

Application of Remote Sensing and other Space Technology to Hydrology and Water Resources

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The research work during the past year is brightly introduced. With the cooperation between Chinese and European partners, watershed water resources modeling based on remote sensing data by the FEST-EWB Model and the Xinanjiang Model separately in the Darminghe Basin located in upstream of the Changjiang River is being carried out, the data preparation including remote sensing data and ground observation data as well as the suggestion document applying for the support of national project in China have been finished.

The parameters of quantitative model for soil erosion estimation caused by water are determined for regions with different soils in China in order to use the unique model for the whole country and evaluate in the same level and standard.

The effect of the operation of the Three Gorge Hydropower Plant on the downstream area including the Poyang Lake and The Dongting Lake is an issue with wide attention, so the hydraulic modeling for low-middle reach of the Changjiang River has been made and providing the basis for further research and analysis, especially the argumentation of some important water projects in this area. For this purpose, the spatial-temporal characteristics of precipitation in the Dongting Lake Basin from 1960 to 2008 were also analyzed and some conclusions were made.

Besides, monitoring of water pollution and retrieval of some pollutants by remote sensing was made in the Huaihe River and the Yellow River, a system for water pollution monitoring and assessment was set up.

In the research mentioned above, the remote sensing data provided by ESA and those from Chinese satellites were widely applied.