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X. Addenda

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 139. Spatial structure of MDPT data from July 1976. Legend: a, b - semivariogram and variance of the entire set of raw data (2,685 cases), c, d - semivariogram and variance of selected raw data (2,672 cases), e, f - semivariogram and variance of the entire data set after normalisation, g, h - semivariogram and variance of selected normalised data.
 140. Directionless (isotropic, omnidirectional) empirical semivariogram of raw measurement MDPT data from June 1976. It was calculated for 15 lag distances, each 2.5 km wide. With each semivariance value is given the number of data pairs from which it was calculated.
 141. Schematic diagram of the procedure of interactive cleaning of a semivariogram based on the cloud diagram of the semivariogram (A) and a location map with symbols proportional to measurement results (B). Detailed explanations in the text.
 142. Corrected directionless empirical semivariogram of raw measurement MDPT data from June 1976 - compare with Figure 140. With each semivariance value is given the number of data pairs from which it was calculated; comparison with Figure 140 offers information about the number of eliminated (masked) pairs.
 143. Number and proportion of data masked in the course of analysis of the spatial structure against the total number of data in the particular monthly MDPT sets.
 144. Number and proportion of data masked in the course of analysis of the spatial structure against the total number of data in the particular annual MDPT sets.
 145. Distribution of rainfall stations at which those MDPTs had been measured which were masked in the course of analysis of the spatial structure: A - monthly sets, B - annual sets. For simplicity, marked on map A are measuring points from only five selected years: 1956, 1960, 1965, 1970 and 1975.
 146. Distribution of rainfall stations at which MDPTs masked in the course of analysis of the spatial structure of monthly sets had been measured more than 5 times. In the remaining part of Poland, not shown on the map, there were only four such locations: Szczecin - Warszewo (6 times), Warsaw - the National Museum (8),

- Wyszków on the Bug (7), and Klusy on the south-eastern margin of the Great Mazurian Lakeland (7).
147. Probability curves of finding a data point within a given radius (distance) from another point for months with the smallest (February 1956) and greatest (August 1975) number of data (details in chapter III). Marked for both data sets is a distance with 95% of probability that the point is situated farther.

XI. 2. Tables

Chapter III

1. Approximate proportion of coded semivariograms with anomalous values for first lag distances depending on the month and threshold value (percentile, P). Legend: R - annual MDPTs, \bar{x} - mean value. Colour is used to mark value intervals: 0-5, 6-10, and then every 10, from 11 to 80.
2. Approximate proportion of coded semivariograms with chaotic fluctuations of values of for the entire distance range analysed, depending on the month and threshold value (percentile, P). Legend: R - annual MDPTs, \bar{x} - mean value. Colour is used to mark value intervals: 0-5, 6-10, and then every 10, from 11 to 80.
3. Approximate proportion of coded semivariograms with no distinct spatial structure depending on the month and threshold value (percentile, P). Legend: R - annual MDPTs, \bar{x} - mean value. Colour is used to mark value intervals: 0-5, 6-10, and then every 10, from 11 to 80.

Chapter V

4. Local statistics of the number of data points within a radius of 35 km from a node of the 1×1 km interpolation grid, and distances from the node to the nearest data point for months and years with the smallest and the greatest density of the measuring network.
5. Descriptive statistics of annual MDPTs in the years 1956-1980.
6. Descriptive statistics of MDPTs for the particular months and the entire period 1956-1980.
7. General result of the Mann-Kendall test for the presence of a linear trend in the statistics of monthly MDPTs.
8. General result of the Mann-Kendall test for the presence of a linear trend in the statistics of differences in the rainfall amount of monthly MDPTs in the nearest sites.
9. List of annual MDPTs exceeding 200 mm registered in Poland in the years 1956-80.

Chapter VI

10. Types of functions (models) used to fit the particular components of composite models of the spatial structure of monthly normalised MDPT data.
11. Summary of the results of testing the significance of seasonal parameter variability in models of the spatial structure of normalised monthly MDPT data using one-way analysis of variance. Differences significant at the $p < 0.05$ level are marked in bold. Legend: SK - sum of squares, df - number of degrees of freedom, \bar{SK} - mean squares.
12. General result of the Mann-Kendall test for the presence of a linear trend in the parameters of the spatial structure of coded monthly MDPTs.
13. Descriptive statistics of absolute values of the square root of the variance (in mm of precipitation total) of the particular components of models of the spatial structure of MDPTs.
14. Summary of the results of testing the significance of seasonal parameter variability in models of the spatial structure of monthly MDPT data using one-way analysis of variance. Legend: SK - sum of squares, df - number of degrees of freedom, \bar{SK} - mean squares.

Chapter VII

15. General results of multifactor analysis of variance (MANOVA) of the dependence of standardised parameters of coded data models on the season (month, M-c), relative rainfall amount (percentile, P), and their interaction (M-c*P).
16. Results of multifactor analysis of variance (MANOVA) of the dependence of the particular parameters of coded data models (A_1 , C_0 , C_1 and C_2) on the season (month, M-c), relative rainfall amount (percentile, P), and their interaction (M-c*P). Partial variances (C_0 , C_1 and C_2) were standardised prior to calculations.
17. Summary of the results of testing the significance of parameter variability in coded data models of the spatial structure of annual MDPTs depending on the relative rainfall amount using one-way analysis of variance. Differences significant at the $p < 0.05$ level are marked in bold. Legend: SK - sum of squares, df - number of degrees of freedom, \bar{SK} - mean squares.
18. Summary of the results of testing the significance of parameter variability in coded data models of the spatial structure of monthly MDPTs depending on the absolute rainfall amount using one-way analysis of variance. Differences significant at $p < 0.05$ level are marked in bold. Legend: SK - sum of squares, df - number of degrees of freedom, \bar{SK} - mean squares.
19. Summary of the results of testing the significance of parameter variability in coded data models of the spatial structure of annual MDPTs depending on the absolute rainfall amount using one-way analysis of variance. Differences significant at $p < 0.05$ level are marked in bold. Legend: SK - sum of squares, df - number of degrees of freedom, \bar{SK} - mean squares.
20. Summary of the results of modelling relations between the parameters of models of the spatial structure of

coded monthly MDPT data and the absolute rainfall amount. Legend: n - number of data considered, Degree - number of model parameters, R - coefficient of determination of model, R-max - maximum possible coefficient of determination irrespective of model type, SEE - standard estimation error, F - F-statistic of model, p - significance level of model, F-LF - F-statistic of lack of fit, p-LF - significance level of lack of fit. Detailed explanations in the text.

21. Summary of the results of modelling relations between the parameters of models of the spatial structure of coded annual MDPT data and the absolute rainfall amount. Legend: n - number of data considered, Degree - number of model parameters, R - coefficient of determination of model, R-max - maximum possible coefficient of determination irrespective of model type, SEE - standard estimation error, F - F-statistic of model, p - significance level of model, F-LF - F-statistic of lack of fit, p-LF - significance level of lack of fit. Detailed explanations in the text.
22. Summary of the results of modelling relations between the parameters of models of the spatial structure of coded MDPT data for the particular months and the absolute rainfall amount. Legend: n - number of data considered, Degree - degree of polynomial, R - coefficient of determination of model, R-max - maximum possible coefficient of determination irrespective of model type, SEE - standard estimation error, F - F-statistic of model, p - significance level of model, F-LF - F-statistic of lack of fit, p-LF - significance level of lack of fit. Detailed explanations in the text.
23. General result of the Mann-Kendall test for the presence of a linear trend in the parameters of the spatial structure of coded monthly MDPTs.
24. General result of the Mann-Kendall test for the presence of a linear trend in the parameters of the spatial structure of coded annual MDPTs.

Chapter VIII

25. Characteristics of the seasonal probability of occurrence of annual MDPTs. Legend: ΣP (%) - probability sum in season in per cent, minPd (%%) - minimum daily probability in season in per mill, maxPd (%%) - maximum daily probability in season in per mill, sredPd (%%) - mean daily probability in season in per mill, gradPd (%%/d) - mean gradient of probability change in season in per mill per day.
26. Statistics of the dates of annual MDPTs in the five regions distinguished. Also presented are the results of Watson's U^2 -tests of the agreement of the observed distributions with von Mises' distribution (corresponding to the normal distribution for cyclic data) and a uniform distribution.
27. Upper part of the table: a comparison matrix of the mean dates of annual MDPT occurrence in the regions using the Watson-Williams F-test. The lower half of the matrix contains values of the F-statistic, and the upper one, an estimated probability of the null hypothesis that the means are equal. p values given as 0 mean that they were lower than the numerical accuracy of the computer ($1 \cdot 10^{-16}$). Lower part of the table: a comparison matrix of the distributions of annual MDPT occurrence in the regions using Watson's U^2 -test. The lower half of the matrix contains values of the U statistic, and the upper one, an estimated probability of the null hypothesis that the distributions are identical.

X. Addenda

28. Characteristics and applications of geostatistical estimations and simulations.
29. Comparison of the statistics of the original set of measurement data of annual MDPTs from 1976 and the results of its estimation (expected IK mean: E-type mean) and simulation (three first realisations) in a grid of 1×1 km.
30. Descriptive statistics of MDPT data from July 1976: VII-76 - original measurement data, VII-76n - normalised data, VII-76bt - data after back conversion.