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红河流域降水量的时空变异特征

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The temporal and spatial variation characteristics analysis of precipitation in Honghe River basin

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全文: PDF (1605 KB) HTML (0 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 利用红河流域52个观测站的43a日降水资料,针对年、湿季和干季降水量和降水倾向率等统计量,采用ArcMap的反距离加权插值法进行插值与分类处理,生成了红河流域年、湿季和干季降水量的空间分布图,实现了气候趋势特征指数的空间化处理.对红河流域年、湿季和干季降水量等的时空分异特性进行综合分析得出:43a来,红河流域年降水呈现上升趋势,空间上主要表现为除了元江干流中下游、盘龙河北部和东北部有下降趋势外,其它地区都呈上升趋势;湿季和干季间降水量变化趋势差异较大,相对于年降水量空间分布而言,湿季具有下降趋势的地区扩大到整个流域中部,而干季降水量在整个流域几乎都呈上升的趋势;因出现在干季降水量有所增加,而在雨季的降雨量有所减少,因而降低了干旱和洪灾的发生机率.

关键词: 红河流域 降水量 时空变异

Abstract: Collected 52 observation stations precipitation data of recent 43 years in Honghe River basin come from Yunnan Meteorological Administration,by using of the interpolation method of Inversed Distance Weighted in ArcMap,the series maps of different temporal precipitation' s surface of Honghe River basin were created.Based on these maps,the spatial distribution of annual,wet season and dry season precipitation can be further analyzed.The long-term change trend index of annual and seasonal precipitation was applied to examine the trend of precipitation changing in Honghe River basin in recent 43 years.The primary result included as that:① There is a weak ascending trend for annual precipitation in study' s basin in temparal and spatial aspect,only except the part in the middle and lower reaches of mainstream and the north and northeast of Panlong river basin.② The changing trend between wet and dry season are different.In wet season the decline area expand to the whole middle part of the study basin.But during dry season,there is an increasing trend in almost the basin.③ Since the precipitation trends characteristics change in spatial distributions in different season with more rainfall in dry season while less rainfall in wet season,it becomes more balance and stable,so it reduce the probability of drought and flood' occure.

Key words: Honghe River basin precipitation temporal and spatial variation

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