

APPENDICES

APPENDIX 1

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APPENDIX 2

Administrative data on hydrological monitoring networks

- 2.1 List of rainfall and meteorological stations
- 2.2 List of stream gauging stations
- 2.3 List of groundwater monitoring networks
- 2.4 Periods of records – rainfall and meteorological stations
- 2.5 Periods of record – stream flow stations

LIST OF RAINFALL AND METEOROLOGICAL STATIONS

(a) Sana'a, Taiz, Hodeidah, Ibb, Dhamar, Hajjah, Al Bayda, Sadah, Al Mahweet, Marib and Al Jawf Governorates

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Abkowr	GDH	ABKOWR	R	1743 D3	1885.350	363.850	1880
Adiat	SAWAS	ADIAT	R	1543 D1	1700.000	364.000	1840
Ahmar, Bayt Al	CAMA	ALAHMAR	R	1544 C4	1672.100	431.940	
Amar	GDH	ALAMAR-A	R	1643 B2	1858.200	371.550	1963
Amir	TDA	AL-AMIR	R	1543 D3	1662.444	360.246	2200
Araqah	MOS	ARAQAH	M	1544 C2	1703.900	444.600	2880
Arqub	MAHWI	ARQUB-A	R	1543 C2	1710.100	338.300	1320
Asal	GDH	ASAL-A	R	1544 D3	1669.620	455.460	2110
Ash'a, Al	MOA		M	1544 C1	1797.000	377.000	1200
Asir Mil.base	GDH	ASR	R	1544 C1	1696.250	409.300	2400
Attius	GDH	ATTIUS-A	R	1445 A1	1631.250	503.250	1625
Azgull	GDH	AZGULL	R	1643 B1	1863.700	355.800	2015
Bab Al-Maljeb	SAWAS	MALJEB	R	1543 D3	1675.000	365.000	1200
Bab Dayan	SAWAS	DAYAN	R	1543 D1	1688.500	361.600	880
Bajil	CAMA	BAJIL	R	1543 C4	1665.900	315.600	185
Bani Sabir	SAWAS		M	1544 A4	1736.950	428.450	2260
Barh	TDA	AL-BARH	M	1343 D1	1487.288	359.268	500
Basat	TDA	BASAT	R	1443 C2	1585.000	324.000	150
Bawn	MAWR	AlBawn	M	1543 B4	1739.766	382.144	2150
Bawn	MOA	ALBAWN1	R	1544 A1	1742.700	394.600	2200
Bayda	MOA	AL-BAYDA	M	1345 A2	1544.500	551.000	2000
Beit Astan	SAWAS	ASTAN	R	1544 A2	1743.500	427.250	2350
Bir Basl	SAWAS	BIRBASL	R	1544 A4	1729.350	443.750	2090
Buqa, Al	CAMA	AL-BUQA	M	1744 D1	1908.438	448.060	1200
Dabaat	CAMA	ADDAB'AT	R	1544 C2	1698.700	432.250	2460
Dabab,Wadi Ad	TDA	ADDABAB	R	1343 B4	1496.300	386.300	1200
Dabira	TDA	ALDABIRA	R	1443 B2	1634.736	369.055	1000
Dahi	GDH	ADDAHI-A	M	1543 C3	1682.330	290.820	70
Damaj	GDH	DAMAJ	R	1643 B2	1868.400	372.900	1895
Dar Salem	MOS	DARSALM	R	1544 C2	1689.600	420.400	2310

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Darb	DAFRD	ADDARB	R	1444 A4	1613.500	430.100	2435
DarNajd	RIRDP	DAR-NAJD	R	1444 D2	1597.000	485.800	2110
Darwan	GDH	DARWAN	R	1544 A3	1719.800	401.000	2440
Dawran	CHRD	DARWAN1	R	1443 A3	1629.500	414.400	2400
DelilSumara	TDA	ADDALIL	R	1444 C3	1560.801	411.846	1680
Dhamar	RLIP	DHAMAR	M	1444 A4	1606.815	435.354	2360
Dhamar	DAFRD	DHAF	R	1444 A2	1646.800	422.300	2400
Dhamar	DAFRD	DHAMAR-1	R	1444 A4	1607.700	435.500	2420
Dimnah	TDA	ADDIMNAH	R	1443 C2	1588.858	332.858	270
Dumeid	GDH	DUMEID-A	M	1743 D3	1884.600	354.620	1950
Dutrat	MOA	DUTRAT	M	1544 A4	1732.700	442.600	2060
Faqih, Bayt Al	TDA	AL-FAQIH	R	1443 A4	1606.700	317.900	120
Fawwarah	TDA	ALFOWARA	R	1444 A1	1658.000	408.000	1500
Fulayh	TDA	FULAYH	R	1443 D4	1568.550	373.250	800
Gawadir	TDA	GAWADIR	R	1443 D1	1586.967	340.037	350
Ghamr	GDH	GHAMR-A	R	1543 D1	1695.350	344.620	924
GhUjla	GDH	GHUJLA-A	R	1545 C2	1713.480	547.175	1051
Giblah	RDPM	Giblah	R	1543 B3	1714.700	343.000	1140
Gudami	GDH	GUDAMI-A	R	1743 D4	1885.350	371.750	1810
Gumeisha (FAO)	FAO	GUMISCHA	R	1443 A1	1637.700	293.400	45
Habaka/Girmah	TDA	HABAKA	R	1443 D1	1597.900	361.670	900
Habashi	TDA	HABASHI	R	1343 B4	1496.460	368.336	950
Hagag	RDPM	HAGAG-A	R	1543 C2	1695.900	322.500	1400
Haima	TDA	AL-HAIMA	R	1543 D4	1667.858	381.777	1600
Hajar (RIRDP)	RIRDP	AL-HAJAR	R	1444 D1	1582.800	464.600	2600
Hajdah	TDA	HAJDAH	R	1343 B4	1501.965	373.774	1150
Hajjah (MOA)	MOA	HAJJA	M	1543 B3	1738.700	350.400	1300
Hajjah (TDA)	TDA	HAJJAH	R	1543 B3	1734.425	349.959	1650
Hamal (TDA)	TDA	AL-HAMAL	R	1443 B4	1630.958	386.977	2000
Hamam Ali	TDA	HAMAMALI	R	1444 A3	1619.806	408.465	2000
Harad	MOA	HARAD	M	1643 C1	1816.850	292.650	110
Har, Wadi	TDA	WADI-HAR	R	1444 A3	1605.044	412.002	2000
Haymah, Wadi	NWSA	HAYMAH	M	1344 A1	1524.000	397.500	1650
Hazm, Al	MOA	HAZM	M	1644 D4	1788.000	474.800	1080

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Hazm, Al	CAMA	AL-HAZM	M	1644 D4	1792.800	475.200	1080
Hidad	TDA	AL-HIDAD	R	1444 A3	1610.562	415.613	2500
Hijrah	DAFRD	ALHIJRAH	R	1444 A2	1633.200	423.200	2340
Hijrah	GDH	HIJRAH	R	1743 D3	1880.150	346.550	2080
Hijrat Makinah	MOS		R	1544 A4	1724.000	437.200	2240
Hijrat Ma'bar	CHRD		R	1444 A2	1636.200	423.000	2335
Hisn Shamat	SAWAS	SHAMAT	R	1543 D2	1700.800	374.350	2600
Hudaydah	CAMA	Hudaydah	M	1442 B2	1630.600	280.500	10
Hudaydah	TDA	HUDAYDA1	R	1442 B2	1634.000	280.000	10
Huth	TDA	HUTH	R	1643 D4	1795.046	389.900	1900
Ibb	CAMA	IBB-2	M	1344 A1	1546.000	411.700	1800
Ibb	MOA	IBB-1	M	1344 A1	1544.203	413.589	1760
Ibb	TDA	IBB	R	1344 A1	1546.053	411.795	1800
Irra	MOA	IRRA	M	1544 C1	1709.400	411.750	2200
Jabal Taraf	RDPM	TARAF	R	1543 D1	1707.300	337.100	1000
Jabin	TDA	JABIN	R	1443 B3	1626.000	349.000	2300
Jabri, Bayt Al	RIRD	AL-JABRI	R	1445 C1	1587.000	507.000	1970
Jannat	GDH	ALJANNAT	R	1543 B4	1734.250	386.700	2250
Jarubah	MOA	JARUBA	M	1443 C2	1591.150	329.220	150
Jawf	MOA	JAWF	M	1644 D4	1791.300	476.500	1100
Jihanah	CAMA	JIHANAH	M	1544 C4	1683.400	444.500	2240
Jiraf, Al	CAMA		R	1544 C1	1703.000	414.000	2230
Jubah	GDH	ALJUBA-A	R	1545 C4	1666.750	532.000	1300
Juban	RIRD	JUBAN	M	1444 D4	1548.500	487.000	2060
Jubayr	RIRD	JUBAYR	R	1444 D1	1577.300	468.300	2290
Kadan	GDH	ALKADAN	R	1543 C4	1686.650	312.200	170
Kadan	MOA		M	1543 C4	1686.000	313.000	250
Kadima,HaradAl	TDA	ALKADIMA	R	1643 C1	1818.000	292.000	90
Kahal	MOA	KAHEL	R	1543 D4	1664.000	365.000	2400
Kamer	CAMA	KAMER	R	1543 B2	1768.000	388.000	
Kasabat Akwan	GDH	AKWAN	R	1643 B2	1877.650	373.600	1860
Ketab	MOA	KETAB	M	1444 C4	1570.100	428.000	2500
Khabar	RIRD	KHABAR	M	1444 D2	1590.950	481.060	2140
Khadrah	RIRD	ALKHADRA	R	1444 D1	1590.400	470.800	2280

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Khadrah	TDA	KHADRAH	R	1642 D2	1813.000	283.000	50
Khalifah, Al	TDA	KHALIBAH	M	1443 A2	1646.000	319.000	139
Khamir	TDA	KHAMIR	R	1643 B4	1769.232	389.432	2356
Khamis	GDH	KHAMIS-A	R	1543 D3	1679.280	340.240	520
Khamis	TDA	KHAMIS	R	1543 D3	1679.000	339.000	450
Khamlu	GDH	KHAMLU-A	R	1543 C4	1679.490	330.320	364
Khasha'a	RIRDP	KHASHA'A	R	1445 C1	1586.000	504.000	1960
Khulagah	MOS	KHULAGAH	R	1544 A4	1727.800	438.400	2080
Kudeihah	TDA	KUDAYHAH	M	1343 C2	1492.989	330.429	120
Kudmah Maraiya	TDA	KUDMAH	R	1543 A3	1736.000	306.000	180
Lahimah, Wadi	RDPM	LAHIMAH	R	1543 C2	1707.300	335.400	1000
Lahj	DAFRD	LAHJ	R	1444 A1	1631.900	416.100	2180
Lariud	RIRDP	LARIUD	R	1444 D2	1590.900	481.100	2000
Ma'adi	MOS	MA'ADI	M	1544 A4	1739.900	437.100	1900
Ma'adi, Al	SAWAS	MA'ADI	R	1544 A4	1737.750	442.250	2020
Mabar	DAFRD	MABAR	R	1444 A2	1635.800	423.700	2340
Madaf	RIRDP	MADAF	R	1444 D2	1580.900	480.700	2120
Mafhaq	GDH	MAFHAQ-A	R	1543 D4	1670.260	382.810	1620
Magash	MOA	ALMAGASH	M	1743 D3	1884.300	354.800	1885
Maghreba	TDA	MAGHREBA	R	1443 A2	1644.164	335.030	1200
Mahabisha	TDA	MAHABISH	R	1543 A2	1764.000	332.000	1600
Mahatt	TDA	ALMAHATT	R	1443 C2	1581.596	316.625	95
Mahwit	TDA	MAHWIT	R	1543 D1	1710.488	344.437	2100
Mahwit	RDPM	MAHWIT1	R	1543 D1	1711.000	344.300	2120
Mahwit	MOA	MAHWIT-2	M	1543 D1	1709.500	353.200	1970
Mai'na	RDPM	MAINA	R	1543 D1	1711.000	340.900	1600
Majhiz	MOA	MAJHIZ	M	1544 C1	1703.150	400.850	2480
Majz	GDH	MAJZ	R	1743 D3	1887.800	348.700	1995
Makarib	MOA	MAKARIB	M	1544 A3	1730.350	416.500	2220
Manakha	MOA	MANACHAH	M	1543 D3	1666.600	364.800	2230
Manakha	GDH	MANAKHAH	R	1543 D3	1666.800	364.700	2280
Manakha	SAWAS	MANAKHAH	R	1543 D3	1666.650	364.770	2280
Manasah	RIRDP	MANASIH	R	1444 B3	1612.300	472.300	2340
Manjidah	GDH	MANJIDAH	R	1544 A1	1743.250	394.700	2200

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Mansur,Wadi	RIRDP	MANSUR	R	1445 C1	1592.000	515.000	1880
Maqbanah	TDA	MAQBANAH	R	1343 B4	1510.600	356.000	980
Maqwalah	MOA	MAQWALAH	M	1544 C4	1674.900	430.100	2510
Maram	DAFRD	MARAM	R	1444 B3	1612.800	457.800	2560
Marib	MOA	MARIB	M	1545 C2	1705.000	535.000	1000
Marib	CAMA	MARIB1	M	1545 C2	1710.600	534.900	1100
Marib	MOA	MARIB2	M	1545 C2	1708.000	534.400	1100
Markha	RIRDP	MARKHA	M	1446 A3	1605.500	608.000	1560
Marran, Bayt	MOS		R	1544 A3	1735.000	415.000	2460
Masnaah	TDA	MASNA'AH	R	1444 A3	1620.500	418.700	2000
Maswarah	RIRDP	MASWARAH	R	1445 D1	1586.000	579.000	1900
Mawsanah	MOA	MAWSANAH	R	1543 D3	1669.550	361.000	1360
Mayan	GDH	MAYAN-A	R	1543 D2	1709.460	380.900	2280
Midi	TDA	MIDI	R	1642 D2	1813.500	266.000	10
Mikras	TDA	MIKRAS	R	1543 A4	1730.900	313.800	200
Milh	TDA	AL-MILH	R	1542 B4	1733.752	266.200	20
Mind	CAMA	MIND	R	1544 C1	1690.250	399.650	2700
Mirwah	RDPM	MIRWAH	R	1543 C2	1711.100	331.500	1200
Mishrafah	TDA	MISHRAFA	R	1443 D1	1588.777	345.441	450
Mokha	CAMA	MUKHA	M	1343 C2	1473.015	309.850	5
Mosalla	RIRDP	MOSALLA	R	1444 D2	1593.600	481.300	2200
Muthef	GDH	MUTHEF-A	R	1743 D3	1882.350	342.800	2500
Na'ta	RIRDP	NA'TA	R	1445 D1	1597.400	558.700	1750
Nagil Sam	GDH	NGLSAM-A	R	1444 B2	1647.590	475.840	1630
Nozaih,Al	TDA	NOZAIH	R	1343 B4	1507.900	367.200	750
Nuqabah	RIRDP	NUQABAH	R	1444 B4	1615.400	496.000	1880
Ossefra	MOA	OSSEFRA	M	1344 A3	1503.600	393.500	1350
Qa'mah	CAMA	AL QAMAH	M	1443 C2	1618.000	331.500	2340
Qadam	MOA	AL-QADAM	R	1543 D3	1671.860	351.970	980
Qadam	GDH	QADAM-A	R	1543 D3	1671.860	351.980	920
Qahmah	TDA	ALQAHMAH	R	1443 C2	1581.494	331.011	180
Qarry	RIRDP	AL-QARI	R	1444 B4	1606.500	497.900	1970
Qarwah	GDH	QARWAH-A	R	1544 D1	1689.375	447.785	2350
Rabu,suq al	TDA	AL-RABU	R	1643 C2	1780.000	301.000	180

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Rada'a	RIRDP	RADA'	R	1444 D2	1593.570	483.030	2140
Rahaba	GDH	RAHABA-A	R	1444 B2	1647.310	499.120	1470
Rahban	RIRDP	RAHBAN	R	1445 C2	1584.900	529.900	1980
Raydah	GDH	RAYDAH	R	1544 A1	1748.600	397.100	2190
Rihab	TDA	RIHAB	R	1444 C3	1573.500	411.800	1500
Risabah	DAFRD	DAFRD	M	1444 A4	1626.300	428.000	2318
Rizwa	DAFRD	RIZWA	R	1444 A1	1634.700	409.800	2200
Robei	TDA	AL-ROBEI	R	1343 B4	1501.940	379.185	1250
Ruba	DAFRD	ARRUBA	R	1444 C1	1602.560	393.970	2020
Ruba	TDA	AL-RUBA	R	1643 C3	1780.000	301.000	180
Rubat	RIRDP	RUBAT	R	1445 C4	1560.000	549.000	1980
Rubu Utmah	CHRD		R	1444 A3	1605.400	394.300	2040
Rujum	GDH	RUJUM-A	R	1543 D1	1709.590	353.320	1970
Rujum	RDPM	RUJUM	R	1543 D1	1709.300	353.100	1940
Sadah	MOA	SADAH	M	1643 B1	1872.400	356.500	1790
Sadah Salam	GDH	SALAM-A	R	1643 B2	1872.650	367.000	1880
Sadah	CAMA	SADAH1	M	1643 B1	1876.000	365.000	1800
Safaqayn	RDPM	SAFAQAYN	R	1543 C2	1701.000	330.100	2120
Safiah	RIRDP	SAFIAH	R	1445 C1	1595.700	519.500	1890
Sahwah	GDH	SAHWAH	R	1643 B2	1862.600	379.050	1970
Said, Bait AL	TDA	BAITSAID	R	1443 A4	1608.200	334.200	210
Saidiyah	TDA	SAIDIYAH	R	1343 A4	1507.000	334.000	220
Salf	GDH	ASSALF-A	R	1543 D4	1683.400	385.800	2920
Salif	GDH	ASSALIF	R	1542 D1	1694.000	249.900	5
Sama Al Ulya	DAFRD	SAMAH	R	1444 C2	1601.100	444.200	2520
Sama'ah, Al	RIRDP	SAMA'AH	R	1445 D4	1557.000	586.500	2030
Sana'a Airport	CAMA	SANA'A	M	1544 C1	1710.000	416.000	2190
Sana'a Town	VAR	SANA'A1	M	1544 C1	1697.100	416.000	2240
Sana'a	GDH	MINIST-A	M	1544 C1	1696.500	412.400	2275
Sana'a	CAMA	CAMA	R	1544 C1	1697.100	415.100	2216
Sanaban	DAFRD	SANABAN	R	1444 D1	1594.500	463.600	2350
Sanam	TDA	AS-SANAM	R	1444 A4	1610.544	421.000	2400
Saqayn	TDA	SAQAYN	R	1643 B1	1865.409	343.753	2230
Shaharah	TDA	SHAHARAH	R	1643 D3	1793.364	361.046	2200

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Shamir, Mahal	TDA	SHAMIRI	R	1443 A2	1657.163	322.570	200
Shaqab	DAFRD	ASHSHAQB	R	1444 C2	1588.000	444.000	2500
Sharaf	RIRDP		R	1445 C1	1586.900	512.000	1870
Sharq	DAFRD	AL-SHARK	R	1443 B4	1618.700	387.320	1300
Sharq	TDA	ASHSHIRQ	R	1443 B4	1619.888	388.721	1500
Sherwab	GDH	SHERWB-A	R	1544 D4	1683.090	497.800	1270
Shibam	TDA	SHIBAM	R	1543 B4	1715.787	381.700	2600
Shoub Farm	MOA	SHU'UB	M	1544 C1	1701.000	417.500	2250
Sirwah	GDH	SIRWAH-A	R	1545 C1	1707.875	502.050	1480
Suar	RIRDP	SUAR	R	1444 D2	1582.000	480.000	2180
Azaydiyah	TDA	ZAYDIYAH	R	1543 C1	1696.000	286.000	60
Sukhnah	TDA	SUKHNAH	R	1443 A2	1638.658	331.404	350
Surby	GDH	SURABI	R	1643 B1	1871.050	359.650	1930
Taiz Town	VAR.	TAIZTOWN	R	1344 A3	1502.000	393.900	1400
Taiz Yard	NWSA	TAIZYARD	R	1344 A3	1502.260	394.400	1290
Taiz new airp	CAMA	TAIZ1	M	1344 A3	1513.000	406.000	1475
Talab	RIRDP	TALAB	R	1444 D3	1573.000	471.000	2500
Tawilah	RDPM	TAWILA-A	R	1543 D1	1713.800	365.500	2700
Thawban	GDH	THAWBAN-A	R	1444 B1	1632.000	462.550	2130
Therhaan	HARAZ	THERHAAN	R	1543 D3	1666.000	364.800	2230
Thula	GDH	THILA	R	1543 B4	1722.000	382.250	2800
Tur	MOA		M	1543 A4	1724.000	330.000	380
Tur	TDA	AT-TUR	R	1543 A4	1723.511	328.437	200
Udein	TDA	AL-UDEIN	R	1344 A1	1542.405	400.979	1700
Uwair, Bani	TDA	UWAIR	R	1643 B1	1854.231	359.661	2100
Wa,alah	RIRDP	WA'ALAH	R	1445 D1	1597.400	558.700	1750
Wahbiah	RIRDP	WAHBIAH	M	1445 C2	1599.000	539.000	1995
Wallan	TDA	WALLAN	R	1544 C4	1668.200	421.100	2500
Waqir	TDA	WAQIR	R	1443 A2	1646.152	315.314	230
Warazan	MOA	WARAZAN	M	1344 C2	1480.500	423.800	1200
Waset	RDPM	WASET-A	R	1543 C2	1709.600	324.000	1000
Wash'hah	TDA	WASH'HA	R	1643 C2	1797.294	327.221	230
Yarim	TDA	YARIM	R	1444 C1	1580.700	433.550	2400
Yusuf, Bani	GDH	YUSUF-A	R	1543 D4	1685.400	373.350	1480

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV. (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Yusuf, Bani	SAWAS	YUSUF1	M	1543 D4	1685.400	373.350	1480
Zabid Town	TDA	ZABID	R	1443 C4	1568.674	318.330	105
Zabid(Gerbah)	TDA	ALJIRBAH	M	1443 C4	1564.899	330.899	240
Zakhim	RIRDP	ZAKHIM	R	1444 B3	1614.500	453.500	2640
Zhar,Wadi	GDH	WADIZHAR	R	1544 C1	1707.350	406.150	2240
Zinkah, Deir	TDA	ZINQAH	R	1543 C4	1660.773	333.352	450
Zuhaif	GDH	ZUHAIF-A	R	1543 C2	1662.340	329.440	1280
Zuhrah	TDA	ZUHRAH	M	1543 A3	1740.600	287.500	70
Zuwab	RIRDP	ZUWAB	R	1444 B4	1603.200	480.800	2190

(b) Aden, Lahej, Abyan, Shabwah, Hadramawt and Al Mahra Governorates

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV. (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Aden		ADEN	R	38D-115	1413.93	503.618	27
AlGharib	WHADP	GHARIB	R	39D-27	1661.145	286.748	1400
Albayth	DI		R	1447 B4	1608.516	796.389	510
AlGeidah	CAMA	ALGEIDAH	M	39E-141	1778.479	615.870	
AlHagrain	WHADP	HAGRAIN	R	1542 A4	1715.452	212.100	
AlHaleh	WHADP	ALHALEH	R	38D-36	1695.383	806.062	
AlHujayr	NWSA		R	1446 A3	1612.574	623.882	
AlJawadeh	WHADP	JAWADEH	R	1542 B1	1764.989	235.941	
Alkhoribeh	WHADP	KHARIBEH	R	38D-25	1671.166	211.553	
Alkod	DI	ALKOD	M	38D-103	1446.597	539.750	13
AlMashhad	WHADP	ALMASHED	R	1542 A4	1724.701	210.427	
AlMinsaf	WHADP	ALMINSAF	R	38E-133	1780.109	207.751	
AlQatan	WHADP	ALQATAN	R	1542 B1	1752.159	228.644	
AlRudood	WHADP	ALRUDOOD	R	39D-3	1755.230	285.829	
AlSufal	DI	AL-SUFAL	M	38D-62	1561.829	255.279	5
Alugubeih	WHADP	ALUGUBIH	R	1542 D3	1681.768	252.897	
Amaqin	DI	AMAGIN	R	1447 C2	1595.085	749.791	
Amd	WHADP	AMD	R	1547 D4	1680.762	817.010	1335

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV. (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Ataq	CAMA		M	38D-58	1605.694	699.367	
Azzan	DI	AZZAN	R	1447 C2	1584.164	764.293	500
Bahran	WHADP	BAHRAN	R	1542 A4	1739.487	208.802	
Beihan	DA	BEIHAN	M	1445 B1	1634.510	578.923	1150
Bodhan	WHADP	BODHAN	R	38D-25	1687.796	209.965	
Dhala	DI	DHALA	M	1344 B3	1514.581	471.161	1150
Dhira Vill	NWSA		R	1444 A1	1641.922	410.342	220
Dura	DI	DURA	R	1446 C2	1596.130	650.919	
Fiyush	DI	FIYUSH	M	38D-114	1435.090	494.577	65
Fuwah(mukalla)	DA		M	1443 C1	1602.110	288.024	2.5
Gaidun	WHADP	G AidUN	R	38D-25	1671.166	211.553	
Ghail Bawazir	NWSA		R	39D-39	1635.020	324.201	
Ghail Bin Yumin	WHA	BIN YUMIN	R	39D-27	1681.136	322.750	
Giar	DI	GIAR	M	38D-103	1446.394	537.943	
Gol madram	DI	MADRAAM	R	38D-90	1475.878	467.512	450
Habban	DI	HABBAN	R	1447 C2	1587.467	724.689	
Habilin	DI	HABILIN	M	38D-90	1497.980	485.573	
Hainan	WHADP	HAINAN	R	39D-1	1754.150	885.410	1040
Hajar	NWSA		R	1446 C1	1594.128	622.178	
Harad	DI	HARAD	R	1344 B1	1520.131	456.755	1100
Hisn Hasan	NWSA		R	38D-58	1618.424	675.919	
Jawala	DI		R	38D-114	1429.782	490.961	52
Jueimah	WHADP	JUEIMAH	R	1542 B1	1768.514	250.263	
Karish	DI	KARISH	R	1344 C2	1477.560	445.857	750
Katbah	WHADP	KATBAH	R	39E-134	1775.000	285.000	950
Khalla	DI	KHALLA	R	1344 B2	1525.638	474.779	1350
Khawrah	NWSA		R	1446 A3	1603.355	623.929	
Khirba Vill	DI		R	1442 B4	1605.862	280.869	120
Khormaksar	CAMA	KORMAKSR	M	38D-115	1410.872	503.617	4
Lahej	DI	LAHIJ	M	38D-102	1442.689	487.351	129
Little Aden	DI		R	38D-114	1409.011	481.908	12
Meifaah	DA	MEIFAAH	M	38D-72	1576.941	778.766	450

STATION NAME	ORG.	GDH FILE	RAINFALL or METEO	LOCATION			ELEV. (m)
				MAPSHEET	UTM N (m)	UTM E (m)	
Milah	DI	MILAH	R	38D-90	1483.238	481.956	600
Moudia	DI	MOUDIA	M	38D-81	1536.967	620.653	820
Mukalla(PWC)	NWSA		R	39D-51	1607.553	298.852	30
Mukiras	D1	MUKIRAS	M	1345 B1	1540.477	573.819	2150
Mukiras1	RIRDP	MUKIRAS1	R	1345 B1	1540.477	573.819	2150
Musaimer	DI	MUSIMER	R	38D-90	1483.264	458.499	600
Nissab	DI	NISSAB	M	38D-58	1603.574	661.652	1100
Nissab-1	RIRDP	NISSAB-1	R	38D-58	1603.574	661.652	1100
Nuqub	DA	NUQUB	M	1445 B2	1638.222	586.085	1040
Orisma	D1	ORISMA	R	1344 A4	1492.510	442.280	900
Perim	DI	PERIM	R	38D-123	1398.957	329.848	29
Q.Bamasood	WHADP	BAMASOOD	R	1543 D4	1686.133	804.391	
Qasm	WHADP	QASM	R	39E-135	1784.626	298.594	
Riyan	CAMA	RIAN	M	39D-51	1612.986	311.469	24
Sabiha(turbaha)	DI		M	1344 C4	1450.150	427.735	580
Sah	WHADP	SAH	R	1542 B4	1724.030	269.441	
Seiyun	ARC	SEIYUN	M	1542 B2	1762.679	278.761	700
Seiyun1	CAMA	SEIYUN	M	1542 B2	1766.513	264.520	620
Sharj Asharif	WHADP	ASHARIF	R	1542 D3	1681.963	234.981	850
Sheik Othman	DI	OTHMAN	R	38D-114	1422.408	498.192	14
Shibam	WHADP	SHIBAM	R	1542 B1	1751.950	246.506	
Sidara	DI	SIDARAH	M	1442 B4	1604.066	275.462	460
Slasil	WHADP	SLASIL	R	1642 D2	1821.800	270.454	
Sobeikh	WHADP	SOBEIKH	R	38D-25	1687.686	218.922	
Socotra	CAMA	SOCOTRA	M	39D-132	1398.350	815.071	
Thibi	NWSA		R	1642 D4	1786.713	273.651	800
W.Bani Ali	WHADP	BIN ALI	R	1542 B1	1742.725	246.402	750
W.Buwaysh (pwc)	DI		R	39D-51	1618.560	306.125	25
W.Huwayrah	DI		R	39D-39	1657.473	284.922	1440
W.Sarr	NWSA		R	38E-133	1795.042	195.286	1100
Yabhoodh	WHADP	YABHOODH	R	1542 B4	1766.319	284.151	

LIST OF STREAM GAUGING STATIONS

WADI	STATION	ORG.	L O C A T I O N			ELEV. (m)
			MAP SHEET	UTM-N (m)	UTM-E (m)	
<i>Red sea basin</i>						
Wadi Harad		TDA	1643 C1	1822.5	310.5	220
Wadi Hayran		TDA	1643 C4	1792.0	320.6	280
Wadi Mawr	Shat al Erg	TDA	1543 A4	1727.4	316.6	230
Wadi La'ah		TDA	1543 A4	1725.0	328.5	360
Wadi Surdud	Faj-Al-Hussein-A	GDH	1543 C4	1680.1	330.4	340
Wadi Surdud	Faj-Al-Hussein-A	GDH	1543 C4	1680.1	330.2	340
Wadi Surdud	Shat Ad Darba	TDA	1343 C4	1679.0	337.0	430
Wadi Surdud	Dayan confluence	NWSA	1543 D1	1688.5	361.5	925
Wadi Siham	Mahal Saleem	TDA	1443 A4	1656.0	326.0	390
Wadi Rima	Misrafah	TDA	1443 D1	1590.0	346.0	390
Wadi Zabid	Kolah	TDA	1443 D3	1561.0	345.0	320
Wadi Nakhlah		TDA	1343 B1	1539.0	347.6	330
Wadi Damim	Qabna	TDA	1343 B1	1532.0	349.4	320
Wadi Rasyan	Gorge	TDA	1343 D1	1483.0	346.0	270
Wadi Haymah		NWSA	1344 A2	1524.0	397.0	1650
Wadi Mawza	Assufariyah	TDA	1343 D1	1470.6	335.0	360
<i>Gulf of Aden Basin</i>						
Wadi Ma'adin	Tor Al Bahr	DA	1344 C4	1457.5	422.4	
Wadi Ma'adin	Upper	NWSA	1344 C4	1454.5	427.0	575
Wadi Ma'adin	Lower	NWSA	1344 C4	1447.0	431.0	460
Wadi Tuban	Dukeim	DI	38D-102	1466.7	474.7	
Wadi Warazan		NWSA	1344 C1	1483.4	418.8	1100
Wadi Rabwa	Saba weir	DA	38D-90	1494.3	483.8	
Wadi Bana	Batais	SYP	38D-91	1474.0	523.5	
Wadi Hassan	Al Haig	SYP	38D-103	1463.0	532.5	
Wadi Hassan	Al Miyuh	DI	38D-103	1466.7	536.1	
Wadi Ahwar	Fuad Weir	DA	38D-106	1510.0	684.0	
Wadi Amaqn	Haban	DA	1442 C2	1584.2	264.3	
Wadi Khirba	Khirba Ford	DA	1442 B4	1604.0	280.9	

WADI	STATION	ORG.	LOCATION			ELEV. (m)
			MAP SHEET	UTM-N (m)	UTM-E (m)	
Wadi Khirba	Jarashah	DA	1446 A3	1603.4	263.9	
Wadi Buwaysh	PWC	DA	39D-51	1618.6	306.1	
Wadi Huwayrah	Seiyun ford	DA	39D-39	1631.4	315.2	
<i>Arabian Sea basin (Ramlat-as-Sabatayn)</i>						
Wadi Kharid	Dam Site 2a	NWSA	1544 A4	1740.5	436.6	1925
Wadi Kharid	Gurdud	AHT	1644 C4	1791.2	436.0	1190
Wadi Kharid	Sec.gauge	AHT	1644 C4	1789.0	434.0	1200
Wadi Habash		AHT	1644 C4	1789.0	434.0	1200
Wadi Assaghi		AHT	1644 D3	1780.0	456.4	1200
Wadi Madhab		AHT	1644 C2	1811.5	439.7	1220
Wadi Adhana	Dam	ERADA	1545 C1	1718.0	526.0	1140
Wadi Adhana	Dhana-1	GDH	1545 C1	1687.9	512.2	1180
Wadi Adhana	Dhana-2	GDH	1545 C1	1688.3	512.9	1180
Wadi Beyhan	Nuqub	DA	1445 B3	1625.3	579.0	1040
Wadi Markhah	Hagar Markhah	DA	1446 A3	1607.0	616.7	
Wadi Hammam	Mukail (Dura)	DA	1446 C2	1596.1	649.1	
Wadi Hammam (?)	Husn Al War	DA	1446 C2	1588.8	660.0	
<i>Arabian Sea Basin (Wadi Hadramawt)</i>						
Wadi Hadramawt	Shibam	WHADP	1542 B1	1763.0	252.0	
Wadi Doan	Gaudah	WHADP	38D-1	1743.2	205.3	
Wadi Al Ayn	Ajliniyah	WHADP	38D-1	1745.0	210.7	
Wadi Sarr		WHADP	1542 B1	1763.2	227.0	
Wadi Bin Ali	Road	WHADP	1542 B1	1759.3	246.6	
Wadi Juaymah		WHADP	38E-134	1770.3	253.9	
Wadi Thibi		WHADP	1642 D4	1771.9	280.6	
Wadi Idim	Ghuraf	WHADP	1542 B2	1766.3	284.2	
Wadi Masila	Qassam	WHADP	39E-135	1784.6	302.2	
Wadi Masila		WHADP	39E-135	1782.7	311.1	

LIST OF GROUNDWATER LEVEL MONITORING NETWORKS

Agency	Area	Total Number of wells		Period of record
		Manual	Automatic	
GDH	Marib	54	8	1987-93
GDH	Surdud	38	4	1984-93
GDH	Sadah	29	2	1984-92
TDA	Mawr	36	-	1978-92
TDA	Siham	22	-	1986-92
TDA	Rima	61	-	1975-77 1981-92
TDA	Zabid	45	-	1970-92
TDA	Rasyan	30	-	1980-92
RIRD	Rada	20	16	1977-92
NWSA	Sana'a	44	3	1990-93
ODA/LRC	Dhamar Montane Plains	45		1975-76
?	Tuban Delta	?		
?	Abyan Delta	?		
?	Wadi Bayhan	?		
WHAP	Wadi Hadramawt	85		

PERIODS OF RECORD - RAINFALL AND METEOROLOGICAL STATIONS

(a) Sana'a, Taiz, Hodeidah, Ibb, Dhamar, Hajjah, Al Bayda, Sadah, Al Mahweet, Marib and Al Jawf Governorates

STATION NAME	AVAILABLE YEARS				REMARKS	
	1960	1970	1980	1990	STATUS	TYPE
Abkowr			+*5***		-	m
Ahmar, Bayt Al			+5*		o	m
Amar			+***6789	012	o	e
Amir		+	0*23456789	01	o	m
Araqah			+4*		-	m
Arqub				12	o	e
Asal			+789	012	o	e
Ash'a, Al			+		o	e
Asir Mil. base		+678			-	m
Attius			+789	01*	o	e
Azgull			+****		-	m
Bajil	+*	**2*45**89	0*		-	m
Barh			+*23456789	01	o	m/c
Basat		+89	0123*56789	01	o	m
Bawn		+***9	01234567*	**	o	m/c
Bawn			+7 9		o	m
Bayda			+8*		o	e
Buqa, Al			+		o	c
Dabaat		+3456*8*			-	m
Dabab,Wadi Ad			+89	*1	o	m
Dabira		++	0123456789	01	o	m
Dahi			+56789	012	o	m/c/e
Damaj			*		-	m
Dar Salem			+4*		-	m
Darb		+ +789	012 4		-	m
Dar Najd		+			-	m
Darwan		+3456 8	*		-	m
Dawran		+			-	m
Delil Sumara	+	0123456**9	0123456789	01	o	m

STATION NAME	AVAILABLE YEARS				REMARKS	
	1960	1970	1980	1990	STATUS	TYPE
Dhamar			+345678		-	m/c
Dhamar		+* 89	012345678		o	m
Dhamar		+6789	0*2345678		o	m
Dimnah		+ +9	012*456789	01	o	m
Dumeid			+34*6789	012	o	c/e
Dutrat			+4*6		o	m/c
Faqih, Bayt Al			+789	01	o	m
Fawwarah		++	0123456789	01	o	m
Fulayh		+123*			-	m
Gawadir		+89	0123456789	01	o	m
Ghamr			+56*89	012	o	c/e
Ghujla			+89	0*2	o	e
Giblah			+ 89		-	c
Gudami			+34**789	012	o	e
Gumeisha		234567			-	c
Habaka/Girnah		+ +9	01+ **6789	01	o	m
Habashi			+34*6789	*1	o	m
Hagag				12	o	e
Haima		+	*123456789	01	o	m
Hajar		+	01*34**78	0	o	c
Hajdah			+*23456*89	01	o	m
Hajjah			+789		o	e
Hajjah		+567**	*** *56789	01	o	m
Hamal		+*	**23456789	01	o	m
Hamam Ali		+* 89	01**456789	01	o	m
Harad			+*8*		-	e
Har,Wadi		0123***789	0123456789	*1	o	m
Haymah,Wadi			+		o	m
Hazm, Al			+		o	m/c
Hazm, Al			+67		o	m/c
Hidad		+ *9	0123456789	01	o	m

STATION NAME	AVAILABLE YEARS				REMARKS	
	1960	1970	1980	1990	STATUS	TYPE
Hijrah			*1**45*78		o	m
Hijrah			+234567		-	m
Hijrat Makinah			+		o	m
Hijrat Ma'bar			+		-	m
Hudaydah	+4**	***678*	0 3456789		o	c
Hudaydah			+6789	01	o	e
Huth		+**7*	123*56789	01	o	m
Ibb			+		o	c
Ibb			+*345*789		o	c
Ibb	+	0123456789	0123456789	01	o	m
Irra			++789		o	e
Jabal Taraf			*7**		-	c
Jabin			+		-	m
Jabri, Bayt Al		*	*234		-	c
Jannat		+67 9	01		-	m
Jarubah		+	+6789		-	m/c
Jawf			+789	0*	o	m/c
Jihanah			+		o	m/c
Jiraf, Al		+			-	m
Jubah			+789	012	o	e
Juban			++	01	o	e
Jubayr			+*7		o	e
Kadan		+3**			-	c
Kadan		+			o	e
Kadima,Harad Al			+789	01	o	m
Kahal			+5*		-	c
Kamer			** *56		-	m
Kasabat Akwan			***		-	m
Ketab			+89	01	o	e
Khabar		+7+9	0123456789	012	o	m/c/e
Khadrah		+	+23456789	012	o	c

STATION NAME	AVAILABLE YEARS				REMARKS	
	1960	1970	1980	1990	STATUS	TYPE
Khadrah			+789	01	o	m
Khalifah, Al			+89	01	o	m/c
Khamir		+34*6*	*** *6789	01	o	m
Khamis			*56789	01	o	c/e
Khamis		+			-	m
Khamlu			+56*89	01	o	m/e
Khasha'a			+34*6789	**	o	c
Khulagah			+		-	m
Kudeihah			+*23456789	0*2	o	c/e
Kudmah Maraiya			+789	01	o	m
Lahimah, Wadi			*789		-	c
Lahj		5*7**	012 +6		-	m
Lariud			+ *	01	o	e
Ma'adi			+		o	m
Mabar		567	012*456		o	m
Madaf		+	+34567**	*1	o	c
Mafhaq			+56*89	01	o	c/e
Magash			+89	0*	o	c
Maghreba		+	0123*56789	01	o	m
Mahabish		+56* *	0123*56789	01	o	m
Mahatt		+ 89	01234*6789	01	o	m
Mahwit		+****	* *3456789	01	o	m
Mahwit			+78*	+2	o	c
Mahwit			+8*	0	o	e
Mai'na			+789		-	c
Majhiz			+4**		o	m/c
Majz			+*4**		-	m
Makarib			+4**		-	m
Manakha			+3		-	m/c
Manakha		+9	*		-	c
Manasih			+45**89	0*	o	c

STATION NAME	AVAILABLE YEARS				REMARKS	
	1960	1970	1980	1990	STATUS	TYPE
Manjidah		+6789			-	c
Mansur,Wadi			+		-	e
Maqbanah			+89	*1	o	m
Maqwalah			+4**		-	m
Maram		+6789	0123456789		o	m
Marib			+789		o	m/c
Marib		8*	*2+4*6*		o	m/c
Marib			+		o	e
Markha				+	o	e
Marran, Bayt			+		o	m
Masnaah		+**+9	0123456789	01	o	m
Maswarah			+89	0	o	e
Mawsanah			+5*		-	c
Mayan			+56*89	012	o	c/e
Midi			+789	01	o	m
Mikras		+*			-	m
Milh		+**89	0123456789	01	o	m
Mind		+3456*89	0		-	m
Mirwah			+**	*	-	c
Mishrafah		+ +9	*1***56789	01	o	m
Mokha		+* 89	+45678		o	m/c
Mosalla				+	o	e
Muthef			+34*6789	012	o	c/e
Na'ta			+		-	e
Nagil Sam			+789	01	o	e
Nozaih,Al			+89	01	o	c
Nuqabah			+34567**		o	c
Ossefra		+	0123*5*789	012	o	m/c
Qa,mah			+		o	m/c
Qadam			+56		-	c
Qadam			+ 6*89	012	o	m/e

STATION NAME	AVAILABLE YEARS				REMARKS	
	1960	1970	1980	1990	STATUS	TYPE
Qahmah		+ *9	01*3456789	01	o	m
Qarry			+45678*	0*	o	c
Qarwah			+78*	01	o	e
Rabu,suq Al			+789	01	o	m
Rada'a		++89	*12345*789	012	o	m/e
Rahaba			+789	01	o	e
Rahban			+	1	o	e
Raydah		+67 9	0*2		-	m
Rihab	+	0123456789	0123456789	01	o	m
Risabah		+9	0123456789	*	o	m/c
Rizwa		+678*	01*34567		-	m
Robei			+ **789	01	o	m
Ruba			+678		o	m
Ruba			+7		-	m
Rubat			+**	1	o	e
Rubu Utmah			+		o	m
Rujum			+5**89	012	o	m/e
Rujum			** *		-	c
Sadah			+		o	e
Sadah Salam			+345*789	012	o	c/e
Sadah			678		o	m/c
Safaqayn			+ *9		-	c
Safiah			+**		o	e
Sahwah			+456		-	m
Said, Bait Al			+*89	01	o	m
Saidiyah			+789	01	o	m
Salf		+*	** +56789	012	o	c/e
Salif			+ ****	*	-	m
Sama Al Ulya		+6789	012 456*8		o	m
Sama'ah, As			+8	1	o	e
Sana'a Airport	+*	*****789	01 3456789	0	o	m/c

STATION NAME	AVAILABLE YEARS				REMARKS	
	1960	1970	1980	1990	STATUS	TYPE
Sana'a Town	3456789	0123456789	0123		o	m/c
Sana'a			+	0*2	o	e
Sana'a		789	*		o	m
Sanaban		+6789	012345678		o	m
Sanam		+ 8*	01*3456789	*1	o	m
Saqayn		+56**	*123*56789	01	o	m
Shaharah		+5	*56***	01	o	m
Shamir, Mahal		+*	0123456789	01	o	m
Shaqab		+67*9	0123 *		-	m
Sharaf			+		o	e
Sharq			+567		-	m
Sharq		+ 89	01*3456789	01	o	m
Sherwab			+*89	01	o	e
Shibam		+567**	0123456789	**	o	m
Shoub Farm	456 89	0123456789	01 3		o	m/c
Sirwah			+8*	*12	o	e
Suar		9	***3		-	m
Azaydiyah			+789	01	o	m
Sukhnah		+*	0123*56789	01	o	m
Surby			+*567		-	m
Taiz Town	012345678	23456789	01		o	m
Taiz Yard		+*6*	0123456789	0	o	m
Taiz new airp			3456789		o	m/c
Talab			+1 +		-	m
Tawilah			+* 9	12	o	c/e
Thawban			****	*12	o	e
Therhaan			012+****		x	x
Thula		+6789	0123		-	m
Tur			8		-	e
Tur		*56789	0123456789	01	o	m
Udein		01*345*789	0123456789	01	o	m

STATION NAME	AVAILABLE YEARS				REMARKS	
	1960	1970	1980	1990	STATUS	TYPE
Uwair, Bani		+5* *	0123456789	01	o	m
Wa,alah				+2	o	e
Wahbiah				+	o	e
Wallan		+*	0*23456789	01	o	m
Waqir		++	0123456789	0*	o	m
Warazan			+*9	*1	o	e
Waset				12	o	e
Wash'hah		+*7*9	**2345*789	01	o	m
Yarim	+	0123456789	0123456789	01	o	m
Yusuf, Bani			+56789	0*2	o	m/e
Yusuf, Bani				+123	o	e
Zabid Town	+	01234* **9	*123456789	01	o	m
Zabid(Gerbah)	+	0123456789	123456789	01	o	c/e
Zakhim				+2	o	e
Zhar,Wadi		+78	01*		-	m
Zinkah, Deir		+*	*1*3456789	01	o	m
Zuhaif			+56789	012	o	m/e
Zuhrah		*3* +	*123*56789	01	o	m
Zuwab		+	0+2345*789	0*2	o	c

- not operated + date of installation
 o operated * incomplete data
 m manual x unknown
 e electronic R rainfall station
 c chart m meteo station

(b) Aden, Lahej, Abyan, Shabwah, Hadramawt and Al Mahra Governorates

STATION NAME	AVAILABLE YEARS						REMARKS	
	1940	1950	1960	1970	1980	1990	STATUS	TYPE
A. Gharib					56789	0	o	m
Albayth					+		o	m
AlGeidah					67		o	m/c
AlHagrain					89	01	o	m
AlHaleh					56789	01	o	m
AlHujayr					23		-	m
AlJawadeh					89	01	o	m
Alkhoribeh					56789	01	o	m
Alkod		89	0123456789	0123456789	0123456789	01	o	m/c
AlMashhad					56789	01	o	m
AlMinsaf					89	01	o	m
AlQatan					56789	01	o	m
AlRudood					56789	01	o	m
AlSufal					34*678	01	o	m/c
Alugubeih					56789	01	o	m
Amaqin				+			-	m
Amd					89	01	o	m
Ataq							o	m/c
Azzan				+			-	m
Bahran					56789	01	o	m
Beihan					2345678		-	m/c
Bodhan						1	o	m
Dhala				3456789	01234567		-	m/c
Dhira Vill					+		o	m
Dura					012		-	m
Fiyush				3456789	012345678		o	m/c
Fuwah(mukalla)					+		o	m/c
Gaidun					*6789	01	o	m
Ghail Bawazir					+		o	m
Ghail Bin yumin					89	01	o	m
Giar					56789	0	o	m/c
Gol madram				3456789	012345		-	m
Habban				+			-	m

STATION NAME	AVAILABLE YEARS						REMARKS	
	1940	1950	1960	1970	1980	1990	STATUS	TYPE
Habilin					89	012	o	m/c
Hainan					9	01	o	m
Hajar					23		-	m
Harad				+			-	m
Hisn Hasan					23		-	m
Jawala				+			-	m
Jueimah					89	01	o	m
Karish				456789	012345		-	m
Katbah					89	01	o	m
Khalla				56789	23		-	m
Khawrah					23		-	m
Khirba Vill					+		o	m
Kormaksar	89	0123456789	0123456789	0123456789	0+234 67 9	0	o	m/c
Lahej				3456789	0123456789	01	o	m/c
Little Aden		+					-	m
Meifaah				5			-	m/c
Milah				5678			-	m
Moudia					23456789	0	o	m/c
Mukalla(PWC)					+		o	m
Mukiras				789	01 78	+	-	m/c
Mukiras						+	o	e
Musaimer				3456789	0123456		-	m
Nissab					0123		-	m/c
Nissab						+	o	e
Nuqub			56		23456789	012	o	m/c
Orisma				3456789	012345		-	m
Perim	12345678						-	m
Q.Bamasood					56789	01	o	m
Qasm					56789	01	o	m
Riyan				3456789	0123456789	0	o	m/c
Sabiha(turbaha)							o	m
Sah					56789	01	o	m
Seiyun				789	0123456789	012	o	m/c
Seiyun					0123456		o	m/c
Sharj Asharif					56789	01	o	m

STATION NAME	A V A I L A B L E Y E A R S						R E M A R K S	
	1940	1950	1960	1970	1980	1990	STATUS	TYPE
Sheik Othman	6789						-	m
Shibam					56789	01	o	m
Sidarah					456789	01	o	m/c
Slasil					89	01	o	m
Sobeikh					89	01	o	m
Socotra				89	012 6789		o	m/c
Thibi					+		-	m
W.Bani Ali					+	01	o	m
W.Buwaysh (pwc)					+		o	m
W.Huwayrah					+		o	m
W.Sarr					+		-	m
Yabhoodh						01	o	m

-	not operated	+	date of installation
o	operated	*	incomplete data
m	manual	x	unknown
e	electronic	R	rainfall station
c	chart	m	meteo station

PERIODS OF RECORD - STREAM FLOW STATIONS

WADI	STATION	AVAILABLE YEARS					REMARKS	
		1950	1960	1970	1980	'90	STATUS	TYPE
<i>Red sea basin</i>								
Wadi Harad					***9	12	o	c
Wadi Hayran					****9	12	o	c
Wadi Mawr	Shat al Erg			5678*	0**3456789	12	o	f
Wadi La'ah				567			o	c
Wadi Surdud	F.a.Hussein-A				456789	12	o	e
Wadi Surdud	F.a.Hussein-B					+	o	e
Wadi Surdud	Sh.A dDarba				***89	12	o	f
Wadi Surdud	Dayan confl.					+	o	e
Wadi Siham	Mahal Saleem				+67*9	12	o	c
Wadi Rima	Misrafah			67*9	0*2345		o	f
Wadi Zabid	Kolah			012345678*	123456789	12	o	m
Wadi Nakhlah					***8*	12	o	c
Wadi Damim	Qabna				789	12	o	c
Wadi Rasyan	Gorge				**34**789	0*2	o	f
Wadi Haymah					+		o	m
Wadi Mawza	Assufariyah				+ 8*	12	o	c
<i>Gulf of Aden Basin</i>								
Wadi Ma'adin	Tor Al Bahr				-6789	012	o	c
Wadi Ma'adin	Upper			+			o	c
Wadi Ma'adin	Lower			+			o	c
Wadi Tuban	Dukeim			-23456789	123456789	012	o	f
Wadi Warazan					+		o	m
Wadi Rabwa	Saba weir			3456789	123456789		o	c
Wadi Bana	Batais	23456789	12345		+		o	c
Wadi Hassan	Al Haig				+89		-	f
Wadi Hassan	Al Miyuh				+678		-	c
Wadi Ahwar	Fuad Weir	+		23456789	123456789		o	c
Wadi Amaqn	Haban			+			-	c
Wadi Khirba	Khirba Ford				-456789	012	o	c
Wadi Khirba	Jarashah				-3456789	012	o	c
Wadi Buwaysh	PWC				-456789	012	o	c

WADI	STATION	AVAILABLE YEARS					REMARKS	
		1950	1960	1970	1980	'90	STATUS	TYPE
W. Huwayrah	Seiyun ford				-456789	012	o	c
<i>Arabian Sea basin (Ramlat-as-Sabatayn)</i>								
Wadi Kharid	Dam Site 2a					+	-	e
Wadi Kharid	Gurdud				+		-	m/c
Wadi Kharid	Sec.gauge				+		-	m
Wadi Habash					+		-	m
Wadi Assaghi					+		-	m
Wadi Madhab					+		-	m/c
Wadi Adhana	Dam				6789	12	o	e
Wadi Adhana	Dhana-1				89	12	o	e
Wadi Adhana	Dhana-2				89	12	o	e
Wadi Beyhan	Nuqub				+789		o	c
W. Markhah	Hagar				-3456789	012	o	c
W. Hammam	Mukail				+12		o	c
W. Hammam (?)	Husn Al War				+12		o	c
<i>Arabian Sea Basin (Wadi Hadramawt)</i>								
Wadi Hadra-mawt	Shibam			-89	0123456		-	c
Wadi Doan	Gaudah			-89	123456789	01	-	c
Wadi Al Ayn	Ajliniyah			-89	123456789	01	-	c
Wadi Sarr				-789	123456789	0	-	c
Wadi Bin Ali	Road			-89	123456789		-	c
Wadi Juaymah				+	123456789	0	-	c
Wadi Thibi				-89	123456789	01	-	c
Wadi Idim	Ghuraf			-89	123456789	01	-	c
Wadi Masila	Qassam			+	01234567		-	c
Wadi Masila				-89	123456789		-	c

- not operated + date of instalation
o operated * incomplete data
m manual x unknown
e electronic
c chart

APPENDIX 3

Selected statistics of processed monitoring data

- 3.1 Annual rainfall, period 1985-1991
- 3.2 Average monthly rainfall
- 3.3 Average monthly values of meteorological variables
- 3.4 Average monthly and annual rainfall
- 3.5 Monthly and annual flow volumes

ANNUAL RAINFALL, PERIOD 1985 - 1991
(in mm)

STATION	ORG.	1985	1986	1987	1988	1989	1990	1991	MEAN	Correlated to :
Amar	GDH	96.0	140.2	4.5	163.0	46.5	63.0	15.0	75.5	
Amir	TDA	554.6	670.8	599.6	691.6	424.7	392.8	278.8	516.1	
Barh	TDA	278.9	360.0	342.0	245.2	97.2	179.8	206.2	244.2	
Basat	TDA	444.7	371.0	375.8	763.0	335.9	240.0	153.9	383.5	
Dabira	TDA	153.2	255.2	146.2	158.4	304.9	255.0	168.2	205.9	
Dahi	GDH	204.8	125.2	144.1	223.9	75.0	35.5	132.5	134.4	
Dalil Sumara	TDA	812.5	578.7	679.6	671.8	594.0	633.9	451.6	631.7	
Dimnah	TDA	194.0	204.5	418.5	548.1	259.0	156.5	467.0	321.1	
Dumeid	GDH	134.0	189.2	63.5	133.0	111.5	177.0	30.0	119.7	
Fawwarah	TDA	243.2	347.5	163.7	232.8	264.9	161.1	102.7	216.6	
Gawadir	TDA	430.1	295.3	649.0	471.4	530.9	174.2	263.9	402.1	
Ghamr	TDA	598.1	375.4	*251.0	336.0	383.0	241.0	222.5	*344.0	Mahwit
Gudami	GDH	210.8	*109.0	72.0	121.5	55.0	116.0	10.5	*99.0	Muthef, Bani Awer
Habaka	TDA	*188.0	284.5	202.5	398.0	450.8	349.1	246.5	*303.0	Mishrafah, Sharq
Habashi	TDA	395.7	424.3	680.9	440.0	574.7	*352.0	350.6	*460.0	Barh
Haima	TDA	467.0	371.1	284.8	170.1	191.5	270.9	153.5	272.7	
Hajdah	TDA	305.0	*906.0	795.0	733.0	986.0	863.0	238.5	*657.0	Barh
Hajjah	TDA	126.4	156.3	587.2	840.3	572.0	509.0	231.0	431.7	

STATION	ORG.	1985	1986	1987	1988	1989	1990	1991	MEAN	Correlated to :
Hamal	TDA	343.3	424.6	362.9	409.3	454.8	*429.0	337.4	*394.0	Sharq, Hamam Ali
Hamam Ali	TDA	263.4	167.1	400.1	330.2	437.6	274.0	309.0	311.6	
Wadi Har	TDA	240.9	383.7	370.4	388.1	372.0	*318.0	175.9	*321.0	Hadrid, Ham.Ali, Masnh
Hidad	TDA	366.9	369.0	350.0	405.3	368.6	409.0	110.0	339.8	
Hudaydah	TDA	13.9	43.2	51.3	108.1	251.0	71.5	58.9	85.4	
Huth	TDA	33.5	58.6	720.3	270.9	128.5	61.9	64.7	191.2	
Ibb	TDA	2052.9	819.5	1597.6	1572.2	1920.2	1703.7	903.7	1510.0	
Khamis	GDH	295.9	326.6	312.8	434.0	496.5	359.5	264.5	355.7	
Khamlu	GDH	262.1	382.1	*325.0	326.5	383.0	237.0	199.5	*302.0	Khamis, Dar Zankhah
Kudeihah	TDA	102.0	164.6	97.9	103.3	272.6	29.1	0.0	110.0	
Mafhaq	GDH	303.0	351.7	310.9	299.5	188.0	241.5	128.5	260.4	
Maghreba	TDA	570.1	699.0	513.0	505.5	686.5	449.5	339.5	537.6	
Mahabisha	TDA	776.5	1083.0	1003.2	669.4	872.3	392.7	441.5	748.4	
Mahatt	TDA	379.0	310.2	293.0	212.8	435.0	257.0	281.1	309.7	
Mahwit	TDA	1130.1	944.1	483.6	1068.2	571.0	406.9	239.6	*692.0	
Masnaah	TDA	379.0	310.2	293.0	212.0	435.0	257.0	281.1	309.6	
Mayan	GDH	258.4	324.5	177.5	196.0	320.0	154.5	188.5	231.0	
Milh	TDA	78.5	50.9	48.7	161.0	57.7	91.5	72.0	80.0	
Mishrafah	TDA	163.7	552.9	550.5	326.9	419.8	344.0	338.0	385.1	
Muthef	GDH	188.3	220.6	260.0	199.0	148.0	161.0	154.0	190.4	

STATION	ORG.	1985	1986	1987	1988	1989	1990	1991	MEAN	Correlated to :
Qadam	GDH	*550.0	809.8	*435.0	227.0	336.0	295.5	307.0	*422.0	Amir, Hamah
Qahmah	TDA	271.4	333.1	232.3	407.3	346.0	154.3	151.8	270.9	
Rihab	TDA	427.9	648.5	512.0	439.8	520.0	1259.0	396.6	600.5	
Risabah	DAFRD	310.0	277.2	277.1	304.0	357.2	*252.0	*215.0	*285.0	Masna'ah
Rujum	GDH	711.7	*793.0	428.0	972.0	510.5	581.0	286.0	*581.5	Mahwit
Sadah Salam	GDH	170.4	*99.5	47.0	80.5	58.0	91.5	105.5	*93.0	Bani Awer
Salf	GDH	533.3	569.1	409.0	681.0	471.0	212.5	157.0	433.3	
Sanam	TDA	353.0	430.2	511.5	545.7	454.2	*378.0	188.4	*409.0	Masna'ah, Hadid
Saqayn	TDA	228.5	317.8	269.5	274.9	157.7	150.0	89.0	212.5	
Shamir	TDA	459.2	603.5	299.5	304.3	638.2	354.5	*331.0	*427.0	Zankhah, Maghrabeh
Sharq	DAFRD	301.7	377.8	324.0	353.2	486.2	480.0	509.5	404.6	
Shibam	TDA	349.9	493.7	230.0	320.8	508.2	270.0	188.8	337.3	
Sukhnah	TDA	372.0	471.6	539.3	318.6	579.6	*359.0	251.7	*413.0	Maghrabeh
Tur	TDA	354.4	511.5	502.0	429.5	375.5	325.5	321.0	402.8	
Udein	TDA	618.3	676.3	773.0	669.5	897.0	859.0	640.0	733.3	
Uwair,Bani	TDA	116.9	151.0	156.0	213.0	169.0	101.0	73.0	140.0	
Wallan	TDA	230.0	343.0	164.0	289.8	253.0	230.0	171.7	240.2	
Waqir	TDA	319.8	349.9	306.8	458.2	326.8	302.7	118.7	311.8	
Wash'hah	TAD	442.4	*588.0	547.3	389.4	352.7	501.4	203.8	*432.0	Mahabish
Yarim	TDA	533.3	607.0	546.2	688.6	596.6	396.2	481.0	549.8	

STATION	ORG.	1985	1986	1987	1988	1989	1990	1991	MEAN	Correlated to :
Bani Yusuf	GDH	465.8	698.3	485.9	665.0	433.0	321.0	*288.5	*480.0	Himah
Zabid Town	TDA	238.5	145.8	121.0	358.2	250.5	144.7	78.3	191.0	
Zabid Gerbah	TDA	*337.0	491.7	350.1	556.8	289.2	287.6	159.0	*353.0	Zabid, Mahat, Qhmah
Zinkah,Deir	TDA	259.2	408.1	402.6	287.7	401.7	332.0	289.3	340.1	
Zuhaif	GDH	573.9	651.2	*447.0	530.5	559.5	241.5	275.5	*468.0	Zinkhah, Shamir
Zuhrah	TDA	149.4	160.2	*59.0	121.1	26.2	112.7	14.2	*92.0	Milh
Zuwab	RIRD	99.9	112.5	178.6	146.4	139.7	100.0	54.4	119.0	
Al Haleh	WHADP	18.9	78.8	82.5	78.2	94.6	92.1	4.8	71.8	Seiyun
Al-Khoribeh	WHADP	*15.0	23.1	135.4	80.8	139.1	67.1	24.9	*69.0	Seiyun
Al-Kod	DI	118.3	6.0	88.0	40.4	161.4	0.0	35.7	64.3	
Al-Mashhad	WHADP	*6.0	37.2	50.0	16.0	14.0	43.0	14.8	*26.0	Seiyun
Al-Qatan	WHADP	*9.0	19.5	85.3	0.0	106.1	49.3	14.3	*41.0	Seiyun
Al-Rudood	WHADP	*12.0	44.6	65.7	42.3	111.3	21.1	80.0	*54.0	Seiyun
Bahran	WAHDP	*7.0	3.5	52.4	2.6	101.1	27.9	21.3	*31.0	Seiyun
Gaidun	WAHDP	*12.0	80.9	66.9	78.5	129.8	3.3	0.0	*53.0	Seiyun
Lahej	DI	24.2	11.0	70.4	70.0	106.9	28.7	1.8	51.9	
Nuqub	DA	20.4	66.4	99.5	35.8	107.9	145.4	23.9	71.3	
Q.Bamasood	WHADP	*11.0	45.1	52.5	53.0	55.3	88.6	64.3	*53.0	Seiyun
Ryan	CAMA	10.5	80.3	26.0	9.5	120.1	14.0	*27.0	*41.0	Seiyun
Sah	WAHDP	*9.0	65.7	71.8	12.6	91.5	26.0	25.0	*43.0	Seiyun

STATION	ORG.	1985	1986	1987	1988	1989	1990	1991	MEAN	Correlated to :
Seiyun	ARC	13.5	68.0	110.3	8.4	174.9	77.0	44.0	70.9	
Shibam	WAHDP	*9.0	89.1	98.6	19.7	10.8	42.8	33.5	*43.0	Seiyun

Corrected sum or average partly based on corrected figures

AVERAGE MONTHLY RAINFALL
(in mm)

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Abkowr	4.4	6.5	14.4	28.5	36.6	23.4	7.7	18.9	1.1	0.0	2.8	3.9	148.2	83-86
Ahmar, Bayt Al	6.4	11.7	22.1	46.5	72.1	2.5	3.5	33.1	0.7	0.0	8.0	0.0	206.6	84-86
Amar	9.7	6.5	7.4	23.5	5.3	3.4	11.1	19.5	0.3	0.5	0.6	0.7	88.5	86-92
Amir	10.2	14.8	70.4	131.7	68.2	22.4	51.9	96.3	30.3	19.7	13.7	9.3	538.9	79-91
Araqah	7.5	0.0	4.6	48.9	51.8	0.0	9.2	28.9	0.0	0.0	0.0	6.0	156.9	83-85
Asal	0.0	7.1	21.3	60.4	2.1	0.5	21.7	22.3	6.5	13.8	0.3	2.5	158.5	87-92
Asir Mil.base	0.0	5.3	54.7	106.7	12.3	39.7	34.3	125.7	9.4	49.1	12.8	0.1	450.1	75-78
Attius	0.4	10.6	27.5	47.3	0.0	1.7	24.2	20.1	4.0	0.0	0.0	0.3	136.1	87-91
Azgull	19.4	26.3	18.7	45.4	33.6	3.5	44.5	23.4	0.2	0.0	0.0	0.0	215.0	83-86
Bajil	6.6	1.4	11.7	27.5	43.9	35.9	15.6	57.8	89.2	32.4	32.5	12.1	366.6	72-82
Barh	13.2	3.3	19.2	36.4	52.8	25.0	28.0	26.6	83.0	33.3	5.9	3.4	330.1	81-91
Basat	0.1	15.4	12.7	10.3	39.9	24.0	24.3	53.0	78.1	45.6	3.9	6.3	313.6	78-91
Bawn (MAWR)	7.0	13.0	39.0	31.0	36.0	2.0	38.0	55.0	6.0	10.0	5.0	8.0	250.0	83-87
Dabaat	0.0	4.2	20.9	41.5	23.9	0.6	28.7	61.1	2.3	4.3	1.2	4.5	193.2	72-79
Dabira	10.5	10.0	25.6	50.6	29.4	16.7	27.9	30.4	33.1	11.4	6.3	8.3	260.2	78-91
Dahi	0.8	5.0	1.7	12.6	13.8	0.7	7.1	36.4	37.3	17.1	1.3	4.2	138.0	84-92
Dar salem	2.8	0.0	6.3	48.1	58.7	0.0	1.5	30.2	0.0	0.0	0.0	11.9	159.5	83-85
Darb	6.9	10.7	93.3	50.3	33.2	28.5	58.2	84.4	20.0	6.5	28.4	11.1	431.5	76-82

Appendix 3.2

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Dar Najd	0.0	0.0	1.6	0.2	0.2	0.0	4.5	7.2	3.8	0.0	0.0	4.4	21.9	79-80
Dawran (GDH)	3.6	0.9	8.6	22.1	39.9	4.8	19.0	35.6	4.3	11.8	1.1	2.3	154.0	72-80
DeliiSumara	3.5	15.4	56.4	93.1	87.9	61.1	116.4	156.6	70.3	20.9	17.7	2.3	701.6	70-91
Dhamar(RLIP)	0.5	25.2	36.1	71.4	54.1	3.4	37.2	84.9	15.5	4.0	0.0	5.6	338.0	83-88
Dhamar(DAFRD)	1.8	16.9	44.9	65.7	52.9	6.0	58.0	110.0	14.8	10.6	6.8	3.4	391.8	75-88
Dhamar	2.5	7.2	59.5	83.9	39.9	1.9	29.1	60.3	6.7	7.0	4.6	4.9	307.5	75-88
Dimnah(TDA)	4.0	4.1	19.4	27.1	55.9	16.2	40.5	54.9	77.2	47.3	15.2	16.6	378.4	78-91
Dumeid	3.6	4.3	8.2	27.6	30.2	2.3	12.4	25.9	3.4	1.5	3.2	1.7	124.3	83-92
Dutrat	0.4	25.2	16.4	35.8	37.9	3.0	16.3	49.6	5.9	0.0	0.0	11.0	201.5	83-86
Faqih,BaytAl	0.0	14.4	4.1	9.9	29.0	0.0	43.0	53.8	82.1	41.6	0.0	1.5	279.4	87-91
Fawwarah	14.5	14.9	60.9	47.3	21.6	16.7	28.8	30.8	12.3	6.2	6.7	2.2	262.9	79-91
Fulayh	0.9	0.0	24.7	34.9	38.3	24.4	23.7	51.6	46.7	22.8	4.4	0.3	272.7	70-74
Gawadir	17.2	28.4	20.8	43.5	62.5	24.1	54.2	54.9	86.3	55.6	30.8	29.2	507.5	78-91
Ghamr	3.3	8.8	29.7	73.0	68.6	26.1	35.2	70.1	28.2	12.5	11.2	7.3	374.0	84-92
Ghujla	0.5	8.9	4.5	22.8	0.5	0.9	2.5	4.4	1.3	6.9	0.0	1.3	54.5	88-92
Giblah	27.5	53.5	32.4	131.5	42.5	155.0	142.5	270.0	160.0	0.0	0.0	15.0	1029.9	88-90
Gudami	4.0	3.5	13.0	39.8	13.8	3.6	5.3	10.1	2.2	1.5	1.1	0.9	98.8	82-92
Gumeisha(FAO)	2.5	2.8	11.3	4.7	1.1	0.0	3.1	45.1	33.6	15.5	6.0	0.1	125.8	72-77
Habaka/Gimah	2.9	8.4	15.4	35.8	23.7	34.0	77.9	84.0	33.3	3.0	2.9	0.3	321.6	78-91
Habashi	7.4	11.6	22.7	54.5	85.8	68.4	58.3	46.2	113.7	29.4	10.6	7.9	516.5	82-91
Haima	2.5	28.8	43.0	62.5	37.7	19.5	35.6	49.5	8.0	2.5	3.1	3.5	296.2	79-91

Appendix 3.2

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Hajer(RIRD)	2.5	4.3	36.4	45.3	22.8	5.7	19.3	42.7	13.2	4.2	1.5	11.1	209.0	79-90
Hajdah	24.0	59.7	34.4	76.5	126.7	76.7	95.4	71.8	113.0	24.1	24.6	21.4	748.3	81-91
Hajjah(MOA)	10.5	16.3	62.3	88.8	61.9	27.3	73.1	82.7	34.3	1.8	5.5	11.8	476.3	86-91
Hajjah(TDA)	11.6	21.2	35.8	110.3	38.9	26.4	44.5	101.4	38.0	0.0	10.5	29.0	467.6	85-91
Hama(TDA)	0.0	16.1	56.3	75.9	62.9	13.2	66.1	91.6	39.5	14.3	7.3	3.8	447	81-91
Hamamali	0.9	15.5	41.0	94.8	66.7	25.9	37.8	88.7	38.1	9.7	17.12	16.7	453	78-91
Harad	4.3	5.0	3.2	58.6	10.0	48.2	33.1	55.6	46.1	9.1	4.0	42.9	320.1	86-89
Har,Wadi	8.3	10.1	45.8	50.6	44.5	15.9	49.2	48.6	20.4	2.5	15.8	3.7	315.4	70-91
Hidad(TDA)	0.1	10.9	34.7	62.2	25.6	29.6	48.6	74.9	28.0	0.0	3.1	8.5	326.2	78-91
Hijrah(DAFRD)	1.6	11.4	46.1	63.5	26.2	8.9	28.1	27.9	9.5	13.1	5.4	5.0	246.7	80-88
Hijrah(GDH)	7.7	20.0	23.4	36.4	18.6	8.7	6.9	40.6	0.0	0.3	0.6	2.6	165.8	80-87
Hudaydah(TDA)	18.4	15.7	12.3	32.8	2.6	0.0	5.34	11.9	3.8	3.0	0.0	2.4	108.3	87-91
Huth	8.6	4.1	48.5	51.7	19.5	6.0	30.4	17.8	3.8	4.6	2.7	2.7	200.4	74-91
Ibb(MOA)	8.2	21.1	45.3	78.6	107.1	134.6	183.3	170.7	119.5	17.3	14.9	4.0	904.6	81-89
Ibb(TDA)	15.7	31.6	98.7	147.9	243.4	252.2	322.4	333.0	244.5	85.12	42.3	16.8	1833.6	70-91
Irra	0.5	1.3	12.5	51.8	10.3	1.3	36.8	51.3	7.0	0.0	1.3	9.3	183.4	886-89
Jabri,Bayt Al	9.9	2.0	34.8	14.3	17.1	0.6	3.3	6.2	5.0	6.0	15.2	0.0	114.4	79-84
Jannat	4.0	1.4	26.4	34.0	24.8	11.8	17.7	78.9	16.5	20.4	4.8	0.0	240.7	75-80
Jarubah	7.0	12.5	23.0	19.5	49.8	11.6	22.0	61.6	100.0	56.6	0.4	3.4	367.4	85-89
Jawf	3.0	9.2	12.4	16.0	3.6	1.8	7.7	2.8	2.7	1.2	0.8	5.6	66.8	86-91
Jubah	0.4	8.3	13.1	33.9	1.1	0.2	8.3	8.2	1.1	0.0	0.0	4.1	78.7	87-92

Appendix 3.2

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Jubayr	0.0	4.9	28.4	52.0	17.4	2.5	1.9	5.2	22.2	13.8	3.0	10.6	162.5	85-87
Kadan (GDH)	0.0	17.9	8.0	1.1	52.4	22.4	28.6	83.1	98.9	70.5	37.2	3.8	423.9	72-75
Kadima,Harad Al	0.4	5.7	0.3	15.6	5.3	5.4	10.3	33.2	51.2	12.2	2.2	18.9	160.7	86-91
Kahal	0.0	17.6	46.4	178.5	55.2	21.7	70.7	83.6	18.7	0.0	0.0	0.0	492.4	85-86
Kamer	2.2	0.5	31.6	65.5	23.9	12.2	36.7	29.5	1.9	0.0	1.3	4.4	209.7	80-86
Kasabat Akwan	12.8	8.1	8.1	17.8	12.1	23.0	13.3	43.5	0.0	0.0	0.0	6.6	145.3	83-86
Ketab	2.3	39.2	21.9	36.7	37.8	12.0	44.0	79.0	40.7	10.2	16.3	19.4	360.0	87-91
Khabar	11.4	8.9	46.5	43.1	19.8	3.4	25.5	48.1	7.3	6.4	2.9	2.0	225.3	76-92
Khadrah(RIRDPP)	3.5	12.6	49.4	41.7	20.7	2.4	21.7	35.4	8.7	2.3	4.3	3.0	205.7	81-92
Khadrah	0.4	5.7	0.3	15.6	5.3	5.4	10.3	33.2	51.2	12.2	2.0	18.9	160.5	86-91
Khamir(TDA)	0.0	7.7	24.7	77.8	9.8	9.5	21.5	41.3	3.0	0.0	0.0	10.7	206	86-91
Khamis(GDH)	1.6	7.9	5.7	49.9	53.6	35.4	55.9	81.8	47.0	6.9	0.5	6.1	352.3	84-91
Khamlu	0.0	9.3	8.9	52.0	47.7	20.3	26.7	83.8	39.1	4.9	2.2	6.2	301.1	84-91
Khasha'a	1.4	7.4	13.5	32.5	5.2	2.8	14.8	25.2	2.7	0.0	1.5	4.3	111.3	85-92
Kudeihah	7.8	18.3	5.8	22.2	27.2	3.8	2.3	7.8	25.0	14.4	8.4	1.8	144.8	82-92
Kudimah Maraiya	0.0	0.8	7.6	17.0	27.0	11.6	31.7	76.3	88.0	41.4	1.6	11.2	314.2	87-91
Lahinah,wadi	25.0	12.7	22.8	150.0	31.9	157.1	91.4	147.9	57.7	17.2	0.0	2.5	716.1	86-89
Lahj	9.1	39.4	202.5	155.1	82.8	45.1	102.9	170.3	29.3	37.6	59.7	15.3	949.1	75-86
Mabar	2.3	9.2	60.2	62.8	32.4	5.6	27.6	36.7	8.1	36.8	6.8	2.5	291.0	75-86
Madaf	3.6	9.1	30.7	31.2	20.7	4.4	8.3	28.9	2.9	0.0	2.1	2.9	144.7	82-91
Matfhaq(GDH)	0.1	8.3	24.5	72.4	30.1	9.3	33.5	45.3	16.8	1.8	3.3	5.2	250.6	84-92

Appendix 3.2

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Magash	5.5	2.7	9.3	25.7	12.9	8.1	12.4	10.6	8.7	0.7	0.1	1.5	98.2	87-91
Maghreba	24.0	40.1	68.2	99.0	55.5	29.4	51.7	101.5	41.0	15.3	24.0	16.9	566.6	80-91
Mahabish(TDA)	28.2	24.6	48.8	199.3	62.0	16.1	25.7	99.4	35.0	17.3	20.4	22.8	599.6	75-91
Mahatt	3.9	12.4	9.9	7.9	23.6	7.8	22.4	38.5	34.8	15.5	3.8	3.4	184.0	78-91
Mahwit(TDA)	14.3	23.7	39.2	122.2	113.2	42.6	77.0	94.2	59.6	17.7	22.7	2.8	629.2	82-91
Mahwit(RDPM)	13.8	9.5	17.5	115.3	82.5	66.1	101.0	173.7	67.8	5.0	12.7	8.5	673.4	86-89
Mahwit(MOA)	1.4	12.6	4.9	99.6	16.3	46.6	69.5	103.0	56.1	22.0	0.4	8.4	440.8	87-90
Mai'na	20.5	8.3	18.5	146.7	82.3	60.1	136.7	210.4	92.3	30.8	15.9	0.6	823.1	86-89
Majhiz	1.5	4.9	32.7	66.8	139.2	1.6	20.4	82.1	0.0	0.0	0.0	3.3	352.5	83-86
Majz	9.2	10.6	10.7	31.5	28.3	14.8	11.4	28.1	0.7	0.0	0.3	1.9	147.5	83-87
Makarib	2.5	3.5	18.7	23.8	29.4	0.0	2.0	20.6	0.0	0.0	0.0	13.5	114.0	83-86
Manakha(GDH)	0.3	0.0	4.0	18.3	64.1	9.9	69.3	77.7	32.9	0.5	5.0	1.8	283.8	78-80
Manakha(MOA)	0.0	0.3	23.2	66.3	105.8	32.6	49.2	35.3	15.8	0.0	0.0	0.0	328.5	83-85
Manasih	3.0	4.8	20.0	45.6	10.9	0.3	15.1	18.9	5.2	0.0	0.0	4.0	127.8	83-91
Manjidah	6.5	0.0	19.3	35.3	54.2	1.4	32.2	72.9	1.1	17.5	2.0	4.1	246.5	75-79
Magwalah	2.5	3.8	12.1	61.2	62.8	0.0	6.0	36.3	0.0	0.0	0.5	15.6	200.8	83-86
Maram	4.5	10.9	42.7	43.4	30.6	2.4	27.9	60.6	3.8	7.2	6.2	2.0	242.1	75-89
Marib(CAMA)	0.0	7.4	14.9	40.5	1.3	0.8	1.7	1.9	1.5	0.0	0.0	0.3	70.3	74-89
Masnaah	7.3	32.2	41.7	67.2	28.3	15.9	44.6	64.4	18.7	7.1	14.6	17.9	360.0	75-91
Maswarah	0.9	16.1	7.1	21.4	0.2	1.9	23.8	6.6	13.4	0.0	0.0	2.2	93.6	88-90
Mawsanah(MOA)	0.0	22.3	29.9	117.1	44.8	21.0	99.3	57.6	40.1	29.8	0.0	0.0	461.9	85-86

Appendix 3.2

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Mayan	2.0	12.7	24.3	67.0	32.7	5.6	30.6	51.9	3.2	4.6	3.3	9.7	247.6	84-92
Midi	4.3	17.0	0.1	22.7	0.2	0.1	0.4	3.3	10.9	11.6	1.4	36.8	108.8	86-91
Milth(TDA)	11.5	4.5	0.4	13.0	6.6	0.0	3.2	7.0	4.4	4.4	8.5	7.1	70.7	78-91
Mind	6.4	1.9	16.1	38.0	47.4	6.5	33.7	57.2	10.0	8.5	1.7	0.1	227.5	72-80
Mishrafah	16.7	23.2	35.6	29.0	63.8	18.3	43.9	64.9	41.9	17.1	5.3	10.7	370.4	78-91
Mokha	0.0	4.1	9.2	1.1	0.0	0.0	0.0	0.0	0.0	1.7	0.0	5.3	21.4	75-88
Muthef	8.6	8.8	22.6	49.3	25.7	6.0	17.3	29.7	3.7	2.5	1.3	7.5	183.0	82-92
NagilSam	0.0	16.3	15.6	64.8	1.8	0.8	23.4	15.5	2.3	0.0	0.0	2.7	143.2	87-91
Nuqabah	0.0	12.9	20.5	38.8	8.9	1.6	8.3	24.0	1.4	1.7	1.4	3.1	122.7	82-89
Ossefra	5.8	9.0	37.3	55.6	59.7	54.4	43.4	57.2	81.7	63.5	166.8	5.0	639.4	79-92
Qadam(MOA)	0.0	0.0	27.0	190.0	84.8	31.6	66.6	17.0	17.0	2.7	0.0	0.0	437.3	85-86
Qadam(GDH)	0.3	7.7	43.2	95.9	22.1	19.2	54.7	66.3	26.6	15.7	5.5	6.4	363.6	86-92
Qahmah(TDA)	2.7	15.7	27.3	11.3	56.9	15.9	41.0	50.5	67.6	27.3	2.4	4.5	323.1	78-91
Qarry	0.4	13.1	26.7	35.0	14.9	5.5	6.3	14.5	12.7	0.0	2.7	1.1	133.0	83-91
Qarwah	0.4	13.1	24.2	32.9	33.7	2.2	12.8	34.7	4.3	2.9	0.0	10.5	171.7	86-91
Rada'a(RIRDP)	7.9	12.4	47.5	37.6	22.4	1.9	23.7	29.9	7.5	3.0	3.2	1.1	198.0	76-91
Rahaba	0.1	16.5	16.6	53.3	1.1	1.2	15.4	7.4	3.2	0.0	0.0	1.2	116.0	87-91
Raydah	3.5	1.5	21.5	35.3	43.2	4.0	39.1	87.7	13.2	0.0	2.2	0.4	251.6	75-82
Rihab	13.3	13.5	34.0	74.9	95.4	45.9	73.6	102.8	59.6	25.9	14.1	2.3	555.3	70-91
Risabah(DAFRD)	7.6	13.8	50.7	61.7	30.6	6.4	35.9	64.1	10.0	10.4	2.9	4.7	298.8	79-90
Rizwa	2.0	5.1	63.1	86.5	53.1	7.8	24.0	43.2	9.6	8.1	13.7	5.1	321.4	75-87

Appendix 3.2

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Robei	2.6	26.5	5.6	23.8	33.8	38.9	37.3	46.2	72.4	12.5	0.6	1.1	301.3	85-91
Rubat	0.0	16.8	18.5	32.4	11.8	4.8	18.5	31.3	8.4	1.8	0.0	0.0	144.3	87-91
Rujum(GDH)	1.3	8.5	23.4	65.5	58.6	39.8	77.9	157.9	60.0	6.0	1.6	6.3	506.3	84-92
SadahSalam (GDH)	2.7	3.8	9.0	19.8	18.0	6.6	14.9	26.7	1.8	4.5	0.3	1.2	109.4	83-92
Sahwah	21.8	14.7	17.0	33.5	29.9	8.2	4.4	17.9	0.0	0.0	0.0	0.0	147.4	83-86
Saidiyah	3.3	9.7	0.0	5.8	21.9	2.2	14.3	20.8	17.9	11.5	0.0	0.0	107.4	87-91
Salf	4.5	11.9	27.0	121.5	43.5	7.2	57.0	107.6	12.9	7.9	10.4	17.3	428.7	84-92
Salif	9.5	11.0	11.7	136.8	6.0	7.0	67.3	75.0	7.3	0.0	0.0	38.5	370.1	84-90
Sama Al Ulya	2.6	5.6	33.9	47.8	32.3	0.6	40.0	68.1	17.9	10.9	3.0	1.5	264.2	75-88
Sanaban	2.6	12.1	39.9	32.3	23.1	3.2	21.6	33.3	6.9	13.8	3.0	0.0	191.9	76-88
Sanam	6.7	29.5	60.4	88.8	28.2	13.6	38.8	73.7	22.8	7.5	1.4	9.4	380.8	78-91
Sana'a Airport	5.9	12.5	18.7	39.6	17.8	5.7	25.4	36.9	5.3	8.5	3.5	3.3	183.1	68-89
Sana'a Town	5.0	7.0	26.0	50.0	31.0	5.0	50.0	77.0	6.0	6.0	8.0	4.0	275.0	32-83
Sana'a(GDH)	0.8	2.8	35.2	16.7	26.5	1.0	11.7	62.5	9.0	6.5	1.2	0.5	174.4	90-92
Sana'a	15.2	5.3	35.6	27.0	14.2	24.9	7.6	38.2	34.4	0.2	0.3	3.3	206.2	77-79
Saqayn	10.7	19.6	54.9	69.6	14.8	12.9	30.0	40.8	1.2	2.8	0.9	7.3	266.1	81-91
Shaharah	4.6	5.7	33.8	66.9	44.6	28.5	47.8	74.5	36.4	0.0	0.0	2.1	344.9	85-91
Shamir,Mahal	8.1	10.3	7.2	28.0	75.2	22.2	32.6	75.3	99.3	59.0	21.5	6.2	445.0	79-91
Shaqab	0.7	3.0	23.6	22.6	23.5	11.0	29.8	46.9	16.0	13.6	3.5	3.1	197.3	75-83
Sharq (DAFRD)	0.8	16.0	48.6	169.3	154.5	30.5	43.2	78.3	43.0	8.2	4.7	4.6	601.7	84-87
Sharq (TDA)	9.4	14.7	29.0	79.4	51.3	34.1	46.8	68.6	29.6	21.5	10.9	8.9	404.2	78-91

Appendix 3.2

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Sherwab	0.1	15.0	14.5	42.3	2.0	0.9	13.1	11.5	6.1	0.0	0.1	3.8	109.4	86-91
Shibam	3.7	9.5	36.8	82.5	46.2	25.9	70.7	101.0	11.2	7.5	5.0	5.0	405.0	75-91
Shu'tub	4.0	8.3	21.6	29.0	26.4	6.8	18.6	47.2	10.4	21.0	2.0	1.2	197.8	77-83
Sirwah	0.5	2.6	8.2	22.7	3.9	6.3	6.8	1.9	2.6	0.3	0.	2.9	58.7	87-91
Azaydiyah	0.7	1.9	0.5	16.5	6.2	0.8	7.6	23.1	26.9	18.3	1.1	4.7	108.4	86-91
Suknah	12.1	14.0	13.8	39.3	66.1	41.0	39.7	72.2	73.9	51.9	18.3	11.3	453.6	80-91
Surby	9.0	15.2	118.8	159.7	46.3	15.0	5.8	30.9	0.0	0.0	0.7	0.0	401.4	83-87
TaizYard	8.6	11.7	40.9	77.8	95.7	76.5	58.0	88.8	104.3	80.3	10.8	5.5	658.0	74-90
Tawilah	9.0	11.3	15.8	50.3	14.8	40.3	48.8	131.5	4.0	1.0	0.0	0.0	326.8	91-92
Thawban	0.2	5.2	21.3	40.5	4.7	6.3	18.0	14.3	1.2	0.0	0.0	0.6	112.3	87-92
Therhaan	3.3	0.2	3.9	18.3	28.9	3.1	20.8	4.2	2.6	0.4	0.1	0.0	85.8	80-86
Thula	1.4	25.4	105.9	78.6	45.2	42.8	54.9	170.0	30.4	13.9	13.9	3.9	586.3	75-83
Tur(TDA)	2.4	5.2	13.7	69.6	74.7	45.1	62.0	119.1	96.2	39.0	12.3	4.2	543.5	75-91
Udein(TDA)	4.1	19.1	39.2	66.9	116.9	92.0	118.2	127.7	66.7	38.0	18.0	4.6	711.4	70-91
Uwair,Bani	6.5	14.1	20.3	42.9	15.9	4.5	15.6	34.1	1.9	1.6	0.0	3.0	160.4	75-91
Wagir	4.2	14.4	7.7	27.6	29.6	23.2	29.7	53.7	88.7	49.1	1.95	1.2	331.1	80-91
Wallan	3.1	13.5	58.0	89.7	18.6	0.4	17.9	30.6	6.1	11.3	2.3	9.5	261.1	80-91
Warazan	0.7	16.0	1.6	2.8	14.3	74.0	35.4	87.8	55.7	16.3	0.1	0.0	304.7	87-91
Wash'hah/Ahim	18.0	14.3	27.8	94.3	64.7	18.7	39.7	47.9	23.6	25.0	35.6	21.0	430.6	75-91
Yarim	11.1	33.3	86.1	89.4	97.2	42.3	105.3	183.3	44.5	13.7	8.4	7.1	721.7	70-91
Yusuf,Bani	1.6	2.4	20.7	81.5	56.6	39.5	105.4	125.1	37.3	5.5	3.7	5.5	484.8	85-92

Appendix 3.2

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Zabid Town	3.8	8.3	5.5	10.7	15.6	5.4	24.9	28.6	51.4	20.9	3.7	0.8	179.6	69-91
Zabid(Gerbah)	4.3	14.4	11.5	18.3	43.9	5.0	39.3	64.8	95.6	44.9	3.9	1.9	347.8	69-91
Zhar, Wadi	4.8	6.0	10.4	19.6	28.6	2.6	34.5	66.5	4.3	0.0	6.3	2.1	185.7	76-83
Zinkah,Deir	1.5	7.7	10.2	44.7	46.3	38.2	56.9	92.04	40.5	12.2	12.6	4.3	367.8	82-91
Zuhaif	10.2	13.2	18.5	70.3	84.6	35.0	53.6	105.6	45.9	19.0	13.6	13.7	483.0	84-92
Zuhrah	5.3	2.2	2.0	21.5	19.5	1.0	3.1	13.6	29.9	19.2	1.3	14.6	133.0	79-91
Zuwab	1.6	11.4	34.1	34.1	10.1	0.8	12.3	23.4	4.0	0.5	3.2	1.4	136.8	80-92

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
A.Gharib	0.0	12.0	31.2	9.9	0.0	2.1	0.0	2.9	0.0	0.0	0.0	0.0	58.1	85-90
Al-Hagrain	0.0	5.7	6.9	12.1	0.0	0.6	2.2	2.6	1.2	0.0	2.0	0.0	33.3	88-91
Al-Haleh	0.5	8.3	9.3	21.0	0.0	1.0	11.0	14.8	7.0	0.0	0.0	0.0	72.9	85-91
Al-Jawadeh	0.0	5.9	32.5	24.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.0	88-91
Al-Khoribeh	0.0	9.4	18.5	18.9	6.1	0.7	14.4	9.0	1.3	0.0	0.0	0.0	78.3	85-91
Al-Khod	5.0	7.7	8.1	3.0	4.4	1.6	1.8	6.8	15.2	7.6	1.3	2.7	65.2	58-91
Al-Mashhad	0.0	8.6	5.1	3.4	0.0	0.0	3.7	5.1	1.9	0.0	0.0	0.0	27.8	85-91
Al-Minsaf	0.0	8.7	26.0	17.8	0.0	0.0	3.5	0.0	0.0	1.4	0.0	0.0	57.4	88-91
Al-Qatan	0.0	7.6	17.8	15.7	0.0	0.5	0.5	3.0	0.4	0.0	0.0	0.0	45.5	85-91
Al-Rudood	0.4	7.5	22.9	14.8	0.0	2.1	1.9	7.3	0.5	1.5	0.0	0.0	58.9	85-91
Al-Sufal	1.2	0.9	3.4	0.0	0.3	2.3	6.7	0.0	0.0	0.0	2.7	2.0	19.5	83-91

Appendix 3.2

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Alugubeth	0.0	6.8	8.7	37.5	0.0	0.0	3.3	4.7	3.6	0.0	1.9	0.0	66.5	85-91
Amd	1.5	2.9	7.5	15.8	6.1	2.3	1.8	6.9	0.9	0.0	0.0	0.0	45.7	88-91
Bahran	0.0	1.1	8.2	17.1	0.0	0.6	4.5	2.7	0.0	0.0	0.0	0.0	34.2	85-91
Beihan	0.0	2.6	8.4	36.0	18.5	1.3	4.9	9.7	1.3	0.0	0.9	0.0	83.6	82-88
Dhala	4.2	7.8	36.9	30.9	46.7	22.1	63.2	97.8	35.0	8.6	1.9	6.7	361.8	73-87
Fiyush	2.1	7.9	8.1	2.8	8.8	1.5	0.4	2.8	8.2	0.6	1.1	0.9	45.2	73-88
Gaidun	1.5	0.0	13.1	22.3	0.0	1.2	17.8	1.2	2.5	0.0	0.0	0.0	59.6	85-91
Ghail Bin Yumin	0.0	0.0	12.2	0.0	0.0	0.0	3.3	4.4	0.0	0.0	1.1	0.0	21.0	88-91
Giar	2.7	0.8	6.3	4.3	0.0	0.0	9.0	2.1	8.5	0.0	0.0	0.8	34.6	85-90
Gol madram	1.7	5.9	24.7	7.9	14.3	18.8	21.3	16.6	34.8	8.3	2.2	7.8	164.3	73-85
Habilin	0.6	1.6	31.6	3.4	13.8	7.0	14.0	30.4	60.0	5.7	3.5	0.0	172.7	88-92
Jueimah	0.0	18.3	31.4	19.7	0.0	8.0	3.8	0.0	0.0	2.6	0.0	0.0	83.8	88-91
Karish	0.0	33.2	14.9	7.2	20.9	6.6	22.8	27.8	51.0	1.5	0.0	0.0	186.0	74-85
Katbah	0.0	14.5	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.8	88-91
Khalla	1.5	5.0	2.8	16.9	16.7	27.3	31.3	72.2	23.4	10.2	0.7	0.0	207.2	75-83
Khormaksar	5.8	6.9	5.1	5.1	5.0	0.3	2.0	3.4	5.6	2.9	2.3	6.0	50.4	48-90
Lahej	2.0	6.9	10.0	4.9	7.7	1.0	3.2	5.9	12.8	0.5	0.5	0.2	55.6	73-91
Milah	0.0	17.3	0.8	14.8	47.3	36.7	28.5	43.2	24.0	4.0	4.7	6.2	227.5	75.78
Moudia	1.0	22.9	39.8	20.6	35.8	13.9	11.3	14.8	69.9	4.8	0.0	0.0	234.8	82-90
Mukiras (DI)	0.0	12.0	3.2	4.5	4.5	5.0	35.4	31.6	19.4	2.5	0.0	0.0	118.1	77-88
Musaimer	7.6	31.2	17.3	15.6	64.5	12.9	52.0	48.0	74.9	30.2	5.1	2.7	362.0	73-84

Appendix 3.2

STATION	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Nissab (DI)	2.2	9.3	43.3	9.9	6.7	0.1	6.8	19.6	2.0	0.2	0.0	0.0	100.1	80-83
Nuqub	1.1	10.2	23.8	9.7	4.2	1.8	10.4	12.4	1.0	1.4	0.1	0.0	76.1	82-92
Orisma	3.3	5.2	20.2	15.8	51.9	27.0	40.1	89.6	75.2	15.1	1.8	0.9	346.1	73-85
Q.Bamasood	0.0	6.4	14.1	19.1	0.0	1.2	4.7	8.4	4.7	0.0	0.0	0.0	58.6	85-91
Qasm	0.0	9.0	43.0	23.7	0.1	6.3	5.1	6.7	1.1	0.0	0.0	0.0	95.4	85-91
Riyan	2.4	17.1	10.9	25.4	1.5	0.7	1.2	1.4	1.7	4.6	6.4	3.6	76.9	73-90
Sah	0.0	0.9	10.1	15.4	0.4	5.4	0.0	12.3	1.8	1.2	0.0	0.0	47.5	85-91
Seiyun	2.9	5.2	18.0	15.5	1.7	1.7	4.7	13.4	0.5	0.9	0.5	0.2	65.2	77-92
Seiyun	5.9	4.7	6.5	13.5	1.3	5.9	1.1	13.4	0.1	0.0	0.1	0.1	52.6	80-86
Sharj Asharif	0.0	9.7	31.4	20.3	0.0	0.0	9.6	3.4	0.5	0.0	0.0	0.0	74.9	88-91
Shibam	0.0	9.5	14.5	18.8	0.0	6.7	1.9	1.2	0.2	1.2	0.0	0.0	54.0	74-91
Sidarrah	21.2	0.6	2.6	11.7	1.9	0.8	0.0	0.5	26.4	4.0	0.1	1.4	71.2	84-91
Slasil	0.0	11.4	30.1	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.8	88-91
Sobeikh	0.0	7.8	7.7	14.1	3.3	0.0	21.9	7.5	1.8	0.0	0.0	0.0	64.1	88-91
Socotra	1.1	0.0	9.8	4.5	16.3	6.0	0.0	0.0	6.2	31.2	19.6	7.8	102.9	78-89
W.Banni Ali	0.0	0.0	3.4	0.0	0.0	0.0	3.0	8.8	0.0	5.0	0.0	0.0	20.2	90-91
Yabhoodh	0.0	0.0	11.7	4.9	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	18.5	90-91

AVERAGE MONTHLY VALUES OF METEOROLOGICAL VARIABLES

Note : the meteorological data are expressed in the following units:

rain: mm relative humidity: % solar radiation: cal.day⁻¹cm⁻²
 temperature: °C wind speed (at 2 m): m/s sunshine duration: hours/day

STATION	VARIABLE	PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
Barh	rain	81-91	13.2	3.3	19.2	36.4	52.8	25	28	26.6	83	33.3	5.9	3.4	330.1	
	temp.	83-91	25.3	25.4	27.6	28.5	28.8	30.1	31.2	31.6	30.1	29.3	27.7	25.8	28.45	
	rel. hum.	83-91	72.8	74.3	74.5	69.8	72.2	67.8	66	65.3	67.8	62.5	58.1	71.3	68.5	
	wind speed	83-91	1.4	1.6	1.9	2	1.6	1.9	2.2	2.2	2.3	1.7	1.6	1.6	1.3	1.7
	solar rad.															
Dahi	daily sun	83-91	6.9	5.6	6.1	6.3	8.5	7.7	5.1	6.5	6.7	8.7	9.6	7.9	7.1	
	rain	84-92	0.8	5.0	1.6	12.6	13.8	0.8	7.1	39.2	34.5	17.1	1.3	3.7	138	
	temp.	84-91	25.1	25.5	27.7	29.3	32.3	34.1	34	34	33	30.9	28	26.8	30.1	
	relat. hum.	84-91	62.6	64.8	60.7	52.9	50.3	45.5	43.2	48.4	52.9	51.1	51.9	56.8	53.4	
	wind speed	89-91	0.98	0.91	1.11	1.04	0.87	0.90	1.32	1.32	1.16	0.85	0.91	0.99	0.99	1
	solar rad.	87-91	368	381	434	513	530	527	465	465	470	476	481	449	379	456
Dumeid	daily sun	84-88	7.26	6.38	7.05	8.01	8.09	7.28	5.26	5.16	6.03	8.40	8.51	7.22	7.35	
	rain	83-92	3.6	4.3	8.2	27.6	30.2	2.3	12.4	25.9	3.4	1.5	3.2	1.7	124.3	
	temp.	83-92	14.1	16	18.2	19.3	22.1	24	24.2	23.4	23.4	22.3	18.3	14.7	14.2	19
	relat. hum.	83-92	42.4	43.6	36.6	39.5	23.4	16	27.5	34.4	15.9	15	22	36.2	29.4	
	wind speed	87-92	1.08	1.23	1.28	1.23	1.39	1.65	1.62	1.62	1.47	1.75	1.54	1.17	1.12	1.38
	solar rad.	86-92	410	439	488	488	524	505	460	441	441	506	497	438	385	465
daily sun	83-86	8.94	9.37	7.02	7.38	7.24	7.41	6.80	6.80	6.60	7.42	8.73	9.02	9.14	7.92	

Appendix 3.3

STATION	VARIABLE	PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Dhamar	rain	83-88	0.5	25.2	36.1	71.4	54.1	3.4	37.2	84.9	15.5	4.0	0.0	5.6	338
	temp.	82-88	12.2	14	16.3	16.7	17.7	19.4	19.6	18.7	17.7	14.6	12.8	12.1	16
	relat. hum.	82-88	62.1	61.6	62.8	65.5	60.4	53.1	59.7	69.1	55.2	49.2	54.7	63.4	59.7
	wind speed	87-88	.95	1.30	.93	1.08	1.40	1.35	1.62	1.27	1.22	1.03	.89	.91	1.16
	solar rad.														
Hajjah	daily sun	82-88	9.4	8.7	8.4	7.9	8.9	8.7	7.3	6.7	8.7	9.4	9.2	6.3	8.3
	rain	86-91	10.5	16.3	62.3	88.8	61.9	27.3	73.1	82.7	34.3	1.8	5.5	11.8	476.3
	temp.	86-91	20.5	22.1	24	24.2	25	26.2	26.5	26.5	25.5	24.3	18.1	19.9	23.6
	relat. hum.	86-91	60.3	60	57.3	57.7	53.4	48.5	53.6	55.6	51.3	48	54	58.5	54.8
	wind speed	86-91	1.36	1.44	1.42	1.20	1.28	1.22	1.37	1.13	1.17	1.27	1.35	1.16	1.28
	solar rad.	86-91	336	365	439	489	528	497	429	460	495	454	375	318	433
	daily sun														
Irra	rain	86-89	0.5	1.3	12.5	51.8	10.3	1.3	36.8	51.3	7.0	0.0	1.3	9.3	183.4
	temp.	86-89	13	15.3	17.7	18.1	19.5	21.1	22.1	21.6	19	15.2	13.1	13.2	17.4
	relat. hum.	86-89	37.7	35.6	32.6	50.2	32.8	27.2	35.1	46.9	32.6	26.8	29.2	39.2	35.5
	wind speed	86-88	3.93	5.75	5.64	4.16	4.50	6.4	4.6	4.6	4.02	3.81	3.47	3.53	4.49
	solar rad.	86-89	220	200	213	211	210	183	207	204	217	207	178	160	201
	daily sun														
Jaroubah	rain	85-89	7.0	12.5	23.0	19.5	49.8	11.6	22.0	61.6	100	56.6	0.4	3.4	367.4
	temp.	85-89	25.7	27	28.6	30.9	32.5	34	34.1	33.4	32.4	30.5	28.2	26.4	30.3
	relat. hum.	85-89	63.1	64.2	63.1	55.2	56.1	52	51.7	55.4	61.9	64.8	57.7	63.7	59.1
	wind speed	85-89	2.68	2.78	2.63	2.75	3.25	3.37	4.55	4.35	2.55	2.54	2.73	2.55	3.06
	solar rad.	85-89	394	407	444	518	532	493	444	456	460	495	452	390	457
	daily sun														

STATION	VARIABLE	PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Jawf	rain	86-91	3.0	9.2	12.4	16.0	3.6	1.8	7.7	2.8	2.7	1.2	0.8	5.6	67.0
	temp.	86-91	19.5	22.7	26	26.8	28.9	31.6	32.8	32.5	29.9	25.2	21	19.6	26.5
	relat. hum.	86-91	32.2	30.3	28.5	31.9	16.6	16.5	20.3	21.8	14.8	13.4	16.6	25.4	22.3
	wind speed	86-91	2.35	2.86	2.92	2.72	2.72	2.98	5.55	5.23	3.94	3.57	3.18	0.15	3.43
	solar rad.	86-91	489	528	580	615	608	645	572	563	605	589	543	487	569
	daily sun														
Katab	rain	87-91	2.3	39.2	21.9	36.7	37.8	12	44	79	40.7	10.2	16.3	19.4	360
	temp.	87-91	9.7	10.9	12.2	13.4	15.0	15.9	16.6	16.5	14.9	11.8	8.7	8.9	12.9
	relat. hum.	87-91	42	44.2	41.6	42.7	37.9	42.6	52	53.2	46.6	37.6	32.6	32.8	42.1
	wind speed	87-91	2.05	2.13	2.06	2.02	2.28	2.32	2.41	2.11	2.18	2.19	1.93	1.90	2.13
	solar rad.	87-91	462	487	525	518	565	526	456	344	508	532	493	448	497
	daily sun														
Khabar	rain	76-92	11.4	8.9	46.5	43.1	19.8	3.4	25.5	48.1	7.3	6.4	2.9	2.0	225.3
	temp.	78-91	13.5	15.4	17.6	18.7	19.9	21.3	22.2	22.1	19.6	15.8	13.6	13.6	17.8
	relat. hum.	78-91	51.0	51.8	56.3	57.0	49.5	41.7	47.6	55.2	46.8	44.4	48.5	52.9	50.2
	wind speed	78-91	1.20	1.46	1.56	1.65	1.84	2.20	2.58	2.20	1.90	1.51	1.19	1.19	1.71
	solar rad.														
	daily sun														
Khalifah	rain	78-91	9.75	8.79	8.73	8.31	9.49	9.34	7.27	7.25	8.64	10.13	10.27	9.80	8.98
	temp.	87-91	4.3	45.3	4.9	51	31.2	27.9	18.8	78.9	132.8	78.5	0	8.6	550.8
	relat. hum.	87-91	25.7	26.9	25.2	30.8	32.8	33.6	33.9	32.9	31.6	29.4	27.8	26.4	26.8
	wind speed	90	83	86	78	69	83						52	58	62
	solar rad.														
	daily sun														
	rain	87-91	1.1	1.1	1.1	.9	.9	1	1.4	1.2	1	.9	.9	2.7	1
	temp.														
	relat. hum.														
	wind speed														
	solar rad.														
	daily sun														
	rain	87-91	6.5	5.6	5.7	7	8.4	7.1	6	7.2	8.4	8.2	8.5	8	7.2
	temp.														
	relat. hum.														
	wind speed														
	solar rad.														
	daily sun														

Appendix 3.3

STATION	VARIABLE	PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Kudeihah	rain	82-92	7.8	18.3	5.8	22.2	27.2	3.8	2.3	7.8	25.0	14.4	8.4	1.8	144.8
	temp.	83-91	27.8	28.1	30.2	31.8	32.9	33.5	33.9	33.8	32.7	31.2	28.7	26.8	30.6
	relat. hum.	83-91	66.5	72.3	68.7	69	66	64.5	64.2	64.3	62	62	61.5	65.8	65.5
	wind speed	83-91	3.1	3.1	3.1	3.1	2.5	2.6	2.8	3.1	1.9	2.3	2.9	3	2.8
	solar rad.														
Magash	daily sun	83-91	7.3	6.7	7.6	8.1	9.1	7.6	4.6	7.3	7.1	9	9.9	8.2	7.7
	rain	87-91	5.5	2.7	9.3	25.7	12.9	8.1	12.4	10.6	8.7	.7	.1	1.5	98.16
	temp.	87-91	15.6	17.4	19.8	20.4	23.3	24.5	25.3	24.8	22.8	19	15.9	14.8	20.3
	relat. hum.	87-91	48.4	46.1	40.2	42.3	25.7	27.2	35.3	41.4	26	23.2	27.1	37.9	35.1
	wind speed	87-91	2.68	3.24	2.97	2.72	3.04	2.88	3.02	2.67	3.30	2.99	2.30	2.30	2.84
	solar rad.	87-91	437	466	540	536	609	590	518	501	559	543	483	421	516
Marib-MOA	daily sun														
	rain	85-89	.8	10.7	8.3	28.7	1.3	9.5	23	4	1.5	4	3.8	4.5	79.2
	temp.	86-89	17.9	22.2	25.6	26.3	27.9	31.7	33.3	33	29.6	25	21.2	19	26.1
	relat. hum.	86-89	34.3	31.2	33.6	40	15.8	14	16.6	17.8	13.4	14.3	19.4	33.2	22.6
	wind speed	86-89	1.45	1.78	1.86	1.87	1.72	3.90	4.3	3.81	4.28	3.01	2.53	2.43	3.36
	solar rad.	86-89	464	508	522	274	604	598	548	540	584	561	510	454	514
	daily sun														
Ossefra	rain	79-92	5.8	9.0	37.3	55.6	59.7	54.4	43.4	57.2	81.7	63.5	166.8	5.0	639.4
	temp.	79-92	21.3	22.1	24.1	25.3	26.6	27.2	26.5	26.1	26.5	24.6	23.3	22.0	24.6
	relat. hum.	80-89	61.3	60.9	54.6	51.9	51.8	52.8	56.3	58.5	55.5	49.7	51.2	57.6	55.2
	wind speed	79-88	2.0	1.6	2.0	2.2	1.5	1.2	1.3	1.2	1.2	1.8	1.8	1.9	1.6
	solar rad.														
	daily sun	80-89	8.3	10.0	7.9	7.9	8.5	8.0	7.1	7.0	7.8	8.9	9.1	9.0	8.1

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STATION	VARIABLE	PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Risabath	rain	79-90	7.6	13.8	50.7	61.7	30.6	6.4	35.9	64.1	10.0	10.4	2.9	4.7	299
	temp.	81-88	12.3	14	16.5	17.3	18.6	19.3	19.6	19.3	17.6	14.3	13	11.8	16.1
	relat. hum.	88	44.65	41.65	30.1	31.95	21.3	22.5	51.2	62	58.05	40.15	43.55	47.3	41.2
	wind speed	81-88	1.86	2.14	2.19	2.07	2.22	2.35	2.51	2.38	2.18	2.03	1.80	1.71	2.12
	solar rad.														
	daily sun	81-88	9.5	9.2	8.3	7.9	8.1	8.4	6.7	6.5	8.7	10.2	10.1	9.5	8.6
Zabid (GERBA)	rain	69-91	4.3	14.4	11.5	18.3	43.9	5.0	39.3	64.8	95.6	44.9	3.9	1.9	347.8
	temp.	70-91	25.2	26.1	29.2	31	31.8	33.7	33	32.6	31.2	29.5	26.9	25.4	29.6
	relat. hum	70-91	69.3	69.3	64.4	61.5	59.2	57.1	56.4	56.6	62.3	63.9	66.6	68.8	63.0
	wind speed	79-91	1.3	1.3	1.6	1.6	1.7	1.6	1.9	2.2	1.5	1.1	1.1	1.1	1.5
	solar rad.														
	daily sun	79-91	7.2	6.9	6.7	7.8	8.2	6.8	5	6.1	7.3	8.9	9.5	8	7.4
Zuhrah	rain	79-91	5.3	2.2	2	21.5	19.5	1	3.1	13.6	29.9	19.2	1.3	14.6	133
	temp.	80-91	25.6	26.7	28.5	30.3	32	33.5	33.6	33.3	31.9	30.3	28.1	27.3	30.3
	relat. hum.	86-91	68.8	66.6	65.3	62	64	63.8	61.6	63.2	59	52.5	50.9	56.7	61.2
	wind speed	80-91	2.1	1.7	1.9	1.8	1.7	1.7	2	1.9	2	1.3	1.3	1.5	1.7
	solar rad.														
	daily sun	80-91	5.6	5.5	4.7	7.3	6.7	4.9	5.2	5.2	6.4	7.6	8.7	7.1	6.2
Sana'a (CAMA)	rain	68-89	5.9	12.5	18.7	39.6	17.8	5.7	25.4	36.9	5.3	8.5	3.5	3.3	183.1
	temp.	83-90	?	16.8	19.1	19.6	21.9	23.5	24	23.5	21.4	18.5	15.7	13	19.2?
	relat. hum.	83-90	46.3	49.9	49.4	57.8	43.8	41	35.8	47.7	39.4	38.7	39.5	39.4	44
	wind speed	85-87	2.8	2.7	3.2	4.4	3.8	4.8	4.6	4.3	3.2	2.9	2.4	2.8	3.5
	solar rad.	85-89	340	379	411	382	456	424	402	393	444	431	342	334	395
	daily sun	86-89	10.4	4.6	4.2	7.7	10.1	9.6	7.8	7.6	9.5	10.6	10.2	9.6	8.5

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STATION	VARIABLE	PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Sana'a (GDH)	rain	90-92	0.8	2.8	35.2	16.7	26.5	1	11.7	62.5	9	6.5	1.2	.5	174.4
	temp.	90-92	15.5	17.2	16.6	19.6	21.4	23.1	22.1	26.3	21.2	18.2	14.7	16.3	19.4
	relat. hum.	90-92	35.6	36.6	35.6	33.7	43.6	29.6	34.3	34.2	16.2	14.6	20.5	33.2	30.6
	wind speed	90-92	1.2	1.3	1.2	2.2	.99	1.04	.86	1.1	1.1	.9	.6	.7	1.1
	solar rad.	91-92	400	433	530	553	547	613	454	472	540	545	446	408	495
	daily sun														
Hudaydah	rain	63-89	8.8	9.8	9.7	19.7	4.7	0.1	16.5	14.0	6.2	2.1	2.6	7.3	101.5
	temp.	83-90	25.1	26.1	27.3	29.6	31.4	32.7	33	32.6	32	30.3	27.1	25.4	29.4
	relat.hum.	83-90	79.5	79.8	81.3	80.1	78.3	75.6	74.4	73.9	70.8	75	74.4	79.5	76.9
	wind speed	83-90	4.9	5.2	5.2	4.8	5.3	4.0	4.6	4.6	4.1	4.3	4.6	5.0	4.7
	solar rad.	84-88	415	413	454	507	492	466	413	436	426	464	442	402	444
Mukha	rain	75-79	0.0	4.1	9.2	1.1	0.0	0.0	0.0	0.0	0.0	1.7	0.0	5.3	21.4
	temp.	83-90	25.4	25.8	27.4	29.1	31.1	32	32.4	32.2	32.2	29.4	27.5	25.7	29.2
	relat.hum.	84-90	75.4	73.4	72.8	73.5	74.5	75.8	75.4	77.2	75	71.4	70.4	74.1	74.1
	wind speed	83-90	6.3	5.2	6.1	5.4	4.2	2.3	2.0	2.3	2.9	6.0	8.0	5.7	4.7
	daily sun	84-88	6.8	8.9	8.7	9.2	8.7	6.7	6.0	7.2	7.4	9.9	10.2	9.3	8.3

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STATION	VARIABLES	PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Al-Khod	rain	58-91	5	7.7	8.1	3	4.4	1.6	1.8	6.8	15.2	7.6	1.3	2.7	65.2
	temp.	76-91	23.1	23.6	26.3	26.2	29.6	29.1	26.9	26.2	26.1	24.1	23.5	21.4	25.5
	relat. hum.	58-68, 71-91	75	76	77	76	77	74	74	75	77	76	74	74	75
	wind speed	72-91	1.8	1.9	1.9	1.7	1.5	1.6	1.8	1.6	1.4	1.4	1.2	1.6	1.6
	daily sun	58-68, 76-91	8.1	8.5	8.5	8.9	10.2	8.9	7.9	8.4	8.6	10	10.4	8.7	8.9
Giar	rain	85-90	2.7	0.8	6.3	4.3	0.0	0.0	9.1	2.1	8.5	0.0	0.0	0.8	34.6
	temp.	85-90	23.6	25.6	26.1	27.6	29.3	31.5	31.3	31.5	30.5	28	25.6	24.8	28
	relat. hum.	85-90	70.3	66.5	67.8	63.8	61.3	59.2	61.4	60	67.2	67.4	62.8	68.5	64.7
	wind speed	85-90	1.80	2.10	2	2	1.50	2.10	1.60	1.50	1.50	1.90	1.70	1.90	1.8
	solar rad.														
	daily sun	85-90	7.04	7.7	8.02	9.1	8.7	8.7	7.8	8.4	8.8	9.9	13.3	8.4	8.8
Nuqub	rain	65-66, 82-92	0.9	9.41	20.14	12.93	3.52	1.5	8.82	11.35	0.83	1.19	0.08	0.0	70.64
	temp.	65-66, 78-79, 82-92	18.7	20.6	23.3	23.4	27.1	30.6	31.7	29	28.1	26.1	21.5	18.1	24.9
	relat. hum.	65-66, 83-92	39	38	35	40	31	27	28	34	32	34	36	31	34
	wind speed	83-87, 90-91	1	1.5	1.9	2	1.6	1.4	1.7	2	1.6	1.4	1	1.3	1.5
	solar rad.	83-88	396	408	403	434	464	444	367	402	401	426	425	370	411

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STATION	VARIABLES	PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Dhala	rain	73-87	4.2	7.8	36.9	30.9	46.7	22.1	63.2	97.8	35.0	8.6	1.9	6.7	361.8
	temp.	77-87	17.9	19.1	20.8	22.4	24	26.4	25	24.8	23.9	21.4	19.1	18.9	22
	relat. hum.	77-82, 86-87	55	55	57	32	29	38	35	34	33	33	50	39	41
	wind speed	77-87	1.1	1.3	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.8	0.7	0.8	0.8
	solar rad.														
	daily sun														
Fiyush	rain.	73-88	2.14	7.9	8.2	2.8	8.8	1.5	.4	2.8	8.3	.6	1.1	.9	45.4
	temp.	73-86	24.2	24.4	26.2	28.7	30.8	32.6	32.5	32.2	31	27.8	25.5	24.6	28.4
	relat. hum.	73-85	71	69	68	64	65	62	63	62	69	67	66	40	66
	wind speed	73-88	0.5	0.7	0.7	0.6	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.6
	solar rad.	73-79, 83-86	371	424	481	508	512	502	466	466	463	468	461	412	406
	daily sun	80-91	7.6	7.7	7.6	8.5	9.6	8	7.6	7.8	7.8	8.8	8.7	8.3	8.2
Lahej	rain	73-91	2.0	6.9	10.0	4.9	7.7	1.0	3.2	5.9	12.8	0.5	0.5	0.2	55.6
	temp.	73-88	24.6	24.8	26.2	28.3	30.3	32.4	32.2	32.1	30.8	27.7	25.8	24.3	28.3
	relat. hum.	73-88	73	75	74	70	67	62	62	63	69	67	66	70	68.1
	wind speed	73-88	1.13	1.20	1.23	1.11	1.13	.98	1.14	1.14	1.01	1.16	1.04	1	1.11
	solar rad.	74-86	360	366	444	462	465	459	437	456	419	454	430	385	428
	daily sun	73-90	7	7.5	7.8	8.9	9.5	8.6	7.4	7.8	8	8.7	9.1	7.8	8.1
Seiyun	rain	77-92	2.9	5.2	18.0	15.5	1.7	1.7	4.7	13.4	0.5	0.9	0.5	0.2	65.2
	temp.	77-92	18.8	22.1	20.8	27	30.4	32.1	32.8	31.9	29.3	24.8	21.2	21	26
	relat. hum.	77-92	55	50	46	43	37	32	33	36	40	40	44	51	42
	wind speed	77-92	0.8	1.0	1.1	1.1	1.1	1.1	1.0	1.3	1.2	1.0	0.9	0.7	1.0
	solar rad.	86-89	414	428	462	546	560	500	485	466	493	469	421	376	468
	daily sun	80-91	7.9	8.7	9.0	8.9	10.1	8.9	8.1	8.1	9.1	10.6	9.3	8.8	8.9

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STATION	VARIABLES	PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Sufal	rain	83-91	1.2	0.91	3.4	0.0	0.3	2.3	6.7	0.0	0.0	0.0	2.7	2.0	19.5
	temp.	88-89	23.5	25.3	26.5	27.8	30.5	32.1	33.7	32.4	32.0	27.0	25.8	23.3	28.3
	relat. hum.	84-89	81	72	71	74	76	69	62	61	68	72	81	70	71
	wind speed	78-88	2.5	2.8	2.9	2.8	2.7	3.2	3.0	3.3	3.2	2.2	2.3	3.0	2.8
	solar rad.	78-88	305	338	380	411	379	422	427	272	332	355	324	322	320
	daily sun	78-86	8.1	8.7	10.4	8.7	10.4	8.3	6.8	6.9	5.5	9.9	9.6	8.8	8.5
Mefriah	rain	75	0.0	0.0	0.0	0.0	15.9	15.9	24.5	27.3	43.4	0.0	0.0	0.0	127
	temp.	78-82	23.3	23.6	25.4	27.0	29.4	32.3	32.5	33.0	30.1	27.4	26.8	24.9	27.9
	relat. hum.	78-82	64	66	63	59	64	55	50	57	64	61	58	64	60
	wind speed	78-82	1.6	1.6	2.2	1.8	1.9	1.9	1.7	1.8	1.9	2.3	1.4	1.6	1.8
	solar rad.	78-80	284	303	321	370	374	427	334	400	363	521	513	450	388
	daily sun	78-79	6.9	0.6	10.1	9.9	10.2	6.1	7.6	7.9	6.7	8.0	6.0	6.8	7.8
Mukiras	rain	77-88	0.0	12.0	3.2	4.5	4.5	5.0	35.4	31.6	19.4	2.5	0.0	0.0	119.1
	temp.	77-80,'88	13	13.9	16.7	17.7	19.5	22.8	20.9	20.6	19.4	16.4	14.3	13.2	17.4
	relat. hum.	77-80,'88	65	69	49	53	53.5	44.6	62	61	59	57.5	47.5	53	56.2
	wind speed	77-80,'88	0.79	1.81	1.92	1.96	1.37	1.30	1.15	1.14	1.18	1.41	2.14	1.42	1.47
	solar rad.	77-80,'88	215	257	413	316	367	290	243	288	299	398	374	347	317
	daily sun	78-79, 87-88	7.5	10	10.1	8.9	7.6	7.3	8.2	7.7		10.9			8.7
Nissab	rain	80-83	2.2	9.3	43.3	9.9	6.7	0.1	6.8	19.6	2.0	0.2	0.0	0.0	100.1
	temp.	80-84	19.1	21.9	24.8	26.6	28.5	30.8	32.3	31.2	28.7	24.4	21.4	18.9	25.7
	relat. hum.	80-84	49	54	51	47	42	36	42	44	42	42	46	48	75
	wind speed	80-83	1.8	1.9	2.2	1.7	1.6	1.6	2.1	2.0	1.7	1.4	1.3	1.3	1.7
	solar rad.														
	daily sun	80-84	9.7	8.9	9.8	9.5	10.7	10.2	8.4	9.0	9.7	10.4	10.2	9.9	9.7

Appendix 3.3

STATION	VARIABLES	PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Beihan	rain	82-88	0.0	2.6	8.4	36.0	18.5	1.3	4.9	9.7	1.3	0.0	0.9	0.0	83.6
	temp.	83-85	18.6	19.7	24.7	28.3	29	29.6	31.6	31.4	28.3	22.4	20	18.2	25.2
	relat. hum.	83-85	41	37	45	40	30	28	42	32	30	36	42	42	37
	wind speed	83-85	0.9	1.1	1.3	1.1	0.8	0.5	0.4	0.4	0.6	0.9	0.6	0.6	0.8
	solar rad.	84-88	413	323	425	421	416	414	366	372	401	438	406	371	397
	daily sun														
Socotra	rain	78-89	1.1	0.0	9.8	4.5	16.3	6.0	0.0	0.0	6.2	31.2	19.6	7.8	102.9
	temp.	78-82	26.0	26.2	27.8	29.6	31.1	33.4	32.0	31.7	29.4	27.0	26.7	25.7	28.9
	relat. hum.	78-82	68	66	66	65	66	48	45	45	77	72	68	68	63
	wind speed	78-82	1.6	1.6	1.5	1.1	1.5	3.2	3.7	2.8	1.9	1.2	1.5	1.3	1.9
	daily sun	78-82	6.7	8.2	8.4	8.8	7.8	7.7	9.3	7.2	9.8	9.8	8.9	7.7	8.4

AVERAGE MONTHLY AND ANNUAL RUNOFF (in Mm³)

WADI	CATCHM. AREA (km ²)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	PERIOD
Mawr	7912	4.35	4.99	9.07	23.65	16.34	10.63	15.18	30.16	17.25	8.20	6.12	6.78	162.3	75-92
L'ah	1140	1.06	0.70	1.07	2.35	3.40	2.50	0.90	5.20	6.50	4.60	1.70	1.60	31.6	75-77
Surdud	2370	2.76	2.48	2.73	6.53	8.19	4.00	5.01	11.64	7.51	4.50	4.01	2.65	69.3	65-67, 84-91
Rima	2250	2.62	1.66	6.43	9.78	15.71	6.04	17.53	18.38	8.13	4.33	3.75	2.63	98.9	76-85
Zabid	4632	2.93	2.71	4.67	9.13	14.58	9.86	18.64	25.30	17.97	9.88	5.48	3.73	125.0	70-92
Rasyan	1990	0.48	1.09	0.74	1.41	1.40	1.47	0.88	0.89	2.02	2.56	0.66	0.19	11.9	81-84, 87-92
Tuban	5060	0.89	0.52	0.25	4.58	8.83	8.87	12.37	27.67	31.00	9.53	3.24	1.69	109.4	73-80
Rabwa	460	0.03	0.40	0.72	0.50	0.60	0.09	0.32	0.96	1.77	0.65	0.01	0.00	5.76	73-89
Bana	6200	2.37	2.87	5.15	18.19	14.30	5.83	21.08	44.49	23.89	8.32	3.15	2.71	169.9	51-77
Ahwar	6410	0.23	3.03	35.84	10.26	10.37	1.06	3.11	3.26	10.55	1.22	0.29	0.00	70.9	72-89
Adhanah	8300	0.00	6.24	9.08	36.33	14.93	0.63	2.47	10.82	0.94	4.05	0.21	1.83	87.5	87-94
Amd/Doan	6553													20.3	77,78-81
Al Ayn	1500													9.68	77,78-81
Sarr	2540													3.00	77,78-81
Bin Ali	720													4.15	77,78-81
Juaymah	760													0.75	77,78-81
Idim	5485													41.3	77,78-81
Thitbi	718													1.90	77,78-81
Masila	22500													51.0	77,78-81

Note : The mean annual flow volume is calculated as the mean of available complete annual flow volumes. The figure may differ from the sum of the monthly means if data for some of the months are missing.

MONTHLY AND ANNUAL FLOW VOLUMES, WADI MAWR - SHAT AL ERG (in Mm³)

Source of data: TDA, 1993

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1975	6.90	5.40	6.30	19.66	8.23	24.17	25.02	27.41	17.78	9.81	5.11	6.39	162.2
1976	4.45	4.01	6.38	22.84	18.03	13.33	23.77	33.32	24.02	11.79	10.96	10.45	183.4
1977	11.59	8.95	10.96	38.84	33.83	13.11	12.06	9.62	14.32	27.75	18.26	16.62	215.9
1978	20.71	19.27	17.36	20.14	40.12	20.28	36.11	50.65	42.88	27.50	28.33	21.11	344.5
1979	---	---	*5.80	5.46	18.53	3.41	9.75	---	---	---	---	*6.85	---
1980	3.40	*1.14	*0.19	7.94	*13.34	5.54	7.09	*65.65	19.53	*0.98	3.43	2.11	---
1981	*1.34	---	*5.68	*44.98	*26.24	*12.62	18.65	*14.76	8.08	4.09	3.25	---	---
1982	---	*0.14	6.05	35.40	26.11	8.45	12.10	31.14	*3.87	---	---	---	---
1983	3.43	6.90	5.12	14.95	12.06	14.95	6.44	7.21	7.30	3.55	2.29	1.35	85.6
1984	1.49	1.62	*0.80	*5.40	*20.16	*2.86	7.54	10.13	5.40	2.09	1.63	1.30	---
1985	3.28	1.13	16.17	40.65	16.32	8.39	14.08	18.38	10.68	4.65	2.07	2.37	138.2
1986	1.71	2.00	11.85	45.98	23.50	8.16	18.13	30.40	23.62	7.45	5.94	6.81	185.6
1987	1.99	3.06	11.67	23.82	13.64	4.88	5.21	24.06	6.16	2.09	1.42	1.48	99.5
1988	1.81	2.42	2.55	6.93	2.42	7.33	15.92	19.07	13.31	4.22	2.78	2.30	81.0
1989	1.78	1.57	13.71	40.88	10.00	23.78	8.16	33.06	13.16	3.24	0.98	1.42	151.7
1990	1.18	7.85	11.63	28.27	4.73	10.50	11.80	12.18	5.93	2.10	1.11	0.84	98.1
1991	0.89	5.08	6.78	25.02	12.90	1.00	13.90	15.04	8.02	2.44	1.94	4.00	97.0
1992	0.64	0.64	0.42	1.62	4.72	2.88	27.47	130.74	55.82	10.16	8.41	23.29	266.8
MEAN	4.35	4.99	9.07	23.65	16.34	10.63	15.18	30.16	17.25	8.20	6.12	6.79	162.3

* = data not complete

--- = data missing

MONTHLY AND ANNUAL FLOW VOLUMES, WADI SURDUD - FAJ AL HUSSEIN (in Mm³)

Source of data: WRAY/GDH (Mahyoub and Kamphuis, 1993)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1965	5.73	5.52	5.76	7.31	4.90	4.72	8.54	12.05	5.60	6.19	6.66	4.18	77.2
1966	4.15	3.53	3.56	4.51	5.68	4.92	6.21	7.63	5.00	4.90	4.82	2.76	57.7
1967	2.33	1.77	3.03	7.98	6.00	5.18	5.46	28.39	14.46	9.45	6.48	3.32	93.9
1984	2.14	1.73	1.90	1.43	16.82	4.92	7.12	6.32	9.23	2.41	1.81	1.90	57.7
1985	1.61	1.28	2.33	13.30	12.91	4.12	5.01	7.58	6.01	1.69	2.26	2.12	60.2
1986	2.06	2.40	(3.16)	9.23	10.87	(4.28)	(8.79)	19.26	(6.89)	5.73	5.52	3.03	
1987	2.51	1.84	2.05	(13.6)	7.90	3.91	2.76	9.87	(3.11)	(2.01)	(1.68)	(1.47)	
1988	1.55	1.74	1.62	(5.65)	---	---	---	(20.9)	10.65	3.69	3.63	2.91	
1989	(2.33)	(1.08)	---	(15.0)	(1.99)	(0.22)	---	(2.0)	(0.24)	---	(1.61)	---	
1991	---	---	1.55	1.92	0.46	0.22	0.61	2.00	1.63	1.90	0.88	0.98	
MEAN	2.76	2.48	2.73	6.53	8.19	4.00	5.01	11.64	7.51	4.50	4.01	2.65	69.3

() = based on incomplete data or estimated values

--- = data is missing

MONTHLY AND ANNUAL FLOW VOLUMES, WADI RIMA - MISHRAFA
(in Mm³)

Source of data: TDA, 1993

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1976	1.72	1.11	4.84	26.72	19.34	15.44	10.45	10.65	7.16	3.42	3.67	1.40	105.9
1977	3.12	2.51	1.75	12.21	20.67	9.11	9.57	29.82	7.88	9.07	10.15	7.80	123.7
1978	8.37	---	---	---	---	---	---	---	4.46	3.36	3.00	2.84	---
1979	2.04	1.43	27.44	4.10	33.59	7.84	79.53	55.88	24.50	3.28	1.99	2.03	243.7
1980	1.60	1.53	1.64	2.35	7.20	4.71	7.98	11.97	6.49	2.34	2.19	1.22	51.2
1981	---	---	---	15.90	8.78	4.93	9.31	20.84	6.30	2.88	0.93	0.57	---
1982	2.49	1.53	5.52	5.45	8.57	2.70	7.60	8.92	5.89	11.68	11.03	5.28	76.7
1983	1.97	4.21	3.72	7.77	10.59	4.01	6.49	6.62	5.59	1.69	1.40	1.29	55.4
1984	1.48	0.63	4.95	0.70	21.42	3.64	17.50	9.81	5.79	2.47	1.79	2.23	72.5
1985	0.79	0.36	1.59	12.84	11.23	2.01	9.34	10.94	7.27	3.15	1.34	1.65	62.5
MEAN	2.62	1.66	6.43	9.78	15.71	6.04	17.53	18.38	8.13	4.33	3.75	2.63	98.9

--- = data is missing

MONTHLY AND ANNUAL FLOW VOLUMES, WADI ZABID - KOLAH (in Mm³)

Source of data: TDA, 1993

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970	2.87	1.31	3.12	6.83	5.85	6.31	24.27	20.52	15.95	16.53	3.62	2.79	110.0
1971	3.25	2.16	5.01	5.11	13.21	8.13	18.49	27.52	25.78	8.78	5.80	2.99	126.2
1972	3.61	2.39	5.69	10.99	12.27	12.58	25.57	21.73	15.56	6.46	4.47	4.05	125.4
1973	3.87	2.03	1.29	2.18	5.59	7.00	12.82	31.23	17.99	6.73	0.03	1.99	94.8
1974	2.12	1.43	6.82	4.97	17.10	9.80	22.90	39.71	30.03	11.54	3.22	2.16	151.8
1975	2.50	2.36	3.23	9.31	5.03	10.26	39.36	83.50	50.27	17.00	7.58	5.71	236.2
1976	2.23	5.09	4.92	11.39	27.84	19.54	20.65	24.37	19.14	9.70	9.06	4.37	161.3
1977	5.29	3.55	3.37	8.25	34.53	15.73	11.58	19.53	29.55	48.09	36.23	21.88	237.5
1978	10.08	11.11	3.33	4.57	5.97	13.45	36.92	48.51	24.17	12.12	11.43	7.07	188.7
1979	6.02	8.07	10.26	18.31	14.06	23.25	55.57	30.46	10.00	4.92	3.83	---	184.8
1980	3.68	2.95	4.21	4.29	20.53	22.01	9.70	12.49	13.04	9.40	2.92	2.50	108.1
1981	1.12	0.92	26.90	15.02	23.65	13.87	25.48	19.58	14.76	6.93	3.39	2.42	154.0
1982	3.92	2.24	4.00	5.59	3.63	3.83	10.87	11.21	21.12	10.30	11.94	4.55	93.2
1983	3.76	4.11	4.04	46.77	12.28	5.24	9.79	8.41	13.62	5.17	2.88	2.28	118.4
1984	3.82	2.94	2.50	0.81	59.93	6.66	9.66	14.54	8.45	4.97	3.20	3.26	120.7
1985	2.06	1.85	1.04	7.87	7.96	7.05	7.88	8.96	8.61	3.54	1.50	1.05	59.4
1986	1.10	1.26	2.75	6.47	9.33	5.98	7.23	13.18	12.70	12.63	2.69	1.20	76.5
1987	1.32	1.13	7.76	9.14	12.91	8.28	13.42	26.64	20.07	7.22	1.32	0.69	109.9

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1988	1.20	0.93	0.43	14.34	4.75	5.14	12.53	39.10	12.15	5.56	1.64	1.26	99.9
1989	1.45	2.38	1.08	10.46	5.05	11.45	12.53	22.98	11.81	3.98	1.16	0.83	85.2
1990	1.23	1.45	0.63	3.90	8.42	2.86	20.47	29.22	16.99	3.20	0.49	0.30	45.8
1991	0.47	0.37	4.84	2.10	13.08	2.49	6.29	8.55	5.29	1.54	6.96	8.41	98.1
1992	0.46	0.29	0.17	1.42	12.32	5.96	14.76	20.06	16.30	10.99	0.61	0.34	89.3
MEAN	2.93	2.71	4.67	9.13	14.58	9.86	18.64	25.30	17.97	9.88	5.48	3.73	125.0

---- = data is missing

MONTHLY AND ANNUAL FLOW VOLUMES, WADI RASYAN - GORGE (in Mm³)

Source of data: TDA, 1993

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1981	0.40	0.02	0.62	3.94	---	---	*	*	---	5.65	1.49	---	---
1982	1.80	1.28	0.97	1.40	4.90	3.14	1.40	1.09	2.90	1.70	1.90	---	---
1983	0.76	3.55	2.13	4.51	3.12	4.12	1.72	0.85	2.43	2.84	1.55	0.72	28.3
1984	0.87	0.87	0.76	0.26	1.85	2.49	2.18	2.55	5.44	3.08	0.62	0.17	21.1
1985	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	---	---	---	---	---	---	---	---	---	---	0.08	0.03	---
1987	0.02	0.11	0.09	0.62	0.09	0.07	0.05	0.04	0.04	2.54	0.12	0.15	3.9
1988	0.09	1.46	1.32	1.02	0.29	1.15	0.79	0.93	1.25	1.76	0.42	0.23	10.7
1989	0.20	2.28	0.37	0.41	0.17	0.41	0.29	0.16	1.02	1.10	0.20	0.12	6.7
1990	0.15	0.15	0.29	0.48	0.61	0.26	0.50	0.17	1.35	1.51	0.13	0.07	5.7
1992	0.07	0.07	0.07	0.07	0.15	0.10	0.13	1.30	1.72	2.90	0.10	0.00	6.7
MEAN	0.48	1.09	0.74	1.41	1.40	1.47	0.88	0.89	2.02	2.56	0.66	0.19	11.9

--- = data is missing

MONTHLY AND ANNUAL FLOW VOLUMES, WADI TUBAN - DUKEIM
(in Mm³)

Source of data: GDC, 1981b

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1973	0.46	0.32	0.21	0.19	0.42	7.90	8.20	26.00	18.00	0.58	0.34	0.20	62.8
1974	0.19	0.08	0.09	0.75	9.50	13.40	13.40	21.10	18.10	2.85	1.18	0.56	81.2
1975	0.33	0.52	0.29	19.70	3.09	3.79	8.80	16.10	52.90	6.97	1.85	1.25	116.0
1976	0.80	0.51	0.35	5.55	5.13	4.58	6.77	7.28	6.79	3.91	2.99	1.16	45.8
1977	0.65	0.15	0.07	1.69	27.60	26.50	33.60	58.90	42.70	19.10	7.76	3.77	222.0
1978	1.91	1.65	0.52	0.55	13.10	3.04	4.67	48.70	57.10	30.70	5.92	2.13	170.0
1979	1.38	0.27	0.12	4.00	4.89	1.58	11.80	19.40	34.80	7.32	3.53	2.75	91.8
1980	1.40	0.65	0.35	4.18	6.93	10.20	11.70	23.90	17.60	4.83	2.31	1.68	85.7
MEAN	0.89	0.52	0.25	4.58	8.83	8.87	12.37	27.67	31.00	9.53	3.24	1.69	109.4

MONTHLY AND ANNUAL FLOW VOLUMES WADI RABWA - SABA WEIR (in Mm³)

Source of data: Selkhozpromexport, 1990a

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1973	0.00	0.00	0.00	0.00	5.00	0.00	0.10	0.65	0.00	0.00	0.00	0.00	5.75
1974	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.00	5.82	0.00	0.00	0.00	6.32
1975	0.00	0.00	0.00	2.72	0.00	0.13	0.12	2.11	3.20	0.94	0.00	0.00	9.22
1976	0.00	0.00	0.00	0.45	0.25	0.00	0.75	0.50	0.45	0.55	0.00	0.00	2.95
1977	0.00	0.00	0.00	0.00	0.36	0.29	0.73	0.69	0.16	8.16	0.00	0.00	5.40
1978	0.00	0.80	0.00	0.00	0.00	0.00	0.95	1.05	2.15	0.00	0.00	0.00	4.95
1979	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.13	0.00	0.00	0.00	1.11
1980	0.00	0.00	0.00	0.72	0.00	0.00	0.00	2.48	0.00	0.00	0.00	0.00	3.20
1981	0.00	0.00	0.54	0.74	0.00	0.00	0.16	0.50	0.25	0.00	0.00	0.00	2.19
1982	0.00	3.16	7.30	0.00	0.92	0.00	0.00	0.37	5.63	0.20	0.18	0.00	17.76
1983	0.00	2.26	0.29	3.00	1.47	0.27	2.26	0.28	2.10	0.00	0.00	0.00	11.93
1984	0.00	0.00	0.00	0.00	0.42	0.90	0.00	0.48	0.40	0.00	0.00	0.00	2.20
1985	0.00	0.00	0.00	0.00	1.58	0.00	0.00	0.04	2.90	0.00	0.00	0.00	4.51
1986	0.35	0.20	0.30	0.75	0.00	0.00	0.00	3.20	1.30	0.25	0.00	0.00	6.35
1987	0.00	0.00	1.14	0.11	0.00	0.00	0.11	1.99	3.02	0.89	0.00	0.00	7.25
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	2.57	0.00	0.00	0.00	3.48
1989	0.20	0.40	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.27
MEAN	0.03	0.40	0.72	0.50	0.60	0.09	0.32	0.96	1.77	0.65	0.01	0.00	5.76

MONTHLY AND ANNUAL FLOW VOLUMES WADI BANA - BATAIS (in Mm³)

Source of data: Sogreah, 1980b

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1951	---	---	14.00	10.50	11.00	1.60	13.80	115.50	14.60	3.60	1.50	2.00	188.1
1952	1.50	0.80	1.10	11.20	2.70	3.70	11.70	54.30	32.60	0.50	0.40	0.90	121.4
1953	0.20	0.10	0.20	33.30	2.40	3.30	50.00	38.50	32.40	3.80	3.90	10.80	178.9
1954	1.40	2.40	13.50	10.60	8.80	14.60	66.60	88.10	43.20	16.30	7.30	6.10	278.9
1955	14.60	2.60	6.10	4.50	6.00	8.60	20.20	37.50	54.80	4.30	2.80	4.20	166.2
1956	2.30	1.30	0.60	12.90	1.10	2.00	14.80	51.30	18.50	20.50	1.50	1.20	128.0
1957	1.30	4.80	6.10	56.00	88.00	18.00	18.00	62.40	13.80	5.70	7.30	5.20	286.6
1958	5.70	3.80	2.50	10.30	0.30	2.10	17.30	31.50	6.40	2.20	2.10	1.80	86.0
1959	1.80	1.60	1.00	0.50	8.80	3.00	12.80	52.00	39.80	4.20	2.40	2.90	130.8
1960	1.90	1.70	13.50	21.20	30.30	2.00	10.00	11.70	17.80	14.00	1.10	2.30	127.5
1961	1.10	1.50	1.00	5.40	1.10	4.80	12.10	39.70	18.20	2.10	2.40	1.30	90.7
1962	0.40	0.40	3.10	5.80	2.80	11.60	8.00	67.80	46.70	2.10	1.40	1.20	151.3
1963	2.20	1.00	0.60	77.00	49.30	8.80	37.40	57.00	17.10	6.70	5.60	2.10	264.8
1964	2.00	1.50	0.50	37.30	4.30	4.50	50.60	62.30	33.60	12.50	2.50	3.90	215.5
1965	2.90	0.60	0.20	25.80	0.60	0.10	20.90	46.10	15.50	3.40	7.40	1.40	124.9
1966	2.20	7.60	1.20	4.60	---	3.10	11.70	29.50	32.30	2.70	1.90	0.20	
1967	---	---	3.80	18.20	50.70	---	41.40	20.90	13.60	---	---	---	
1968	0.30	6.10	1.80	24.70	11.00	7.00	48.40	40.70	27.50	4.90	6.00	0.50	178.9

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1969	3.10	4.80	12.80	6.70	8.70	---	4.20	57.70	31.60	0.70	1.60	4.50	
1970	3.90	0.90	30.50	15.60	5.30	---	22.30	39.70	12.30	6.70	0.10	0.30	
1971	0.20	---	5.20	5.10	27.60	11.00	9.40	13.50	10.50	---	---	---	
1972	---	---	---	---	---	---	---	---	---	---	---	---	
1973	0.20	---	---	---	0.80	0.70	0.80	8.70	20.00	64.20	0.20	---	
1974	---	2.00	2.60	0.20	5.90	6.20	10.30	---	---	---	---	3.20	
1975	---	---	---	---	---	---	---	---	---	---	---	---	
1976	---	13.00	1.00	19.70	13.30	5.60	8.80	5.40	3.30	2.00	6.80	0.90	
1977	0.60	1.70	0.70	19.40	2.30	6.00	5.60	36.00	17.30	---	---	---	
MEAN	2.37	2.87	5.15	18.19	14.30	5.83	21.08	44.49	23.89	8.32	3.15	2.71	169.9

--- = data is missing

MONTHLY AND ANNUAL FLOW VOLUMES, WADI AHWAR - FUAD WEIR (in Mm³)

Source of data: Selkhozpromexport, 1990b

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1972	0.90	36.00	16.60	13.70	11.30	0.00	0.00	0.00	7.94	0.00	0.00	0.00	86.4
1973	0.00	0.00	0.94	0.00	6.27	0.00	0.00	0.00	9.05	0.00	0.00	0.00	16.3
1974	0.00	0.00	0.00	0.00	1.30	2.40	0.60	2.40	76.00	0.00	0.00	0.00	82.8
1975	0.00	0.00	0.00	11.30	0.00	0.00	0.00	0.00	16.60	0.00	0.00	0.00	27.9
1976	0.00	0.00	22.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.8
1977	0.00	0.00	0.00	51.00	109.90	0.00	0.00	0.16	0.59	5.20	0.00	0.00	16.5
1978	0.00	5.67	0.18	0.00	5.56	0.00	2.64	0.17	0.41	3.49	0.00	0.00	18.1
1979	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.38	0.27	0.00	0.05	0.00	1.0
1980	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40	12.50	2.70	0.00	0.00	17.6
1981	0.00	0.00	129.40	0.00	0.00	0.00	1.48	1.15	1.56	2.00	0.00	0.00	136.0
1982	0.00	0.00	225.00	0.00	16.50	0.00	10.30	22.49	15.40	0.00	0.00	0.00	290.0
1983	0.00	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.10	0.00	0.00	20.5
1984	0.00	0.00	0.00	0.00	33.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.9
1985	0.00	0.00	0.00	0.00	0.00	0.00	11.83	0.00	6.87	0.00	0.00	0.00	18.7
1986	0.76	0.00	0.00	0.00	0.48	0.00	0.00	18.00	16.12	0.00	0.00	0.00	34.6
1987	2.53	0.00	6.52	0.00	0.65	2.63	0.53	1.25	0.00	0.00	0.00	0.00	11.6
1988	0.00	0.00	0.00	7.00	0.86	14.01	28.65	10.20	26.57	3.51	5.16	0.00	96.0
1989	0.00	0.00	243.40	101.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	345.1
MEAN	0.23	3.03	35.84	10.26	10.37	1.06	3.11	3.26	10.55	1.22	0.29	0.00	70.9

MONTHLY AND ANNUAL FLOW VOLUMES, WADI ADHANA - DAM
(in Mm³)

Source of data: ERADA

YEAR	JAN	FEB	MRT	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1987	0.00	0.00	15.80	115.90	0.30	1.15	0.57	1.50	0.00	0.00	1.70	0.84	137.8
1988	0.00	10.36	3.48	32.29	2.07	3.87	19.21	8.35	7.49	0.38	0.00	0.00	87.5
1989	0.00	0.08	13.50	34.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.3
1990	0.00	22.22	0.00	23.00	4.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.5
1991	0.00	0.00	13.00	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.0
1992	0.00	1.04	4.84	7.72	5.45	0.00	0.00	65.70	0.00	32.00	0.00	13.80	130.6
1993	0.00	16.18	8.00	64.00	107.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	195.5
1994	0.00	0.00	14.00	2.00	0.00	0.00	0.00	11.00	0.00	0.00	0.00	0.00	27.0
MEAN	0.00	6.24	9.08	36.33	14.93	0.63	2.47	10.82	0.94	4.05	0.21	1.83	87.5