The Amur River Discharge with Land Form

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Abstract
Utilizing to observation data of precipitation and discharge at Khabarovsk for 40 years, we analyzed the relationship among them and the land use change with inundation events. The wetland area on each landform was calculated using NRCS and dB of JERS/SAR data. To take a point about the relationship between the precipitation and the discharge of the mid Amur River, when 95% of the max discharge of the logistic curve model was regarded as the maximum discharge, the precipitation of 95.5 mm/month was the boundary value. It is suggested that was because of the buffer action of the wetlands. But there was correlation between the area of wetlands on the floodplain and the precipitation. In consequence, the wetlands on the floodplain most played a role of the flood control basin function. Because the wetlands on the upper plain were changed much, it had an enough water-holding capacity. Though geological condition, soil, vegetation and other factors affected the relationship between the precipitation and the area of wetlands, there was the correlation of 5% rejection. The relation would be very strong.

Keywords: the Amur, Flood, wet land