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Snow water equivalents in the European part of Russia in period 1966-2005

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Maps of snow water equivalent (SWE) distribution on 20 December, 20 January, 20 February and 20 March 1966-2005 in the European part of Russia were interpolated using the data from snow transects. The numbers of snow transects varied between 114 (20 March 1995) and 519 (20 January 1980). Kriging with extended drift was used in interpolation and the semivariograms were fitted manually. The maps were validated against measured values and snow patterns. Compared to measured values, most interpolated values were within the interval of $\pm 20\%$. Several points in different parts of the territory (northwest, northeast, southwest, southeast and in the center) were used to study the trends in SWE evolution in period 1966-2005. Measured and interpolated data provided consistent information. The differences among measured and interpolated data in the southeastern part of the territory were higher than in other parts. Selected data did not indicate significant trends in SWE evolution, although the inter-annual variability was high. However, since the year of 2003 SWE in the northwestern and southeastern parts of the territory decreased in March and February, respectively. In the same period smaller values of SWE were found also in the southeastern part of the territory. The study was supported by the APVV grant SK-RU-0005-07.