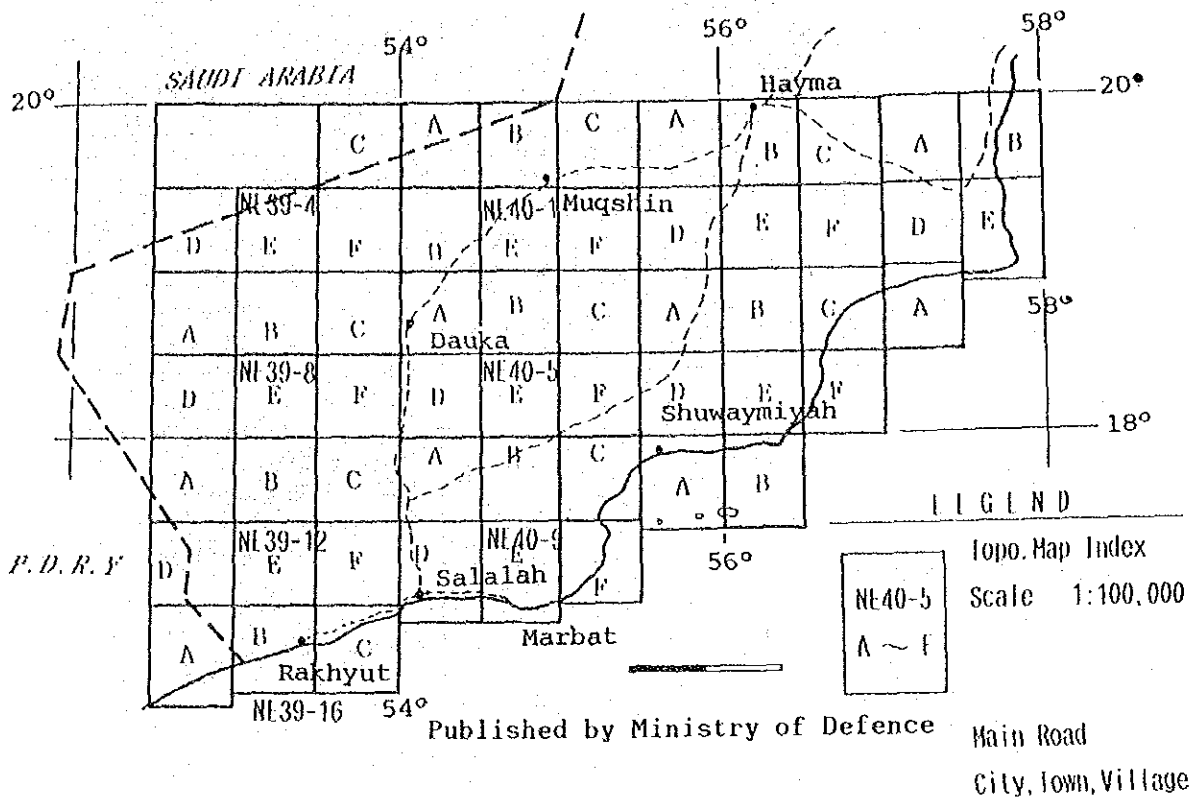


TABLE A-3.1.1 Present Condition of Shasr

Item	Contents	Remarks
Public Organizations	1. Wali-Office 2. Mosque 3. D. of Water Supply, Branch 4. D. of Housing, Branch 5. D. of Irri. Affa. Branch	Constructing ten residences Management of oasis facility
Household	60 households	Most households live near Shasr
Livestock Population	Camel : 1000 ea. numbers Goat : 2000 ea. numbers Cattle : 0	15 - 20 Nos/ household 30 - 40 Nos/ household
Farms and Farming Area (1) Farm inside the village (2) Farms around the vill. (3) Others	30 Farms, - fd 1 Farm (common in 6 farms), 15 fd 3 Farms, 10, 40, & 60 fd 21 Farms, - fd	Including the development schedule in future 1978 established 1986 - 1988 established 21 farms are only plan (not cultivated yet)
Wells	4	Old Oasis : 1 Shallow wells around the village : 3

Note : JICA Team survey in Feb. 1989

TABLE A-3.1.2 Present Condition of Hailat Al-Rakah

Item	Contents	Remarks
Public organization	None	Public facilities, like wali-office, mosque, school, clinic, D. of water supply does not exist.
Household	Household at present : None	Residence location of farm owners Salalah : 5 households Thumrait : 37 households
Farms and Farming Area The Process of Farm Development	42 Farms, 660 fd (277 ha) 1983 : 5 farms 1986 : 15 farms 1988 : 25 farms 1989 : 42 farms	Present data (1989) 80 farms are planned in future.
Wells	Drilled shallow well : Approx. 80 Operating shallow wells : Approx. 40 Unused wells : Approx. 40	Unused reason : Failed drilling and couldn't get water : 20 Farms are not developed yet in spite of having succeeded in drilling well : 20

Note : JICA Team survey in Feb. 1989

TABLE A-3.1.3 Present Condition of Quitbeet

Item	Contents	Remarks
Public organizations	1. Wali-office 2. Mosque 3. Elementary School 4. Clinic 5. D. of Water supply, Branch	Well, Water supply tank
Households Process of Increase in Households	60 households 1986年 : 20 households 1988年 : 40 households 1989年 : 60 households	All of the 60 households live in Quitbeet. All the households are bedwin.
Livestock Population	Camel : 3000 numbers Goat : 4500 numbers Cattle : 0	50 Nos. / household 50 - 100 Nos. / household
Farms and Farm Area	3 Farms, 0.23 fd (0.10 ha) Date palms : 40 plants Rhodes grass : 0.05 fd	All farms established in 1980. All are only small scale farms. Owners live in the village.
Well	1	Existing well for living is used for farming also.

Note : JICA Team survey in Feb. 1989

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Natural Environment

A-3.2.1 Meteorology

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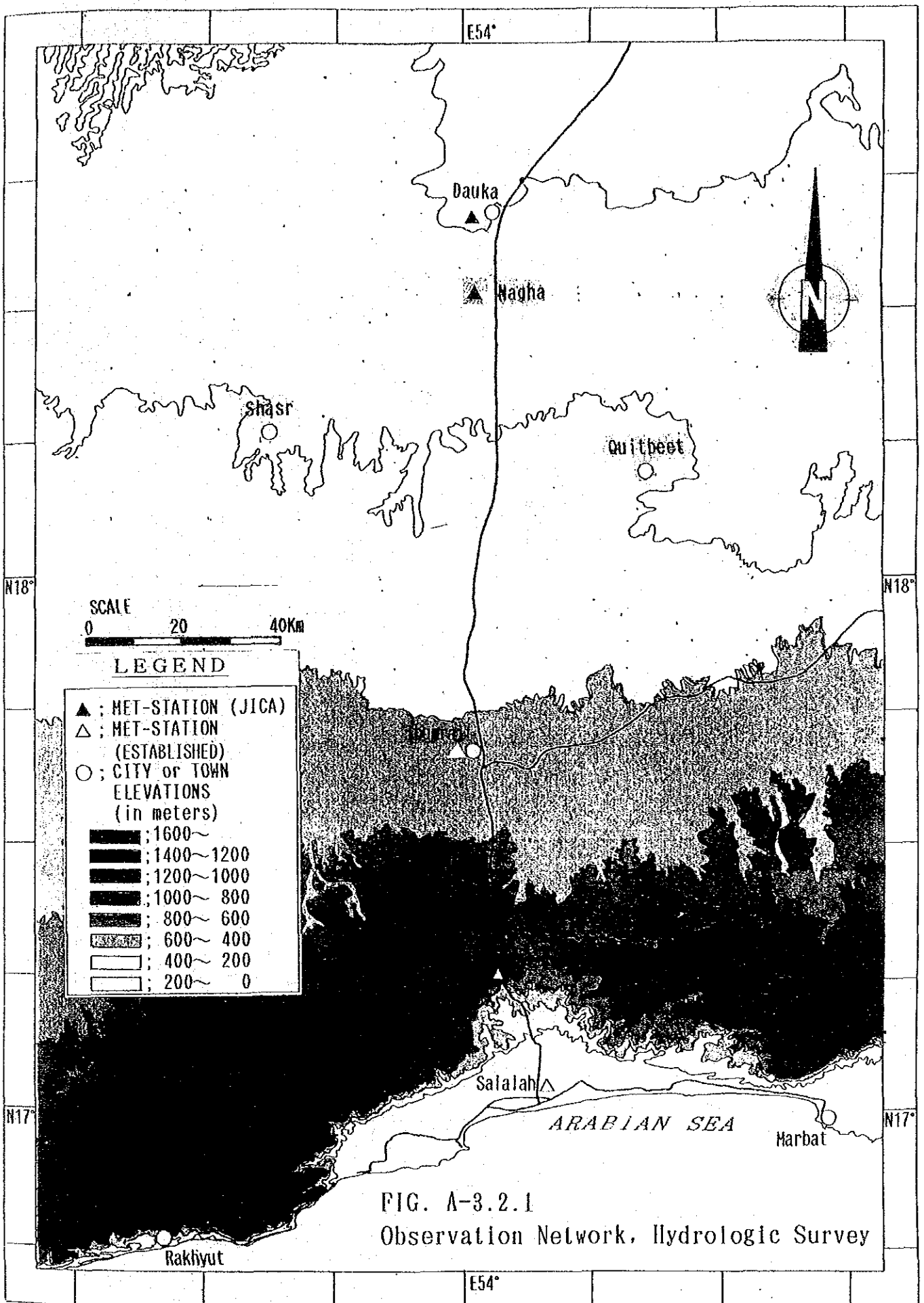


TABLE A-3.2.1 Available Climatological Data

Item	Station Name	Saialah Airport	Saialah OAIROON HAIRITI	Thumrait	JICA station Danka	JICA station Nagha (Pilot farm)
Location (N) or (IAI) (E) or (IE)		17° 02' N 54° 05' E	17° 15' 17.6" N 54° 05' 06.7" E	17° 40' 22.8" N 54° 01' 35.7" E	18° 40' N 54° 04' E	18° 19' N 54° 03' E
Altitude (m-ASL)		21.76m a.s.l	878.30m a.s.l	466.86m a.s.l	213.76m a.s.l	283.10m a.s.l
Operation Agency		MOC	MOC	MOC	JICA	JICA
Data Collection term		Jan. '80 - Oct. '87	Jan. '85 - Dec. '86	Jan. '85 - Oct. '87	Nov. '87 - Now	Oct. '88 - Now
Pressure		Daily & Monthly (Daily Mean) hPa	nil	Daily-Mean, max, min hpa	nil	nil
Air Temperature (°C)		Daily & Monthly Daily, Max, Min, Mean	Daily & Monthly Daily, Max, Min, Mean	Daily & Monthly Daily, Max, Min, Mean	Weekly, Max, Min Hourly	nil
Vapour Pressure (hPa)		nil	nil	Daily & Monthly Daily, Max, Min, Mean	nil	nil
Relative Humidity		Daily & Monthly (Daily Mean) %	nil	Daily & Monthly Daily, Max, Min, Mean	Hourly	nil
Wind PRCV-D		Daily & Monthly (Daily Mean) deg	nil	Daily & Monthly (Daily Mean) deg	Weekly	Daily & Hourly
H-SPEED		Monthly Mean kt	nil	Daily & Monthly (Daily Mean) kt	nil	Daily & Hourly
Max-Gust		Daily & Monthly Daily Mean, kt	nil	Daily & Monthly Daily Mean, kt	nil	Daily & Monthly
Evaporation		Daily & Monthly PICH, ml	nil	Daily & Monthly PICH, mm	nil	nil
Duration of Bright Sunshine		Daily & Monthly (hours)	nil	Monthly (hr) Mean, Max, Min	nil	nil
Radiation per Day		Monthly (mWh/cm ²) Mean, Max, Min	nil	Monthly (mWh/cm ²) Mean, Max, Min	nil	Monthly (mWh/cm ²) Mean, Max, Min
Precipitation		Daily & Monthly (mm)	Daily & Monthly (mm)	Daily total, 10min, 1hr-max Monthly	Accumulate	Hourly, Daily, Monthly

TABLE A-3.2.2

TABLE A-3.2.2 Mean Monthly Climatological Data (Salalah, Thumrait)

Salalah Airport (24.38m-A.S.L.)														
Items	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL	MEAN
1. Precipitation (mm)	3.5	17.3	3.9	18.9	5.7	5.6	24.9	26.0	4.8	2.5	0.5	0.0	120.7	10.1
2. Max temperature(°C)	27.6	27.9	30.0	32.0	32.4	32.2	29.0	27.5	29.2	30.7	30.8	28.7	-	29.9
3. Min temperature(°C)	17.7	18.2	21.3	23.5	25.7	26.8	24.3	22.8	23.3	21.6	20.4	18.6	-	22.0
4. Mean temperature (°C)	22.9	23.7	25.9	27.5	29.2	29.3	26.3	24.8	26.4	26.6	25.8	23.9	-	25.1
5. Relative humidity(%)	50.7	56.6	62.6	69.3	75.6	80.4	88.3	89.6	80.3	66.8	55.9	50.6	-	69.9
6. Mean wind speed(m/sec)	3.5	3.5	3.2	3.5	3.8	4.7	3.5	3.3	3.6	3.2	2.6	3.4	-	3.5
7. Bright sunshine(hr)	9.2	10.2	9.1	9.7	9.1	6.9	1.9	1.4	6.7	9.6	10.1	9.7	93.6	7.7
8. Evaporation(ml/day)	10.9	9.4	7.7	6.6	6.1	4.6	2.4	1.8	4.0	6.2	8.4	10.9	2397.5	6.3

Source : Climate Summary / National Meteorological Service / Sultanate of Oman.

Mean Monthly Climatological Data

Thumrait (466.9m-A.S.L.)														
Items	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	TOTAL	MEAN
1. Precipitation (mm)	0.6	13.4	6.9	8.5	0.0	0.5	0.0	6.7	0.0	0.0	0.0	0.2	36.3	3.0
2. Max temperature(°C)	25.4	27.5	32.3	35.7	38.9	40.6	37.4	38.0	35.9	34.6	30.0	26.0	-	33.9
3. Min temperature(°C)	10.4	13.3	17.8	19.3	22.5	23.5	23.7	22.9	21.5	18.4	14.6	11.5	-	18.6
4. Mean temperature (°C)	18.5	20.5	24.8	28.0	31.0	32.6	29.5	29.3	28.8	26.6	23.1	19.3	-	26.2
5. Relative humidity(%)	54.0	53.3	47.1	41.9	44.1	45.1	62.3	58.3	51.1	40.4	48.8	55.5	-	50.1
6. Mean wind speed(m/sec)	3.7	5.2	6.6	6.0	6.7	7.0	10.8	9.0	6.3	4.5	3.2	4.0	-	5.8
7. Bright sunshine(hr)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Evaporation(ml/day)	9.2	11.0	15.7	18.2	20.6	20.0	16.6	17.0	16.4	16.9	11.9	9.2	5564.2	15.5

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

TABLE A-3.2.3 Monthly Precipitation in Southern Region

Monthly Precipitation
Salalah Airport (24.38m a.s.l) (Unit : mm/month)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Total
1980	0.0	0.0	TR	0.0	0.4	TR	28.2	21.0	11.0	19.9	0.0	0.0	80.5
1981	0.2	0.0	15.4	TR	TR	1.9	21.5	12.4	2.0	0.0	0.0	0.0	53.4
1982	1.1	59.3	1.6	0.0	0.0	27.6	16.7	30.8	6.3	0.0	3.6	0.4	147.4
1983	24.8	77.4	0.2	150.9	27.5	0.4	12.6	59.5	6.5	0.0	0.0	0.0	359.8
1984	0.0	0.0	0.0	0.0	11.0	1.9	27.1	21.4	12.3	0.0	0.0	0.0	73.7
1985	1.5	0.0	0.0	0.0	0.0	4.5	37.0	11.9	0.0	0.0	0.0	0.0	54.9
1986	TR	1.4	0.0	0.0	0.0	3.7	39.3	31.0	TR	0.0	0.0	TR	75.4
1987	0.0	0.0	14.2	0.0	6.5	4.8	16.6	26.	TR	0.0	-	-	-
ΣT	27.6	138.1	31.4	150.9	45.4	44.8	99.0	214.	38.1	19.9	-	-	-
Mean	3.5	17.3	3.9	18.9	5.7	5.6	24.9	26.	4.8	2.5	0.5	0.0	120.7

Note : " - " indicates no data available
" TR" indicates Trace of rainfall
Source : Climate Summary / National Meteorological Service / Sultanate of Oman

Monthly Precipitation
QAIROON HA RITI (Unit : mm/month)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Total
1985	0.0	0.0	0.0	0.0	0.0	19.3	69.6	41.6	0.4	0.0	0.0	0.0	130.9
1986	0.6	5.4	0.0	0.6	0.0	9.0	112.2	82.6	-	0.0	0.0	0.0	-
ΣT	0.6	5.4	0.0	0.6	0.0	28.3	181.8	124.2	-	0.0	0.0	0.0	-
Mean	0.6	2.7	0.0	0.3	0.0	14.2	90.9	62.1	-	0.0	0.0	0.0	-

Note : " - " indicates no data available
" TR" indicates Trace of rainfall
Source : Climate Summary / Ministry of Communications / Sultanate of Oman

Monthly Precipitation
THUMRAIT (466.9m a.s.l) (Unit : mm/month)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Total
1981	-	-	8.0	TR	TR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
1982	1.4	4.0	0.0	0.0	0.0	0.0	0.0	0.3	TR	0.0	0.0	1.3	7.0
1983	2.1	57.8	0.8	44.6	0.0	0.0	0.4	38.9	0.0	0.0	0.0	0.0	144.6
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0
1986	0.0	18.5	0.0	2.7	0.0	3.3	TR	5.4	0.0	0.0	0.0	0.0	29.9
1987	0.0	TR	39.2	12.2	0.0	TR	0.0	0.0	0.0	0.0	-	-	-
ΣT	3.5	80.3	48.0	59.5	0.0	3.3	0.4	47.2	0.0	0.0	-	-	-
Mean	0.6	13.4	6.9	8.5	0.0	0.5	0.0	6.7	0.0	0.0	0.0	0.2	36.3

Note : " - " indicates no data available
" TR" indicates Trace of rainfall
Source : DG of Meteorology / HOC / Sultanate of Oman

TABLE A-3.2.4 Monthly Mean Maximum Temperature In Southern Region

Monthly Mean Maximum Temperature
Salalah Airport (24.38m a.s.l) (Unit :°C)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1980	27.5	27.7	29.5	32.0	32.6	32.5	28.4	27.4	29.2	30.5	30.9	28.9	29.8
1981	27.3	27.9	29.9	31.4	32.7	32.4	27.2	27.8	30.0	31.3	30.8	29.0	29.8
1982	27.2	27.8	29.8	31.7	32.2	31.8	30.1	26.9	30.0	31.7	30.5	28.5	29.9
1983	27.0	27.0	29.0	31.0	32.0	33.0	30.0	28.0	29.0	30.0	31.0	29.0	29.7
1984	28.0	28.0	30.0	33.0	31.9	31.3	29.7	26.8	27.8	30.3	30.2	29.0	29.7
1985	28.0	28.9	31.0	32.1	32.2	31.2	29.3	28.3	29.4	30.0	30.6	27.9	29.9
1986	26.9	27.7	30.9	32.0	33.1	32.7	28.3	26.2	29.0	30.8	31.4	28.6	29.8
1987	28.5	28.4	29.5	32.4	32.7	33.0	28.9	28.5	29.4	30.9	-	-	30.2
ΣI	220.4	223.4	239.6	255.6	259.4	257.9	231.9	219.9	233.8	245.5	-	-	238.8
Mean	27.6	27.9	30.0	32.0	32.4	32.2	29.0	27.5	29.2	30.7	30.8	28.7	29.9

Note : " - " indicates no data available
Source : Climate Summary / National Meteorological Service / Sultanate of Oman

Monthly Mean Maximum Temperature
QAIROON HAIRITI (Unit :°C)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1985	22.6	22.4	27.5	29.1	32.5	27.8	21.6	22.9	26.2	28.4	26.4	21.5	25.7
1986	20.4	22.1	26.7	29.1	29.9	31.4	22.3	20.7	24.3	28.0	26.0	21.5	25.2
ΣI	43.0	44.5	54.2	58.2	62.4	59.2	43.9	43.6	50.5	56.4	52.4	43.0	50.9
Mean	21.5	22.3	27.1	29.1	31.2	29.6	22.0	21.8	25.3	28.2	26.2	21.5	25.5

Note : " - " indicates no data available
Source : Climate Summary / National Meteorological Service / Sultanate of Oman

Monthly Mean Maximum Temperature
THUMRAIT (466.9m a.s.l) (Unit :°C)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1981	-	-	32.0	36.0	39.0	41.0	35.0	37.0	37.0	34.0	30.0	26.0	34.7
1982	25.0	28.0	32.0	35.0	39.0	39.0	39.0	40.0	37.0	35.0	29.0	26.0	33.7
1983	25.0	26.0	30.0	33.0	38.0	41.0	41.0	37.0	40.0	34.0	29.0	25.0	33.3
1984	24.0	27.0	33.0	38.0	38.5	40.3	37.0	40.9	34.5	34.1	30.3	27.5	33.8
1985	27.4	27.0	33.8	35.9	40.3	40.1	36.7	38.0	28.6	35.0	30.4	26.3	33.3
1986	24.6	27.8	33.0	35.3	39.4	40.6	36.0	35.2	36.4	34.9	31.5	25.3	33.3
1987	26.1	29.0	32.4	36.6	37.8	41.9	37.3	38.1	37.5	35.1	-	-	35.2
ΣI	-	-	226.2	249.8	272.0	283.9	262.0	266.2	251.0	242.1	-	-	237.3
Mean	25.4	27.5	32.3	35.7	38.9	40.6	37.4	38.0	35.9	34.6	30.0	26.0	33.9

Note : " - " indicates no data available
Source : Climate Summary / National Meteorological Service / Sultanate of Oman

TABLE A-3.2.5 Monthly Mean Minimum Temperature in Southern Region

Monthly Mean Minimum Temperature
Salalah Airport (24.38m a.s.l) (Unit :°C)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1980	18.2	19.1	21.2	23.2	25.1	26.6	23.8	22.8	22.9	22.0	21.1	17.5	22.0
1981	17.8	17.9	21.0	23.0	26.0	27.0	23.0	23.0	24.0	21.0	19.0	18.0	21.7
1982	17.0	21.0	22.0	23.0	25.0	26.0	25.0	23.0	23.0	22.0	21.0	18.0	22.2
1983	17.0	17.0	21.0	23.0	25.0	26.0	25.0	23.0	23.0	21.0	20.0	19.0	21.7
1984	17.0	17.0	20.0	23.0	26.2	27.0	24.5	23.0	22.7	20.5	20.3	20.3	21.8
1985	19.9	19.0	21.3	24.3	25.5	26.6	24.2	21.1	24.3	22.4	20.8	18.6	22.3
1986	17.1	20.3	21.9	24.6	26.6	27.5	24.3	22.5	23.4	21.4	20.6	18.5	22.4
1987	17.3	18.5	22.3	23.7	25.8	27.3	24.9	23.9	23.1	22.3	-	-	22.9
ΣI	141.3	149.8	170.7	187.8	205.2	214.0	194.7	182.3	186.4	172.6	-	-	177.0
Mean	17.7	18.2	21.3	23.5	25.7	26.8	24.3	22.8	23.3	21.6	20.4	18.6	22.0

Note : " - " indicates no data available
Source : Climate Summary / National Meteorological Service / Sultanate of Oman

Monthly Mean Minimum Temperature
QAIROON HAIRITI (Unit :°C)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1985	13.8	12.3	17.3	10.3	21.8	20.6	19.5	19.4	17.7	17.9	16.9	12.9	16.7
1986	11.0	14.0	17.3	19.7	20.6	22.0	20.0	18.3	17.5	18.5	17.9	12.7	17.5
ΣI	24.8	26.3	34.6	30.0	42.4	42.6	39.5	37.7	35.2	36.4	34.8	25.6	34.2
Mean	12.4	13.2	17.3	15.0	21.2	21.3	19.8	18.9	17.6	18.2	17.4	12.8	17.1

Note : " - " indicates no data available
Source : Climate Summary / National Meteorological Service / Sultanate of Oman

Monthly Mean Minimum Temperature
THUMRAIT(466.9m a.s.l) (Unit :°C)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1981	-	-	18.0	20.0	23.0	24.0	23.0	23.0	21.0	18.0	15.0	11.0	19.6
1982	11.0	17.0	19.0	20.0	22.0	25.0	24.0	24.0	21.0	18.0	15.0	11.0	18.9
1983	10.0	14.0	17.0	20.0	23.0	24.0	25.0	23.0	23.0	17.0	12.0	11.0	18.3
1984	9.0	10.0	17.0	20.0	23.4	25.2	23.4	23.9	20.5	17.5	14.1	13.2	18.1
1985	12.5	11.6	16.5	20.3	24.4	24.1	23.3	22.5	21.5	18.8	15.2	11.3	18.5
1986	9.2	15.6	17.9	22.0	23.7	26.7	24.0	22.4	20.6	19.9	16.1	11.6	19.1
1987	10.5	13.6	19.1	12.7	18.1	15.3	22.9	21.8	22.8	19.3	-	-	17.6
ΣI	-	-	124.5	135.0	157.6	164.3	165.6	160.6	150.4	128.5	-	-	130.1
Mean	10.4	13.3	17.8	19.3	22.5	23.5	23.7	22.9	21.5	18.4	14.6	11.5	18.6

Note : " - " indicates no data available
Source : Climate Summary / National Meteorological Service / Sultanate of Oman

TABLE A-3.2.6 Monthly Mean Temperature in Southern Region

Monthly Mean Temperature
Salalah Airport (24.30m a.s.l)

(Unit :°C)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1980	-	-	-	-	28.8	29.5	26.1	22.1	26.1	26.2	26.0	23.2	26.0
1981	23.3	23.2	20.0	28.0	30.0	30.0	25.0	25.0	27.0	27.0	26.0	24.0	26.2
1982	23.0	25.0	26.0	28.0	29.0	29.0	27.0	25.0	27.0	28.0	26.0	24.0	26.4
1983	23.0	23.0	26.0	27.0	29.0	30.0	28.0	26.0	27.0	26.0	25.0	24.0	26.2
1984	22.0	23.0	25.0	25.0	29.0	28.8	25.7	24.5	24.9	25.6	25.5	24.8	25.3
1985	24.0	24.0	26.1	28.0	28.6	28.4	25.3	25.8	26.5	26.3	25.9	23.3	26.0
1986	22.1	23.9	26.3	28.2	29.8	28.9	26.1	24.2	26.0	26.4	26.3	23.7	26.0
1987	23.2	23.8	26.2	28.2	29.6	30.1	27.3	26.1	26.3	27.2	-	-	26.8
ΣT	-	-	-	-	233.8	234.7	210.5	198.7	210.8	212.7	-	-	195.7
Mean	22.9	23.7	25.9	27.5	29.2	29.3	26.3	24.8	26.4	26.6	25.8	23.9	26.1

Note : " - " indicates no data available

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

Monthly Mean Temperature
QAIROON HAIRITI

(Unit :°C)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1985	18.2	17.3	22.3	24.2	27.2	24.2	20.6	21.1	21.9	23.2	21.6	17.2	21.6
1986	15.7	18.0	22.0	24.4	25.1	26.7	21.1	19.5	21.9	23.3	21.9	17.3	21.4
ΣT	33.9	35.3	44.3	48.6	52.3	50.9	41.7	40.6	43.8	46.5	43.5	34.5	43.0
Mean	17.0	17.7	22.2	24.3	26.2	25.5	20.9	20.3	21.9	23.3	21.8	17.3	21.5

Note : " - " indicates no data available

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

Monthly Mean Temperature
TIHUMRAIT (466.9m a.s.l)

(Unit :°C)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1981	-	-	25.0	28.0	33.0	35.0	29.0	29.0	29.0	26.0	23.0	19.0	27.6
1982	19.0	22.0	25.0	27.0	31.0	32.0	31.0	31.0	28.0	27.0	24.0	20.0	26.4
1983	19.0	20.0	23.0	27.0	30.0	32.0	32.0	29.0	32.0	26.0	22.0	19.0	25.1
1984	17.0	19.0	25.0	29.0	30.1	31.9	28.5	31.3	26.6	26.1	22.3	20.5	25.6
1985	20.2	19.6	25.2	28.1	32.2	30.9	28.4	29.0	29.2	27.0	23.3	18.9	26.0
1986	17.3	21.3	25.2	28.5	30.8	33.0	28.3	27.2	27.5	26.7	23.8	18.6	25.7
1987	18.6	21.1	25.0	28.7	29.7	33.2	29.1	29.2	29.4	27.1	-	-	27.1
ΣT	-	-	17.786	135.0	157.6	164.3	165.6	160.6	150.4	128.5	-	-	183.5
Mean	18.5	20.5	24.8	28.0	31.0	32.6	29.5	29.3	28.8	26.6	23.1	19.3	26.2

Note : " - " indicates no data available

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

TABLE A-3.2.7 Monthly Relative Humidity in Southern Region

Monthly Relative Humidity

Salalah Airport (24.38m a.s.l)

(Unit :%)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1980	-	-	-	-	75.0	81.0	89.0	91.0	82.0	71.0	60.0	47.0	74.5
1981	61.0	55.0	69.0	70.0	74.0	78.0	91.0	88.0	77.0	64.0	54.0	48.0	69.0
1982	52.0	67.0	68.0	72.0	79.0	84.0	87.0	91.0	80.0	65.0	59.0	58.0	71.8
1983	50.0	66.0	57.0	72.0	78.0	80.0	87.0	90.0	83.0	65.0	52.0	47.0	68.9
1984	44.0	52.0	60.0	67.0	75.0	81.0	89.0	90.0	83.0	63.0	56.0	56.0	68.0
1985	57.0	40.0	55.0	70.0	79.0	81.0	90.0	86.0	78.0	70.0	57.0	50.0	67.8
1986	46.0	60.0	61.0	69.0	73.0	80.0	88.0	90.0	77.0	65.0	53.0	48.0	67.5
1987	45.0	56.0	68.0	65.0	72.0	78.0	85.0	91.0	83.0	71.0	-	-	71.4
ΣI	-	-	-	-	605.0	643.0	706.0	717.0	643.0	534.0	-	-	558.9
Mean	50.7	56.6	62.6	69.3	75.6	80.4	88.3	89.6	80.3	66.8	55.9	50.6	69.9

Note : "-" indicates no data available

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

Monthly Relative Humidity

THUMRAIT (466.9m a.s.l)

(Unit :%)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1981	-	-	50.0	43.0	41.0	48.0	68.0	68.0	59.0	50.0	50.0	52.0	52.9
1982	68.0	65.0	64.0	50.0	47.0	52.0	60.0	62.0	61.0	51.0	54.0	59.0	57.8
1983	57.0	66.0	56.0	65.0	57.0	52.0	59.0	65.0	42.0	41.0	51.0	55.0	55.5
1984	48.0	48.0	36.0	25.0	43.0	40.0	64.0	37.0	55.0	25.0	49.0	55.0	43.8
1985	53.0	35.0	31.0	36.0	30.0	49.0	62.0	57.0	47.0	37.0	46.0	50.0	44.4
1986	47.0	56.0	37.0	39.0	44.0	40.0	63.0	62.0	49.0	32.0	43.0	62.0	47.8
1987	51.0	50.0	56.0	35.0	47.0	35.0	60.0	57.0	45.0	47.0	-	-	48.3
ΣI	-	-	330.0	293.0	309.0	316.0	436.0	408.0	358.0	283.0	-	-	350.4
Mean	54.0	53.3	47.1	41.9	44.1	45.1	62.3	58.3	51.1	40.4	48.8	55.5	50.1

Note : "-" indicates no data available

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

TABLE A-3.2.8 Monthly Prevailing Direction at Salalah

Monthly Prevailing Direction

Salalah Airport (24.38m a.s.l)

(Unit :Degree)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec
1980	-	-	-	-	225	225	225	225	225	180	180	360
1981	180	180	180	180	180	180	135	180	180	180	360	360
1982	360	180	180	225	225	225	225	225	225	180	045	360
1983	045	360	180	225	225	225	225	225	225	225	360	045
1984	030	030	180	210	210	210	210	210	210	210	360	360
1985	030	030	210	210	210	210	210	210	210	210	150	360
1986	360	180	180	180	210	210	-	-	-	-	-	-
1987	-	-	-	-	-	-	-	-	-	-	-	-
DIRECTION	N	67	50	0	0	0	0	0	0	0	50	83
	E	0	0	0	0	0	0	0	0	0	0	0
	S	17	50	100	67	58	58	33	50	50	83	33
	W	0	0	0	0	0	0	67	0	0	0	0
	O	16	0	0	33	42	42	0	50	50	17	17

Note : " - " indicates no data available

N; North-direction ratio % Range; 0±30

E; East -direction ratio % Range; 90±30

S; South-direction ratio % Range; 180±30

W; West -direction ratio % Range; 270±30

O; Others ratio %

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

TABLE A-3.2.9 Monthly Mean Wind Speed at Salalah

Monthly Mean Wind Speed

Salalah Airport (24.38m a.s.l)

(Unit :knot)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1980	-	-	-	-	09	10	07	06	08	08	06	07	7.6
1981	07	07	07	08	08	10	04	07	08	08	04	05	6.9
1982	06	07	07	07	08	09	09	07	08	05	05	07	7.0
1983	07	06	07	07	09	10	08	07	05	08	05	07	7.2
1984	07	06	06	08	06	09	07	06	07	04	05	07	6.5
1985	05	08	06	06	06	09	06	06	06	05	05	07	6.3
1986	07	07	05	05	06	07	-	-	-	-	-	-	6.2
1987	-	-	-	-	-	-	-	-	-	-	-	-	-
Σ1	39	41	38	41	52	64	41	39	42	38	30	40	47.7
Mean	6.5	6.8	6.3	6.8	7.4	9.1	6.8	6.5	07	6.3	05	6.7	6.8

Note : " - " indicates no data available

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

TABLE A-3.2.10 Monthly Prevailing Direction at Thumrait

Monthly Mean Wind Direction

THUMRAIT(466.9m a.s.l)

(Unit :Degree)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec
1981	-	-	180	180	180	180	180	180	180	180	000	045
1982	180	180	180	180	180	180	180	180	180	180	180	180
1983	180	180	180	180	180	180	180	180	180	180	045	045
1984	180	150	180	150	180	180	150	180	180	180	150	150
1985	150	150	180	150	180	180	180	150	150	180	180	150
1986	150	180	180	180	180	180	180	180	150	180	180	150
1987	030	150	180	180	180	180	180	180	180	150	-	-
DIRECTION	N	17	0	0	0	0	0	0	0	0	17	0
	E	0	0	0	0	0	0	0	0	0	0	0
	S	83	100	100	100	100	100	100	100	100	67	67
	W	0	0	0	0	0	0	0	0	0	0	0
	O	0	0	0	0	0	0	0	0	0	16	32

Note : " - " indicates no data available

N ; North-direction ratio % Range; $0 \pm 30^\circ$

E ; East-direction ratio % Range; $90 \pm 30^\circ$

S ; South-direction ratio % Range; $180 \pm 30^\circ$

W ; West-direction ratio % Range; $270 \pm 30^\circ$

O ; Others %

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

TABLE A-3.2.11 Monthly Mean Wind Speed at Thumrait

Monthly Mean Wind Speed

THUMRAIT(466.9m a.s.l)

(Unit :knot)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1981	-	-	14	16	13	13	25	20	12	10	00	10	13.3
1982	07	15	16	11	12	19	19	17	13	10	09	08	13
1983	09	12	15	13	14	12	15	18	08	07	07	07	11.4
1984	07	07	12	10	14	14	21	13	16	08	07	07	11.3
1985	07	09	10	10	10	16	22	17	12	08	07	08	11.3
1986	07	09	10	12	14	11	23	21	13	09	07	07	11.2
1987	06	09	13	09	14	11	22	17	13	09	-	-	12.3
ΣI	-	-	90	81	91	96	147	123	87	61	-	-	211.7
Mean	7.2	10.2	12.9	11.6	13	13.7	21	17.6	12.3	8.7	6.2	7.8	11.2

Note : " - " indicates no data available

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

TABLE A-3.2.12 Monthly Evaporation at Salalah and Thumrait

Monthly Evaporation

Salalah Airport (24.38m a.s.l)

(Unit : ml)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1980	-	-	-	-	5.3	4.4	2.5	1.6	3.5	5.2	7.2	10.5	5.0
1981	6.7	8.9	5.6	5.7	10.5	4.7	1.5	2.0	4.2	6.7	11.3	11.4	6.6
1982	10.6	7.3	6.8	6.8	5.0	3.8	2.8	1.4	4.5	7.0	6.8	8.7	6.0
1983	12.2	6.8	10.6	6.0	4.9	5.1	2.8	1.7	3.5	6.2	9.5	12.3	6.8
1984	14.3	10.9	7.4	6.9	5.5	4.3	2.0	1.8	3.6	7.1	8.1	10.0	6.8
1985	8.3	16.2	9.5	7.2	4.6	4.4	1.8	2.5	4.3	5.3	7.3	11.6	7.0
1986	10.6	8.0	7.8	6.0	6.3	4.5	2.3	1.6	4.8	6.6	8.7	12.1	6.6
1987	13.6	7.9	6.4	7.3	6.3	5.5	3.1	2.1	3.2	5.1	-	-	6.1
ΣI	-	-	-	-	48.4	36.7	18.8	14.7	31.6	49.2	-	-	50.8
Mean	10.9	9.4	7.7	6.6	6.1	4.6	2.4	1.8	4.0	6.2	8.4	10.9	6.4

Note : " - " indicates no data available

Source : Climate Summary / National Meteorological Service / Sultanate of Oman

Monthly Evaporation

THUMRAIT (466.9m a.s.l)

(Unit : ml)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec	Mean
1981	-	-	14.4	20.5	19.5	21.0	15.3	17.2	16.1	16.3	11.9	8.6	16.1
1982	8.1	10.1	15.7	16.8	19.6	19.4	17.5	17.4	14.9	15.5	10.1	8.1	14.4
1983	8.6	9.0	13.7	13.4	18.4	19.6	18.1	14.6	19.0	15.1	10.5	8.7	14.1
1984	7.9	10.1	16.6	19.7	20.8	20.7	14.1	20.0	14.7	19.2	12.5	10.5	15.6
1985	10.7	13.7	18.3	18.3	22.6	18.7	16.0	16.1	17.0	17.3	12.9	10.2	16.0
1986	9.6	10.9	16.8	19.5	21.7	16.4	16.6	16.0	17.1	18.7	13.4	8.8	15.5
1987	10.1	12.1	14.1	18.9	21.4	23.2	18.3	17.6	18.4	15.9	-	-	17.0
ΣI	-	-	109.6	127.1	144.0	139.0	115.9	118.9	117.2	118.0	-	-	108.2
Mean	9.2	11.0	15.7	18.2	20.6	20.0	16.6	17.0	16.4	16.9	11.9	9.2	15.5

Note : " - " indicates no data available

Source : Climate Summary / National Meteorological Service / Sultanate of Oman