



FEATURES OF DURATION AND BORDERS OF THE BEDDING OF SNOW COVER IN THE CONDITIONS OF CLIMATIC CHANGES IN THE TERRITORY OF NORTHERN KAZAKHSTAN ACCORDING TO LAND AND SPACE MONITORING

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Precipitation and air temperature datasets from 34 meteorological stations were analyzed to reveal the regional climate changes at the territory in North Kazakhstan over the last 58 years (i.e. 1950-2008). Peculiarities and conditions of snow cover formation and melting have been analyzed at territory of Northern Kazakhstan using surface and space monitoring data. Methods of both the geo-informational processing of remote probing data and statistical processing of databases on snow cover, air temperature and precipitations have been used. Analysis of snow cover observations data for territory of Northern Kazakhstan has shown that the stable snow cover might be observed since the middle of November till the beginning of April. In a few last decades the tendency is observed for longevity decrease of snow cover bedding that appears to be on the background air temperature increase and insignificant increase of cold period precipitations due to the later bedding of the snow cover and its earlier destruction. Peculiarities of atmospheric circulation in Atlantic-Eurasian sector of Northern Semi sphere and their influence of formation of snow cover at territory of Northern Kazakhstan. The higher longevity of the snow cover bedding is defined by the predominance of E form circulation and lower longevity – by the predominance of W+C circulation form. Analysis conducted of the highest height of snow cover bedding has shown that for period of 1936-2012 in the most cases the statistically reliable decreasing trends are observed with the linear trend coefficients of 0,50 – 0,60 cm/year. The method is offered for determination of probable characteristics of the snow cover decade height. Using data of space monitoring are allocated the frontiers of snow cover bedding for the period of snow melting 1982-2008 and the snow cover melting maps are developed. The results further confirm the proposition that snow cover availability is an important and limiting factor in the generation of the water resources in northern Kazakhstan. Amount of snow cover defines the moisture reserve in the soil necessary for growing development of spring wheat as the main agricultural grain culture of Kazakhstan. Agro-landscape zones of stable growth of spring wheat are differentiated, which effectively use the soil moisture reserve for formation of different levels of crop yield and productivity.