亚投行紧急优惠贷款支持河南省暴雨洪涝灾害灾后恢复重建项目——郑州子项目 AllB Henan Flood Emergency Rehabilitation and Recovery Project—Zhengzhou Component

郑州市金水河综合整治工程

Integrated Jinshui River Management Sub-project

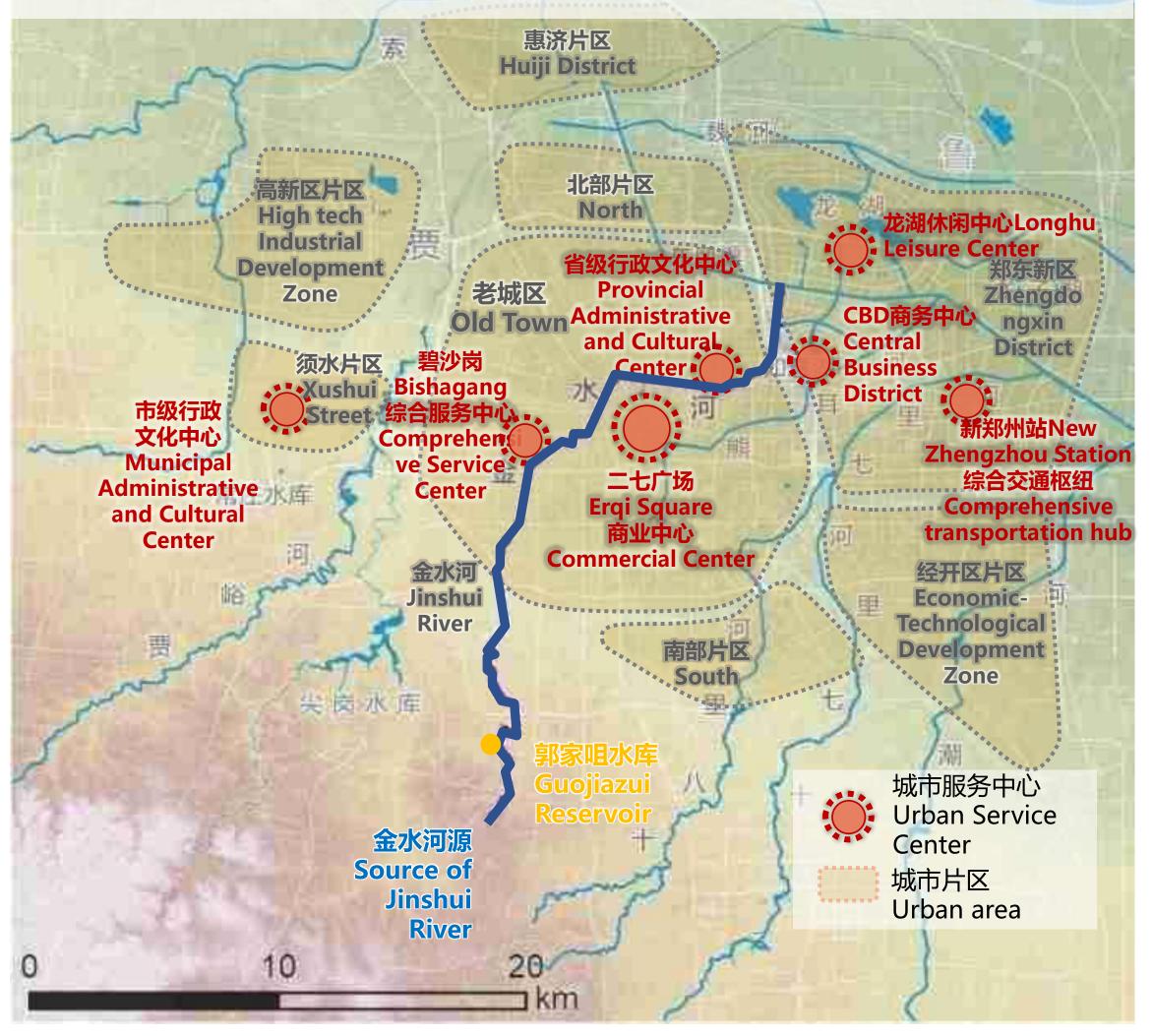
城市防洪排涝预报预警系统建设

Update on Urban Flood Control and Drainage Forecast and Early Warning System

二0二三年九月十三日 September 13, 2023

1.项目基本情况 PROJECT BRIEF

金水河流域水系图 Jinshui River Basin















项目目标:将项目区范围以内交通、市政、水利等方面的基础设施,至少恢复到灾前水平,适当提升基础设施规模和标准,综合提高地方政府应对洪涝灾害的能力和城市韧性。

Project Objective: To support the post-disaster rehabilitation and recovery in Henan Province, and to strengthen the capacity in integrated flood disaster risk management and flood emergency response.





2.郑州市洪涝预报预警系统体系架构 STRUCTURE OF ZHENGZHOU FLOOD FORECASTING AND WARNING SYSTEM

郑州市防洪排涝预报预警平台 Zhengzhou Flood Forecasting and Warning Platform

洪涝五预 Flood Control Five Pre System

山洪 **Torrential** Flood

河道 River Channel

水库 Reservoir

Waterlogg

工程安全 Engineering Safety

综合管理 Management

智慧一张图 **Smart Map**

运管养护 Operation and Maintenance

城市洪水调度管理系统 **Urban Flood Dispatch** management System

移动应用 App

公众防汛动态 Flood Prevention Information

公众安全 出行 Travel safety

支撑平台 Supporting Platform

数据底板 Data

数据汇集 Data Collection 数据共享服务 data sharing

模型平台 Model

水文模型 Hydrology

内涝

ing

水库调度模型 Reservoir Regulation

城市洪涝模型 **Urban Flood**

内涝预警模型 Waterlogging Warning

数字孪生 Digital Analog

洪涝影响区域数字化场景 Digital Scenarios of Flooding Affected Areas

空天地一体化数据孪生 Integrated data fusion of sky and earth

监测感知 Monitoring and Detection

水情感知Detection

积水监测点 Water accumulation monitoring point

视频监测 **CCTV** monitoring

遥感监测 Remote sensing monitoring

工情监测 **Engineering monitoring**

- 依托已有和部分新建水情、工情、视频、遥感等监测, 推进涉水要素全域感知; 充实数据底板、加速数字孪 生,优化模型算法,更新知识和应用,完善支撑平台; 构建山洪、河道、水库、内涝、工程安全的联合调度 实现洪涝水安全监测、重点部位感知网络全覆 为城市洪涝科学调度提供决策支撑。
- · Relying on existing and partially newly established monitoring of water conditions, engineering conditions, video, remote sensing, etc., to promote comprehensive perception of water related elements; Enriching the data base, accelerating digital twinning, optimizing model algorithms, updating knowledge and applications, and improving the support platform; Establish a joint dispatch system for mountain torrents, rivers, reservoirs, waterlogging, and engineering safety, achieving full coverage of flood water safety monitoring and key parts perception network, and providing decision-making support for urban flood scientific dispatch.

3.预期目标 EXPECTATIONS

收集和补测基础地理 数据。

Collect and supplement basic geographic data.

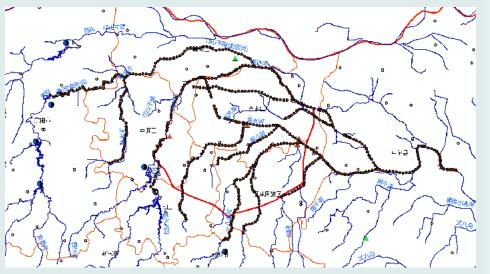


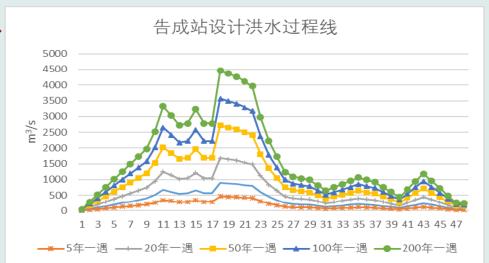
整理主要站点的历史 暴雨、水文和洪水数 据。

Sort out historical rainstorm, hydrology and flood data of main stations.

接入水库、河道水位、流量和水文站点的降 雨监测实时数据; Include real-time rainfall monitoring data for reservoirs, river water levels, flows, and hydrological stations;

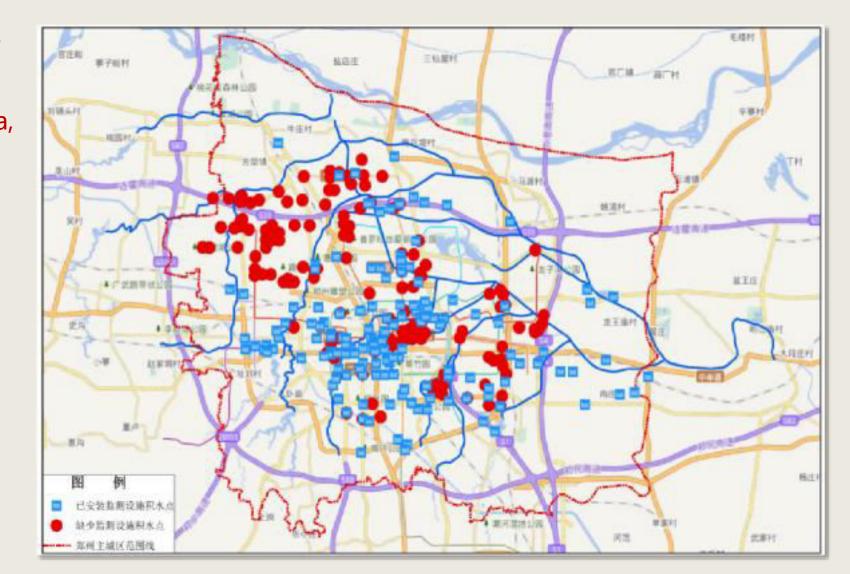
接入气象预报数据。 Include meteorological forecast data;



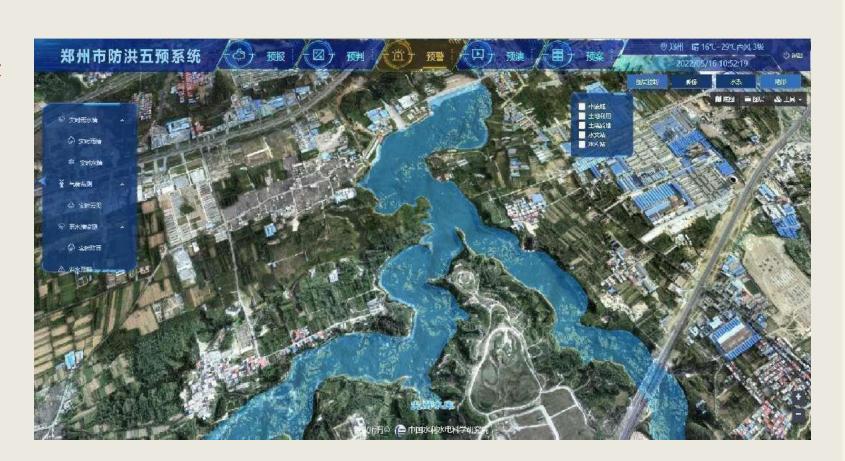




- 1.积水监测全域覆盖、城区内涝实时预报、内涝风险提前预判、内涝过程仿真预演。
- 1. Water logging monitoring will cover the entire area, provide real-time forecasting of urban waterlogging, predict waterlogging risks in advance, and simulate the waterlogging process.
- 2.实现中心城区骨干河道主要排水口监测全域覆盖、 提升水动力学模型计算精度,实现城市排涝与河道 行洪的有效协同。
- 2. To achieve full coverage of the main drainage outlets of the main rivers in the central urban area, improve the accuracy of hydrodynamic model calculation, and achieve effective coordination between urban drainage and river flood discharge.



- 3.实现贾鲁河流域水库群、分洪、调洪工程等防洪联合调度。
- 3. Realize joint flood control scheduling of reservoirs, flood diversion, and flood regulation projects in the Jialu River Basin.
- 4.建设以金水河为重点的贾鲁河流域数字孪生场景。
- 4. Build a digital scene in the Jialu River Basin with a focus on the Jinshui River.



4.防洪五预系统 FLOOD CONTROL FIVE PRE SYSTEM



汇报完毕 谢谢! Thank You for your attention!