HYDROMETCENTRE OF RUSSIA

SOCIO-ECONOMIC BENEFITS OF METEOROLOGICAL AND HYDROLOGICAL SERVICES

INVENTORY OF DECISION SUPPORT TOOLS

ITEM	DESCRIPTION
Sector	Water Management, Energy, Transport, Media, Tourism)
Sub-sector	Hydropower, water supply, water allocation, water delivery, water demand, urban water management, water application, hydrological design, etc.
Tool Name	MH (Model of Hydrometeorological Centre of Russia – "Koren-Belchikov's Model")
Tool Description	The conceptual model of runoff formation for the plain river catchments.
Weather, Climate or Water inputs	Climatic and hydrological data for the hydrological processes modeling
Specific weather, climate, water data required	The actual and forecasting data of air temperature, dew point, precipitation, wind velocity and cloudiness. The actual data of water levels (discharges), snow water equivalents, soil humidity and frozen soil depth
Spatial resolution	The hydrometeorological stations and posts
Temporal resolution	The temporal resolution of the actual meteorological data is four times per day and for all year. The temporal resolution of the actual hydrological data is one time per day (the temporal resolution of snow water equivalent, soil humidity and frozen soil depth is one time per 10 days).
Delivery methodology	For the model development it is necessary to have the historical data for the 15-20 years. For the developed model using in the operational practice it is necessary to have the operational (actual) daily data.
Frequency of data requirement	Daily
Other	-
Detailed Tool Description	This model allows heads in the field of power, water use, preservation of the environment, an agriculture, and transport to make of optimum decisions in view of forecast development of the hydrological situation.
Spatial resolution	The hydrological stations within the basin of large river system
Temporal resolution	1 time per day and the lead time up to 5 days
Delivery methodology	Daily forecasts of water levels and discharges
Frequency of provision	Various variants forecasting hydrographs can be simulated in view of various variants of weather forecasts
Other	
Benefits of tool application	The results of modeling with use of this model

	are used by the persons accepting the decisions for mitigation of possible negative consequences of flooding, and also for development of optimum decisions in various branches of economy.
Possible future advances	It is possible to increase the lead-term of hydrograph forecasts under the condition of increasing the lead-term and reliability of meteorological forecasts.
Comments	-
URL	