1. OBJECTIVES

1. Building the series of precipitations
2. Statistical description of the data series.

2. GENERAL DATA

Dobroudgea (Dobrogea in Romanian) is a region situated in the South – East of Romania, between the Black Sea and the lower Danube river. Its structure (without Danube Delta) is of a plateau with hilly aspect.

Generally, Dobroudgea's climate is temperate - continental and is divided in 2 units:

- (I) which contains the Danube Delta, its south, the too lagoons (Razim lake and Sinoe lake) and the eastern region (a part of 10 - 20 km width along the sea)
- (II) which contains the rest of territory.

The air average temperature is over 11^0 C/ year towards the littoral area and in the Danube floodplain, and less than 10^0C and 11^0C in the north and centre.

3. RESULTS

The data were collected in the period 1965-2005 from 10 meteorological stations: three on the littoral, two in the Danube Delta, two in the center of region and three in the west part of Dobroudgea (Table1.)

Station	Latitude	Longitude	Altitude(m)
Tulcea	+45:11	+28.49	4.36
Jurilovca	+44:46	+28.53	37.65
Corugea	+44:44	+28.20	219.2
Harsova	+44:41	+27.59	37.51
Cernavoda	+44:21	+28.03	87.17
Medgidia	+44:15	+28.16	69.54
Constanta	+44:13	+28.38	12.80
Adamclisi	+44:08	+28.00	158.00
Mangalia	+43:49	+28.35	6.00
*Sulina	+45:04	+29.39	2.08

Table 1. The data concerning the meteorological stations

3.1. *The definition of the characteristic variables*

The characteristic variables were the mean, maximum or minimum annual or monthly precipitations.

The data were verified and the values of the studied variables were determined.

3.2. *The representation of the data series*

In what follows we shall present the results for the mean annual precipitations.

The annual data series are represented in Fig.1.

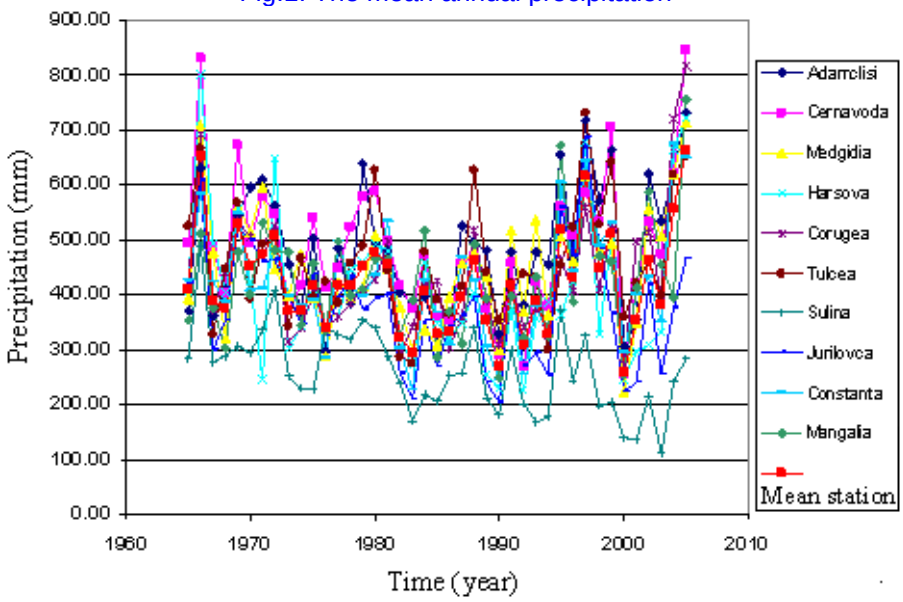
3.3. *The data analysis*

The main results on the time series concern

- The determination of the mean, median, standard deviation, variation coefficients;
- The determination of the data distribution;
- The homogeneity and tendency study;
- The break tests.

The analysis of the spatial variability was done by building two virtual stations, called mean stations. The corresponding data were the annual average precipitations, calculated on the station set, respectively the weighted average precipitations, calculated by Thiessen polygons method. In the both cases the standard deviations and the variation coefficients were determined.

Fig.1. The mean annual precipitation



The standard deviations and the variation coefficients of the mean stations don't differ too much. The most significant variances were registered in 1966, 1997 and in the period 1999-2005.

From the isohyets analysis (Fig.2) it can be seen that the values of the mean annual precipitations increased in the period 1995-2005, excepting The Danube plain and Sulina station.

4. CONCLUSIONS

The mean annual precipitation series are normally distributed, have different types of anomalies, are homogenous and don't have break points, excepting Sulina series.

Starting to 1997 there is a big change in the precipitations regime in the entire region.

In despite of the fact that the precipitation quantity increased their repartition is not uniform. As a consequence, the increase of the water accumulation in soil doesn't occur, Dobroudgea being a carst region.

5. REFERENCES

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Fig.2. The spatial variation of ptrecipitations on sub - periods