

*Feasibility Study on Water Resources Development in
Rural Area in the
Kingdom of Morocco
Final Report
Volume VII Data Book
Data Book HY
Hydrology*

HY3 Rainfall and River Flow for 4 Dams

Rainfall and Discharge Data Relevant to 4 Dams

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MONTHLY RAINFALL

(Daily rainfall data are available in DGH database for the period monthly data are available.)

Station: FEDDANE TABA (unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|-------|-------|-------|------|-------|------|-----|-----|------|-------|-------|-------|-------|
| 1977 | -- | 14.1 | 15.7 | 1.7 | 4.6 | 2.7 | 0.4 | NM | NM | 42.2 | 52.8 | 41.3 | 175.5 |
| 1978 | 88.3 | 77.1 | 10.8 | 57.1 | 0.2 | 0.3 | NM | 0.2 | NM | 22.0 | 14.2 | 156.2 | 426.4 |
| 1979 | 155.1 | 97.1 | 130.5 | 21.4 | 3.8 | 0.2 | NM | NM | NM | 126.6 | 13.2 | 20.0 | 567.9 |
| 1980 | 75.5 | 13.6 | 89.7 | 23.9 | 11.1 | NM | NM | 0.8 | 2.8 | 28.4 | 41.1 | 7.1 | 294.0 |
| 1981 | 14.3 | 4.3 | 21.1 | 21.1 | -- | 6.4 | NM | NM | 0.2 | 0.8 | 0.2 | 53.9 | 122.3 |
| 1982 | 34.8 | 5.8 | 34.9 | 63.5 | 1.6 | NM | NM | NM | NM | 14.7 | 43.6 | 47.3 | 246.2 |
| 1983 | 0.3 | 88.5 | 54.4 | 27.6 | 2.3 | NM | NM | NM | 2.8 | 1.5 | 58.0 | 63.4 | 298.8 |
| 1984 | -- | 7.0 | 98.4 | 43.8 | 105.8 | NM | NM | NM | NM | 2.5 | 81.3 | 26.7 | 365.5 |
| 1985 | 84.5 | 31.6 | -- | 17.7 | 18.2 | NM | NM | NM | 0.3 | -- | 61.2 | 54.4 | 267.9 |
| 1986 | 55.4 | 156.0 | 30.2 | 36.8 | -- | 16.8 | NM | NM | 0.8 | 4.9 | 59.9 | 17.6 | 378.4 |
| 1987 | 86.4 | 81.0 | 12.5 | 13.6 | 6.4 | 0.5 | 1.4 | 0.1 | 3.3 | 31.9 | 83.3 | 110.0 | 430.4 |
| 1988 | 81.9 | 78.7 | 7.6 | 20.3 | 15.3 | 7.4 | NM | NM | 0.2 | 20.5 | 79.2 | 8.9 | 320.0 |
| 1989 | 27.7 | 30.1 | 55.4 | 76.4 | 1.6 | NM | NM | NM | NM | 8.0 | 80.3 | 138.8 | 418.3 |
| 1990 | 67.9 | -- | 47.5 | 59.0 | 2.9 | 0.9 | NM | NM | 0.9 | 34.3 | 42.0 | 78.6 | 334.0 |
| 1991 | 45.9 | 125.8 | 93.0 | 19.7 | 0.4 | NM | NM | NM | 55.0 | 111.9 | 7.2 | 21.9 | 480.8 |
| 1992 | -- | 33.4 | 31.2 | 89.5 | 3.6 | 24.3 | NM | NM | 1.1 | 23.6 | 9.7 | 14.0 | 230.4 |
| 1993 | 14.8 | 21.3 | 45.4 | 34.8 | -- | NM | NM | NM | 4.5 | 25.9 | 109.6 | 14.6 | 270.9 |
| 1994 | 36.8 | 44.1 | -- | -- | 1.0 | NM | NM | NM | 1.0 | 7.2 | 17.4 | -- | 107.5 |
| 1995 | 6.4 | 30.5 | -- | 22.7 | -- | NM | NM | NM | 1.0 | 5.1 | 45.7 | 59.7 | 171.1 |
| 1996 | 172.5 | 34.6 | 63.3 | 20.0 | 39.1 | NM | NM | NM | 5.1 | 18.0 | 29.0 | 253.9 | 635.5 |
| 1997 | 64.5 | 0.4 | 2.4 | 36.9 | -- | 0.3 | 6.0 | NM | 6.2 | 21.1 | 60.6 | 32.8 | 231.2 |
| 1998 | 20.5 | 32.8 | 6.8 | 8.8 | 1.2 | 6.1 | NM | NM | 4.2 | 3.8 | 0.0 | 77.5 | 161.7 |
| 1999 | 67.6 | 61.4 | 7.7 | 8.0 | 14.0 | NM | NM | NM | NM | -- | 39.7 | 11.3 | 209.7 |
| 2000 | 20.2 | 0.0 | 0.0 | -- | -- | NM | NM | NM | 62.3 | -- | -- | -- | 82.5 |

(NOTE) MN: Lack of whole month record during June through September is assumed to be NM (no-measurement) due to dry season.

Station: CHEIKHREGUIG (unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|-------|-------|-------|-------|-------|------|-----|-----|------|-------|-------|-------|--------|
| 1977 | -- | 90.0 | 11.5 | 1.1 | 7.4 | 3.9 | NM | NM | 0.9 | 14.1 | 64.8 | 42.3 | 236.0 |
| 1978 | 108.5 | 93.2 | 27.4 | 93.6 | 58.9 | 0.8 | NM | NM | NM | 27.4 | 23.7 | 165.6 | 599.1 |
| 1979 | 103.4 | 152.1 | 59.3 | 40.8 | 0.3 | 1.7 | NM | NM | 0.1 | 209.6 | 23.5 | 45.8 | 636.6 |
| 1980 | 77.5 | 5.9 | 137.0 | 23.8 | 20.1 | 0.2 | NM | NM | 2.6 | 33.9 | 120.8 | 9.7 | 431.5 |
| 1981 | 15.8 | 16.6 | 25.4 | 44.6 | 13.3 | 3.5 | NM | NM | 0.1 | 1.6 | 0.3 | 82.4 | 203.6 |
| 1982 | 98.0 | 71.6 | 32.8 | 66.0 | 0.6 | NM | 0.3 | NM | 3.3 | 34.9 | 57.4 | 44.8 | 409.7 |
| 1983 | 1.6 | 130.6 | 50.7 | 23.5 | 4.0 | NM | NM | NM | 1.7 | 4.9 | 55.4 | 90.8 | 363.2 |
| 1984 | 17.7 | 15.8 | 82.0 | 31.6 | 155.4 | 1.7 | NM | NM | NM | 5.4 | 136.3 | 28.3 | 474.2 |
| 1985 | 104.5 | 27.2 | 3.3 | 33.2 | 9.4 | 1.3 | NM | NM | 2.3 | -- | 62.4 | 64.6 | 308.2 |
| 1986 | 65.2 | 138.3 | 42.9 | 86.3 | 1.6 | 47.8 | NM | NM | 1.2 | 2.7 | 97.3 | 23.3 | 506.6 |
| 1987 | 103.2 | 62.5 | 9.4 | 17.6 | 4.3 | 2.0 | NM | 8.1 | 2.8 | 68.6 | 113.5 | 129.4 | 521.4 |
| 1988 | 86.8 | 65.9 | 20.6 | 21.2 | 24.0 | 0.7 | NM | NM | 0.1 | 26.2 | 69.9 | 9.4 | 324.8 |
| 1989 | 47.4 | 36.5 | 88.1 | 82.9 | 0.4 | 1.0 | NM | 2.1 | -- | -- | -- | -- | 258.4 |
| 1990 | -- | -- | -- | -- | -- | 0.1 | NM | NM | 0.9 | 39.2 | 86.1 | 110.2 | 236.5 |
| 1991 | 14.6 | 117.5 | 139.8 | 5.0 | 0.8 | 0.8 | 0.3 | NM | 59.8 | 72.5 | 3.7 | 29.4 | 444.2 |
| 1992 | -- | 36.4 | 68.1 | 108.4 | 4.7 | 12.5 | NM | 0.3 | 6.5 | 40.0 | 19.5 | 19.5 | 315.9 |
| 1993 | 14.2 | 22.8 | 44.3 | 68.2 | 18.4 | NM | NM | NM | 5.7 | 22.0 | -- | 22.8 | 357.7 |
| 1994 | 52.2 | 111.6 | 11.5 | 4.8 | 17.8 | NM | NM | NM | 0.3 | 7.2 | 33.0 | 0.3 | 238.7 |
| 1995 | 2.9 | 33.3 | 16.2 | 18.0 | 0.2 | 13.2 | NM | 0.6 | 3.9 | 6.1 | 80.6 | 140.3 | 315.3 |
| 1996 | 330.8 | 70.8 | 98.4 | 16.6 | 84.3 | 0.2 | NM | 0.2 | 10.9 | 26.5 | 34.0 | 395.9 | 1068.6 |
| 1997 | 102.1 | 1.3 | 2.9 | 88.1 | -- | 18.3 | 6.8 | NM | 6.4 | 17.2 | 133.6 | 96.0 | 472.7 |
| 1998 | 15.1 | 52.5 | 10.8 | 23.6 | 10.6 | 11.8 | NM | 1.1 | 10.6 | 17.1 | 0.4 | 84.0 | 237.6 |
| 1999 | 75.4 | 63.8 | 24.6 | 5.8 | 8.7 | NM | NM | NM | NM | 69.0 | 82.8 | 30.1 | 360.2 |
| 2000 | 46.7 | 2.4 | 99.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 148.4 |

(NOTE) MN: Lack of whole month record during June through September is assumed to be NM (no-measurement) due to dry season.

MONTHLY RAINFALL

(Daily rainfall data are available in DGH database for the period monthly data are available.)

Station: SKHIRAT

(unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|-------|-------|-------|-------|-------|------|-----|-----|------|-------|-------|-------|-------|
| 1942 | -- | -- | -- | 39.9 | 3.3 | 2.4 | NM | NM | 3.0 | 104.3 | 105.2 | 125.0 | 383.1 |
| 1943 | 16.2 | -- | 37.4 | 26.6 | 52.8 | NM | NM | NM | 2.2 | 52.6 | 23.9 | 130.6 | 342.3 |
| 1944 | 10.6 | 108.8 | 18.1 | 13.2 | 17.4 | 23.2 | NM | 9.5 | 27.9 | 19.3 | 19.9 | 73.0 | 340.9 |
| 1945 | 99.2 | -- | 2.7 | -- | 2.4 | NM | NM | NM | 0.0 | 53.4 | 58.7 | 120.2 | 336.6 |
| 1946 | 84.1 | 17.6 | 106.6 | 53.6 | 41.3 | 10.7 | NM | NM | 3.5 | 11.6 | 68.1 | 70.9 | 468.0 |
| 1947 | 96.7 | 122.0 | 60.8 | 1.5 | 50.6 | NM | NM | NM | 6.9 | 29.3 | 98.4 | 30.3 | 496.5 |
| 1948 | 114.0 | 64.1 | 7.9 | 110.7 | 33.0 | NM | NM | NM | NM | 8.1 | -- | 94.5 | 432.3 |
| 1949 | 178.5 | 20.6 | 14.7 | 149.3 | 9.6 | NM | NM | NM | 7.4 | 1.4 | 82.1 | 136.2 | 599.8 |
| 1950 | 54.1 | 14.6 | 18.8 | 14.9 | 21.3 | NM | NM | NM | 2.2 | 25.7 | 15.0 | 182.9 | 349.5 |
| 1951 | 97.7 | 168.6 | 51.8 | 20.8 | 46.0 | 2.1 | NM | NM | 10.1 | 24.0 | 141.0 | 56.7 | 618.8 |
| 1952 | 102.9 | 7.0 | 59.8 | 81.9 | 23.1 | 1.3 | NM | NM | 16.0 | 28.9 | 70.4 | 138.2 | 529.5 |
| 1953 | 107.7 | 39.8 | 29.9 | 22.9 | -- | 22.2 | NM | NM | 83.5 | 57.4 | 5.0 | 80.8 | 449.2 |
| 1954 | 105.1 | 53.2 | 152.7 | 40.1 | -- | -- | -- | -- | -- | -- | -- | -- | 351.1 |
| 1955 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1956 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1957 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1958 | 35.0 | 30.0 | 22.0 | 14.0 | 18.0 | NM | NM | NM | 0.0 | 2.5 | 46.5 | 187.0 | 355.0 |
| 1959 | 28.0 | 56.0 | 55.5 | 19.0 | 22.0 | NM | NM | NM | NM | 13.0 | 49.0 | 83.5 | 326.0 |
| 1960 | 132.5 | 51.0 | 91.5 | 0.5 | -- | 11.0 | NM | NM | NM | 8.0 | 46.0 | 34.5 | 537.0 |
| 1961 | 39.0 | 10.0 | -- | 8.0 | 22.5 | NM | NM | NM | NM | 7.0 | 172.0 | 52.5 | 311.0 |
| 1962 | 50.5 | 17.0 | 271.5 | 36.5 | 14.0 | 4.0 | NM | NM | 4.7 | 45.5 | 250.3 | 70.0 | 764.0 |
| 1963 | 243.3 | 255.5 | -- | 34.0 | 79.0 | 11.0 | NM | NM | NM | -- | 15.5 | 174.4 | 812.7 |
| 1964 | 10.6 | -- | 94.1 | 185.0 | 17.0 | -- | -- | -- | -- | -- | -- | -- | 306.7 |
| 1965 | 53.5 | 103.3 | 34.8 | 76.4 | -- | 8.7 | NM | NM | 46.7 | 140.4 | 88.5 | 86.3 | 638.6 |
| 1966 | 17.0 | 88.5 | 4.1 | 17.0 | 10.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 137.0 |
| 1967 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1968 | -- | -- | 58.9 | 8.0 | 41.3 | NM | NM | NM | NM | 19.2 | 99.9 | 63.9 | 291.2 |
| 1969 | 40.2 | 99.6 | 25.3 | 44.3 | 11.8 | 12.2 | NM | NM | 22.3 | 23.4 | 91.0 | 102.2 | 472.3 |
| 1970 | 137.2 | -- | 52.0 | 10.0 | 32.2 | 4.1 | NM | NM | NM | 36.1 | 35.7 | 106.1 | 413.4 |
| 1971 | 113.9 | 53.4 | 111.3 | 116.7 | 74.1 | NM | NM | NM | NM | -- | 123.2 | 61.6 | 654.2 |
| 1972 | 75.1 | 78.4 | 87.6 | 11.5 | 26.5 | NM | NM | NM | 10.0 | 72.2 | 10.9 | 112.7 | 484.9 |
| 1973 | 14.7 | 22.8 | 69.1 | -- | -- | NM | NM | 7.1 | NM | -- | 33.0 | 211.0 | 357.7 |
| 1974 | 15.8 | 50.2 | 68.2 | 160.5 | -- | NM | NM | NM | 2.0 | 9.3 | 11.1 | 0.0 | 317.1 |
| 1975 | 64.0 | 50.5 | 71.1 | 28.2 | 22.5 | NM | NM | NM | 3.6 | -- | 32.5 | 147.9 | 420.3 |
| 1976 | 27.2 | 16.2 | 57.5 | 139.1 | 68.0 | NM | NM | NM | 18.3 | 17.3 | 110.2 | 8.2 | 583.0 |
| 1977 | 71.2 | 76.1 | -- | -- | 4.2 | NM | NM | NM | NM | 33.7 | 88.2 | 57.0 | 330.4 |
| 1978 | 102.5 | 49.5 | 25.9 | 48.1 | 32.2 | 1.8 | NM | NM | NM | 25.5 | 10.8 | 126.4 | 422.7 |
| 1979 | 83.7 | 107.6 | 64.7 | 34.0 | -- | 3.2 | NM | NM | NM | 166.9 | 13.6 | 25.8 | 499.5 |
| 1980 | 68.4 | 4.5 | 150.2 | 34.5 | 18.0 | NM | NM | NM | 3.0 | 27.5 | 124.3 | 8.8 | 439.2 |
| 1981 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1982 | 0.0 | 56.6 | 22.9 | -- | 1.9 | NM | NM | NM | NM | 32.8 | 61.0 | 50.5 | 225.7 |
| 1983 | -- | 125.5 | -- | 43.0 | 2.4 | NM | NM | NM | 3.3 | 3.0 | 56.1 | 104.2 | 337.5 |
| 1984 | 10.0 | 14.0 | 70.5 | 45.0 | 137.5 | 1.2 | -- | -- | -- | -- | -- | -- | 278.2 |

[NOTE] MN: Lack of whole month record during June through September is assumed to be NM (no-measurement) due to dry season.

MONTHLY RAINFALL

(Daily rainfall data are available in DGH database for the period monthly data are available.)

Station: SIDI BOUATHMANE

(unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|------|-------|-------|-------|------|------|------|------|------|-------|-------|------|-------|
| 1989 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 37.2 | 24.2 | 30.2 | 91.6 |
| 1990 | 35.6 | 0.0 | 31.3 | 20.9 | 12.7 | 7.4 | 34.4 | 0.3 | 1.2 | 2.5 | 4.8 | 53.3 | 204.4 |
| 1991 | 8.9 | 140.3 | 120.7 | 6.2 | 6.2 | 5.1 | 4.0 | 6.1 | 44.7 | 23.1 | 13.0 | 27.6 | 405.9 |
| 1992 | 0.0 | 47.9 | 79.9 | 59.7 | 7.4 | 49.8 | 3.5 | 1.4 | 0.2 | 61.2 | 14.2 | 8.6 | 333.8 |
| 1993 | 35.3 | 29.2 | 18.7 | 24.9 | 7.2 | 0.0 | 0.0 | 0.0 | 0.1 | 27.4 | 103.5 | 44.4 | 290.7 |
| 1994 | 67.1 | 80.1 | 36.8 | 8.1 | 0.0 | 0.0 | 0.0 | 18.8 | 0.0 | 91.5 | 0.0 | 0.1 | 302.5 |
| 1995 | 0.0 | 77.2 | 58.2 | 187.5 | 0.0 | 0.2 | 0.6 | 0.0 | 8.0 | 40.8 | 12.6 | 77.1 | 462.2 |
| 1996 | 92.4 | 105.4 | 125.4 | 7.6 | 26.4 | 63.4 | 0.0 | 0.0 | 6.2 | 0.9 | 58.7 | 84.6 | 571.0 |
| 1997 | 62.5 | 0.0 | 42.9 | 97.2 | 32.1 | 3.6 | 0.0 | 0.2 | 79.7 | 40.6 | 33.7 | 91.6 | 484.1 |
| 1998 | 25.8 | 34.8 | 18.9 | 52.0 | 20.7 | 0.1 | 0.0 | 0.0 | 13.2 | 46.1 | 0.1 | 38.1 | 249.8 |
| 1999 | 77.9 | 88.7 | 96.7 | 4.6 | 9.0 | 14.3 | 0.2 | 4.0 | 4.3 | 154.8 | 45.2 | 70.6 | 570.3 |
| 2000 | 5.5 | 0.5 | 0.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6.3 |

Station: SIDI HSSAIN

(unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|------|------|------|-----|------|-----|-----|-----|-----|-----|-----|------|-------|
| 1998 | 29.8 | 16.6 | 36.5 | 62 | 21 | -- | 0 | 0 | 14 | 75 | 3.7 | 48.6 | 307.2 |
| 1999 | 83.7 | 52.2 | 96 | 2.2 | 16.7 | 2 | 0 | 5 | 11 | 124 | 75 | 84 | 551.8 |
| 2000 | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14 |

MONTHLY RAINFALL

(Daily rainfall data are available in DGH database for the period monthly data are available.)

Station: IFFRE

(unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|-------|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|
| 1965 | 36.1 | 147.0 | 0.0 | -- | 0.0 | 8.7 | -- | -- | -- | 87.4 | 64.0 | -- | 394.1 |
| 1966 | -- | -- | 34.0 | -- | 23.0 | -- | -- | -- | 13.2 | -- | 41.7 | -- | 111.9 |
| 1967 | 7.4 | -- | 5.2 | -- | 99.6 | 1.5 | 0.0 | 1.5 | 39.5 | 25.7 | 182.4 | 2.5 | 399.6 |
| 1968 | 0.0 | 24.2 | 17.2 | 17.0 | -- | 4.2 | 5.2 | 0.0 | 12.0 | 1.8 | 15.2 | 23.8 | 120.6 |
| 1969 | 38.3 | 68.5 | -- | 4.6 | 2.0 | -- | 0.0 | 16.1 | 9.4 | 7.2 | 49.9 | 3.7 | 199.7 |
| 1970 | 45.7 | 1.3 | 19.2 | -- | -- | 4.0 | -- | 2.4 | 10.0 | 78.6 | 44.5 | 32.0 | 237.7 |
| 1971 | 0.8 | 3.0 | 10.8 | 12.5 | -- | 2.3 | 0.4 | 0.0 | 36.3 | 38.9 | 20.1 | 1.5 | 126.6 |
| 1972 | 11.8 | 13.2 | 13.0 | 44.0 | 2.7 | -- | -- | 0.0 | 2.5 | 23.2 | 73.3 | 7.2 | 190.9 |
| 1973 | 4.0 | 0.0 | 16.3 | 0.0 | -- | -- | -- | 9.2 | -- | 0.0 | 58.6 | 7.3 | 95.4 |
| 1974 | -- | 0.0 | 21.2 | 13.2 | 3.2 | 1.0 | 6.0 | 2.3 | 5.6 | -- | 27.3 | 8.6 | 88.4 |
| 1975 | -- | -- | -- | 63.6 | 33.9 | 5.0 | 4.3 | 3.0 | 3.0 | 4.6 | 1.3 | 20.7 | 139.4 |
| 1976 | 0.0 | 19.6 | 25.3 | 10.8 | 38.3 | 6.2 | -- | 3.0 | 88.0 | 5.0 | -- | 8.2 | 204.4 |
| 1977 | 26.0 | 2.0 | -- | 17.9 | 7.8 | -- | -- | 6.2 | 21.0 | 26.4 | -- | 98.0 | 205.3 |
| 1978 | 91.2 | -- | -- | -- | 3.0 | -- | -- | 19.8 | 4.0 | 19.0 | 6.8 | -- | 143.8 |
| 1979 | 113.3 | 21.4 | 0.1 | 5.3 | 7.2 | -- | 0.0 | -- | 5.7 | 119.2 | 16.1 | -- | 288.3 |
| 1980 | 19.4 | 39.3 | 40.1 | 4.8 | -- | -- | -- | -- | 9.9 | -- | 25.2 | 14.8 | 153.5 |
| 1981 | 1.6 | 37.7 | -- | -- | 3.0 | 0.0 | 2.1 | -- | -- | 1.8 | 11.5 | -- | 57.7 |
| 1982 | 5.0 | 2.7 | 4.2 | 13.2 | 52.7 | 2.8 | -- | 14.6 | 1.6 | 0.0 | 14.2 | -- | 111.0 |
| 1983 | -- | -- | 14.0 | 14.0 | 21.6 | -- | -- | 3.0 | -- | 6.0 | 12.3 | -- | 70.9 |
| 1984 | -- | -- | -- | -- | -- | 9.2 | -- | 1.0 | 10.2 | -- | 65.1 | 7.0 | 92.5 |
| 1985 | 26.2 | 15.0 | 1.0 | 51.5 | 18.8 | -- | -- | -- | 8.1 | 10.5 | 38.8 | 11.3 | 181.2 |
| 1986 | -- | 2.4 | -- | -- | 5.0 | 0.8 | 0.0 | 0.9 | 11.0 | 40.9 | -- | -- | 61.0 |
| 1987 | 10.3 | 7.3 | 11.2 | -- | 27.5 | 6.0 | -- | 4.5 | 35.0 | 33.4 | 19.2 | 51.3 | 205.7 |
| 1988 | 33.6 | 103.4 | 38.1 | -- | -- | -- | -- | -- | -- | 36.0 | 128.4 | -- | 339.5 |
| 1989 | 12.9 | 49.1 | 16.6 | 19.0 | -- | 34.3 | 19.9 | 18.3 | 16.5 | 86.2 | 47.2 | 161.0 | 481.0 |
| 1990 | 6.4 | -- | 79.3 | 5.2 | 12.0 | -- | 3.2 | 7.8 | 33.8 | -- | -- | 22.5 | 170.2 |
| 1991 | -- | 19.2 | 32.3 | 7.2 | -- | 16.2 | 9.6 | 14.4 | 6.2 | 4.0 | 4.0 | 61.2 | 174.3 |
| 1992 | -- | 61.4 | 9.3 | -- | 12.0 | -- | -- | 15.8 | -- | 7.6 | 3.8 | 18.1 | 128.0 |
| 1993 | 17.2 | 24.9 | 10.8 | -- | -- | -- | -- | -- | -- | 29.2 | 81.4 | 3.0 | 166.5 |
| 1994 | 11.0 | -- | -- | -- | -- | -- | -- | -- | -- | 71.5 | -- | -- | 82.5 |
| 1995 | -- | -- | 55.5 | 21.2 | -- | -- | -- | -- | -- | 48.2 | 7.2 | 23.4 | 155.5 |
| 1996 | 59.2 | 28.2 | 58.4 | -- | 4.0 | 51.6 | 16.0 | -- | -- | -- | -- | 55.0 | 272.4 |
| 1997 | 8.0 | 15.0 | 11.5 | 10.6 | -- | -- | -- | 24.5 | 18.6 | 3.8 | -- | -- | 92.0 |
| 1998 | 32.3 | 97.1 | 53.0 | -- | -- | 9.6 | -- | 10.0 | -- | -- | -- | 2.8 | 204.8 |
| 1999 | 21.0 | -- | 5.4 | -- | 2.0 | -- | 0.0 | 9.6 | 2.2 | 128.6 | -- | 13.3 | 182.1 |
| 2000 | 0.0 | 0.0 | 0.0 | 5.2 | 8.2 | -- | -- | -- | -- | -- | -- | -- | 13.4 |

MONTHLY RAINFALL

(Daily rainfall data are available in DGH database for the period monthly data are available.)

Station: TADIGHOUST

(unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|------|-------|------|------|------|------|------|------|------|-------|-------|------|-------|
| 1962 | 0.5 | 0.0 | 1.7 | 0.0 | 0.5 | 9.1 | 0.0 | 8.4 | 24.5 | 11.6 | 30.1 | 19.0 | 105.4 |
| 1963 | 25.5 | 9.6 | 3.0 | 20.4 | 78.4 | 9.7 | 2.2 | 4.8 | 8.0 | 0.0 | 0.0 | 3.8 | 165.4 |
| 1964 | 30.4 | 6.0 | 0.0 | 0.8 | 3.4 | 0.8 | 2.4 | 2.5 | 27.5 | 0.0 | 0.4 | 11.5 | 85.7 |
| 1965 | 46.1 | 125.2 | 4.4 | 39.0 | 3.1 | 1.2 | 0.0 | 12.6 | 20.2 | 130.1 | 76.7 | 0.5 | 459.1 |
| 1966 | 0.0 | 0.0 | 29.0 | 0.0 | 15.1 | 4.1 | 0.0 | 0.5 | 16.8 | 0.0 | 28.1 | 0.0 | 93.6 |
| 1967 | 3.2 | 34.2 | 0.0 | 11.9 | 39.2 | 0.9 | 0.0 | 0.0 | 28.4 | 68.3 | 98.6 | 0.4 | 285.1 |
| 1968 | 3.5 | 4.0 | 7.8 | 29.8 | 11.8 | 8.4 | 0.4 | 0.2 | 9.2 | 0.4 | 5.2 | 21.6 | 102.3 |
| 1969 | 15.4 | 22.1 | 0.0 | 7.5 | 4.1 | 0.0 | 1.6 | 29.2 | 9.3 | 7.3 | 32.6 | 5.4 | 134.5 |
| 1970 | 20.9 | 0.0 | 13.2 | 0.0 | 8.3 | 0.0 | 0.0 | 4.6 | 3.2 | 26.3 | 19.2 | 8.1 | 103.8 |
| 1971 | 0.0 | 7.3 | 4.0 | 24.8 | 9.3 | 0.2 | 1.1 | 8.1 | 15.8 | 37.8 | 16.5 | 17.0 | 141.9 |
| 1972 | 2.2 | 25.7 | 6.6 | 66.7 | 0.0 | 3.8 | 0.0 | 0.0 | 9.0 | 9.9 | 112.3 | 10.8 | 247.0 |
| 1973 | 1.6 | 1.4 | 5.7 | 5.9 | 0.0 | 14.5 | 0.5 | 3.9 | 0.4 | 0.0 | 65.9 | 18.4 | 118.2 |
| 1974 | 0.0 | 0.0 | 14.0 | 20.8 | 3.7 | 4.7 | 0.2 | 1.4 | 28.8 | 0.0 | 16.2 | 5.0 | 94.8 |
| 1975 | 0.0 | 0.0 | 0.0 | 82.8 | 51.3 | 3.6 | 0.0 | 0.3 | 0.0 | 1.8 | 0.2 | 29.1 | 169.1 |
| 1976 | 26.0 | 12.7 | 25.5 | 32.2 | 31.8 | 12.9 | 1.0 | 3.3 | 41.6 | 0.5 | 0.0 | 6.0 | 193.5 |
| 1977 | 39.1 | 4.0 | 0.2 | 17.9 | 5.1 | 0.0 | 0.0 | 0.8 | 18.3 | 8.6 | 0.0 | 19.4 | 113.4 |
| 1978 | 29.2 | 0.0 | 0.0 | 8.3 | 2.8 | 0.0 | 0.0 | 18.1 | 0.0 | 24.2 | 1.2 | 0.0 | 83.8 |
| 1979 | 59.8 | 4.1 | 0.0 | 0.0 | 1.2 | 5.0 | 0.0 | 0.0 | 25.3 | 106.8 | 1.5 | 0.0 | 203.7 |
| 1980 | 17.4 | 11.0 | 48.1 | 24.9 | 0.6 | 0.5 | 0.0 | 3.3 | 2.7 | 2.4 | 11.8 | 28.7 | 151.4 |
| 1981 | 1.0 | 24.2 | 2.0 | 0.8 | 0.0 | 3.0 | 0.0 | 1.2 | 1.0 | 0.0 | 0.0 | 0.0 | 33.2 |
| 1982 | 17.3 | 5.4 | 0.9 | 37.4 | 35.2 | 15.0 | 0.0 | 3.0 | 0.7 | 0.7 | 1.0 | 0.2 | 116.8 |
| 1983 | 0.0 | 0.0 | 0.6 | 7.0 | 23.9 | 0.8 | 0.0 | 61.1 | 9.2 | 6.3 | 1.5 | 0.0 | 110.4 |
| 1984 | 0.2 | 0.3 | 0.7 | 0.1 | 16.0 | 0.3 | 0.0 | 0.0 | 2.3 | 0.2 | 21.1 | 6.5 | 47.7 |
| 1985 | 13.9 | 24.0 | 0.3 | 3.0 | 37.2 | 0.0 | 3.3 | 0.0 | 16.0 | 9.3 | 41.1 | 31.5 | 179.6 |
| 1986 | 0.1 | 4.7 | 1.9 | 1.0 | 4.1 | 7.8 | 0.0 | 1.5 | 3.7 | 46.3 | 1.8 | 0.0 | 72.9 |
| 1987 | 1.4 | 0.8 | 24.2 | 0.0 | 4.9 | 5.9 | 0.0 | 2.0 | 25.4 | 6.8 | 20.1 | 37.7 | 129.2 |
| 1988 | 7.8 | 38.2 | 7.8 | 0.2 | 16.1 | 0.8 | 0.0 | 0.0 | 1.2 | 19.6 | 31.4 | 0.0 | 123.1 |
| 1989 | 0.8 | 46.8 | 1.8 | 2.2 | 0.9 | 22.1 | 0.6 | 14.9 | 12.8 | 21.4 | 67.6 | 93.8 | 285.7 |
| 1990 | 15.4 | 0.0 | 32.6 | 8.2 | 39.9 | 0.5 | 0.8 | 6.7 | 18.3 | 0.0 | 1.8 | 30.4 | 154.6 |
| 1991 | 0.0 | 14.4 | 8.2 | 15.4 | 0.2 | 17.1 | 2.6 | 5.3 | 15.9 | 7.2 | 0.0 | 61.9 | 148.2 |
| 1992 | 0.0 | 29.3 | 6.9 | 0.0 | 13.4 | 5.9 | 0.0 | 4.9 | 0.2 | 0.0 | 15.1 | 26.3 | 102.0 |
| 1993 | 8.7 | 4.9 | 4.5 | 0.4 | 1.5 | 0.0 | 0.0 | 0.8 | 0.4 | 19.0 | 105.0 | 5.7 | 150.9 |
| 1994 | 7.9 | 0.0 | 5.9 | 13.5 | 0.0 | 28.3 | 1.4 | 0.0 | 1.4 | 61.6 | 3.0 | 0.0 | 123.0 |
| 1995 | 0.0 | 0.0 | 14.3 | 41.3 | 3.2 | 0.0 | 0.0 | 12.4 | 12.4 | 52.9 | 0.0 | 8.9 | 145.4 |
| 1996 | 24.9 | 27.4 | 36.4 | 0.0 | 1.9 | 27.8 | 17.6 | 0.3 | 0.0 | 1.4 | 0.0 | 12.0 | 149.7 |
| 1997 | 17.8 | 3.1 | 27.3 | 12.4 | 1.3 | 0.0 | 0.0 | 20.3 | 26.1 | 0.8 | 0.0 | 0.1 | 109.2 |
| 1998 | 18.2 | 72.6 | 21.6 | 0.9 | 1.7 | 4.1 | 0.0 | 6.5 | 0.3 | 0.0 | 0.0 | 1.1 | 127.0 |
| 1999 | 14.2 | 0.4 | 3.8 | 0.0 | 0.0 | 1.1 | 0.0 | 8.5 | 6.0 | 41.6 | 1.9 | 1.3 | 78.8 |

MONTHLY RAINFALL

(Daily rainfall data are available in DGH database for the period monthly data are available.)

Station: AIT BOUIJANE (unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|------|------|------|------|------|------|------|------|------|-------|------|-------|-------|
| 1970 | -- | -- | -- | -- | -- | -- | -- | -- | 0.8 | 46.9 | 17.0 | 9.7 | 74.4 |
| 1971 | 0.0 | 5.4 | 4.4 | -- | 6.9 | -- | 0.0 | -- | -- | -- | 8.2 | 14.8 | 89.2 |
| 1972 | 7.4 | 14.8 | 5.3 | 41.0 | -- | 0.2 | 0.0 | 0.0 | 1.3 | -- | 76.9 | 9.9 | 174.2 |
| 1973 | 8.7 | 3.2 | 5.5 | 8.7 | 0.3 | 4.7 | 0.0 | 0.8 | 0.0 | 0.4 | 52.3 | 20.3 | 104.9 |
| 1974 | -- | 0.0 | -- | 31.4 | -- | 3.0 | -- | 1.1 | 14.7 | -- | 24.2 | 7.0 | 100.3 |
| 1975 | -- | 0.0 | 0.0 | 74.4 | -- | 4.4 | 4.2 | -- | 5.5 | 0.0 | 2.2 | 10.2 | 122.2 |
| 1976 | 7.7 | 12.9 | 19.7 | 17.1 | 59.5 | 0.0 | 2.5 | 0.0 | 30.9 | 6.5 | -- | 3.8 | 160.6 |
| 1977 | 24.0 | 0.7 | -- | -- | 13.4 | -- | -- | -- | 23.1 | 4.8 | -- | 44.5 | 133.8 |
| 1978 | 47.3 | 0.0 | -- | -- | 0.3 | -- | -- | 16.0 | 0.0 | 15.7 | 0.5 | -- | 79.8 |
| 1979 | 74.8 | 3.6 | 0.0 | 0.3 | 0.0 | 0.8 | -- | 10.2 | -- | 145.1 | 5.3 | -- | 246.7 |
| 1980 | 23.8 | 31.5 | 34.9 | 7.2 | 0.2 | 0.4 | 0.0 | 0.0 | -- | 0.0 | 19.9 | 26.2 | 152.3 |
| 1981 | 2.8 | 32.4 | -- | 0.9 | 8.2 | 5.4 | 0.0 | -- | 3.5 | 0.0 | 0.0 | -- | 54.7 |
| 1982 | 3.7 | 0.6 | 1.2 | 48.2 | -- | 5.1 | 0.6 | -- | 0.2 | 0.0 | 1.6 | -- | 122.7 |
| 1983 | 0.0 | 0.0 | 1.8 | 6.8 | 25.3 | 0.7 | 0.5 | 2.0 | 8.9 | -- | 9.2 | 3.3 | 63.5 |
| 1984 | 1.3 | 0.2 | 0.7 | 1.3 | 19.7 | 0.3 | -- | 4.4 | 16.9 | -- | 25.9 | 6.0 | 76.7 |
| 1985 | 16.2 | 17.3 | 0.8 | 33.3 | 19.2 | -- | 0.0 | 0.5 | 4.7 | 3.1 | 15.6 | 13.6 | 124.3 |
| 1986 | 0.9 | 2.1 | 0.0 | 0.7 | 8.0 | 6.0 | 0.7 | 7.5 | 1.5 | 48.4 | 3.6 | -- | 79.4 |
| 1987 | 2.8 | 5.9 | 24.8 | 1.0 | 9.4 | 5.1 | 0.1 | 3.1 | 25.8 | 4.9 | 12.3 | 19.0 | 114.2 |
| 1988 | 23.0 | 54.4 | 11.7 | 1.9 | 4.2 | -- | -- | 1.6 | 3.4 | 29.4 | 63.9 | -- | 193.5 |
| 1989 | -- | 66.8 | -- | -- | 1.0 | 47.3 | -- | 30.0 | 7.9 | 34.2 | 50.7 | 100.0 | 337.9 |
| 1990 | 12.7 | 0.0 | 22.9 | 2.0 | 9.8 | -- | -- | -- | -- | -- | 2.7 | 30.6 | 92.2 |
| 1991 | 1.5 | 8.0 | 16.5 | 14.4 | 5.1 | 8.5 | 7.2 | 21.4 | 10.4 | 11.1 | -- | 34.8 | 138.9 |
| 1992 | -- | 42.2 | 19.9 | 0.3 | -- | 7.4 | -- | 11.2 | 2.2 | 4.7 | 3.5 | 23.0 | 126.0 |
| 1993 | 3.8 | 17.6 | 8.2 | 0.0 | 4.9 | -- | 1.5 | 1.4 | 2.3 | 10.1 | 59.3 | 3.3 | 112.4 |
| 1994 | 22.3 | 1.5 | 3.6 | 8.3 | 0.0 | -- | 9.8 | 3.2 | 4.7 | 53.3 | -- | -- | 106.7 |
| 1995 | -- | -- | 49.2 | 42.9 | 0.4 | 4.0 | 1.5 | 2.0 | 10.7 | 81.4 | 0.0 | 9.0 | 201.1 |
| 1996 | 16.0 | 32.2 | 38.9 | 3.0 | 0.5 | 77.0 | 22.0 | 1.2 | 1.5 | 1.4 | 0.0 | 9.0 | 202.7 |
| 1997 | 13.4 | 1.5 | 12.0 | 24.1 | 4.0 | -- | 0.2 | 20.3 | 13.4 | 6.0 | 1.0 | 0.0 | 95.9 |
| 1998 | 17.1 | 67.9 | 29.3 | 8.1 | 0.0 | 6.7 | 0.0 | 3.8 | 4.2 | 0.0 | -- | -- | 137.1 |
| 1999 | 20.6 | 0.1 | 16.3 | -- | 2.0 | -- | 0.0 | 40.0 | 0.9 | 51.9 | 0.1 | 3.4 | 135.3 |
| 2000 | 0.4 | 0.0 | 0.1 | 2.3 | 11.1 | -- | -- | -- | -- | -- | -- | -- | -- |

Station: MERUTCHA (unit:mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1978 | 34.3 | 0.0 | -- | 3.2 | 2.0 | -- | -- | 23.6 | 0.3 | 7.0 | -- | 0.5 | 70.9 |
| 1979 | 62.4 | -- | 2.4 | -- | 0.1 | 4.7 | -- | -- | 25.3 | 78.9 | 2.9 | -- | 176.7 |
| 1980 | 15.7 | 28.5 | 33.0 | 22.1 | 0.8 | -- | -- | 1.7 | 15.3 | 3.2 | 14.7 | 22.9 | 157.9 |
| 1981 | -- | 9.7 | -- | -- | 2.3 | 14.4 | 0.3 | 1.7 | -- | 0.0 | 0.0 | -- | 30.6 |
| 1982 | 28.9 | 1.9 | 0.0 | 58.0 | 42.5 | 0.8 | -- | -- | 0.9 | 0.7 | 5.3 | -- | 139.0 |
| 1983 | 1.9 | 0.0 | 0.0 | 4.0 | 23.1 | 0.0 | -- | 0.3 | 0.0 | 1.9 | 0.0 | -- | 31.2 |
| 1984 | 0.0 | 0.0 | 1.8 | 0.0 | 11.5 | 1.5 | 0.0 | -- | 3.3 | 0.0 | 12.6 | 0.0 | 30.7 |
| 1985 | 15.8 | 15.7 | 0.9 | 12.0 | 9.7 | -- | -- | 2.0 | 14.1 | 15.5 | 8.9 | 45.8 | 140.4 |
| 1986 | 4.3 | 3.7 | 1.3 | 0.0 | 3.3 | 0.4 | -- | 0.0 | 3.7 | 52.2 | 0.0 | -- | 68.9 |
| 1987 | 0.3 | 0.0 | 21.7 | -- | 10.4 | 10.9 | -- | 0.0 | -- | 7.7 | 13.1 | 10.1 | 92.9 |
| 1988 | 4.0 | 34.1 | 8.4 | 1.1 | 2.5 | 0.0 | -- | 0.0 | 0.3 | 15.3 | 45.4 | -- | 111.1 |
| 1989 | 0.0 | 21.2 | 3.2 | 4.5 | 0.0 | 6.8 | 2.8 | -- | -- | 70.5 | 41.7 | 52.3 | 224.8 |
| 1990 | 1.6 | -- | 8.5 | 10.6 | 24.0 | 0.0 | 0.4 | 0.3 | -- | -- | 0.0 | 29.8 | 80.0 |
| 1991 | 0.0 | 12.0 | 11.2 | 16.0 | 3.0 | 10.7 | 0.2 | 8.4 | 8.3 | 4.0 | -- | 9.5 | 83.3 |
| 1992 | -- | 17.4 | 3.9 | 7.5 | 10.9 | 1.4 | 0.0 | 0.0 | 0.0 | 1.0 | 5.8 | 37.7 | 85.6 |
| 1993 | 5.9 | 11.5 | 5.2 | -- | 0.0 | -- | -- | 2.8 | 0.0 | 8.2 | 49.0 | 3.1 | 85.7 |
| 1994 | 69.0 | -- | -- | 10.0 | -- | 0.0 | 0.0 | 2.2 | 0.0 | 48.2 | -- | -- | 129.4 |
| 1995 | -- | -- | 29.7 | 28.5 | 0.0 | 12.2 | -- | 8.3 | 4.0 | 49.8 | 0.0 | 3.2 | 135.7 |
| 1996 | 16.6 | 45.3 | 12.2 | 1.4 | 0.0 | 43.9 | 17.9 | -- | 4.3 | 13.3 | -- | 8.8 | 163.7 |
| 1997 | 8.2 | -- | 12.0 | 29.7 | -- | -- | 0.0 | 9.5 | 21.2 | -- | -- | 0.0 | 80.6 |
| 1998 | 10.6 | 43.3 | 6.7 | 0.0 | 0.0 | 0.0 | -- | 0.0 | 2.2 | 0.0 | 0.0 | 7.4 | 70.2 |
| 1999 | 18.4 | 2.4 | 9.7 | -- | 1.8 | 0.0 | -- | 7.4 | 7.5 | 50.2 | 0.0 | 0.0 | 97.4 |

MONTHLY RAINFALL

(Daily rainfall data are available in DGH database for the period monthly data are available.)

Station: DAR HAMRA (unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|-------|-------|-------|------|-------|------|------|------|------|------|-------|-------|-------|
| 1983 | -- | 36.7 | 46.6 | 11.6 | 27.7 | 0 | 0 | 3.3 | 1.6 | 8.8 | 82.5 | 48.2 | 267 |
| 1984 | 27.4 | 9.1 | 48.6 | 50.1 | 111.4 | 3.3 | 1.6 | 0.8 | 8.9 | 0 | 102.7 | 9.5 | 373.4 |
| 1985 | 70.8 | 30 | 42.8 | 36.6 | 81.5 | 0 | 4.1 | 0 | 3 | 15.8 | 42.2 | 55.2 | 382 |
| 1986 | 89.8 | 96.7 | 85.9 | 57.4 | 5.2 | 44.3 | 0 | 3.8 | 8.1 | 20.1 | 34.4 | 34.1 | 479.8 |
| 1987 | 79 | 139.3 | 1.7 | 8.3 | 14 | 0.7 | 39.7 | 0.8 | 39.9 | 28.9 | 74.9 | 48.5 | 475.7 |
| 1988 | 79.9 | 80.2 | 44.4 | 25.3 | 42.1 | 7.2 | 1.7 | 0.5 | 0 | 41.3 | 56.8 | 13.6 | 393 |
| 1989 | 21.7 | 44.6 | 68.6 | 78.7 | 20.4 | 18.7 | 11 | 15.4 | 41.1 | 61.5 | 80.6 | 82.8 | 545.1 |
| 1990 | 44.3 | -- | 39.2 | 72.9 | 9.3 | 4.3 | 34.1 | 2.8 | 45.6 | 9.9 | 40.1 | 121.4 | 423.9 |
| 1991 | 12.4 | 105.5 | 159.6 | 49.4 | 14.6 | 9.5 | 8.9 | 23.1 | 52.3 | 39.6 | 26.4 | 36.4 | 537.7 |
| 1992 | 4.3 | 34.5 | 85.2 | 66.2 | 78.9 | 69.5 | 0.6 | 17.1 | 12.8 | 40.3 | 13.2 | 20.3 | 442.9 |
| 1993 | 18 | 49.6 | 94.9 | 38.8 | 23.1 | 9 | 0 | 2.6 | 6.2 | 15.2 | 97.5 | 23.4 | 378.3 |
| 1994 | 55 | 122.2 | 81.6 | 18.8 | 24.4 | 0.5 | 0 | 1 | 35.6 | 21.8 | 9.4 | 2.4 | 372.7 |
| 1995 | 7.4 | 78.1 | 75.2 | 57.1 | 8.4 | 24.9 | 0.1 | 8.7 | 14.2 | 13.2 | 27.8 | 111.3 | 426.4 |
| 1996 | 183.9 | 64.2 | 79.2 | 83.8 | 64.4 | 35.4 | 1.3 | 1.9 | 42.3 | 18.5 | 15.2 | 154.6 | 744.7 |
| 1997 | 114.5 | -- | 18.4 | 78 | 39.9 | 11.6 | 0 | 3.9 | 95.2 | 18.9 | 72.7 | 88.3 | 541.4 |
| 1998 | 11.7 | -- | -- | 12.9 | 47.9 | 6.2 | 0 | 26.2 | 16 | 0.8 | 3.3 | 45.9 | 179.9 |
| 1999 | 75.1 | 51.8 | 80 | 3.8 | 32.2 | 5.5 | -- | 2.4 | 14.1 | 16.4 | -- | -- | 281.3 |
| 2000 | -- | 0 | 0 | 34.3 | -- | -- | -- | -- | -- | -- | -- | -- | 34.3 |

Station: AIN TIMEDRINE (unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|-------|-------|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|
| 1958 | 46.9 | 30.3 | 17.1 | 89.2 | 20.0 | 24.5 | -- | 1.6 | 5.6 | 46.4 | 56.8 | 90.3 | 428.7 |
| 1959 | 15.6 | 36.4 | 51.3 | 34.1 | 90.2 | 11.9 | 10.5 | 0.9 | 20.0 | 40.3 | 42.6 | 166.5 | 520.3 |
| 1960 | 156.0 | -- | 81.7 | 12.2 | 41.4 | 92.0 | 13.6 | 1.9 | 2.4 | 15.1 | 45.1 | 167.3 | 628.7 |
| 1961 | 103.6 | 1.0 | 38.7 | 36.0 | 32.9 | 62.2 | -- | 4.7 | 29.0 | 3.7 | 94.5 | 12.0 | 418.3 |
| 1962 | 17.7 | 32.7 | 106.7 | 67.3 | 30.9 | 51.2 | 1.4 | 6.6 | 30.6 | 63.2 | 110.0 | 44.0 | 562.3 |
| 1963 | 94.2 | 132.5 | 25.8 | 53.4 | 218.3 | 21.8 | 12.7 | 19.7 | 3.2 | 5.6 | 15.6 | 97.1 | 699.9 |
| 1964 | 10.2 | 33.6 | 80.9 | 51.8 | -- | 33.1 | 11.3 | 3.5 | 9.7 | 1.1 | 76.3 | 88.6 | 400.1 |
| 1965 | 66.7 | 34.0 | 77.9 | 147.7 | 15.9 | 29.6 | 7.1 | 12.1 | 20.9 | 36.5 | 64.9 | 20.0 | 533.3 |
| 1966 | 12.7 | 37.5 | 27.3 | 20.2 | 16.6 | 3.1 | 8.2 | 0.4 | 6.1 | 94.8 | 34.5 | 0.2 | 261.6 |
| 1967 | 23.0 | 22.1 | 9.6 | 44.5 | 26.7 | 19.1 | 3.2 | 2.7 | 8.6 | 69.9 | 58.9 | 82.5 | 370.8 |
| 1968 | 7.2 | 91.0 | 199.1 | 90.7 | 64.3 | 17.8 | 2.8 | 12.6 | 7.3 | -- | 76.2 | 76.0 | 645.0 |
| 1969 | 52.8 | 97.8 | 49.6 | 68.6 | -- | 53.3 | 25.5 | 6.8 | 8.8 | 37.8 | 42.9 | 40.2 | 484.1 |
| 1970 | 90.9 | 2.7 | 63.1 | 45.5 | 38.6 | 8.6 | -- | 3.4 | 15.3 | 21.1 | 23.3 | 54.1 | 366.6 |
| 1971 | 83.1 | 17.7 | 92.3 | 96.6 | 75.1 | 47.7 | 9.7 | 6.3 | 5.7 | 4.9 | 110.5 | 29.6 | 579.2 |
| 1972 | 95.0 | 64.5 | 72.1 | 12.0 | 55.5 | 0.8 | -- | 0.5 | 8.9 | 85.4 | 50.2 | 48.5 | 493.4 |
| 1973 | 27.6 | 90.0 | 61.3 | 80.5 | 12.3 | 3.2 | -- | 13.6 | -- | 15.7 | 32.4 | 43.3 | 379.9 |
| 1974 | 3.5 | 78.1 | 58.6 | 81.6 | 2.1 | 29.7 | 8.3 | 1.5 | 4.3 | 36.6 | 7.7 | -- | 312.0 |
| 1975 | 13.3 | 55.1 | 92.3 | 143.3 | 58.5 | 48.0 | 9.0 | 22.4 | 20.9 | 0.4 | 54.2 | 21.0 | 538.4 |
| 1976 | 13.6 | 78.7 | 55.4 | 106.5 | 140.7 | 11.1 | 3.7 | 1.6 | 19.6 | 65.1 | 1.7 | 102.8 | 600.5 |
| 1977 | 79.1 | 78.3 | 72.2 | 10.3 | 42.8 | 4.1 | -- | 0.3 | 4.1 | 51.7 | 27.1 | 53.4 | 423.4 |
| 1978 | 43.7 | 49.4 | 22.3 | 67.9 | 23.1 | 13.3 | -- | 4.0 | 0.3 | 6.7 | 20.4 | 38.6 | 289.7 |
| 1979 | 20.5 | 150.1 | 35.1 | 29.8 | 31.0 | 3.5 | 3.6 | -- | 35.8 | 109.7 | 32.2 | 18.8 | 470.1 |
| 1980 | 25.9 | 42.8 | 70.9 | 25.3 | 39.3 | 1.7 | -- | 13.3 | 27.9 | 42.3 | 59.1 | 20.2 | 368.7 |
| 1981 | 6.5 | 42.6 | 26.5 | 62.8 | 26.2 | 17.9 | 1.1 | 3.3 | 9.7 | 70.7 | -- | 20.7 | 288.0 |
| 1982 | 47.1 | 43.3 | 31.9 | 149.9 | 67.3 | 4.4 | 4.1 | 9.5 | 17.1 | 96.7 | 39.8 | 56.3 | 567.4 |
| 1983 | 2.5 | 33.2 | 52.9 | 7.5 | 18.1 | 2.0 | -- | 2.4 | 2.3 | 9.3 | 52.3 | 17.0 | 199.5 |
| 1984 | 29.1 | 13.8 | 36.8 | 30.7 | 97.7 | 4.1 | 5.2 | 1.1 | 5.6 | 2.5 | 67.8 | 7.1 | 301.5 |
| 1985 | 64.2 | 18.1 | 37.0 | 29.3 | 94.4 | 0.1 | 2.8 | 2.9 | 1.8 | 13.6 | 30.4 | 39.6 | 334.2 |
| 1986 | 74.0 | 55.4 | 44.7 | 47.2 | 0.9 | 12.1 | 0.1 | 2.4 | 8.0 | 37.0 | 24.7 | 22.7 | 329.2 |
| 1987 | 51.1 | 72.0 | 3.1 | 4.6 | 10.2 | 4.5 | 10.7 | -- | 44.9 | 13.0 | 65.7 | 30.7 | 310.5 |
| 1988 | 42.4 | 80.1 | 34.0 | -- | -- | -- | 1.3 | -- | -- | 30.4 | 56.8 | 14.2 | 259.2 |
| 1989 | 4.1 | 30.6 | 34.8 | 57.5 | 11.8 | 16.6 | 1.2 | 14.8 | 40.9 | 60.7 | 66.6 | 82.2 | 421.8 |
| 1990 | 31.8 | -- | 42.0 | 83.4 | 27.5 | 2.1 | 8.5 | 0.1 | 46.8 | 6.3 | 40.1 | 121.6 | 410.2 |
| 1991 | 13.3 | 99.8 | 106.7 | 61.1 | 15.1 | 4.2 | 3.1 | 19.6 | 41.4 | 35.5 | 26.4 | 22.4 | 448.6 |
| 1992 | 3.2 | 44.2 | 67.2 | 40.6 | 82.6 | 83.3 | 4.3 | 8.8 | 0.1 | 36.2 | 19.6 | 14.4 | 404.5 |
| 1993 | 24.3 | 37.1 | 90.5 | 34.7 | 29.6 | 11.2 | -- | -- | 2.1 | 17.2 | 89.5 | 14.6 | 350.8 |
| 1994 | 42.7 | 92.1 | 38.4 | 40.8 | 25.1 | 0.5 | 0.8 | 4.4 | 54.5 | 27.2 | 11.2 | 1.2 | 338.9 |
| 1995 | 1.4 | 38.8 | 51.5 | 50.4 | 6.3 | 30.0 | -- | 7.9 | 12.2 | 9.6 | 24.9 | 96.0 | 329.0 |
| 1996 | 104.1 | 65.2 | 66.1 | 63.3 | 55.2 | 39.8 | 5.6 | 4.6 | 28.0 | 12.1 | 11.7 | 97.1 | 552.8 |
| 1997 | 103.0 | -- | 12.6 | 68.7 | 48.6 | 14.3 | -- | 7.5 | 61.9 | 10.9 | 43.6 | 61.1 | 432.2 |
| 1998 | 31.3 | 22.4 | 35.1 | 24.0 | 50.0 | 11.2 | -- | 8.8 | 19.7 | 1.7 | 5.8 | 34.3 | 244.3 |
| 1999 | 84.4 | 42.8 | 35.3 | 5.1 | 27.5 | 2.3 | -- | 1.4 | 10.7 | 27.7 | 47.9 | 33.3 | 318.4 |
| 2000 | 12.1 | 0.0 | 0.0 | 32.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

MONTHLY RAINFALL

(Daily rainfall data are available in DGH database for the period monthly data are available.)

Station: AZZABA (unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|-------|-------|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|
| 1957 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 55.9 | 120.7 | 126.8 | 303.4 |
| 1958 | 20.1 | 21.1 | 39.4 | 85.4 | 12.8 | 25.2 | -- | 1.4 | 21.2 | 28.9 | 38.7 | 102.3 | 396.5 |
| 1959 | 17.9 | 29.6 | 51.4 | 18.9 | 96.8 | 3.3 | 22.4 | 0.5 | 14.0 | 22.5 | 33.0 | 115.7 | 426.0 |
| 1960 | 97.9 | 19.8 | 99.5 | 17.5 | 45.7 | 63.5 | 13.7 | -- | -- | 49.7 | 18.6 | 82.9 | 508.8 |
| 1961 | 65.4 | 4.8 | 62.3 | 26.9 | 5.2 | 27.8 | -- | 1.1 | 32.2 | 5.2 | 65.8 | 18.5 | 315.2 |
| 1962 | 16.1 | 23.0 | 104.3 | 54.0 | 15.5 | 25.6 | -- | 6.2 | 16.9 | 87.9 | 104.5 | 38.6 | 492.6 |
| 1963 | 99.3 | 95.6 | 3.3 | 42.2 | 170.0 | 19.1 | 34.6 | 14.8 | 3.5 | 4.4 | 12.8 | 96.7 | 596.3 |
| 1964 | 8.7 | 53.8 | 91.7 | 42.3 | -- | 8.6 | 2.6 | -- | 3.9 | 2.2 | 68.2 | 63.8 | 348.7 |
| 1965 | 48.7 | 49.4 | 56.7 | 102.3 | 2.6 | 31.5 | 1.3 | 1.2 | 14.6 | 66.1 | 56.8 | 12.6 | 443.8 |
| 1966 | 5.6 | 39.9 | 15.7 | 10.8 | 9.6 | 5.4 | 1.1 | -- | 6.8 | 81.9 | 33.7 | 1.7 | 212.2 |
| 1967 | 18.5 | 39.9 | 17.3 | 39.1 | 32.0 | 20.3 | -- | -- | 1.7 | 73.0 | 51.0 | 63.3 | 360.0 |
| 1968 | 7.4 | 110.2 | 137.0 | 51.5 | 28.5 | 26.9 | -- | -- | -- | -- | 45.6 | 44.8 | 483.4 |
| 1969 | 60.4 | 98.4 | 64.3 | 63.2 | 17.3 | 38.1 | 19.2 | -- | 9.4 | 33.1 | 77.8 | 52.4 | 533.6 |
| 1970 | 100.7 | 0.9 | 84.8 | 32.1 | 33.7 | 17.5 | -- | 9.4 | -- | 19.5 | 17.6 | 3.8 | 320.0 |
| 1971 | 76.4 | 9.6 | 111.7 | 114.4 | 81.2 | 54.4 | -- | -- | 2.5 | 0.7 | 142.9 | 73.9 | 667.7 |
| 1972 | 73.0 | 74.8 | 51.6 | 28.7 | 23.7 | 1.8 | 16.0 | 17.1 | 36.8 | 46.4 | 46.9 | 39.4 | 456.2 |
| 1973 | 43.5 | 66.9 | 71.3 | 92.0 | 7.6 | 2.6 | 1.1 | 28.7 | -- | 25.7 | 47.1 | 50.1 | 436.6 |
| 1974 | 5.6 | 59.1 | 68.0 | 71.8 | 3.3 | 31.3 | 4.3 | -- | 0.2 | 37.2 | 7.8 | -- | 288.6 |
| 1975 | 11.4 | 49.9 | 101.3 | 102.0 | 46.1 | 58.0 | 2.1 | 3.5 | -- | -- | -- | -- | 374.3 |
| 1976 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1977 | -- | -- | -- | -- | -- | -- | -- | -- | 23.9 | 66.3 | 30.9 | 56.2 | 177.3 |
| 1978 | 23.6 | 63.3 | 19.5 | 55.6 | 16.7 | 14.2 | -- | 9.4 | -- | 2.8 | 9.8 | 22.5 | 237.4 |
| 1979 | 24.8 | 139.7 | 41.6 | 23.5 | 22.2 | 7.3 | 0.5 | -- | 22.5 | 119.1 | 22.9 | 13.2 | 437.3 |
| 1980 | 15.6 | 32.4 | 66.4 | 46.5 | 18.0 | 0.2 | 0.0 | -- | 27.5 | 50.7 | 38.8 | 12.5 | 308.6 |
| 1981 | 11.5 | 35.5 | 24.7 | 51.4 | 21.9 | 11.8 | 7.1 | 0.4 | 2.3 | 6.1 | -- | 17.6 | 190.3 |
| 1982 | 50.8 | 34.4 | 17.1 | 104.6 | 43.4 | 0.4 | 6.7 | 8.8 | 0.9 | 71.0 | 31.5 | 51.5 | 421.1 |
| 1983 | -- | 43.6 | 41.0 | 7.1 | 18.2 | -- | -- | -- | -- | 2.0 | 70.5 | 14.0 | 196.4 |
| 1984 | 52.1 | 12.1 | 41.6 | 22.0 | 111.8 | 13.2 | 1.9 | -- | 7.8 | 1.5 | 43.9 | 3.5 | 311.4 |
| 1985 | 61.2 | 19.2 | 26.9 | 29.1 | 43.0 | -- | -- | -- | 2.6 | 0.2 | 39.6 | 29.3 | 251.1 |
| 1986 | 62.8 | 46.1 | 68.3 | 26.1 | -- | 17.6 | -- | 0.2 | 14.2 | 25.5 | 17.6 | 23.5 | 301.9 |
| 1987 | 56.5 | 78.4 | -- | 8.7 | 12.3 | 6.1 | 27.8 | -- | 32.0 | 17.8 | 63.8 | -- | 303.4 |
| 1988 | 31.3 | 75.1 | 18.3 | 19.0 | 72.1 | 4.0 | 0.7 | -- | 2.4 | 38.0 | 40.0 | 6.9 | 307.8 |
| 1989 | 8.4 | 37.6 | 26.4 | 59.4 | 16.5 | 15.7 | 0.0 | 12.3 | 3.6 | 37.5 | 65.2 | 73.6 | 356.2 |
| 1990 | 27.7 | -- | 45.7 | 64.9 | 9.8 | 0.4 | 17.2 | -- | 31.1 | 9.5 | 46.3 | 85.8 | 338.4 |
| 1991 | 12.5 | 84.3 | 55.6 | 33.9 | 6.2 | 6.4 | 3.0 | 4.6 | 33.2 | 25.0 | 14.9 | 27.6 | 307.2 |
| 1992 | 0.0 | 32.7 | 71.7 | 31.2 | 64.5 | 74.7 | 5.8 | 6.9 | -- | 28.6 | 21.9 | 11.6 | 349.6 |
| 1993 | 15.7 | 37.7 | 65.4 | 25.5 | 39.9 | 1.8 | 0.3 | 0.0 | 4.5 | 33.0 | 85.8 | 9.6 | 319.2 |
| 1994 | 36.5 | 86.4 | 24.0 | 11.9 | 22.5 | 2.1 | 4.0 | 9.0 | 59.1 | 14.0 | 19.3 | 0.5 | 289.3 |
| 1995 | 1.7 | 40.1 | 45.4 | 28.5 | 2.7 | 29.5 | 1.4 | 7.2 | 13.8 | 4.5 | 27.6 | 67.3 | 269.7 |
| 1996 | 90.8 | 42.8 | 58.7 | 69.1 | 57.8 | 24.0 | 0.2 | 13.5 | 32.7 | 12.5 | 19.4 | 80.6 | 502.1 |
| 1997 | 64.3 | 0.2 | 3.0 | 59.9 | 36.5 | 10.7 | -- | 4.1 | 60.4 | 20.9 | 53.6 | 69.4 | 383.0 |
| 1998 | 26.4 | 26.4 | 19.9 | 14.7 | 45.6 | 7.4 | -- | 2.2 | 15.4 | 7.6 | 0.1 | 28.3 | 194.0 |
| 1999 | 62.4 | 24.5 | 50.8 | 5.0 | 23.9 | 7.0 | -- | 3.2 | 9.2 | 29.0 | 53.3 | 28.9 | 297.2 |
| 2000 | 14.0 | 0.0 | 0.0 | 34.7 | -- | -- | -- | -- | -- | -- | -- | -- | 48.7 |

Station: PONT DU M'DEZ (unit: mm/month)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rann |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1981 | 2 | 23.6 | 16.2 | -- | -- | 12.1 | 0 | 6.3 | 6.5 | -- | -- | -- | 66.7 |
| 1982 | -- | -- | -- | -- | -- | 5.2 | -- | -- | 8.5 | 49.6 | 18.2 | 19.1 | 100.6 |
| 1983 | 1.7 | 12.8 | 34.1 | 7.2 | 17.4 | -- | -- | -- | -- | -- | -- | -- | 73.2 |
| 1984 | -- | -- | -- | -- | -- | -- | -- | -- | 2 | 1.1 | 39.3 | 6.3 | 48.7 |
| 1985 | 48 | 12.9 | 16.5 | 26.1 | 56.2 | 0.7 | 2 | 1.3 | 2.6 | 21.5 | 19.3 | 30.9 | 238 |
| 1986 | 34.6 | 29.5 | 20.5 | 34.4 | 4 | 24.1 | 2.4 | 7 | 6.3 | 25.9 | 13.3 | 12.5 | 214.5 |
| 1987 | 33.1 | 46.8 | 0.8 | 2.8 | 12.8 | 2.5 | 20.9 | 1.5 | 12.3 | 28 | 44.7 | 22.8 | 229 |
| 1988 | 20.1 | 51.7 | 30.1 | 12.1 | 32.5 | 2.5 | 0.9 | -- | 0.6 | 25.8 | 36.3 | 5.4 | 218 |
| 1989 | 3.7 | 27.5 | 22.6 | 26.5 | 25.1 | 21.5 | 0.4 | 16.5 | -- | -- | -- | -- | 143.8 |

MONTHLY RAINFALL COLLECTED FROM ORMVA TAFILALET

MONTHLY RAINFALL

Station: C.M.V 720 d'AGHBALOU

(unit: mm/month)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Rann |
|------|------|-------|-------|-------|------|------|-------|------|------|-------|------|------|-------|
| 7980 | -- | 91.0 | -- | -- | 35.0 | 87.0 | 131.0 | 37.0 | -- | -- | -- | -- | 381.0 |
| 8081 | -- | -- | -- | 30.0 | -- | 68.0 | -- | -- | -- | -- | -- | -- | 98.0 |
| 8182 | -- | -- | -- | -- | 16.5 | -- | -- | 55.0 | 98.0 | -- | 4.0 | -- | 173.5 |
| 8283 | -- | -- | -- | -- | -- | -- | 6.0 | 29.0 | 31.0 | -- | -- | -- | 66.0 |
| 8384 | 4.0 | 17.0 | 5.0 | -- | 7.0 | -- | -- | -- | -- | -- | -- | -- | 33.0 |
| 8485 | -- | -- | 15.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 15.0 |
| 8586 | 26.2 | 18.1 | 27.0 | 10.0 | 1.5 | 3.0 | -- | 7.0 | 6.0 | 15.5 | -- | -- | 114.3 |
| 8687 | 21.9 | 51.3 | 8.5 | -- | 5.0 | 13.5 | 9.0 | -- | 9.0 | -- | -- | -- | 118.2 |
| 8788 | 25.7 | 25.2 | 15.5 | 35.2 | -- | -- | -- | -- | -- | -- | -- | -- | 101.6 |
| 8889 | 7.0 | 68.5 | 100.5 | -- | 5.5 | 62.1 | 1.5 | 2.5 | 5.8 | 79.5 | 4.0 | 50.5 | 387.4 |
| 8990 | 37.5 | 45.0 | 104.5 | 104.5 | 18.0 | -- | 31.7 | 21.0 | 46.0 | -- | -- | -- | 408.2 |
| 9091 | 26.3 | -- | 3.0 | 36.5 | -- | -- | 2.5 | 11.5 | 10.5 | 18.5 | 3.5 | 2.5 | 114.8 |
| 9192 | 14.0 | 4.0 | -- | 31.0 | -- | 68.0 | 14.5 | -- | 17.0 | 10.0 | 6.0 | 4.0 | 168.5 |
| 9293 | 6.0 | 5.0 | -- | 28.5 | 17.0 | 8.5 | -- | -- | -- | -- | -- | -- | 65.0 |
| 9394 | 12.0 | 27.0 | 106.0 | 11.5 | -- | -- | -- | -- | -- | -- | -- | -- | 156.5 |
| 9495 | 7.0 | 80.3 | 0.5 | -- | -- | -- | 49.2 | 60.5 | -- | 8.0 | -- | 4.0 | 209.5 |
| 9596 | 17.0 | 103.0 | -- | 13.0 | 22.0 | 24.5 | 72.4 | 18.0 | 8.0 | 134.1 | 43.0 | 6.0 | 461.0 |
| 9697 | 15.0 | 3.0 | -- | 23.5 | 12.5 | -- | 49.5 | 18.0 | 9.5 | -- | 1.0 | 17.0 | 149.0 |
| 9798 | 58.0 | 7.0 | -- | -- | 20.0 | 98.5 | 40.0 | 1.0 | -- | -- | -- | -- | 224.5 |
| 9899 | 3.5 | -- | -- | 2.0 | 17.0 | -- | -- | -- | 2.0 | -- | 2.0 | 3.6 | 30.1 |
| 9900 | 2.0 | 100.0 | -- | 2.0 | -- | -- | -- | -- | 26.5 | 5.0 | -- | 25.0 | 160.5 |
| Mean | 17.7 | 43.0 | 38.6 | 27.3 | 14.8 | 48.1 | 37.0 | 23.7 | 22.4 | 38.7 | 9.1 | 14.1 | 173.1 |
| Max. | 58.0 | 103.0 | 106.0 | 104.5 | 35.0 | 98.5 | 131.0 | 60.5 | 98.0 | 134.1 | 43.0 | 50.5 | 461.0 |

MONTHLY RAINFALL

Station: C.M.V 714 d'ASSOUL

(unit: mm/month)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Rann |
|------|-------|-------|-------|------|------|------|------|-------|------|-------|------|------|-------|
| 7980 | -- | -- | -- | -- | 17.0 | 30.0 | 72.0 | 25.0 | -- | -- | -- | -- | 144.0 |
| 8081 | -- | -- | -- | -- | 5.0 | 18.5 | -- | -- | -- | -- | -- | -- | 23.5 |
| 8182 | -- | -- | -- | -- | 1.5 | -- | -- | -- | 89.0 | 4.0 | 5.5 | -- | 100.0 |
| 8283 | -- | -- | -- | -- | -- | -- | 11.5 | 14.5 | 19.0 | -- | -- | -- | 45.0 |
| 8384 | 2.5 | 24.5 | 9.5 | 3.5 | 6.5 | -- | 3.0 | -- | 2.0 | 3.3 | -- | -- | 54.8 |
| 8485 | 34.0 | -- | 16.0 | 10.0 | 10.0 | 16.0 | 8.0 | 23.0 | 22.5 | -- | 18.0 | 10.0 | 167.5 |
| 8586 | 24.1 | 20.0 | 39.0 | 4.7 | -- | 3.0 | -- | -- | 2.0 | 66.0 | -- | 10.0 | 168.8 |
| 8687 | 21.9 | 51.3 | 5.5 | -- | 5.0 | 13.3 | 9.0 | -- | 9.0 | 6.2 | 1.5 | -- | 122.7 |
| 8788 | 44.0 | 113.0 | 38.0 | 30.0 | 28.0 | 36.0 | 9.0 | 13.7 | 45.0 | -- | -- | -- | 356.7 |
| 8889 | 15.0 | 157.5 | 62.0 | -- | -- | 13.8 | 6.0 | -- | 15.0 | 44.0 | -- | 98.0 | 411.3 |
| 8990 | 8.5 | 70.0 | 224.0 | 39.0 | 12.5 | -- | 80.0 | 60.5 | 55.5 | 1.0 | 10.0 | 5.0 | 566.0 |
| 9091 | 119.5 | -- | 7.5 | 32.0 | -- | -- | 16.5 | 40.1 | 26.9 | 44.5 | 22.5 | 14.2 | 323.7 |
| 9192 | 24.5 | -- | -- | 6.0 | -- | 5.0 | 45.0 | -- | 28.0 | -- | -- | -- | 108.5 |
| 9293 | -- | -- | 4.0 | 21.0 | -- | 11.0 | 6.5 | -- | -- | -- | -- | -- | 42.5 |
| 9394 | 4.0 | 8.0 | 201.5 | -- | -- | -- | 5.5 | 6.5 | -- | -- | -- | -- | 225.5 |
| 9495 | 8.0 | 90.0 | -- | -- | -- | -- | 36.0 | 134.5 | -- | -- | -- | 24.0 | 292.5 |
| 9596 | 12.0 | 65.0 | -- | 5.0 | 4.0 | 30.0 | 61.0 | 3.0 | 2.0 | 146.5 | 11.0 | -- | 339.5 |
| 9697 | 5.5 | 10.0 | -- | 16.5 | 9.0 | 8.0 | 32.5 | 34.5 | 13.0 | -- | -- | -- | 129.0 |
| 9798 | 81.8 | 23.0 | -- | -- | 7.0 | 37.0 | 28.0 | 6.5 | 5.0 | 9.5 | -- | -- | 197.8 |
| 9899 | 5.5 | -- | 1.0 | -- | 30.5 | 1.0 | 6.0 | -- | -- | -- | -- | 12.0 | 56.0 |
| 9900 | 11.0 | 81.5 | -- | 1.0 | 2.0 | -- | 9.0 | 3.0 | 6.0 | -- | -- | 16.5 | 130.0 |
| Mean | 26.4 | 59.5 | 55.3 | 15.3 | 10.6 | 17.1 | 24.7 | 30.4 | 22.7 | 36.1 | 11.4 | 23.7 | 190.7 |
| Max. | 119.5 | 157.5 | 224.0 | 39.0 | 30.5 | 37.0 | 80.0 | 134.5 | 89.0 | 146.5 | 22.5 | 98.0 | 566.0 |

MONTHLY RAINFALL COLLECTED FROM ORMVA TAFILALET

MONTHLY RAINFALL

Station: C.M.V 712 de TINEJDAD

(unit: mm/month)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Rann |
|------|------|-------|------|------|------|------|------|------|------|------|------|------|-------|
| 7980 | -- | 110.0 | -- | -- | 29.0 | 24.5 | 30.0 | 21.0 | -- | -- | -- | -- | 214.5 |
| 8081 | -- | -- | -- | 20.0 | -- | 10.0 | 1.0 | -- | -- | -- | -- | -- | 31.0 |
| 8182 | -- | -- | -- | -- | 10.0 | -- | -- | 83.5 | 20.0 | -- | -- | -- | 113.5 |
| 8283 | -- | -- | -- | -- | 1.0 | -- | -- | -- | 29.5 | -- | -- | -- | 30.5 |
| 8384 | -- | 3.5 | -- | -- | -- | -- | -- | -- | -- | 1.0 | -- | -- | 4.5 |
| 8485 | -- | -- | 13.0 | -- | -- | -- | -- | -- | 37.0 | -- | -- | -- | 50.0 |
| 8586 | 16.0 | 12.5 | 17.3 | 28.0 | 25.0 | -- | -- | -- | 1.0 | 3.0 | -- | -- | 102.8 |
| 8687 | 5.0 | 38.0 | -- | -- | -- | -- | 24.5 | -- | 8.0 | 8.5 | 0.5 | -- | 84.5 |
| 8788 | 37.5 | 7.5 | 10.5 | 13.0 | 11.0 | 29.5 | 6.5 | 1.5 | 2.0 | -- | -- | -- | 119.0 |
| 8889 | 1.5 | 33.0 | 41.7 | -- | -- | 33.4 | 1.7 | 5.5 | -- | 32.0 | 1.5 | 13.3 | 163.6 |
| 8990 | 14.8 | 52.5 | 62.0 | 17.0 | 1.5 | -- | 15.9 | 7.7 | 12.5 | 2.0 | 6.5 | -- | 192.4 |
| 9091 | 25.1 | -- | 1.5 | 27.3 | -- | 13.9 | 20.0 | 13.9 | 4.5 | 5.0 | 0.5 | 12.0 | 123.7 |
| 9192 | 10.5 | 7.0 | -- | 13.5 | -- | 37.5 | -- | -- | 10.5 | 2.0 | -- | 14.0 | 95.0 |
| 9293 | -- | 5.0 | 0.5 | 28.5 | 4.8 | 20.5 | 5.0 | -- | -- | -- | -- | -- | 64.3 |
| 9394 | -- | 7.0 | 74.7 | 4.0 | 94.4 | -- | 8.5 | 5.0 | -- | -- | -- | 1.0 | 194.6 |
| 9495 | 3.0 | 57.7 | -- | -- | -- | -- | 23.9 | 46.9 | 5.0 | 3.0 | -- | 4.0 | 143.5 |
| 9596 | 5.9 | 88.5 | -- | 3.2 | 18.5 | 51.0 | 9.0 | -- | -- | 76.5 | 18.5 | -- | 271.1 |
| 9697 | 5.0 | 17.8 | -- | 8.0 | 21.0 | -- | 9.5 | 30.5 | 1.6 | -- | -- | 9.2 | 102.6 |
| 9798 | 15.0 | -- | -- | -- | 16.1 | 58.9 | 13.0 | 1.2 | -- | 4.5 | -- | 3.3 | 112.0 |
| 9899 | 8.0 | -- | -- | -- | 22.3 | 11.0 | 12.0 | -- | 1.0 | -- | -- | 31.0 | 85.3 |
| 9900 | 9.5 | 69.5 | -- | 3.0 | -- | -- | -- | -- | 43.5 | 3.5 | -- | -- | 129.0 |
| Mean | 12.1 | 36.4 | 27.7 | 15.0 | 21.2 | 29.0 | 12.9 | 21.7 | 13.5 | 12.8 | 5.5 | 11.0 | 115.6 |
| Max. | 37.5 | 110.0 | 74.7 | 28.5 | 94.4 | 58.9 | 30.0 | 83.5 | 43.5 | 76.5 | 18.5 | 31.0 | 271.1 |

MONTHLY RAINFALL

Station: C.M.V 704 de GOULMIMA

(unit: mm/month)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Rann |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 7980 | 12.0 | 98.5 | -- | -- | 35.5 | 47.0 | 70.0 | 30.0 | -- | -- | -- | -- | 293.0 |
| 8081 | 25.0 | 12.0 | 8.0 | 29.5 | -- | 12.0 | 1.0 | -- | -- | 40.0 | -- | -- | 127.5 |
| 8182 | -- | -- | -- | 12.0 | 12.5 | -- | -- | 51.5 | 34.5 | 3.5 | -- | -- | 114.0 |
| 8283 | -- | -- | -- | -- | 4.0 | -- | -- | 1.1 | 34.1 | -- | -- | -- | 39.2 |
| 8384 | 5.2 | 3.5 | -- | -- | 1.0 | -- | -- | -- | 1.0 | -- | -- | -- | 10.7 |
| 8485 | -- | -- | 18.0 | -- | 1.0 | -- | -- | -- | -- | -- | -- | -- | 19.0 |
| 8586 | 8.3 | 6.5 | 14.8 | 24.0 | -- | 0.7 | 2.0 | -- | 7.6 | -- | -- | -- | 63.9 |
| 8687 | 11.0 | 67.5 | -- | -- | -- | -- | 5.8 | -- | 2.5 | 8.5 | -- | -- | 95.3 |
| 8788 | 15.5 | 13.5 | 16.7 | 22.9 | 8.7 | 41.7 | 10.6 | 2.0 | 6.0 | -- | -- | -- | 137.6 |
| 8889 | 2.0 | 28.0 | 37.9 | -- | 0.8 | 37.7 | 2.5 | 10.5 | -- | 17.4 | -- | 12.0 | 148.8 |
| 8990 | 9.4 | 58.8 | 54.0 | 71.8 | 4.8 | 15.4 | 6.0 | 23.1 | -- | 2.0 | -- | 3.9 | 249.2 |
| 9091 | 8.2 | -- | 15.0 | 30.4 | -- | 12.5 | 8.8 | 14.5 | 2.0 | 9.1 | 2.2 | 2.6 | 105.3 |
| 9192 | 8.7 | 7.0 | -- | 26.8 | -- | 28.7 | 7.8 | 3.0 | 13.3 | 3.0 | -- | 1.0 | 99.3 |
| 9293 | -- | 1.0 | 3.5 | 19.9 | 21.1 | 9.2 | 3.0 | -- | -- | -- | -- | -- | 57.7 |
| 9394 | 2.4 | 7.4 | 72.3 | 8.0 | 13.2 | 13.3 | 11.0 | -- | -- | -- | -- | -- | 127.6 |
| 9495 | -- | 60.2 | -- | -- | -- | -- | 19.0 | 40.8 | 5.0 | -- | -- | 6.3 | 131.3 |
| 9596 | 2.5 | 67.8 | -- | 2.7 | 15.7 | 41.7 | 34.3 | 3.0 | 1.4 | 38.5 | 22.5 | -- | 230.1 |
| 9697 | -- | 9.0 | 6.1 | 17.0 | -- | 5.2 | 11.4 | 7.0 | -- | -- | -- | -- | 55.7 |
| 9798 | 26.6 | 1.0 | -- | -- | 14.9 | 47.4 | 9.5 | -- | 5.0 | 3.6 | -- | -- | 108.0 |
| 9899 | 5.3 | -- | -- | 5.3 | 15.3 | 4.0 | 4.0 | -- | -- | -- | -- | -- | 33.9 |
| 9900 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0 |
| Mean | 10.2 | 29.4 | 24.6 | 22.5 | 11.4 | 22.6 | 12.9 | 17.0 | 10.2 | 14.0 | 12.4 | 5.2 | 107.0 |
| Max. | 26.6 | 98.5 | 72.3 | 71.8 | 35.5 | 47.4 | 70.0 | 51.5 | 34.5 | 40.0 | 22.5 | 12.0 | 293.0 |

MONTHLY RAINFALL COLLECTED FROM ORMVA TAFILALET

MONTHLY RAINFALL

Station: C.M.V 722 de MELLAAB

(unit: mm/month)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Rann |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 7980 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0 |
| 8081 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0 |
| 8182 | -- | -- | -- | -- | -- | -- | -- | 29.5 | -- | -- | -- | -- | 29.5 |
| 8283 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0 |
| 8384 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0 |
| 8485 | -- | -- | 4.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.0 |
| 8586 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0 |
| 8687 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0 |
| 8788 | 13.0 | 4.0 | 9.0 | 8.0 | 6.0 | 25.0 | 10.0 | -- | -- | -- | -- | -- | 75.0 |
| 8889 | -- | 8.0 | 26.0 | -- | -- | 20.0 | 5.0 | 5.0 | -- | 11.0 | 17.0 | 6.0 | 98.0 |
| 8990 | 4.0 | 65.0 | 40.0 | 50.0 | 1.0 | -- | 8.0 | 3.0 | 26.0 | -- | -- | 5.0 | 202.0 |
| 9091 | 8.0 | -- | -- | 31.0 | -- | 12.0 | 13.0 | 14.0 | 4.0 | 7.5 | 1.5 | -- | 91.0 |
| 9192 | 3.0 | 7.0 | -- | 10.0 | -- | 13.0 | 3.5 | -- | 11.0 | -- | -- | -- | 47.5 |
| 9293 | -- | 3.5 | -- | 23.0 | 7.0 | 15.0 | 5.0 | -- | -- | -- | -- | -- | 53.5 |
| 9394 | 6.0 | 8.5 | 44.0 | 64.0 | -- | 9.0 | -- | -- | -- | -- | -- | -- | 131.5 |
| 9495 | -- | 73.0 | -- | -- | -- | -- | 43.5 | 36.3 | -- | 7.6 | -- | 13.0 | 173.4 |
| 9596 | 4.0 | 61.0 | -- | 3.5 | 21.0 | 46.1 | 14.5 | 5.0 | -- | 43.5 | 21.5 | -- | 220.1 |
| 9697 | 5.0 | 8.5 | -- | 11.0 | 9.0 | -- | 15.0 | 39.5 | -- | -- | -- | 33.0 | 121.0 |
| 9798 | 25.0 | -- | -- | -- | 13.0 | 49.0 | 8.0 | 0.5 | -- | -- | -- | -- | 95.5 |
| 9899 | 2.5 | -- | -- | 7.5 | 17.5 | 1.5 | 10.0 | -- | 10.0 | -- | -- | 7.0 | 56.0 |
| 9900 | 0.5 | 41.0 | 5.0 | -- | -- | -- | -- | -- | 45.0 | -- | 3.0 | 7.2 | 101.7 |
| Mean | 7.1 | 28.0 | 21.3 | 23.1 | 10.6 | 21.2 | 12.3 | 16.6 | 19.2 | 17.4 | 10.8 | 11.9 | 71.4 |
| Max. | 25.0 | 73.0 | 44.0 | 64.0 | 21.0 | 49.0 | 43.5 | 39.5 | 45.0 | 43.5 | 21.5 | 33.0 | 220.1 |

MONTHLY MEAN DISCHARGE

(Daily discharge data are available in DGH database for the period monthly data are available.)

Station: FEDDANE TABA

(unit: m3/s)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apl | May | Jun | Jul | Aug | Mean |
|------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1975 | 0.030 | 0.039 | 0.063 | 0.157 | 0.079 | 0.389 | 0.842 | 0.995 | 0.382 | 0.055 | 0.029 | 0.016 | 0.255 |
| 1976 | 0.023 | 0.919 | 0.070 | 1.526 | 3.109 | 3.886 | 0.294 | 0.136 | 0.105 | 0.117 | 0.071 | 0.061 | 0.843 |
| 1977 | 0.035 | 0.096 | 0.165 | 0.423 | 1.789 | 6.741 | 0.118 | 0.416 | 0.201 | 0.043 | 0.012 | 0.008 | 0.796 |
| 1978 | 0.076 | 0.184 | 0.147 | 2.773 | 7.127 | 16.141 | 2.001 | 0.737 | 0.482 | 0.447 | 0.377 | 0.235 | 2.473 |
| 1979 | 0.181 | 1.271 | 0.333 | 0.276 | 0.852 | 0.324 | 3.700 | 0.342 | 0.259 | 0.103 | 0.030 | 0.003 | 0.646 |
| 1980 | 0.085 | 0.160 | 0.727 | 0.131 | 0.121 | 0.078 | 0.345 | 0.095 | 0.068 | 0.035 | 0.028 | 0.029 | 0.158 |
| 1981 | 0.032 | 0.038 | 0.036 | 0.297 | 0.747 | 0.655 | 0.174 | 1.334 | 0.054 | 0.038 | 0.033 | 0.027 | 0.285 |
| 1982 | 0.031 | 0.044 | 0.158 | 0.186 | 0.077 | 0.785 | 0.136 | 0.109 | 0.088 | 0.059 | 0.053 | 0.042 | 0.143 |
| 1983 | 0.031 | 0.040 | 0.425 | 0.544 | 0.054 | 0.036 | 0.584 | 0.413 | 0.781 | 0.043 | 0.016 | 0.015 | 0.250 |
| 1984 | 0.017 | 0.016 | 2.459 | 0.170 | 0.884 | 0.202 | 0.044 | 0.023 | 0.057 | 0.017 | 0.014 | 0.016 | 0.324 |
| 1985 | 0.045 | 0.013 | 0.694 | 0.141 | 0.489 | 2.478 | 0.189 | 0.320 | 0.018 | 0.007 | 0.002 | 0.002 | 0.350 |
| 1986 | 0.002 | 0.006 | 2.639 | 0.048 | 0.243 | 1.955 | 0.046 | 0.033 | 0.007 | 0.002 | 0.001 | 0.003 | 0.400 |
| 1987 | 0.023 | 0.146 | 0.605 | 1.497 | 1.476 | 3.274 | 0.599 | 0.065 | 0.054 | 0.046 | 0.016 | 0.004 | 0.641 |
| 1988 | 0.011 | 0.050 | 0.369 | 0.039 | 0.339 | 0.486 | 0.927 | 1.329 | 0.015 | 0.009 | 0.004 | 0.002 | 0.295 |
| 1989 | 0.003 | 0.018 | 1.416 | 2.590 | 1.179 | 0.064 | 0.192 | 0.048 | 0.029 | 0.015 | 0.004 | 0.002 | 0.468 |
| 1990 | 0.002 | 0.077 | 0.131 | 1.203 | 0.078 | 1.563 | 2.045 | 1.507 | 0.089 | 0.061 | 0.035 | 0.029 | 0.562 |
| 1991 | 0.211 | 0.384 | 0.086 | 0.211 | 0.078 | 0.173 | 0.159 | 1.284 | 0.205 | 0.164 | 0.016 | 0.015 | 0.247 |
| 1992 | 0.016 | 0.153 | 0.150 | 0.087 | 0.074 | 0.023 | 0.485 | 0.075 | 0.023 | 0.022 | 0.022 | 0.022 | 0.097 |
| 1993 | 0.030 | 0.039 | 0.063 | 0.157 | 0.079 | 0.389 | 0.842 | 0.995 | 0.382 | 0.055 | 0.029 | 0.016 | 0.255 |
| 1994 | 0.007 | 0.008 | 0.076 | 0.001 | 0.001 | 0.001 | 0.001 | 0.012 | 0.001 | 0.001 | 0.001 | 0.002 | 0.009 |
| 1995 | 0.004 | 0.011 | 0.656 | 1.383 | 8.001 | 1.917 | 3.846 | 0.169 | 0.239 | 0.079 | 0.022 | 0.007 | 1.371 |
| 1996 | 0.011 | 0.022 | 0.080 | 8.519 | 7.448 | 0.300 | 0.220 | 0.727 | 0.082 | 0.052 | 0.031 | 0.020 | 1.483 |
| Ave. | 0.041 | 0.170 | 0.525 | 1.016 | 1.560 | 1.903 | 0.809 | 0.508 | 0.165 | 0.067 | 0.038 | 0.026 | |
| Max. | 0.211 | 1.271 | 2.639 | 8.519 | 8.001 | 16.141 | 3.846 | 1.507 | 0.781 | 0.447 | 0.377 | 0.235 | |
| Min. | 0.002 | 0.006 | 0.036 | 0.001 | 0.001 | 0.001 | 0.001 | 0.012 | 0.001 | 0.001 | 0.001 | 0.002 | |

Station: CHEIKH REGUIG

(unit: m3/s)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apl | May | Jun | Jul | Aug | Mean |
|------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1974 | -- | -- | -- | -- | -- | -- | -- | 0.396 | 0.092 | 0.018 | 0.011 | 0.004 | -- |
| 1975 | 0.004 | 0.010 | 0.026 | 0.231 | 0.105 | 1.041 | 0.558 | 0.648 | 0.371 | 0.005 | 0.004 | 0.003 | 0.247 |
| 1976 | 0.003 | 2.606 | 0.052 | 15.518 | 13.817 | 8.978 | 0.337 | 0.078 | 0.043 | 0.033 | 0.024 | 0.024 | 3.452 |
| 1977 | 0.027 | 0.051 | 0.055 | 0.166 | 1.040 | 2.011 | 0.563 | 0.356 | 0.194 | 0.024 | 0.017 | 0.030 | 0.367 |
| 1978 | 0.031 | 0.067 | 0.080 | 3.768 | 7.762 | 16.817 | 2.476 | 0.376 | 0.119 | 0.074 | 0.057 | 0.048 | 2.550 |
| 1979 | 0.062 | 1.877 | 0.307 | 0.249 | 1.665 | 0.270 | 3.248 | 0.331 | 0.168 | 0.071 | 0.035 | 0.034 | 0.701 |
| 1980 | 0.028 | 0.057 | 0.743 | 0.282 | 0.126 | 0.072 | 0.097 | 0.054 | 0.019 | 0.003 | 0.001 | 0.001 | 0.123 |
| 1981 | 0.003 | 0.006 | 0.005 | 0.030 | 0.877 | 0.497 | 0.070 | 0.488 | 0.054 | 0.007 | 0.005 | 0.004 | 0.168 |
| 1982 | 0.005 | 0.006 | 0.070 | 0.045 | 0.012 | 0.522 | 0.051 | 0.022 | 0.012 | 0.013 | 0.014 | 0.006 | 0.062 |
| 1983 | 0.015 | 0.017 | 0.065 | 0.320 | 0.011 | 0.010 | 0.161 | 0.025 | 0.467 | 0.009 | 0.001 | 0.000 | 0.093 |
| 1984 | 0.000 | 0.002 | 0.452 | 0.054 | 0.699 | 0.064 | 0.012 | 0.004 | 0.004 | 0.001 | 0.000 | 0.000 | 0.108 |
| 1985 | 0.000 | 0.000 | 0.124 | 0.101 | 0.208 | 4.469 | 0.342 | 0.199 | 0.005 | 0.006 | 0.001 | 0.000 | 0.426 |
| 1986 | 0.000 | 0.000 | 0.414 | 0.006 | 0.454 | 1.928 | 0.042 | 0.009 | 0.001 | 0.001 | 0.000 | 0.000 | 0.226 |
| 1987 | 0.000 | 0.000 | 0.104 | 0.783 | 1.767 | 1.971 | 0.404 | 0.057 | 0.016 | 0.004 | 0.003 | 0.002 | 0.422 |
| 1988 | 0.002 | 0.003 | 0.231 | 0.033 | 0.092 | 0.052 | 0.365 | 0.774 | 0.024 | 0.002 | 0.001 | 0.002 | 0.131 |
| 1989 | 0.002 | 0.002 | 0.681 | 7.672 | 2.997 | 0.183 | 0.046 | 0.125 | 0.007 | 0.002 | 0.002 | 0.015 | 0.993 |
| 1990 | 0.001 | 0.006 | 0.065 | 0.356 | 0.012 | 1.802 | 6.436 | 0.866 | 0.024 | 0.006 | 0.002 | 0.001 | 0.796 |
| 1991 | 0.150 | 0.361 | 0.012 | 0.062 | 0.011 | 0.025 | 0.025 | 0.684 | 0.004 | 0.114 | 0.001 | 0.000 | 0.120 |
| 1992 | 0.000 | 0.054 | 0.000 | 0.007 | 0.001 | 0.001 | 0.124 | 0.006 | 0.000 | 0.000 | 0.000 | 0.000 | 0.016 |
| 1993 | 0.000 | 0.000 | 1.701 | 0.078 | 0.327 | 1.603 | 1.081 | 0.006 | 0.001 | 0.000 | 0.000 | 0.000 | 0.390 |
| 1994 | 0.000 | 0.000 | 0.184 | 0.001 | 0.000 | 0.040 | 0.002 | 0.000 | 0.000 | 0.075 | 0.000 | 0.000 | 0.025 |
| 1995 | 0.000 | 0.000 | 0.191 | 0.010 | 18.264 | 3.179 | 4.729 | 0.196 | 0.164 | 0.006 | 0.002 | 0.001 | 2.247 |
| Ave. | 0.016 | 0.244 | 0.265 | 1.418 | 2.393 | 2.168 | 1.008 | 0.259 | 0.081 | 0.022 | 0.008 | 0.008 | |
| Max. | 0.150 | 2.606 | 1.701 | 15.518 | 18.264 | 16.817 | 6.436 | 0.866 | 0.467 | 0.114 | 0.057 | 0.048 | |
| Min. | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.001 | 0.002 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |

Station: SKHIRAT

(unit: m3/s)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Mean |
|------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1967 | -- | -- | -- | -- | 0.240 | 7.202 | 0.723 | 0.244 | 0.084 | 0.042 | 0.031 | 0.005 | -- |
| 1968 | 0.003 | 0.001 | 1.356 | 3.406 | 3.444 | 13.656 | 5.917 | 0.389 | 0.094 | 0.061 | 0.305 | 0.031 | 2.348 |
| 1969 | 0.027 | 0.028 | 0.116 | 1.025 | 11.647 | 0.823 | 0.498 | 0.259 | 0.116 | 0.062 | 0.015 | 0.009 | 1.233 |
| 1970 | 0.009 | 0.023 | 0.029 | 0.547 | 2.605 | 2.549 | 0.559 | 7.979 | 3.709 | 0.279 | 0.085 | 0.017 | 1.521 |
| 1971 | 0.033 | 0.023 | 0.210 | 0.696 | 4.645 | 0.687 | 3.089 | 0.381 | 0.264 | 0.088 | 0.050 | 0.027 | 0.858 |
| 1972 | 0.024 | 0.032 | 0.027 | 0.048 | 0.823 | 0.208 | 0.222 | 0.042 | 0.020 | 0.012 | 0.011 | 0.010 | 0.124 |
| 1973 | 0.013 | 0.019 | 0.004 | 3.750 | 0.341 | 3.632 | 0.785 | 6.684 | 0.740 | 0.101 | 0.039 | 0.010 | 1.327 |
| 1974 | 0.003 | 0.000 | 0.000 | 0.000 | 0.393 | 0.140 | 0.143 | 0.156 | 0.046 | 0.000 | 0.000 | 0.000 | 0.073 |
| 1975 | 0.001 | 0.001 | 0.002 | 0.104 | 0.017 | 0.195 | 0.278 | 0.305 | 0.070 | 0.002 | 0.001 | 0.000 | 0.081 |
| 1976 | 0.000 | 0.436 | 0.040 | 2.637 | 3.293 | 5.972 | 0.322 | 0.134 | 0.065 | 0.035 | 0.015 | 0.006 | 1.051 |
| 1977 | 0.003 | 0.003 | 0.032 | 0.156 | 1.166 | 3.781 | 0.275 | 0.274 | 0.198 | 0.085 | 0.045 | 0.035 | 0.482 |
| 1978 | 0.006 | 0.018 | 0.012 | 3.473 | 7.854 | 16.319 | 1.333 | 0.304 | 0.086 | 0.035 | 0.023 | 0.011 | 2.368 |
| 1979 | 0.010 | 1.276 | 0.220 | 0.112 | 0.824 | 0.260 | 4.029 | 0.234 | 0.091 | 0.026 | 0.018 | 0.012 | 0.600 |
| 1980 | 0.002 | 0.003 | 0.273 | 0.029 | 0.027 | 0.025 | 0.094 | 0.057 | 0.023 | 0.008 | 0.004 | 0.001 | 0.045 |
| 1981 | 0.000 | 0.000 | 0.000 | 0.016 | 0.249 | 0.480 | 0.034 | 0.652 | 0.018 | 0.005 | 0.001 | 0.002 | 0.118 |
| 1982 | 0.001 | 0.005 | 0.001 | 0.008 | 0.005 | 0.407 | 0.047 | 0.009 | 0.000 | 0.000 | 0.000 | 0.000 | 0.038 |
| 1983 | 0.000 | 0.000 | 0.041 | 0.145 | 0.010 | 0.010 | 0.258 | 0.165 | 0.249 | 0.006 | -- | -- | -- |
| Ave. | 0.008 | 0.117 | 0.148 | 1.009 | 2.211 | 3.314 | 1.095 | 1.075 | 0.346 | 0.050 | 0.040 | 0.011 | |
| Max. | 0.033 | 1.276 | 1.356 | 3.750 | 11.647 | 16.319 | 5.917 | 7.979 | 3.709 | 0.279 | 0.305 | 0.035 | |
| Min. | 0.000 | 0.000 | 0.000 | 0.000 | 0.005 | 0.010 | 0.034 | 0.009 | 0.000 | 0.000 | 0.000 | 0.000 | |

MONTHLY MEAN DISCHARGE

(Daily discharge data are available in DGH database for the period monthly data are available.)

Station: SIDI BOUATHMANE

(unit: m³/s)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apl | May | Jun | Jul | Aug | Mean |
|------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1984 | -- | -- | -- | 0.018 | 1.703 | 1.951 | 1.602 | 2.581 | 2.521 | 0.629 | 0.052 | 0.024 | -- |
| 1985 | 0.022 | 0.029 | 0.025 | 0.044 | 0.201 | 0.161 | 1.537 | 2.490 | 2.350 | 0.297 | 0.021 | 0.019 | 0.602 |
| 1986 | 0.019 | 0.190 | 0.042 | 0.014 | 0.501 | 1.076 | 0.310 | 0.232 | 0.155 | 0.484 | 0.011 | 0.010 | 0.248 |
| 1987 | 0.019 | 2.208 | 3.228 | 6.586 | 1.634 | 6.026 | 7.840 | 4.045 | 2.626 | 1.169 | 0.150 | 0.024 | 2.955 |
| 1988 | 0.018 | 1.100 | 14.672 | 3.956 | 2.311 | 2.205 | 2.772 | 4.610 | 2.828 | 0.984 | 0.376 | 0.226 | 2.989 |
| 1989 | 0.064 | 3.706 | 2.907 | 1.499 | 1.256 | 0.539 | 3.125 | 2.125 | 2.315 | 0.745 | 0.509 | 0.093 | 1.583 |
| 1990 | 0.021 | 0.022 | 0.151 | 0.175 | 0.067 | 0.501 | 1.579 | 1.097 | 0.641 | 0.110 | 0.072 | 1.112 | 0.463 |
| 1991 | 0.192 | 0.169 | 0.134 | 4.341 | 0.823 | 1.697 | 2.005 | 4.023 | 2.847 | 0.698 | 0.241 | 0.148 | 1.444 |
| 1992 | 0.239 | 0.335 | 0.348 | 1.066 | 0.666 | 1.535 | 0.961 | 1.818 | 0.697 | 0.349 | 0.019 | 0.009 | 0.663 |
| 1993 | 0.012 | 0.248 | 1.069 | 0.887 | 1.227 | 1.366 | 5.997 | 5.991 | 1.774 | 0.424 | 0.024 | 0.020 | 1.585 |
| 1994 | 0.023 | 0.361 | 0.132 | 0.049 | 0.013 | 0.019 | 0.047 | 1.789 | 0.848 | 0.234 | 0.036 | 0.199 | 0.312 |
| 1995 | 0.077 | 0.204 | 0.327 | 1.506 | 2.882 | 2.819 | 5.070 | 6.602 | 3.069 | -- | 0.410 | 0.235 | -- |
| 1996 | 0.105 | 0.084 | 0.633 | 0.763 | 1.353 | 1.593 | 1.372 | 5.438 | 4.364 | 1.000 | 1.043 | -- | -- |
| Ave. | 0.067 | 0.721 | 1.972 | 1.608 | 1.126 | 1.653 | 2.632 | 3.295 | 2.080 | 0.594 | 0.228 | 0.177 | |
| Max. | 0.239 | 3.706 | 14.672 | 6.586 | 2.882 | 6.026 | 7.840 | 6.602 | 4.364 | 1.169 | 1.043 | 1.112 | |
| Min. | 0.012 | 0.022 | 0.025 | 0.014 | 0.013 | 0.019 | 0.047 | 0.232 | 0.155 | 0.110 | 0.011 | 0.009 | |

Station: ILLLOUDJANE

(unit: m³/s)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apl | May | Jun | Jul | Aug | Mean |
|------|-------|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1976 | 0.037 | 0.044 | 0.054 | 0.090 | 0.124 | 0.069 | 0.065 | 0.090 | 0.063 | 0.027 | 0.001 | 0.000 | 0.055 |
| 1977 | 0.404 | 0.108 | 0.215 | 0.236 | 2.512 | 2.646 | 2.254 | 2.542 | 1.089 | 0.207 | 0.154 | 0.069 | 1.025 |
| 1978 | 0.023 | 0.305 | 0.081 | 0.155 | 4.048 | 2.640 | 0.981 | 1.488 | 1.183 | 0.960 | 0.704 | 0.947 | 1.119 |
| 1979 | 1.206 | 0.466 | 0.360 | 0.831 | 0.395 | 1.052 | 4.286 | 6.238 | 3.041 | 2.894 | 2.562 | 0.484 | 1.982 |
| 1980 | 0.216 | 0.077 | 0.297 | 0.160 | 0.089 | 0.239 | 0.501 | 0.402 | 0.314 | 0.159 | 0.096 | 0.066 | 0.217 |
| 1981 | 0.016 | 0.218 | 0.056 | 0.130 | 0.354 | 0.416 | 0.505 | 1.312 | 1.153 | 0.148 | 0.061 | 0.055 | 0.368 |
| 1982 | 0.037 | 0.006 | 0.023 | 0.049 | 0.057 | 0.083 | 0.038 | 0.033 | 0.020 | 0.003 | 0.002 | 0.002 | 0.029 |
| 1983 | 0.000 | 0.087 | 0.793 | 0.386 | 0.258 | 0.158 | 0.178 | 0.125 | 0.152 | 0.083 | 0.035 | 0.014 | 0.189 |
| 1984 | 0.000 | 0.000 | 0.043 | 0.015 | 2.594 | 3.041 | 2.787 | 2.148 | 0.980 | 0.294 | 0.109 | 0.056 | 0.993 |
| 1985 | 0.010 | 0.000 | 0.000 | 0.025 | 0.289 | 0.164 | 2.228 | 1.307 | 0.539 | 0.212 | 0.091 | 0.040 | 0.411 |
| 1986 | 0.006 | 0.103 | 0.002 | 0.001 | 0.058 | 0.019 | 0.022 | 0.005 | 0.006 | 0.005 | 0.003 | 0.000 | 0.019 |
| 1987 | 0.013 | 0.311 | 0.376 | 2.419 | 1.012 | 3.116 | 8.011 | 2.235 | 1.275 | 0.604 | 0.224 | 0.126 | 1.645 |
| 1988 | 0.084 | 1.067 | 19.131 | 3.422 | 2.116 | 2.548 | 2.971 | 2.385 | 2.349 | 2.891 | 2.912 | 2.867 | 3.712 |
| 1989 | 1.454 | 5.539 | 5.835 | 8.891 | 6.356 | 3.630 | 4.824 | 1.850 | 1.346 | 0.320 | 2.725 | 0.040 | 3.580 |
| 1990 | 0.042 | 0.037 | 0.030 | 0.041 | 0.029 | 0.444 | 1.330 | 4.185 | 1.033 | 0.418 | 0.246 | 0.197 | 0.666 |
| 1991 | 0.011 | 0.006 | 0.007 | 6.166 | 2.282 | 2.358 | 2.687 | 2.791 | 1.984 | 0.580 | 0.092 | 0.032 | 1.587 |
| 1992 | 0.053 | 0.156 | 0.155 | 0.156 | 0.184 | 0.084 | 0.093 | 0.134 | 0.091 | 0.084 | 0.072 | 0.047 | 0.109 |
| 1993 | 0.000 | 0.031 | 2.974 | 2.506 | 2.258 | 0.542 | 2.995 | 2.217 | 1.057 | 0.177 | 0.162 | 1.291 | 1.358 |
| 1994 | 0.136 | 0.027 | 0.005 | 0.001 | 0.000 | 0.163 | 0.657 | 2.769 | 0.706 | 0.085 | 0.037 | 0.028 | 0.382 |
| 1995 | 0.098 | 0.001 | 0.054 | 10.568 | 13.868 | 6.246 | 6.416 | 2.663 | 0.152 | 0.000 | -- | -- | -- |
| Ave. | 0.192 | 0.429 | 1.525 | 1.812 | 1.944 | 1.483 | 2.191 | 1.846 | 0.927 | 0.508 | 0.542 | 0.335 | |
| Max. | 1.454 | 5.539 | 19.131 | 10.568 | 13.868 | 6.246 | 8.011 | 6.238 | 3.041 | 2.894 | 2.912 | 2.867 | |
| Min. | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.019 | 0.022 | 0.005 | 0.006 | 0.000 | 0.001 | 0.000 | |

Station: SIDI HSSAIN

(unit: m³/s)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apl | May | Jun | Jul | Aug | Mean |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1987 | -- | -- | -- | -- | 0.743 | 1.239 | 1.042 | 0.504 | 0.608 | 0.359 | 0.626 | 0.468 | -- |
| 1988 | 0.844 | 0.584 | 0.872 | 0.762 | 0.548 | 0.649 | 0.933 | 1.419 | 0.716 | 0.675 | 0.537 | 0.372 | 0.741 |
| 1989 | 0.524 | 1.767 | 1.236 | 1.846 | 1.086 | 0.744 | 1.455 | 0.947 | 0.911 | 0.530 | 0.548 | 0.215 | 0.988 |
| 1990 | 0.239 | 0.253 | 0.260 | 0.326 | 0.303 | 0.388 | 0.685 | 0.852 | 0.503 | 0.373 | 0.264 | 0.516 | 0.414 |
| 1991 | 0.084 | 0.263 | 0.232 | 3.830 | 1.469 | 1.390 | 1.583 | 1.890 | 1.554 | 0.715 | 0.438 | 0.314 | 1.150 |
| 1992 | 0.265 | 0.406 | 0.458 | 0.507 | 0.518 | 0.548 | 0.873 | 0.812 | 0.497 | 0.275 | 0.149 | 0.089 | 0.449 |
| 1993 | 0.145 | 0.457 | 0.981 | 0.827 | 0.698 | 1.066 | 1.125 | 0.853 | 0.511 | 0.232 | 0.125 | 0.234 | 0.601 |
| 1994 | 0.154 | 0.279 | 0.349 | 0.364 | 0.324 | 0.431 | 0.774 | 1.755 | 0.349 | 0.245 | 0.192 | 0.132 | 0.444 |
| 1995 | 0.144 | 0.205 | 0.184 | 1.117 | 1.414 | 1.172 | 3.058 | 1.835 | 1.003 | 0.388 | 0.000 | 0.009 | 0.878 |
| 1996 | 0.301 | 0.284 | 0.261 | 0.329 | 0.300 | 0.471 | 0.524 | 1.261 | 1.671 | 1.707 | 1.589 | -- | -- |
| Ave. | 0.300 | 0.500 | 0.537 | 1.101 | 0.740 | 0.810 | 1.205 | 1.213 | 0.832 | 0.550 | 0.447 | 0.261 | |
| Max. | 0.844 | 1.767 | 1.236 | 3.830 | 1.469 | 1.390 | 3.058 | 1.890 | 1.671 | 1.707 | 1.589 | 0.516 | |
| Min. | 0.084 | 0.205 | 0.184 | 0.326 | 0.300 | 0.388 | 0.524 | 0.504 | 0.349 | 0.232 | 0.000 | 0.009 | |

MONTHLY MEAN DISCHARGE

(Daily discharge data are available in DGH database for the period monthly data are available.)

| Station: TADIGHOUST | | | | | | | | | | | | (unit: m ³ /s) | |
|---------------------|--------|--------|--------|--------|-------|-------|-------|-------|--------|--------|-------|---------------------------|--------|
| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apl | May | Jun | Jul | Aug | Mean |
| 1961 | 0.152 | 0.035 | 2.939 | 0.035 | 0.000 | 0.000 | 0.000 | 0.317 | 0.632 | 0.000 | 0.000 | 0.000 | 0.340 |
| 1962 | 3.056 | 1.961 | 0.445 | 0.211 | 0.120 | 0.065 | 0.065 | 0.262 | 15.493 | 1.916 | 0.000 | 0.000 | 1.988 |
| 1963 | 0.949 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.054 | 0.000 | 0.000 | 0.082 |
| 1964 | 4.660 | 0.000 | 0.000 | 0.000 | 0.000 | 8.138 | 0.535 | 0.936 | 0.217 | 0.628 | 0.414 | 1.318 | 1.347 |
| 1965 | 2.283 | 18.823 | 71.848 | 20.013 | 4.284 | 2.664 | 3.772 | 3.713 | 2.961 | 2.687 | 1.480 | 1.043 | 11.272 |
| 1966 | 1.838 | 1.128 | 1.346 | 0.998 | 0.868 | 1.207 | 1.209 | 0.860 | 1.056 | 0.044 | 0.005 | 0.005 | 0.876 |
| 1967 | 0.449 | 1.836 | 11.817 | 1.824 | 1.525 | 1.654 | 1.612 | 2.430 | 1.160 | 1.044 | 0.865 | 0.707 | 2.228 |
| 1968 | 0.823 | 0.835 | 0.703 | 0.876 | 0.609 | 0.615 | 0.302 | 0.219 | 0.165 | 0.180 | 0.394 | 5.501 | 0.943 |
| 1969 | 1.291 | 0.260 | 0.711 | 0.038 | 0.102 | 0.059 | 0.053 | 0.065 | 0.814 | 0.492 | 0.062 | 0.076 | 0.334 |
| 1970 | 0.155 | 0.079 | 0.460 | 0.055 | 0.053 | 0.053 | 1.422 | 0.021 | 0.010 | 0.010 | 0.010 | 0.009 | 0.196 |
| 1971 | 0.086 | 0.754 | 0.148 | 0.000 | 0.000 | 0.000 | 0.000 | 3.207 | 0.075 | 0.086 | 0.071 | 0.071 | 0.371 |
| 1972 | 0.071 | 0.083 | 9.243 | 0.587 | 0.471 | 0.457 | 0.360 | 0.398 | 0.245 | 0.579 | 0.498 | 0.246 | 1.092 |
| 1973 | 0.245 | 0.245 | 0.984 | 0.353 | 0.180 | 0.093 | 0.074 | 0.329 | 0.144 | 0.161 | 0.182 | 0.106 | 0.257 |
| 1974 | 1.101 | 0.078 | 0.015 | 0.008 | 0.004 | 0.002 | 0.004 | 3.166 | 2.896 | 0.186 | 0.037 | 0.081 | 0.631 |
| 1975 | 0.096 | 0.105 | 0.166 | 0.356 | 0.252 | 0.090 | 0.063 | 0.210 | 1.844 | 0.868 | 0.640 | 0.127 | 0.404 |
| 1976 | 2.477 | 0.784 | 0.534 | 0.646 | 1.041 | 0.231 | 0.079 | 0.094 | 0.089 | 0.080 | 0.036 | 0.022 | 0.509 |
| 1977 | 0.479 | 0.186 | 0.036 | 1.289 | 0.064 | 0.004 | 0.004 | 0.003 | 0.007 | 0.007 | 0.008 | 0.003 | 0.176 |
| 1978 | 0.000 | 0.251 | 0.000 | 0.000 | 0.832 | 0.000 | 0.000 | 0.000 | 0.671 | 0.006 | 0.000 | 0.000 | 0.149 |
| 1979 | 1.213 | 7.494 | 0.002 | 0.000 | 0.180 | 1.352 | 3.999 | 2.385 | 0.824 | 0.463 | 0.501 | 0.337 | 1.570 |
| 1980 | 0.606 | 0.736 | 0.477 | 0.672 | 0.361 | 0.516 | 0.145 | 0.093 | 0.227 | 0.215 | 0.215 | 0.177 | 0.369 |
| 1981 | 0.036 | 0.035 | 0.177 | 0.171 | 0.146 | 0.000 | 0.000 | 0.129 | 1.200 | 0.597 | 0.000 | 0.000 | 0.209 |
| 1982 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.003 | 0.447 | 0.000 | 0.000 | 0.230 | 0.058 |
| 1983 | 0.158 | 0.167 | 0.010 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.028 |
| 1984 | 0.000 | 0.000 | 0.401 | 0.000 | 0.000 | 0.000 | 0.000 | 0.009 | 0.627 | 0.000 | 0.002 | 0.000 | 0.087 |
| 1985 | 1.355 | 1.467 | 6.181 | 2.846 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.756 | 0.000 | 1.145 | 1.227 |
| 1986 | 2.416 | 7.582 | 0.000 | 0.000 | 0.000 | 0.000 | 0.958 | 0.000 | 0.935 | 0.000 | 0.000 | 0.000 | 1.003 |
| 1987 | 0.814 | 2.161 | 1.945 | 2.318 | 0.000 | 0.001 | 0.000 | 0.000 | 0.302 | 0.001 | 0.000 | 0.000 | 0.631 |
| 1988 | 0.006 | 6.574 | 1.459 | 0.000 | 0.000 | 3.398 | 2.534 | 0.149 | 0.019 | 3.977 | 0.931 | 3.227 | 1.848 |
| 1989 | 1.455 | 2.007 | 14.157 | 18.558 | 6.021 | 4.666 | 2.958 | 2.287 | 10.810 | 2.181 | 1.986 | 2.189 | 5.790 |
| 1990 | 4.800 | 1.246 | 0.755 | 1.541 | 1.970 | 2.065 | 0.822 | 0.623 | 0.891 | 10.707 | 2.752 | 2.914 | 2.577 |
| 1991 | 1.908 | 0.704 | 0.293 | 1.368 | 0.404 | 0.461 | 0.307 | 0.065 | 0.057 | 0.517 | 0.013 | 0.000 | 0.506 |
| 1992 | 2.502 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.206 |
| 1993 | 0.187 | 0.363 | 25.766 | 0.437 | 1.550 | 1.762 | 1.757 | 2.099 | 2.051 | 1.698 | 1.476 | 0.546 | 3.275 |
| 1994 | 0.547 | 4.276 | 0.847 | 0.517 | 0.363 | 0.437 | 0.870 | 8.065 | 0.524 | 0.675 | 0.332 | 0.315 | 1.478 |
| 1995 | 0.305 | 22.888 | 2.849 | 0.361 | 0.330 | 1.179 | 1.925 | 0.630 | 0.596 | 0.565 | 0.536 | 0.508 | 2.749 |
| 1996 | 0.480 | 0.455 | 0.432 | 0.409 | 0.388 | 0.368 | 0.343 | 0.311 | 0.281 | 0.255 | 0.230 | 1.920 | 0.492 |
| 1997 | 23.985 | 0.327 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Ave. | 1.702 | 2.322 | 4.365 | 1.569 | 0.614 | 0.876 | 0.689 | 0.958 | 1.341 | 0.907 | 0.380 | 0.634 | |
| Max. | 23.985 | 22.888 | 71.848 | 20.013 | 6.021 | 8.138 | 3.999 | 8.065 | 15.493 | 10.707 | 2.752 | 5.501 | |
| Min. | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |

| Station: MERROUTCHA | | | | | | | | | | | | (unit: m ³ /s) | |
|---------------------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|------|
| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Mean |
| 1978 | -- | -- | -- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- |
| 1979 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1985 | -- | 0.72 | 0.75 | 3.74 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- |
| 1986 | 0.17 | 13.49 | 0.00 | 0.00 | 0.00 | 0.00 | 1.14 | 0.00 | 0.04 | 0.06 | 0.00 | 0.00 | 1.26 |
| 1987 | 1.19 | 0.22 | 0.46 | 0.53 | 0.00 | 0.25 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 |
| 1988 | 0.00 | 1.04 | 3.08 | 0.07 | 0.00 | 7.17 | 0.00 | 0.00 | 0.00 | 4.69 | 0.00 | 1.10 | 1.37 |
| 1989 | 0.38 | 0.35 | 60.32 | 0.00 | 0.00 | 0.00 | 0.09 | 0.40 | 0.93 | 0.00 | 0.00 | 0.00 | 5.14 |
| 1990 | 0.74 | 0.31 | 0.00 | 0.87 | 0.02 | 0.00 | 0.41 | 1.10 | 0.33 | 1.10 | 0.00 | 0.70 | 0.47 |
| 1991 | 0.70 | 0.03 | 0.00 | 0.72 | 0.00 | 0.00 | 0.00 | 0.02 | 0.10 | 0.25 | 0.06 | 0.00 | 0.16 |
| 1992 | 0.00 | 0.00 | 0.04 | 0.09 | 0.05 | 0.41 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.05 |
| 1993 | 0.34 | 0.00 | 14.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.20 |
| 1994 | 0.00 | 10.87 | 0.56 | 0.00 | 0.00 | 0.00 | 2.78 | 1.56 | 0.00 | 0.33 | 0.00 | 0.09 | 1.37 |
| 1995 | 0.00 | 0.92 | 0.00 | 0.00 | 0.00 | 1.98 | 0.20 | 0.00 | 0.00 | 2.89 | 2.67 | 0.00 | 0.72 |
| 1996 | 0.00 | 0.02 | 0.00 | 0.00 | 0.05 | 0.00 | 0.01 | 0.17 | 0.00 | 0.00 | 0.00 | -- | -- |
| Ave. | 0.293 | 2.331 | 6.623 | 0.463 | 0.018 | 0.755 | 0.367 | 0.250 | 0.108 | 0.717 | 0.210 | 0.159 | |
| Max. | 1.188 | 13.493 | 60.318 | 3.737 | 0.108 | 7.170 | 2.779 | 1.564 | 0.934 | 4.688 | 2.668 | 1.100 | |
| Min. | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |

| Station: AIT BOULJANE | | | | | | | | | | | | (unit: m ³ /s) | |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|-------|
| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apl | May | Jun | Jul | Aug | Mean |
| 1975 | 0.345 | 0.274 | 0.437 | 0.517 | 0.419 | 0.522 | 0.428 | 0.250 | 0.513 | 0.239 | 0.312 | 0.271 | 0.377 |
| 1976 | 0.686 | 0.569 | 0.497 | 0.441 | 0.501 | 0.480 | 0.421 | 0.374 | 0.400 | 0.312 | 0.356 | 0.405 | 0.453 |
| 1977 | 0.934 | 0.314 | 0.358 | 0.748 | 1.359 | 0.834 | 0.693 | 0.478 | 0.549 | 0.437 | 0.408 | 0.401 | 0.625 |
| 1978 | 0.351 | 0.608 | 0.572 | 0.365 | 0.509 | 0.397 | 0.651 | 0.396 | 0.426 | 0.317 | 0.342 | 0.392 | 0.445 |
| 1979 | 0.572 | 3.938 | 1.139 | 1.091 | 1.022 | 1.153 | 1.777 | 2.388 | 2.484 | 1.898 | 1.055 | 1.838 | 1.617 |
| 1980 | 0.826 | 0.411 | 0.911 | 1.175 | 1.061 | 0.954 | 0.930 | 0.703 | 0.593 | 0.554 | 0.517 | 0.427 | 0.754 |
| 1981 | 0.422 | 0.436 | 0.404 | 0.453 | 0.452 | 0.444 | 0.438 | 0.425 | 0.385 | 0.206 | 0.210 | 0.165 | 0.369 |
| 1982 | 0.237 | 0.271 | 0.487 | 0.512 | 0.729 | 0.918 | 0.521 | 0.518 | 0.423 | 0.182 | 0.237 | 0.346 | 0.446 |
| 1983 | 0.240 | 0.180 | 0.429 | 0.237 | 0.340 | 0.149 | 0.210 | 0.232 | 0.318 | 0.233 | 0.131 | 0.064 | 0.230 |
| 1984 | 0.145 | 0.103 | 0.425 | 0.379 | 0.387 | 0.279 | 0.302 | 0.478 | 1.235 | 0.724 | 1.011 | 0.937 | 0.537 |
| 1985 | 0.886 | 0.332 | 0.503 | 0.223 | 0.128 | 0.104 | 0.174 | 0.199 | 0.223 | 0.400 | 0.217 | 0.181 | 0.297 |
| 1986 | 0.122 | 2.157 | 0.280 | 0.216 | 0.146 | 0.113 | 0.274 | 0.184 | 0.174 | 0.230 | 0.111 | 0.047 | 0.341 |
| 1987 | 0.512 | 0.243 | 0.513 | 0.148 | 0.193 | 0.196 | 0.669 | 0.409 | 0.429 | 0.357 | 0.213 | 0.218 | 0.341 |
| 1988 | 0.200 | 0.456 | 1.500 | 0.733 | 0.713 | 1.165 | 1.499 | 1.469 | 1.553 | 3.735 | 0.525 | 3.604 | 1.428 |
| 1989 | 1.484 | 1.386 | 3.887 | 3.445 | 2.391 | 2.125 | 1.863 | 1.795 | 1.780 | 1.725 | 1.733 | 1.832 | 2.119 |
| 1990 | 2.045 | 1.136 | 1.155 | 1.194 | 1.252 | 1.211 | 1.113 | 1.018 | 0.972 | 1.022 | 1.090 | 1.183 | 1.198 |
| 1991 | 0.979 | 1.044 | 1.059 | 0.843 | 0.572 | 0.420 | 0.777 | 0.795 | 0.962 | 1.236 | 0.638 | 0.496 | 0.818 |
| 1992 | 0.389 | 0.477 | 0.680 | 0.401 | 0.506 | 0.442 | 0.544 | 0.495 | 0.569 | 0.382 | 0.513 | 0.538 | 0.495 |
| 1993 | 0.837 | 0.234 | 2.764 | 1.071 | 1.019 | 1.049 | 1.481 | 1.570 | 1.358 | 1.341 | 1.228 | 1.261 | 1.266 |
| 1994 | 1.214 | 4.757 | 0.826 | 0.852 | 1.035 | 0.922 | 1.546 | 1.814 | 1.119 | 0.824 | 0.815 | 1.165 | 1.414 |
| 1995 | 0.764 | 1.119 | 1.014 | 0.423 | 0.497 | 0.908 | 0.899 | 0.614 | 0.704 | 0.795 | 1.266 | 1.764 | 0.898 |
| 1996 | 1.997 | 2.097 | 2.458 | 2.335 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Ave. | 0.736 | 1.025 | 1.014 | 0.809 | 0.725 | 0.704 | 0.820 | 0.791 | 0.817 | 0.817 | 0.616 | 0.787 | |
| Max. | 2.045 | 4.757 | 3.887 | 3.445 | 2.391 | 2.125 | 1.863 | 2.388 | 2.484 | 3.735 | 1.733 | 3.604 | |
| Min. | 0.122 | 0.103 | 0.280 | 0.148 | 0.128 | 0.104 | 0.174 | 0.184 | 0.174 | 0.182 | 0.111 | 0.047 | |

MONTHLY MEAN DISCHARGE

(Daily discharge data are available in DGH database for the period monthly data are available.)

| Station: AIT BOUIJANE | | | | | | | | | | | | | (unit: m ³ /s) |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|
| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apl | May | Jun | Jul | Aug | Mean |
| 1975 | 0.345 | 0.274 | 0.437 | 0.517 | 0.419 | 0.522 | 0.428 | 0.250 | 0.513 | 0.239 | 0.312 | 0.271 | 0.377 |
| 1976 | 0.686 | 0.569 | 0.497 | 0.441 | 0.501 | 0.480 | 0.421 | 0.374 | 0.400 | 0.312 | 0.356 | 0.405 | 0.453 |
| 1977 | 0.934 | 0.314 | 0.358 | 0.748 | 1.359 | 0.834 | 0.693 | 0.478 | 0.549 | 0.437 | 0.408 | 0.401 | 0.625 |
| 1978 | 0.351 | 0.608 | 0.572 | 0.365 | 0.509 | 0.397 | 0.651 | 0.396 | 0.426 | 0.317 | 0.342 | 0.392 | 0.445 |
| 1979 | 0.572 | 3.938 | 1.139 | 1.091 | 1.022 | 1.153 | 1.777 | 2.388 | 2.484 | 1.898 | 1.055 | 0.838 | 1.617 |
| 1980 | 0.826 | 0.411 | 0.911 | 1.175 | 1.061 | 0.954 | 0.930 | 0.703 | 0.593 | 0.554 | 0.517 | 0.427 | 0.754 |
| 1981 | 0.422 | 0.436 | 0.404 | 0.453 | 0.452 | 0.444 | 0.438 | 0.425 | 0.385 | 0.206 | 0.210 | 0.165 | 0.369 |
| 1982 | 0.237 | 0.271 | 0.487 | 0.512 | 0.729 | 0.918 | 0.521 | 0.518 | 0.423 | 0.182 | 0.237 | 0.346 | 0.446 |
| 1983 | 0.240 | 0.180 | 0.429 | 0.237 | 0.340 | 0.149 | 0.210 | 0.232 | 0.318 | 0.233 | 0.131 | 0.064 | 0.230 |
| 1984 | 0.145 | 0.103 | 0.425 | 0.379 | 0.387 | 0.279 | 0.302 | 0.478 | 1.235 | 0.724 | 1.011 | 0.937 | 0.537 |
| 1985 | 0.886 | 0.332 | 0.503 | 0.223 | 0.128 | 0.104 | 0.174 | 0.199 | 0.223 | 0.400 | 0.217 | 0.181 | 0.297 |
| 1986 | 0.122 | 2.157 | 0.280 | 0.216 | 0.146 | 0.113 | 0.274 | 0.184 | 0.174 | 0.230 | 0.111 | 0.047 | 0.341 |
| 1987 | 0.512 | 0.243 | 0.513 | 0.148 | 0.193 | 0.196 | 0.669 | 0.409 | 0.429 | 0.357 | 0.213 | 0.218 | 0.341 |
| 1988 | 0.200 | 0.456 | 1.500 | 0.733 | 0.713 | 1.165 | 1.499 | 1.469 | 1.553 | 3.735 | 0.525 | 3.604 | 1.428 |
| 1989 | 1.484 | 1.386 | 3.887 | 3.445 | 2.391 | 2.125 | 1.863 | 1.795 | 1.780 | 1.725 | 1.733 | 1.832 | 2.119 |
| 1990 | 2.045 | 1.136 | 1.155 | 1.194 | 1.252 | 1.211 | 1.113 | 1.018 | 0.972 | 1.022 | 1.090 | 1.183 | 1.198 |
| 1991 | 0.979 | 1.044 | 1.059 | 0.843 | 0.572 | 0.420 | 0.777 | 0.795 | 0.962 | 1.236 | 0.638 | 0.496 | 0.818 |
| 1992 | 0.389 | 0.477 | 0.680 | 0.401 | 0.506 | 0.442 | 0.544 | 0.495 | 0.569 | 0.382 | 0.513 | 0.538 | 0.495 |
| 1993 | 0.837 | 0.234 | 2.764 | 1.071 | 1.019 | 1.049 | 1.481 | 1.570 | 1.358 | 1.341 | 1.228 | 1.261 | 1.266 |
| 1994 | 1.214 | 4.757 | 0.826 | 0.852 | 1.035 | 0.922 | 1.546 | 1.814 | 1.119 | 0.824 | 0.815 | 1.165 | 1.414 |
| 1995 | 0.764 | 1.119 | 1.014 | 0.423 | 0.497 | 0.908 | 0.899 | 0.614 | 0.704 | 0.795 | 1.266 | 1.764 | 0.898 |
| 1996 | 1.997 | 2.097 | 2.458 | 2.335 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Ave. | 0.736 | 1.025 | 1.014 | 0.809 | 0.725 | 0.704 | 0.820 | 0.791 | 0.817 | 0.817 | 0.616 | 0.787 | |
| Max. | 2.045 | 4.757 | 3.887 | 3.445 | 2.391 | 2.125 | 1.863 | 2.388 | 2.484 | 3.735 | 1.733 | 3.604 | |
| Min. | 0.122 | 0.103 | 0.280 | 0.148 | 0.128 | 0.104 | 0.174 | 0.184 | 0.174 | 0.182 | 0.111 | 0.047 | |

MONTHLY MEAN DISCHARGE

(Daily discharge data are available in DGH database for the period monthly data are available.)

Station: DAR HAMRA

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apl | May | Jun | Jul | Aug | Mean |
|------|-------|-------|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 1983 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.070 | -- |
| 1984 | 0.078 | 0.084 | 2.273 | 0.980 | 3.136 | 1.494 | 1.854 | 0.960 | 4.213 | 0.568 | 0.138 | 0.064 | 1.323 |
| 1985 | 0.062 | 0.143 | 0.574 | 0.767 | 5.349 | 19.387 | 17.394 | 7.539 | 1.283 | 3.669 | 0.187 | 0.087 | 4.602 |
| 1986 | 0.179 | 0.542 | 1.173 | 0.373 | 3.764 | 21.070 | 3.053 | 0.798 | 0.374 | 0.267 | 0.400 | 0.166 | 2.551 |
| 1987 | 3.144 | 3.775 | 3.222 | 0.976 | 6.183 | 5.462 | 9.540 | 1.212 | 2.212 | 0.414 | 0.126 | 0.081 | 3.027 |
| 1988 | 0.071 | 0.080 | 0.419 | 0.326 | 0.112 | 1.221 | 3.350 | 12.343 | 1.461 | 0.741 | 0.128 | 0.255 | 1.695 |
| 1989 | 1.497 | 2.906 | 2.841 | 11.227 | 8.608 | 1.180 | 0.474 | 3.949 | 0.863 | 0.096 | 0.697 | 0.227 | 2.903 |
| 1990 | 1.020 | 0.112 | 1.417 | 6.089 | 0.713 | 5.970 | 26.286 | 8.546 | 1.828 | 0.645 | 0.527 | 0.333 | 4.462 |
| 1991 | 1.413 | 0.652 | 0.534 | 0.425 | 0.505 | 0.708 | 2.298 | 8.661 | 1.153 | 3.033 | 0.541 | 0.414 | 1.681 |
| 1992 | 0.175 | 0.413 | 0.346 | 1.333 | 0.356 | 0.446 | 3.478 | 3.025 | 4.087 | 0.253 | 0.074 | 0.047 | 1.178 |
| 1993 | 0.032 | 0.252 | 5.603 | 1.029 | 4.083 | 13.668 | 4.789 | 1.091 | 0.513 | 0.134 | 0.038 | 0.020 | 2.523 |
| 1994 | 0.437 | 0.304 | 0.554 | 0.121 | 0.121 | 0.107 | 4.075 | 2.179 | 0.454 | 0.258 | 0.065 | 0.067 | 0.732 |
| 1995 | 0.113 | 0.160 | 0.255 | 4.342 | 27.670 | 14.287 | 15.919 | 13.240 | 7.034 | 2.199 | 0.560 | 0.115 | 7.154 |
| 1996 | 2.678 | 1.850 | 0.581 | 19.603 | 26.636 | 4.650 | 2.030 | 5.010 | 1.880 | 0.552 | 0.162 | 0.086 | 5.517 |
| 1997 | 1.960 | 3.490 | 5.590 | 6.950 | 4.100 | 7.720 | 1.420 | 1.320 | 1.350 | 0.574 | 0.412 | 0.565 | 2.935 |
| 1998 | 0.616 | 0.589 | 0.575 | 0.657 | 3.160 | 1.920 | 2.530 | 0.482 | | | | | 0.877 |
| Ave. | 0.898 | 0.867 | 1.523 | 3.661 | 6.710 | 6.896 | 7.272 | 5.273 | 2.104 | 0.987 | 0.280 | 0.145 | |
| Max. | 3.144 | 3.775 | 5.603 | 19.603 | 27.670 | 21.070 | 26.286 | 13.240 | 7.034 | 3.669 | 0.697 | 0.414 | |
| Min. | 0.032 | 0.080 | 0.255 | 0.121 | 0.112 | 0.107 | 0.474 | 0.798 | 0.374 | 0.096 | 0.038 | 0.020 | |

: Only monthly data are available.

Station: AIN TIMEDRINE

(unit: m³/s)

| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Mean |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1955 | 5.966 | 7.846 | 8.554 | 26.352 | 18.242 | 50.383 | 76.797 | 93.533 | 58.574 | 30.120 | 17.813 | 11.977 | 33.748 |
| 1956 | 9.243 | 10.565 | 9.596 | -- | 16.329 | 10.556 | 21.800 | 35.473 | 32.248 | 13.310 | 8.442 | 7.928 | -- |
| 1957 | 5.463 | 10.193 | 20.174 | 23.545 | 42.103 | 42.457 | 24.010 | 27.830 | 21.723 | 13.257 | 7.551 | 5.447 | 20.171 |
| 1958 | 5.065 | 5.070 | 7.137 | 29.847 | 29.119 | 21.182 | 36.181 | 23.730 | 20.635 | 14.580 | 8.932 | 6.048 | 17.313 |
| 1959 | 5.536 | 5.871 | 6.871 | 55.803 | 84.826 | 55.724 | 55.735 | 37.000 | 23.645 | 28.257 | 13.684 | 9.244 | 31.855 |
| 1960 | 7.180 | 8.705 | 10.563 | 40.513 | 46.852 | 45.754 | 32.642 | 33.363 | 16.706 | 13.827 | 8.025 | 5.622 | 22.356 |
| 1961 | 5.436 | 6.244 | 13.933 | 11.656 | 10.510 | 9.497 | 47.910 | 41.123 | 19.177 | 13.947 | 7.989 | 5.844 | 16.132 |
| 1962 | 4.851 | 7.221 | 25.066 | 21.284 | 59.723 | 85.439 | 46.548 | 29.290 | 69.997 | 44.663 | 18.503 | 14.839 | 35.315 |
| 1963 | 11.940 | 10.932 | 10.092 | 34.913 | 18.635 | 17.945 | 26.648 | 57.067 | 20.887 | 14.407 | 10.425 | 8.740 | 20.197 |
| 1964 | 8.980 | 7.762 | 12.036 | 12.424 | 35.977 | 38.021 | 49.758 | 49.113 | 23.832 | 17.393 | 13.488 | 10.269 | 23.148 |
| 1965 | 10.800 | 10.686 | 9.949 | 8.772 | 10.149 | 8.976 | 9.975 | 10.774 | 8.346 | 5.800 | 3.382 | 3.213 | 8.387 |
| 1966 | 5.267 | 33.776 | 13.559 | 7.845 | 5.237 | 6.235 | 7.893 | 13.198 | 12.646 | 9.601 | 3.958 | 2.895 | 10.206 |
| 1967 | 3.823 | 6.865 | 8.131 | 12.265 | 15.997 | 34.200 | 69.348 | 51.527 | 39.477 | 20.187 | 12.004 | 8.908 | 23.532 |
| 1968 | 6.972 | 5.915 | 16.250 | 34.132 | 47.184 | 67.714 | 54.542 | 48.247 | 32.732 | 24.997 | 15.074 | 9.985 | 30.072 |
| 1969 | 8.996 | 9.544 | 14.115 | 21.474 | 82.297 | 30.029 | 30.042 | 29.410 | 17.568 | 12.737 | 8.150 | 6.678 | 22.594 |
| 1970 | 6.715 | 6.393 | 5.772 | 6.494 | 23.853 | 26.982 | 35.897 | 66.507 | 65.313 | 38.063 | 19.858 | 13.571 | 26.246 |
| 1971 | 11.073 | 10.117 | 17.189 | 16.803 | 25.397 | 44.576 | 72.290 | 55.010 | 41.484 | 25.693 | 15.542 | 10.542 | 28.741 |
| 1972 | 10.894 | 14.987 | 11.202 | 11.626 | 16.555 | 32.189 | 48.600 | 47.017 | 27.142 | 16.043 | 10.085 | 8.800 | 21.172 |
| 1973 | 5.981 | 6.469 | 6.491 | 7.852 | 9.225 | 13.744 | 33.400 | 53.543 | 43.616 | 21.590 | 13.523 | 8.820 | 18.693 |
| 1974 | 8.048 | 8.416 | 7.031 | 5.748 | 5.296 | 13.518 | 28.548 | 51.610 | 37.774 | 22.713 | 12.118 | 8.931 | 17.459 |
| 1975 | 6.905 | 6.404 | 6.619 | 8.002 | 7.091 | 20.638 | 26.148 | 44.440 | 64.455 | 24.643 | 15.432 | 9.398 | 20.004 |
| 1976 | 8.639 | 12.058 | 13.613 | 25.604 | 53.571 | 61.750 | 40.329 | 31.660 | 18.545 | 13.253 | 8.784 | 6.408 | 24.297 |
| 1977 | 7.281 | 9.068 | 7.701 | 12.835 | 14.185 | 33.457 | 27.606 | 33.493 | 24.016 | 14.797 | 9.120 | 7.206 | 16.603 |
| 1978 | 5.244 | 5.083 | 4.843 | 6.624 | 10.819 | 47.571 | 48.813 | 33.517 | 19.587 | 13.007 | 8.535 | 5.828 | 17.245 |
| 1979 | 16.917 | 19.337 | 26.253 | 17.458 | 14.316 | 15.283 | 28.194 | 20.380 | 22.616 | 11.402 | 6.899 | 5.362 | 17.026 |
| 1980 | 5.502 | 7.173 | 11.836 | 8.465 | 9.739 | 13.142 | 16.500 | 24.523 | 19.216 | 10.069 | 5.871 | 4.531 | 11.349 |
| 1981 | 3.429 | 6.670 | 2.705 | 4.914 | 7.291 | 12.431 | 17.084 | 32.067 | 23.484 | 12.246 | 6.491 | 4.533 | 11.085 |
| 1982 | 3.910 | 17.969 | 12.338 | 16.523 | 14.842 | 15.161 | 17.771 | 15.223 | 7.754 | 5.110 | 3.667 | 3.089 | 11.101 |
| 1983 | 3.108 | 3.478 | 6.714 | 7.801 | 6.447 | 4.533 | 8.771 | 13.144 | 23.700 | 12.950 | 7.304 | 4.953 | 8.593 |
| 1984 | 3.607 | 2.724 | 9.150 | 8.830 | 11.723 | 15.454 | 13.447 | 12.070 | 21.994 | 10.533 | 6.217 | 3.509 | 9.905 |
| 1985 | 3.202 | 2.816 | 3.908 | 6.227 | 18.665 | 49.793 | 55.752 | 40.447 | 25.048 | 21.203 | 9.185 | 7.622 | 20.114 |
| 1986 | 5.622 | 7.253 | 5.900 | 5.578 | 9.959 | 46.239 | 29.665 | 14.823 | 10.338 | 9.926 | 10.117 | 3.365 | 13.006 |
| 1987 | 10.547 | 13.266 | 9.153 | 12.104 | 16.233 | 26.228 | 29.316 | 13.403 | 13.654 | 9.233 | 6.278 | 3.961 | 13.579 |
| 1988 | 2.962 | 4.412 | 5.286 | 6.539 | 3.840 | 5.515 | 14.679 | 31.983 | 18.197 | 12.713 | 9.824 | 8.175 | 10.352 |
| 1989 | 8.942 | 18.056 | 14.989 | 14.811 | 17.126 | 14.911 | 9.514 | 11.309 | 20.103 | 6.222 | 5.214 | 4.285 | 12.120 |
| 1990 | 8.825 | 3.308 | 4.401 | 20.382 | 13.474 | 19.132 | 58.674 | 46.370 | 22.823 | 12.896 | 9.010 | 7.232 | 18.883 |
| 1991 | 7.222 | 6.946 | 5.099 | 6.484 | 4.705 | 4.852 | 7.877 | 37.517 | 20.074 | 19.067 | 8.323 | 7.765 | 11.299 |
| 1992 | 4.261 | 3.986 | 3.736 | 3.474 | 3.528 | 3.094 | 17.303 | 14.067 | 14.686 | 6.522 | 3.601 | 2.517 | 6.757 |
| 1993 | 2.391 | 2.389 | 16.515 | 8.207 | 11.275 | 32.050 | 34.768 | 18.147 | 10.669 | 7.037 | 4.864 | 3.437 | 12.504 |
| 1994 | 7.531 | 6.022 | 4.253 | 2.726 | 2.500 | 2.212 | 22.866 | 18.713 | 9.609 | 5.039 | 3.171 | 4.641 | 7.467 |
| 1995 | 4.190 | 5.148 | 3.054 | -- | 44.494 | 53.997 | 71.503 | 41.443 | 30.800 | 24.337 | 12.487 | 8.561 | -- |
| 1996 | 9.430 | 6.594 | 4.171 | 24.080 | 41.158 | 24.086 | 13.000 | 20.287 | 17.910 | 9.922 | 6.708 | 5.594 | 15.219 |
| 1997 | 12.027 | 8.204 | 10.543 | 17.958 | 16.755 | 29.454 | 12.965 | 9.674 | 9.942 | 8.571 | 5.080 | 4.655 | 12.031 |
| Ave. | 6.975 | 8.650 | 9.918 | 15.487 | 22.261 | 28.049 | 33.282 | 33.327 | 25.645 | 15.858 | 9.319 | 6.859 | |
| Max. | 16.917 | 33.776 | 26.253 | 55.803 | 84.826 | 85.439 | 76.797 | 93.533 | 69.997 | 44.663 | 19.858 | 14.839 | |
| Min. | 2.391 | 2.389 | 2.705 | 2.726 | 2.500 | 2.212 | 7.877 | 9.674 | 7.754 | 5.039 | 3.171 | 2.517 | |

MONTHLY MEAN DISCHARGE

(Daily discharge data are available in DGH database for the period monthly data are available.)

| Station: AZZABA | | | | | | | | | | | | (unit: m ³ /s) | |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------------|--------|
| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Mean |
| 1957 | 6.02 | 12.17 | 22.35 | 23.46 | 42.10 | 43.14 | 23.32 | 27.75 | 21.61 | 13.22 | 8.32 | 6.09 | 20.651 |
| 1958 | 5.70 | 5.80 | 7.81 | 32.26 | 34.03 | 24.56 | 40.09 | 28.26 | 24.84 | 17.69 | 10.75 | 7.52 | 19.960 |
| 1959 | 6.90 | 7.07 | 8.50 | 58.74 | 94.51 | 71.67 | 61.98 | 42.24 | 28.61 | 31.54 | 14.17 | 9.64 | 36.257 |
| 1960 | 7.75 | 9.06 | 10.20 | 41.15 | 50.62 | 44.03 | 34.09 | 35.22 | 18.69 | 15.44 | 8.67 | 6.43 | 23.346 |
| 1961 | 6.32 | 7.32 | 14.52 | 12.23 | 11.84 | 10.62 | 49.43 | 44.57 | 22.36 | 16.16 | 8.54 | 6.64 | 17.570 |
| 1962 | 5.83 | 8.88 | 28.35 | 24.96 | 66.43 | 88.73 | 46.90 | 29.79 | 69.11 | 48.65 | 20.75 | 16.58 | 37.603 |
| 1963 | 11.96 | 11.28 | 10.69 | 34.95 | 19.65 | 19.71 | 26.55 | 56.21 | 25.71 | 17.99 | 13.20 | 10.18 | 21.487 |
| 1964 | 8.86 | 8.09 | 10.88 | 10.91 | 31.79 | 34.06 | 45.07 | 45.34 | 25.93 | 19.61 | 13.79 | 10.04 | 21.942 |
| 1965 | 10.51 | 10.33 | 11.05 | 9.53 | 11.27 | 10.22 | 10.64 | 11.91 | 8.87 | 6.12 | 3.96 | 3.71 | 8.990 |
| 1966 | 4.91 | 33.95 | 12.25 | 7.80 | 6.22 | 7.06 | 8.05 | 13.98 | 14.07 | 10.71 | 4.91 | 3.72 | 10.666 |
| 1967 | 4.24 | 6.79 | 7.57 | 11.89 | 16.75 | 35.47 | 69.97 | 50.49 | 40.23 | 21.69 | 13.75 | 9.80 | 24.024 |
| 1968 | 7.27 | 6.21 | 17.15 | 38.35 | 54.36 | 72.16 | 59.09 | 55.55 | 37.67 | 25.96 | 15.54 | 11.12 | 33.125 |
| 1969 | 10.14 | 10.68 | 14.19 | 18.70 | 80.22 | 31.08 | 30.78 | 30.02 | 18.56 | 13.83 | 9.36 | 7.48 | 22.918 |
| 1970 | 7.22 | 7.15 | 6.15 | 7.00 | 23.40 | 26.42 | 34.34 | 70.62 | 70.43 | 39.08 | 20.49 | 14.54 | 27.204 |
| 1971 | 12.12 | 11.35 | 18.50 | 18.58 | 25.92 | 47.04 | 75.83 | 60.17 | 46.66 | 28.75 | 16.59 | 11.10 | 30.976 |
| 1972 | 10.84 | 16.38 | 11.99 | 13.60 | 18.33 | 33.96 | 50.36 | 47.40 | 29.26 | 17.28 | 10.91 | 9.18 | 22.369 |
| 1973 | 6.10 | 6.66 | 6.78 | 8.39 | 10.04 | 15.17 | 36.61 | 58.82 | 48.10 | 24.60 | 14.76 | 9.86 | 20.494 |
| 1974 | 9.25 | 8.25 | 6.99 | 6.29 | 6.04 | 14.42 | 32.79 | 55.37 | 40.17 | 24.26 | 17.53 | 7.34 | 19.043 |
| 1975 | 6.89 | 6.09 | 6.26 | 8.52 | 7.20 | 23.03 | 27.81 | 47.76 | 65.52 | 27.38 | 17.16 | 11.53 | 21.244 |
| 1976 | 11.19 | 14.34 | 15.26 | 28.13 | 58.83 | 66.04 | 39.44 | 30.64 | 19.17 | 15.00 | 9.57 | 7.18 | 25.996 |
| 1977 | 8.23 | 10.02 | 8.19 | 12.54 | 13.92 | 32.57 | 30.97 | 37.03 | 26.11 | 14.00 | 8.68 | 7.13 | 17.331 |
| 1978 | 5.32 | 5.19 | 5.01 | 6.65 | 10.72 | 50.63 | 58.29 | 40.83 | 23.84 | 16.25 | 9.82 | 6.27 | 19.683 |
| 1979 | 18.12 | 16.73 | 24.27 | 15.82 | 13.35 | 13.99 | 27.55 | 19.02 | 23.00 | 11.76 | 7.62 | 5.79 | 16.411 |
| 1980 | 6.49 | 8.83 | 13.46 | 10.11 | 11.01 | 14.05 | 17.50 | 28.42 | 20.89 | 10.56 | 6.48 | 5.36 | 12.730 |
| 1981 | 3.73 | 4.51 | 3.93 | 5.48 | 8.08 | 15.16 | 19.53 | 33.53 | 25.40 | 10.35 | 6.69 | 4.76 | 11.723 |
| 1982 | 3.73 | 18.41 | 16.41 | 19.93 | 18.36 | 18.71 | 19.89 | 17.99 | 7.25 | 5.27 | 3.76 | 2.84 | 12.683 |
| 1983 | 2.58 | 2.88 | 5.20 | 6.10 | 5.49 | 4.27 | 8.19 | 15.14 | 25.33 | 15.68 | 6.49 | 5.04 | 8.542 |
| 1984 | 3.99 | 3.44 | 11.19 | 12.81 | 14.84 | 17.93 | 16.46 | 15.11 | 25.11 | 12.38 | 6.06 | 4.13 | 11.918 |
| 1985 | 3.41 | 3.30 | 4.02 | 5.94 | 17.91 | 50.47 | 55.14 | 41.65 | 25.94 | 21.78 | 10.68 | 7.46 | 20.429 |
| 1986 | 5.18 | 6.73 | 5.60 | 5.46 | 8.93 | 50.37 | 31.22 | 16.07 | 11.39 | 12.00 | 9.69 | 4.51 | 13.677 |
| 1987 | 10.91 | 11.06 | 10.14 | 10.79 | 16.58 | 26.47 | 30.81 | 12.97 | 13.35 | 8.49 | 5.69 | 4.07 | 13.404 |
| 1988 | 3.50 | 4.77 | 5.67 | 6.21 | 4.21 | 5.82 | 14.11 | 37.06 | 19.00 | 15.27 | 9.63 | 8.39 | 11.133 |
| 1989 | 8.79 | 12.63 | 13.17 | 15.90 | 17.59 | 15.67 | 9.41 | 11.39 | 19.06 | 5.36 | 4.91 | 4.61 | 11.527 |
| 1990 | 8.97 | 3.89 | 4.98 | 19.95 | 13.33 | 18.13 | 55.34 | 47.70 | 25.77 | 16.30 | 11.43 | 8.80 | 19.561 |
| 1991 | 7.44 | 7.33 | 4.93 | 6.78 | 4.46 | 4.51 | 7.99 | 44.02 | 23.55 | 21.65 | 9.08 | 7.39 | 12.394 |
| 1992 | 4.21 | 4.04 | 3.84 | 3.40 | 3.74 | 3.43 | 18.85 | 15.00 | 17.16 | 7.59 | 4.92 | 3.47 | 7.502 |
| 1993 | 3.48 | 3.37 | 14.69 | 15.39 | 9.95 | 32.69 | 35.54 | 18.22 | 9.77 | 5.66 | 3.92 | 2.65 | 12.809 |
| 1994 | 6.18 | 5.75 | 4.32 | 2.86 | 2.62 | 2.44 | 18.45 | 15.30 | 9.00 | 6.02 | 4.03 | 2.68 | 6.657 |
| 1995 | 3.94 | 5.60 | 3.42 | 16.97 | 37.77 | 57.81 | 68.73 | 38.44 | 30.66 | 15.85 | 9.14 | 6.36 | 24.476 |
| 1996 | 8.66 | 6.47 | 4.87 | 20.39 | 31.79 | 19.84 | 10.58 | 16.76 | 16.01 | 19.16 | 5.20 | 5.08 | 13.698 |
| Ave. | 7.171 | 8.819 | 10.368 | 15.874 | 23.355 | 29.338 | 33.942 | 34.094 | 26.829 | 17.159 | 9.916 | 7.162 | |
| Max. | 18.122 | 33.954 | 28.350 | 58.742 | 94.506 | 88.729 | 75.832 | 70.620 | 70.429 | 48.650 | 20.752 | 16.584 | |
| Min. | 2.577 | 2.878 | 3.421 | 2.863 | 2.617 | 2.438 | 7.991 | 11.386 | 7.252 | 5.269 | 3.761 | 2.654 | |

MONTHLY MEAN DISCHARGE

(Daily discharge data are available in DGH database for the period monthly data are available.)

| Station: PON DE M'DEZ | | | | | | | | | | | | | (unit: m ³ /s) |
|-----------------------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|---------------------------|
| Year | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Mean |
| 1956 | 2.932 | 5.213 | 3.648 | 3.535 | 5.296 | 3.328 | 7.060 | 11.608 | 9.784 | 2.275 | 1.600 | 1.160 | 4.795 |
| 1957 | 1.226 | 4.488 | -- | 5.113 | 14.099 | 19.789 | 7.633 | 7.503 | 3.981 | 2.529 | 1.158 | 0.782 | -- |
| 1958 | 2.194 | 1.802 | 2.929 | 8.610 | 11.173 | 6.125 | 14.909 | 6.959 | 4.561 | 2.052 | 1.103 | 0.461 | 5.251 |
| 1959 | 2.730 | 1.815 | 2.075 | 19.294 | 27.777 | 30.824 | 22.326 | 12.704 | 6.176 | 9.291 | 2.819 | 1.285 | 11.542 |
| 1960 | 1.193 | 2.451 | 3.230 | 13.178 | 14.397 | 21.039 | 14.623 | 14.093 | 5.058 | 4.445 | 1.671 | 0.972 | 7.947 |
| 1961 | 1.778 | 2.729 | 5.151 | 4.525 | 4.176 | 3.720 | 21.862 | 18.953 | 5.687 | 4.070 | 1.293 | 0.648 | 6.223 |
| 1962 | 1.088 | 3.148 | 8.836 | 7.863 | 27.071 | 42.332 | 19.365 | 9.373 | 32.635 | 20.466 | 5.866 | 5.993 | 15.174 |
| 1963 | 4.348 | 4.905 | 4.907 | 15.743 | 7.146 | 6.680 | 8.281 | 25.003 | 6.243 | 4.297 | 2.908 | 2.915 | 7.767 |
| 1964 | 3.414 | 3.247 | 4.360 | 4.258 | 12.286 | 15.477 | 18.029 | 16.792 | 7.856 | 7.920 | 3.746 | 4.807 | 8.463 |
| 1965 | 3.892 | 4.301 | 4.205 | 3.294 | 3.419 | 2.343 | 3.072 | 2.756 | 3.544 | 2.431 | 0.836 | 1.147 | 2.937 |
| 1966 | 2.866 | 18.210 | 4.189 | 2.953 | 1.983 | 2.120 | 2.214 | 3.888 | 3.347 | 2.624 | 1.136 | 0.905 | 3.889 |
| 1967 | 3.486 | 3.772 | 3.087 | 4.006 | 5.109 | 12.306 | 28.884 | 20.940 | 11.998 | 4.207 | 1.944 | 1.632 | 8.432 |
| 1968 | 1.468 | 1.492 | 3.667 | 8.253 | 13.411 | 28.279 | 22.942 | 19.353 | 8.335 | 5.746 | 3.748 | 1.400 | 9.715 |
| 1969 | 1.405 | 3.924 | 5.416 | 5.835 | 43.098 | 11.655 | 9.579 | 7.927 | 4.007 | 3.461 | 2.960 | 1.391 | 8.403 |
| 1970 | 2.305 | 2.739 | 2.378 | 2.802 | 7.107 | 7.718 | 14.774 | 41.083 | 39.297 | 20.235 | 6.455 | 3.402 | 12.521 |
| 1971 | 3.556 | 4.342 | 8.298 | 8.116 | 9.499 | 22.066 | 32.632 | 27.877 | 17.355 | 7.093 | 2.972 | 1.638 | 12.070 |
| 1972 | 3.018 | 7.150 | 4.030 | 5.441 | 7.165 | 12.371 | 24.755 | 22.027 | 8.693 | 4.354 | -- | 2.623 | -- |
| 1973 | 1.399 | 2.713 | 3.132 | 3.667 | 3.441 | 4.248 | 15.310 | 23.800 | 18.031 | 3.620 | 2.100 | 1.074 | 6.887 |
| 1974 | 1.516 | 2.642 | 2.497 | 2.038 | 1.907 | 4.411 | 11.835 | 27.197 | 19.445 | 8.602 | 2.729 | 2.085 | 7.236 |
| 1975 | 2.064 | 2.446 | 2.912 | 3.263 | 2.769 | 7.757 | 11.858 | 25.690 | 31.294 | 8.671 | 6.931 | 2.953 | 9.049 |
| 1976 | 2.973 | 4.889 | 4.751 | 8.047 | 22.326 | 29.986 | 18.065 | 11.974 | 3.887 | 2.476 | 1.270 | 0.982 | 9.173 |
| 1977 | 3.217 | 4.010 | 3.396 | 3.943 | 4.518 | 14.440 | 7.798 | 7.812 | 3.867 | 2.425 | 1.178 | 1.257 | 4.749 |
| 1978 | 1.038 | 1.681 | 2.006 | 2.353 | 3.263 | 18.268 | 29.039 | 14.418 | 4.436 | 3.830 | 1.503 | 0.594 | 6.792 |
| 1979 | 15.007 | 8.569 | 9.490 | 5.308 | 4.203 | 5.741 | 11.979 | 7.638 | 8.122 | 1.341 | 0.825 | 0.706 | 6.562 |
| 1980 | 2.446 | 3.535 | 4.276 | 2.874 | 3.408 | 4.614 | 4.526 | 8.062 | 6.990 | 4.175 | 3.043 | 1.845 | 4.139 |
| 1981 | 1.328 | 1.930 | 0.205 | 0.585 | 1.109 | 2.582 | 5.424 | 13.276 | 9.958 | 3.303 | 1.059 | 0.829 | 3.461 |
| 1982 | 1.353 | 7.629 | 2.995 | 4.241 | 4.131 | 3.929 | 4.072 | 2.698 | 1.268 | 0.736 | 0.404 | 0.261 | 2.810 |
| 1983 | 0.365 | 1.087 | 1.930 | 1.646 | 1.113 | 0.763 | 1.310 | 1.816 | 4.555 | 1.136 | 0.434 | 0.283 | 1.374 |
| 1984 | 0.470 | 0.548 | 0.958 | 1.745 | 2.162 | 4.171 | 2.913 | 1.981 | 6.807 | 1.658 | 1.267 | 0.065 | 2.054 |
| 1985 | 0.766 | 1.500 | 0.963 | 1.389 | 3.977 | 14.228 | 19.723 | 12.230 | 4.968 | 6.283 | 1.489 | 1.608 | 5.698 |
| 1986 | 0.993 | 3.165 | 1.383 | 1.336 | 2.056 | 19.058 | 11.805 | 3.081 | 1.449 | 2.718 | 2.196 | 0.062 | 4.008 |
| 1987 | 4.691 | 7.323 | 1.626 | 2.778 | 3.705 | 9.250 | 9.765 | 2.098 | 2.281 | 0.796 | 0.360 | 0.111 | 3.718 |
| 1988 | 0.148 | 1.369 | 1.640 | 1.677 | 0.978 | 1.310 | 3.448 | 10.254 | 6.311 | 3.815 | 1.154 | 2.719 | 2.903 |
| 1989 | 2.128 | 5.115 | 4.157 | 4.147 | 5.281 | 5.744 | 2.072 | 2.072 | 10.633 | 0.847 | 11.841 | 3.625 | 4.825 |
| 1990 | 6.528 | 0.836 | 1.533 | 8.729 | 8.197 | 8.563 | 21.261 | 19.151 | 4.280 | 2.523 | 1.651 | 1.383 | 7.037 |
| 1991 | 2.326 | 1.769 | 0.998 | 1.577 | 1.011 | 0.854 | 1.405 | 17.811 | 5.001 | 5.506 | 0.723 | 2.266 | 3.416 |
| 1992 | 0.508 | 0.807 | 0.929 | 0.837 | 0.996 | 0.710 | 7.300 | 3.906 | 3.425 | 0.611 | 0.206 | 0.606 | 1.748 |
| 1993 | 0.248 | 0.610 | 7.053 | 2.063 | 2.335 | 9.478 | 15.700 | 3.822 | 1.327 | 0.698 | 0.448 | 0.577 | 3.657 |
| 1994 | 4.903 | 2.369 | 1.378 | 0.532 | 0.423 | 0.467 | 8.524 | 7.844 | 1.867 | 1.566 | 0.312 | 1.422 | 2.638 |
| 1995 | 2.722 | 4.001 | 1.675 | 5.490 | 12.016 | 23.303 | 34.713 | 18.883 | 13.659 | 3.074 | 1.412 | 0.827 | 10.115 |
| 1996 | 2.688 | 1.799 | 1.420 | 7.956 | 15.149 | 7.135 | 2.100 | 9.396 | 6.259 | 0.446 | 0.242 | 1.940 | 4.704 |
| 1997 | 8.520 | 3.364 | 3.163 | 6.485 | 5.305 | 14.716 | 2.830 | 1.992 | 3.565 | 2.230 | 0.969 | 1.567 | 4.482 |
| Ave. | 2.696 | 3.606 | 3.338 | 4.941 | 7.857 | 11.045 | 12.803 | 12.565 | 8.625 | 4.300 | 2.145 | 1.543 | |
| Max. | 15.007 | 18.210 | 9.490 | 19.294 | 43.098 | 42.332 | 34.713 | 41.083 | 39.297 | 20.466 | 11.841 | 5.993 | |
| Min. | 0.148 | 0.548 | 0.205 | 0.532 | 0.423 | 0.467 | 1.310 | 1.816 | 1.268 | 0.446 | 0.206 | 0.062 | |

*Feasibility Study on Water Resources Development in
Rural Area in the
Kingdom of Morocco
Final Report
Volume VII Data Book
Data Book HY
Hydrology*

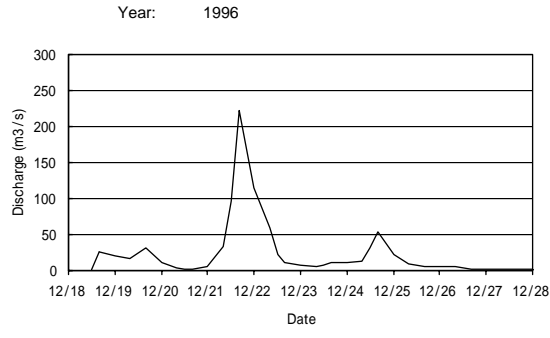
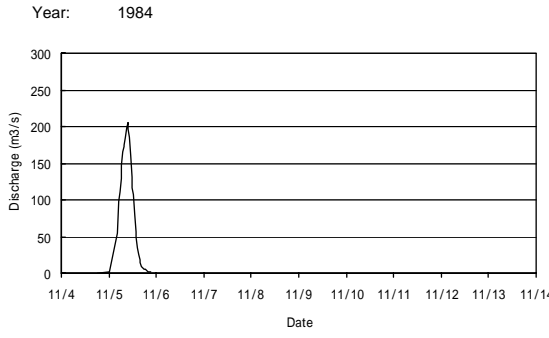
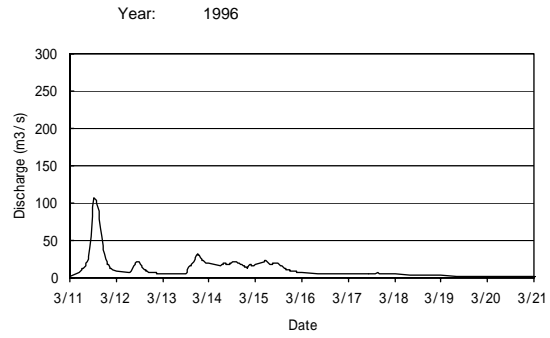
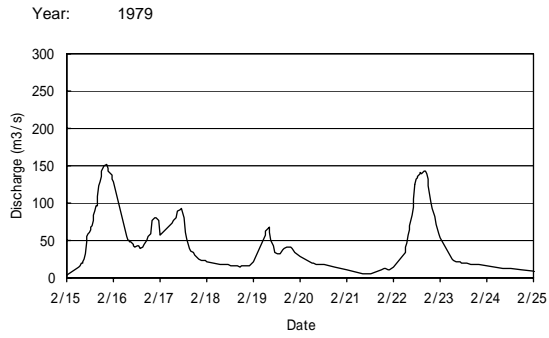
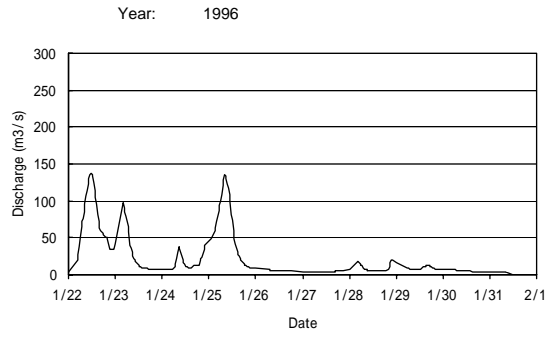
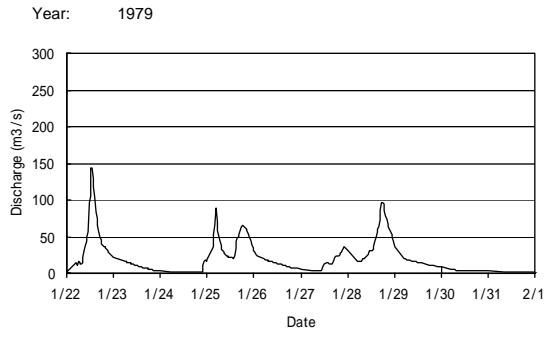
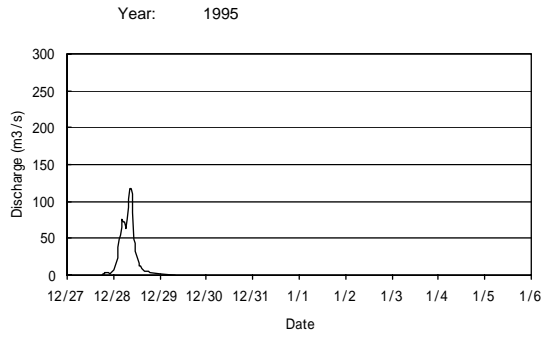
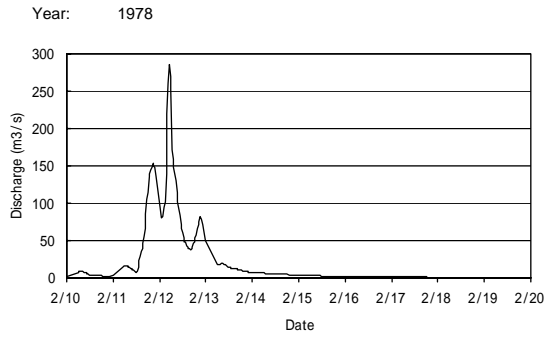
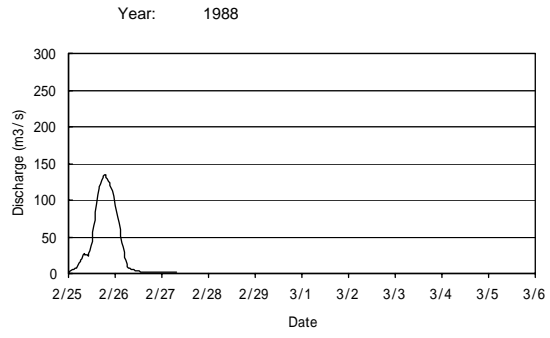
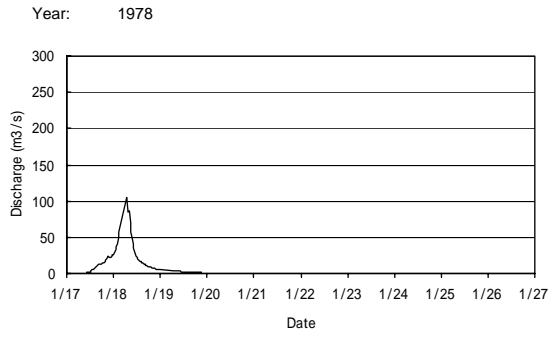
HY4 Hydrograph of Major Floods

Hydrogramme des Principales Crues

Table des matières

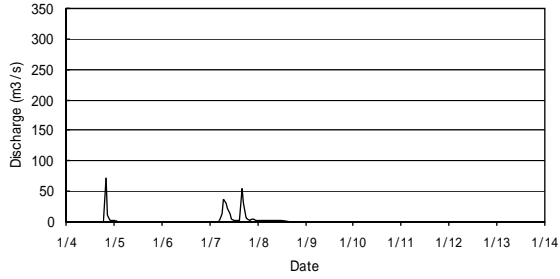
1. Hydrogramme de Débit des Principales Crues
2. WateHydrogramme du Niveau d'eau des Principales Crues

**DISCHARGE HYDROGRAPHS OF MAJOR FLOODS
FEDDANE TABA STATION (Qpeak > 100 m3/s)**

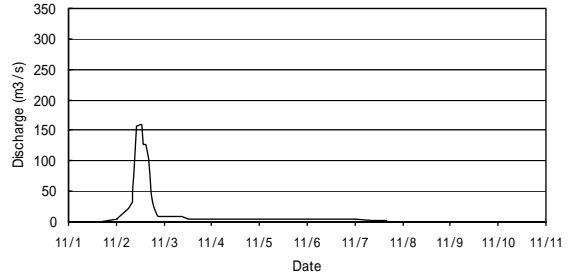


**DISCHARGE HYDROGRAPHS OF MAJOR FLOODS
SIDI BOUATHMANE STATION (Qpeak > 70 m³/s)**

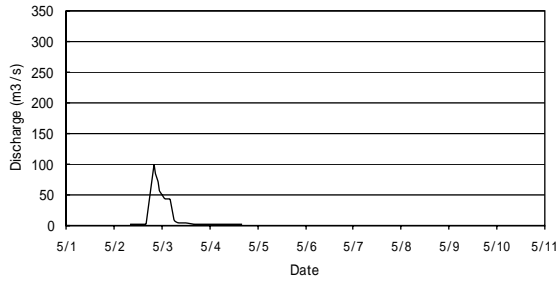
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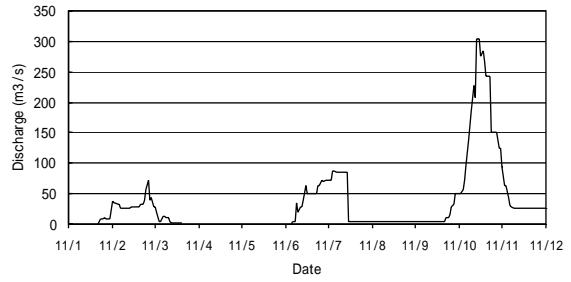
Year: 1987



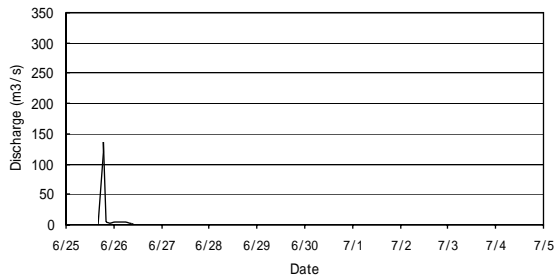
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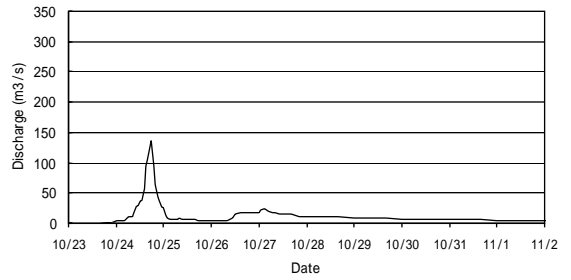
Year: 1988



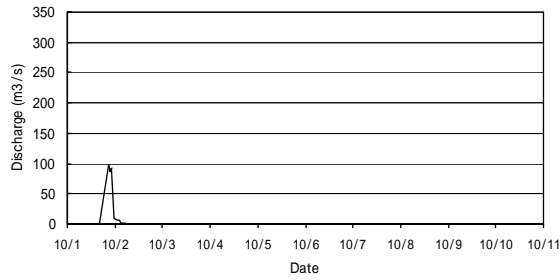
Year: 1987



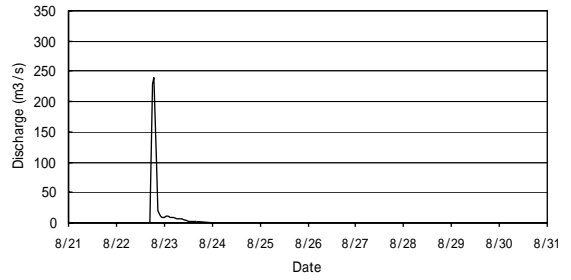
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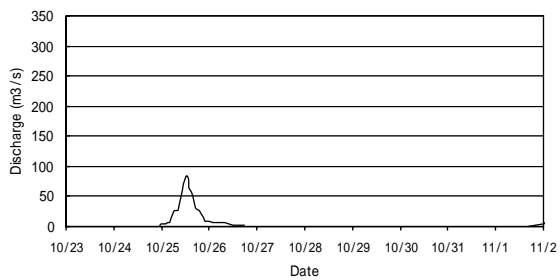
Year: 1987



Year: 1991

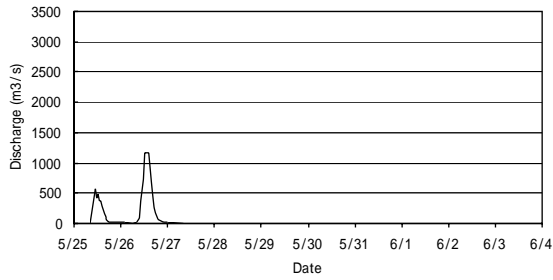


Year: 1987

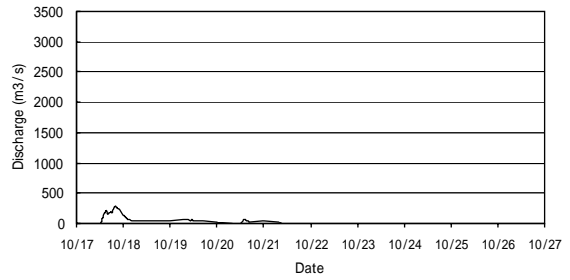


**DISCHARGE HYDROGRAPHS OF MAJOR FLOODS
TADIGHOUST STATION (Qpeak > 250 m³/s)**

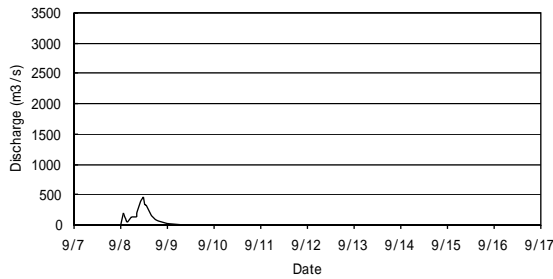
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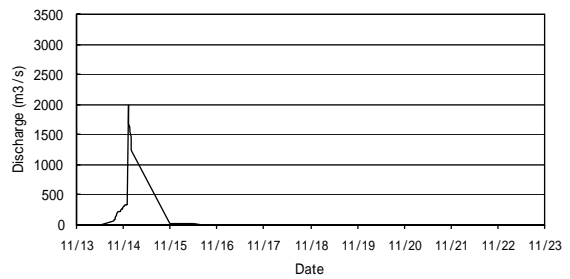
Year: 1979



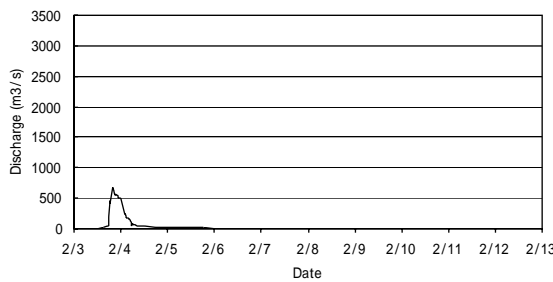
Year: 1964



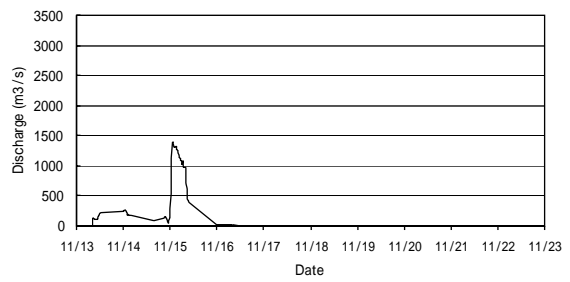
Year: 1989



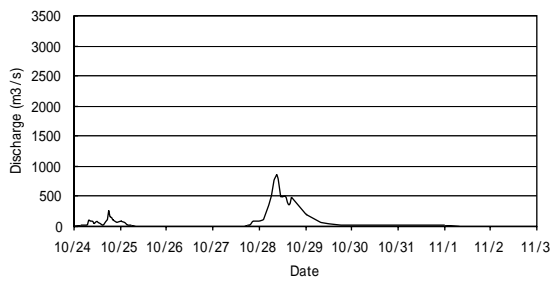
Year: 1965



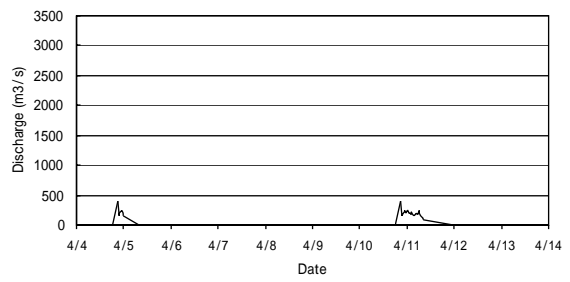
Year: 1993



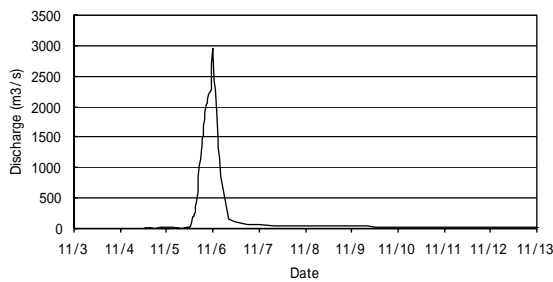
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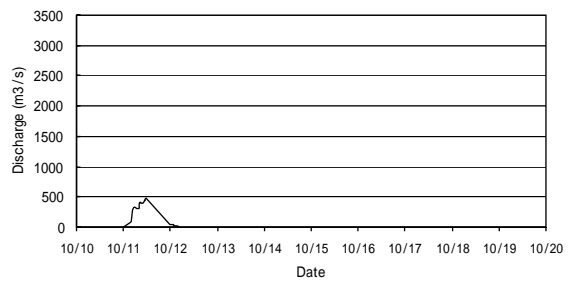
Year: 1995



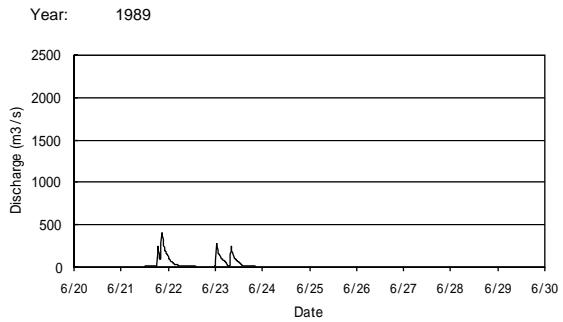
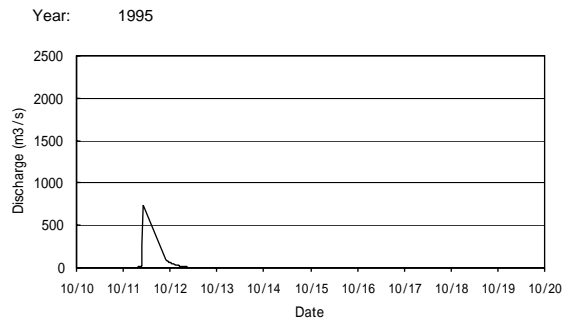
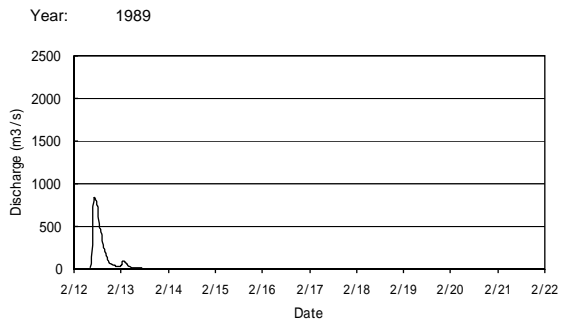
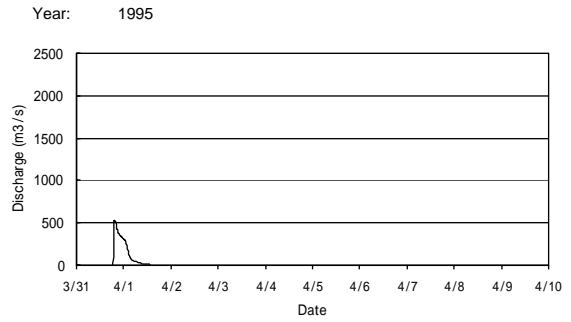
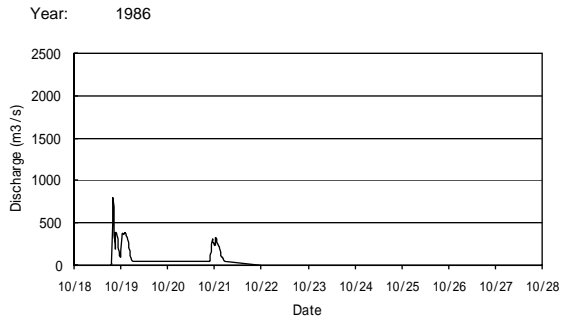
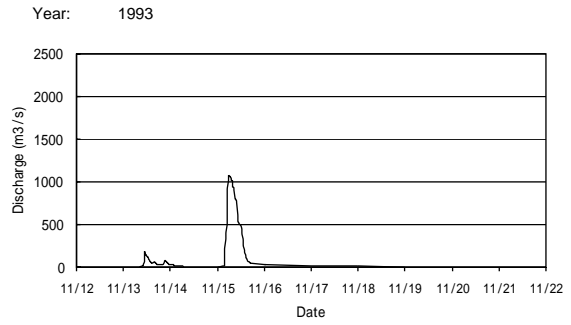
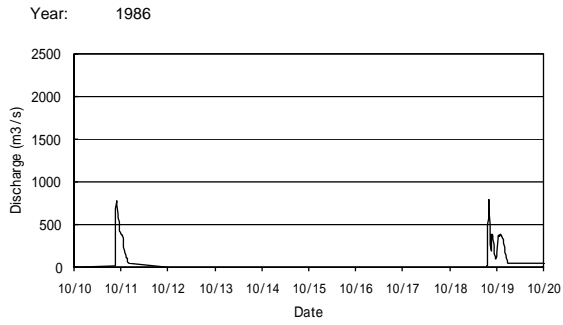
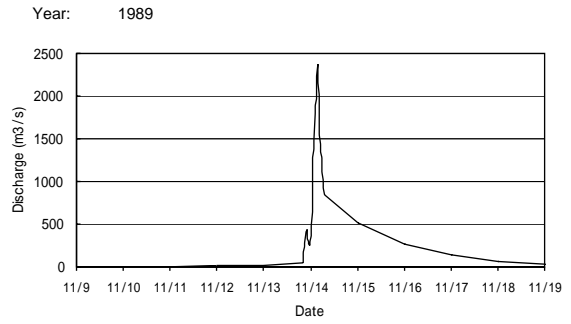
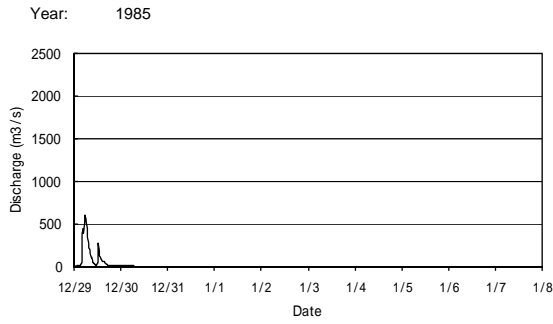
Year: 1965



Year: 1995

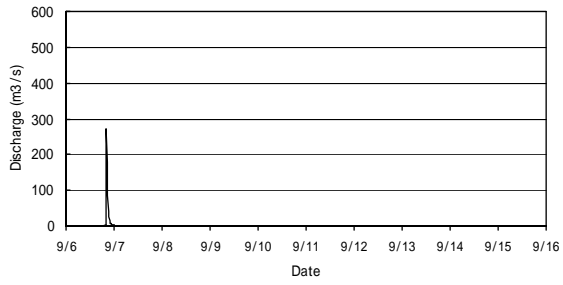


**DISCHARGE HYDROGRAPHS OF MAJOR FLOODS
MERROUTCHA STATION (Qpeak > 250 m3/s)**

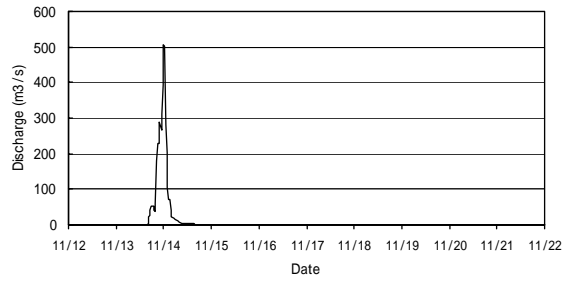


**DISCHARGE HYDROGRAPHS OF MAJOR FLOODS
AIT BOUIJANE STATION (Qpeak > 250 m3/s)**

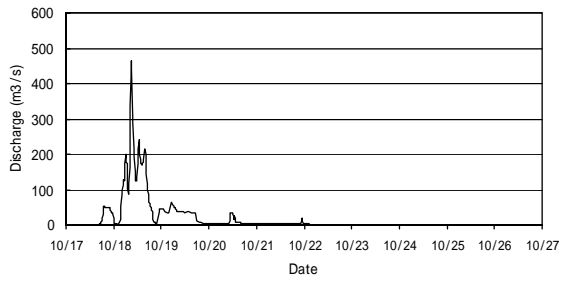
Year: 1977



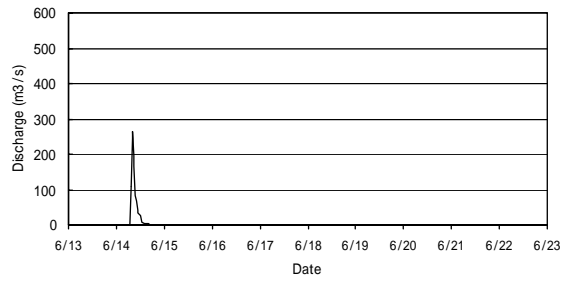
Year: 1989



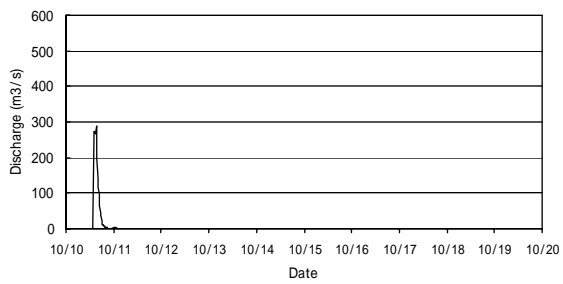
Year: 1979



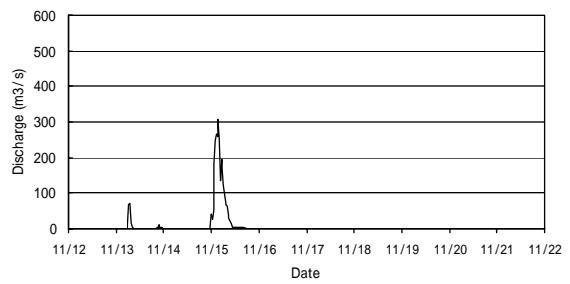
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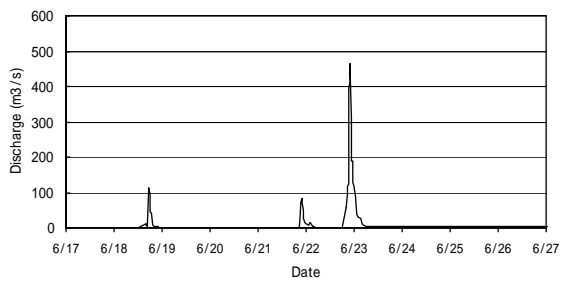
Year: 1986



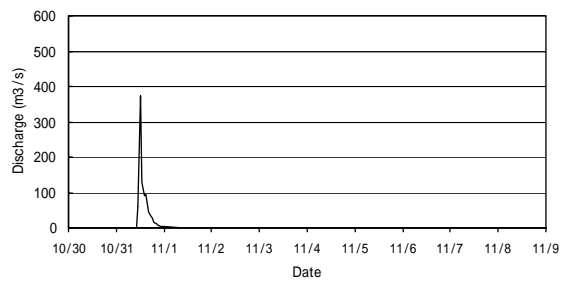
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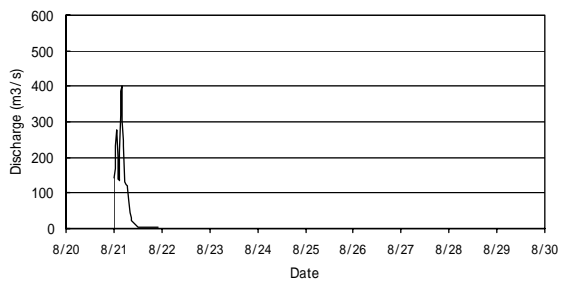
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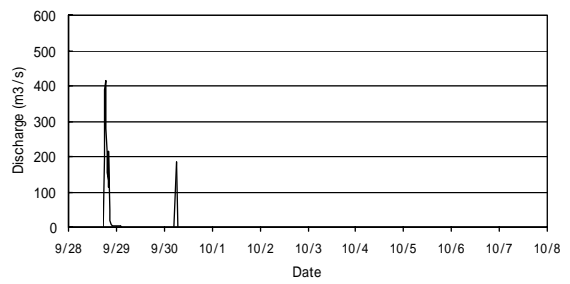
Year: 1994



Year: 1989

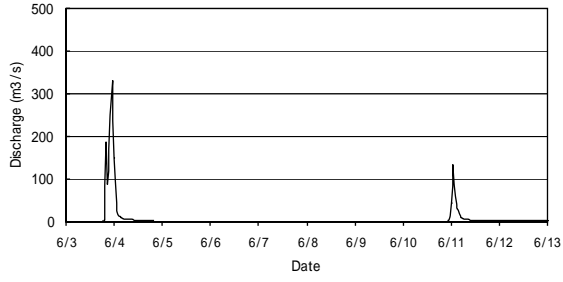


Year: 1997

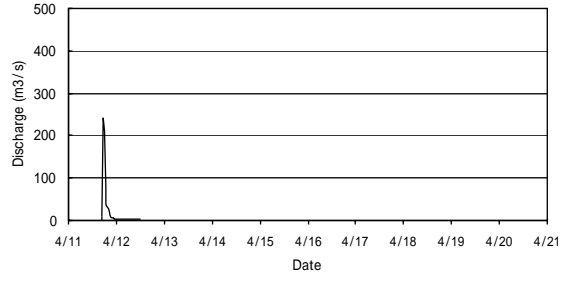


**DISCHARGE HYDROGRAPHS OF MAJOR FLOODS
DAR HAMRA STATION (Qpeak > 200 m3/s)**

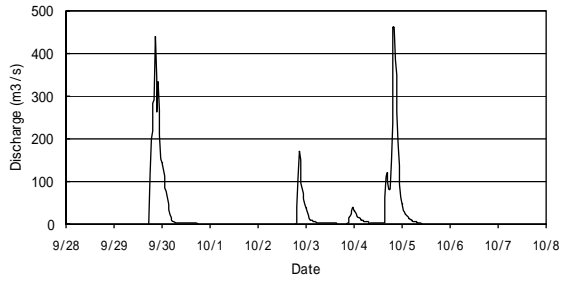
Year: 1986



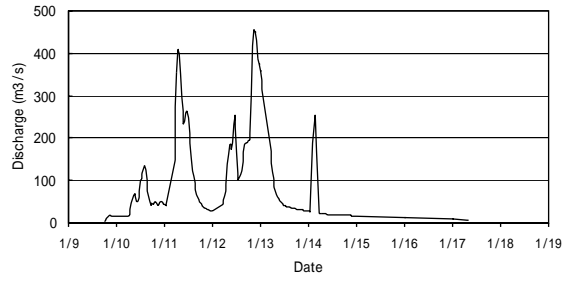
Year: 1995



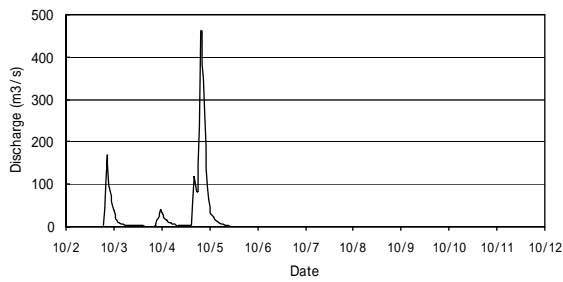
Year: 1987



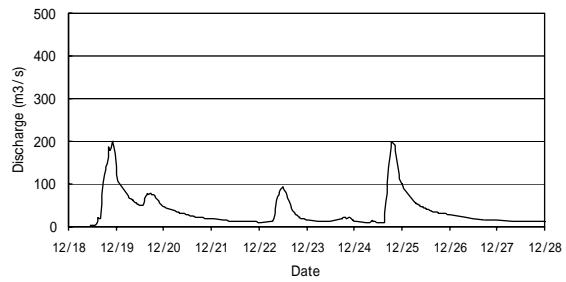
Year: 1996



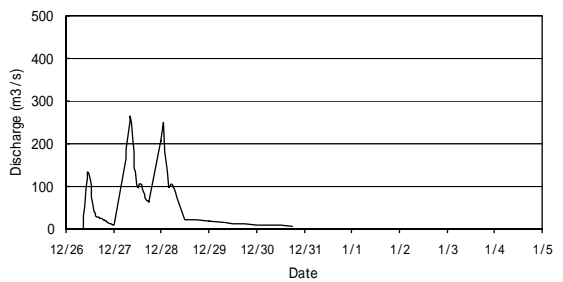
Year: 1987



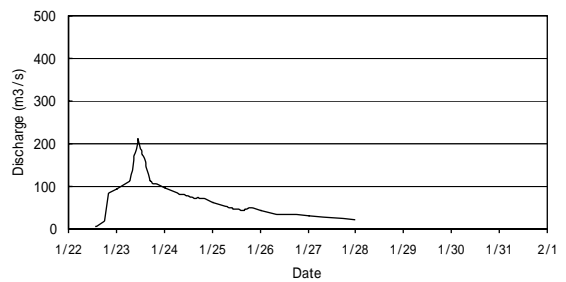
Year: 1996



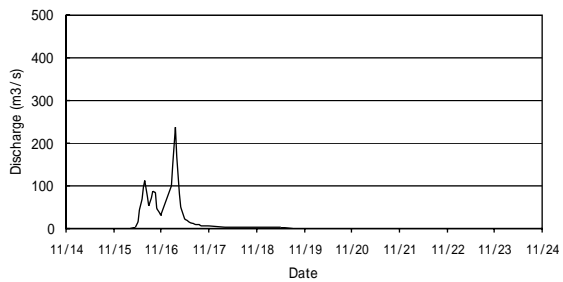
Year: 1989



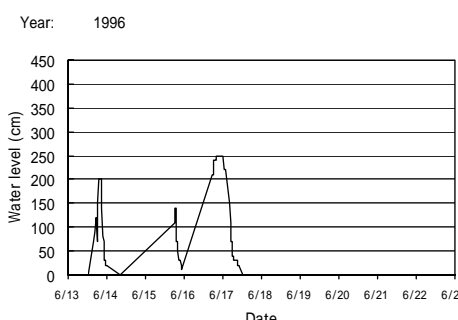
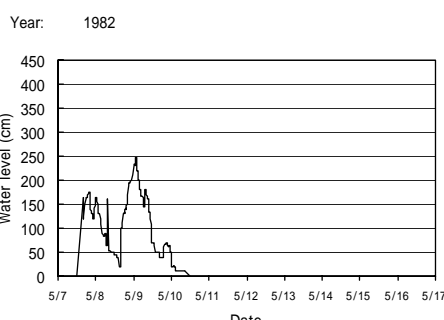
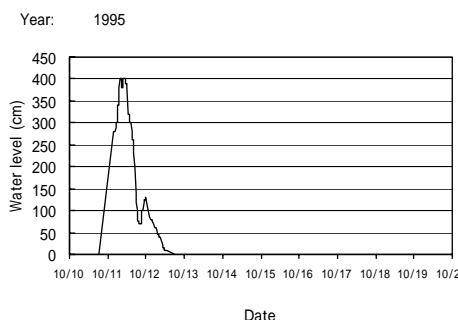
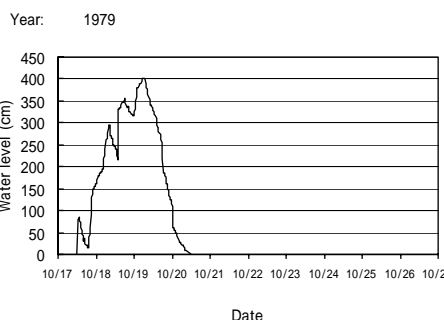
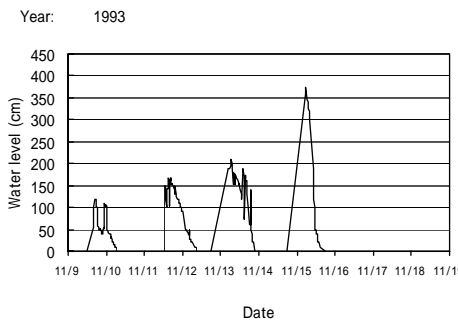
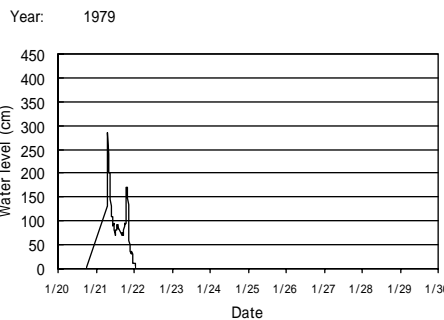
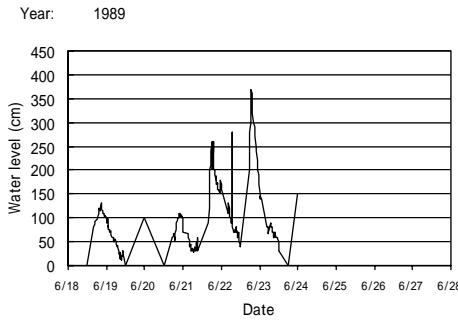
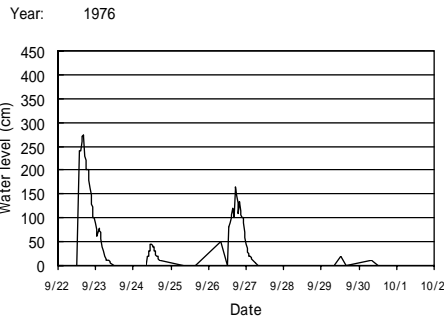
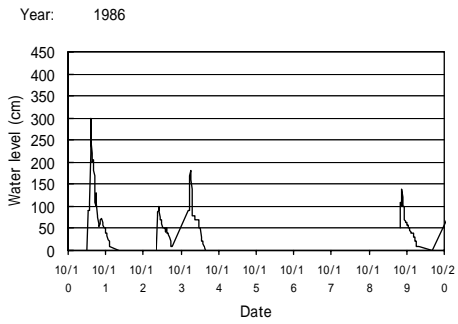
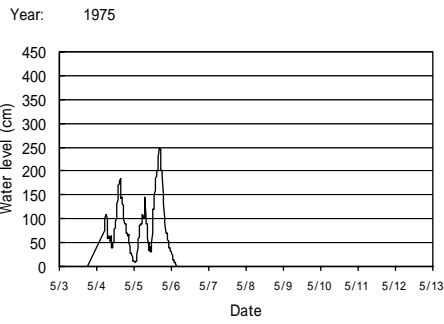
Year: 1997



Year: 1993

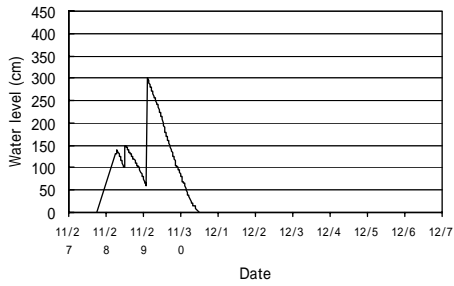


DISCHARGE HYDROGRAPHS OF MAJOR FLOODS
IFFER STATION (H_{peak} > 250cm)

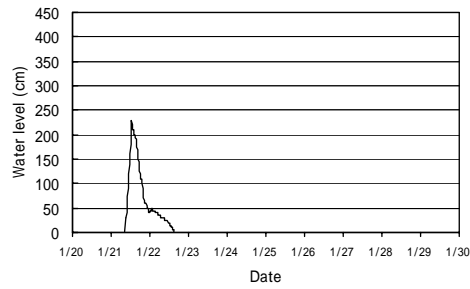


**DISCHARGE HYDROGRAPHS OF MAJOR FLOODS
FELKLA STATION (H_{peak} > 150cm)**

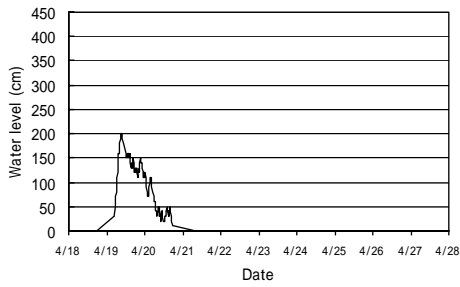
Year: 1972



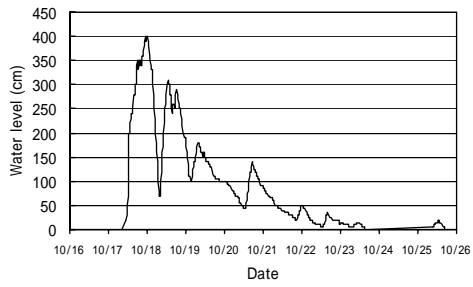
Year: 1979



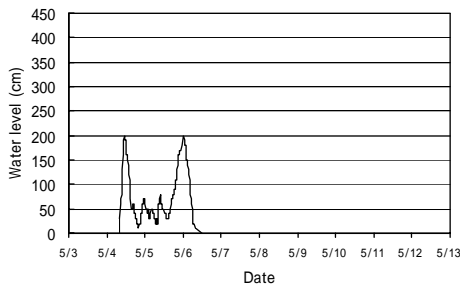
Year: 1975



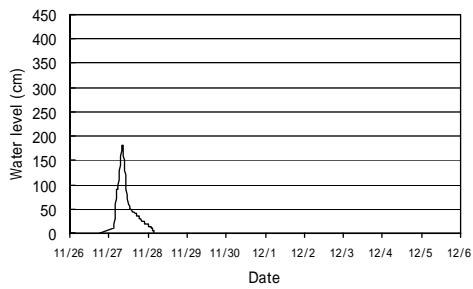
Year: 1979



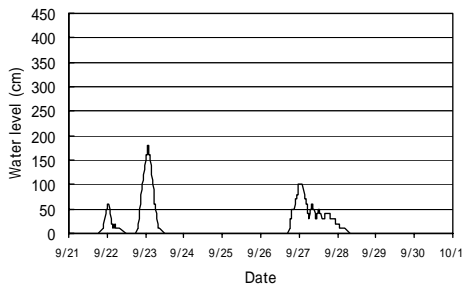
Year: 1975



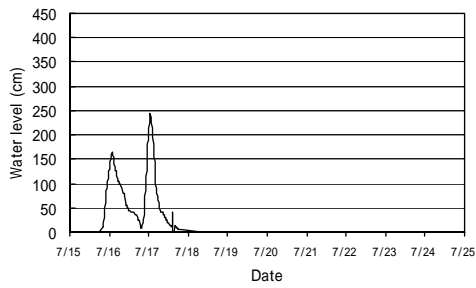
Year: 1984



Year: 1976



Year: 1996



Year: 1978

