

# Rainfall\_MeteoStation\_Vathi\_Samos

October 3, 2017

## 1 Post-processing of the meteorological data

Here we look at the rainfall data obtained from the meteorological station of Vathi

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Meteorological station's coordinates

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X,Y in EGSA 87  
X,Y in WGS 84  
Height

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```
In [1]: import pandas as pd
        %matplotlib inline
        data = pd.read_csv ('Rainfall_meteostation_Vathi_year.csv',
                             header=0,
                             index_col='Year',
                             decimal=',')

        data.head(n=10)
```

```
Out[1]:          Vathi
Year
1930-31  1226.8
1931-32   753.5
1932-33   600.7
1933-34   803.5
1934-35   672.0
1935-36  1444.9
1936-37   525.6
1937-38  1246.0
1938-39  1152.4
1939-40  1169.2
```

```
In [9]: data.head(n=50)
```

```
Out[9]:          Vathi
Year
1930-31  1226.8
1931-32   753.5
1932-33   600.7
```

1933-34	803.5
1934-35	672.0
1935-36	1444.9
1936-37	525.6
1937-38	1246.0
1938-39	1152.4
1939-40	1169.2
1946-47	993.0
1947-48	1250.2
1948-49	623.2
1949-50	566.9
1950-51	1056.8
1951-52	998.6
1952-53	825.0
1953-54	836.5
1954-55	694.0
1955-56	1272.6
1956-57	606.8
1957-58	604.6
1958-59	622.5
1959-60	1032.7
1960-61	1196.1
1961-62	826.8
1962-63	1383.6
1963-64	505.2
1964-65	1176.0
1965-66	798.0
1966-67	781.6
1968-69	946.2
1970-71	1008.4
1971-72	501.7
1972-73	507.0
1973-74	650.3
1974-75	895.7
1975-76	540.3

In [7]: *# Run some basic statistics for the dataset*  
data.describe()

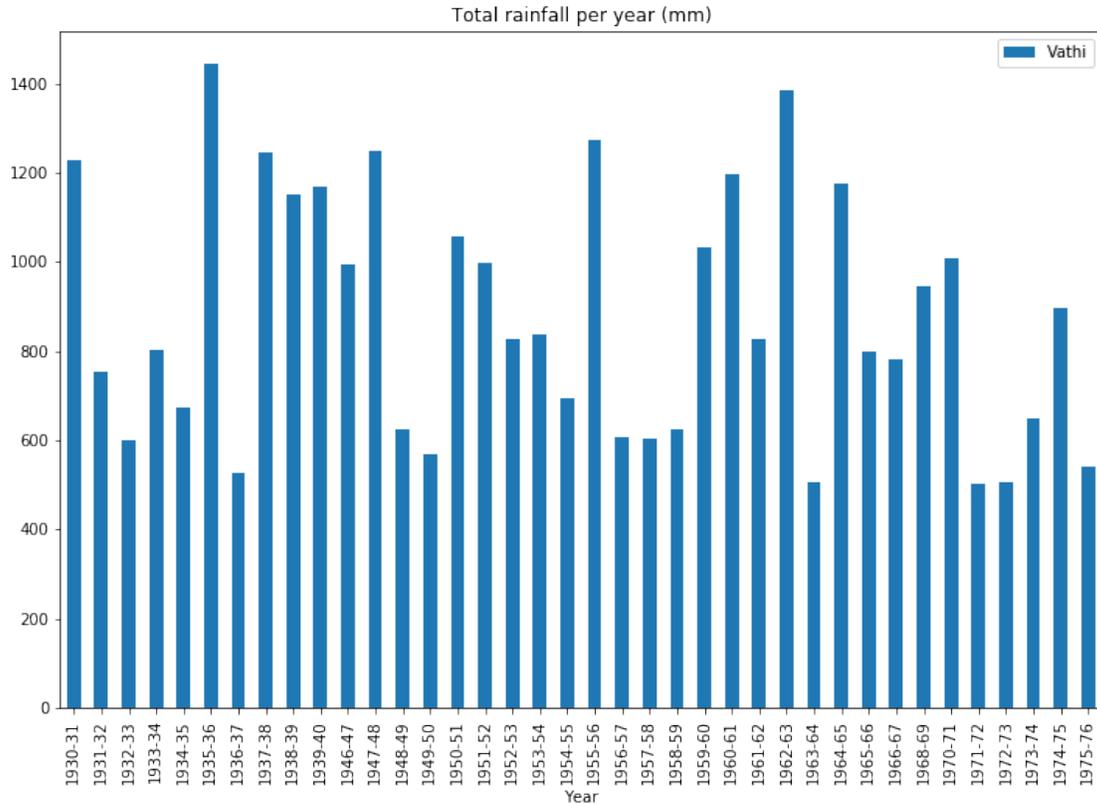
Out [7]:

	Vathi
count	38.000000
mean	876.181579
std	278.247244
min	501.700000
25%	622.675000
50%	825.900000
75%	1128.500000
max	1444.900000

Data set of Ydroussa meteorological station includes total rainfall (mm) for 38 hydrological years (count).

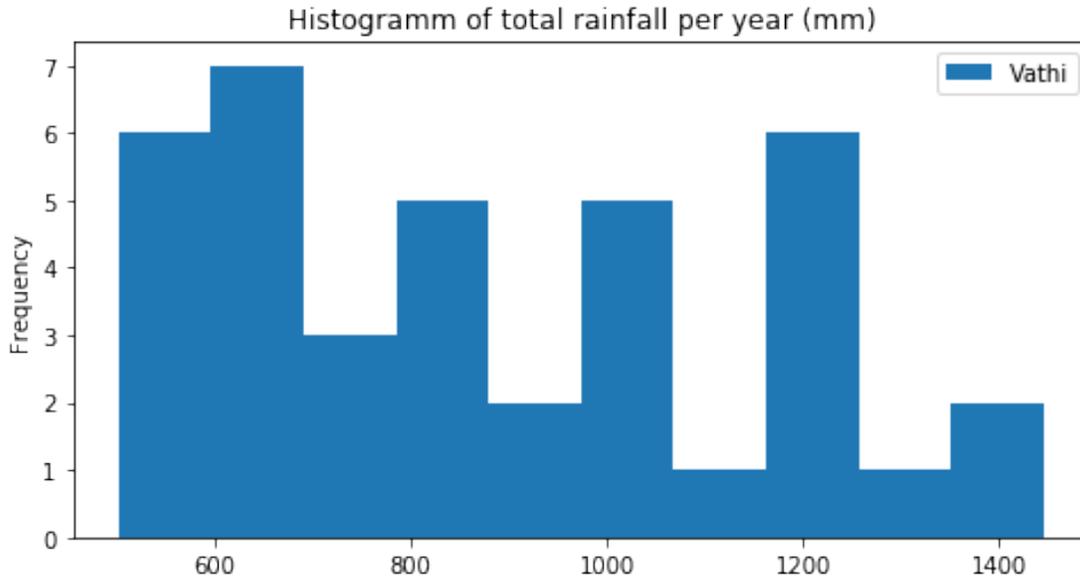
```
In [4]: # Figure of the total rainfall per year (mm)
        data.plot.bar(title='Total rainfall per year (mm)',figsize=(12,8))
```

```
Out[4]: <matplotlib.axes._subplots.AxesSubplot at 0x7f58b3e533d0>
```



```
In [5]: # Figure of the histogram of the total rainfall per year (mm)
        data.plot.hist(title = 'Histogramm of total rainfall per year (mm)',figsize=(8,4))
```

```
Out[5]: <matplotlib.axes._subplots.AxesSubplot at 0x7f58b1ce9290>
```



1.0.1 We get the following data:

1.0.2 Max dry season = 501.7 mm at hydr. year 1972-73

1.0.3 Max wet season = 1444.9 mm at hydr. 1952-53

1.0.4 Statistics calculated from 38 hydrological years (mm)

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Type

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count  
 mean  
 std  
 min  
 25%  
 50%  
 75%  
 max

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