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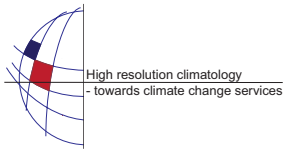

About the reaction of climatic conditions of Ukraine to global warming: semi-empirical model and scenarios

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The analysis of materials of instrumental observations on a network of meteorological stations of Ukraine for last 100 years has shown that its climatic conditions have reacted to global warming as follows:
- the annual temperature on plain part of the territory of Ukraine has increasing on 0.5-0.7 /100 years which approximately coincides with estimations of a level of global warming;
- the process of alignment of an annual temperature field on plain part of the territory of Ukraine was revealed: in northern and north-east regions the annual temperature has increasing on and 0.8-1.2 /100 years, and in southern and south-west regions of Ukraine - only on 0.4-0.6 / 100 years;
- the process of decontinentalization a climate of Ukraine was revealed: the amplitude of a seasonal course of temperature has decreased on ∼0,4-0,5/100 years;
- the general alignment of a climatic field of the annual sums of precipitations was revealed. In northern, and it is especial in north-west regions of Ukraine, where the annual sum of precipitations was concerning high (650-750 mm/year), it has decreased approximately on 5-15 %; in southern, and it is especial in south-east regions, where the annual sum of precipitations was concerning low (350-450 mm/year), it has increased approximately on 10-20 %.
The analysis on the basis of the developed regional stochastic scenarios of changes of climatic conditions for a plain part of territory of Ukraine in XXI century shows that it is possible to expect:
-of increase of annual temperature in XX century on the territory of Ukraine on 1.5-2.5 ;
- of decrease of continentality of a climate of Ukraine (the reduction of amplitude of a seasonal course);
- of significant warming in winter months;
- of increase of the general annual sum of the atmospheric precipitations on the territory of Ukraine in XX century on 15-20 % at global warming on 1.5-2.5 ;
- for global warming 3-4 the significant decrease of sum of precipitations and increase of intensity of evaporation in southern and south-east regions of Ukraine - because of shift of northern periphery of a zone of subtropical anticyclones on these regions of Ukraine (this process already now began in south-west regions of Europe).