

聚焦水资源可持续利用 打造郴州“水立方”模式

Sustainable Water Resources Utilization--
the Chenzhou "Water Cube" Model

报告人：吴巨培（湖南省郴州市委书记）

Speaker: Jupei Wu (Secretary of the Chenzhou Municipal Committee)

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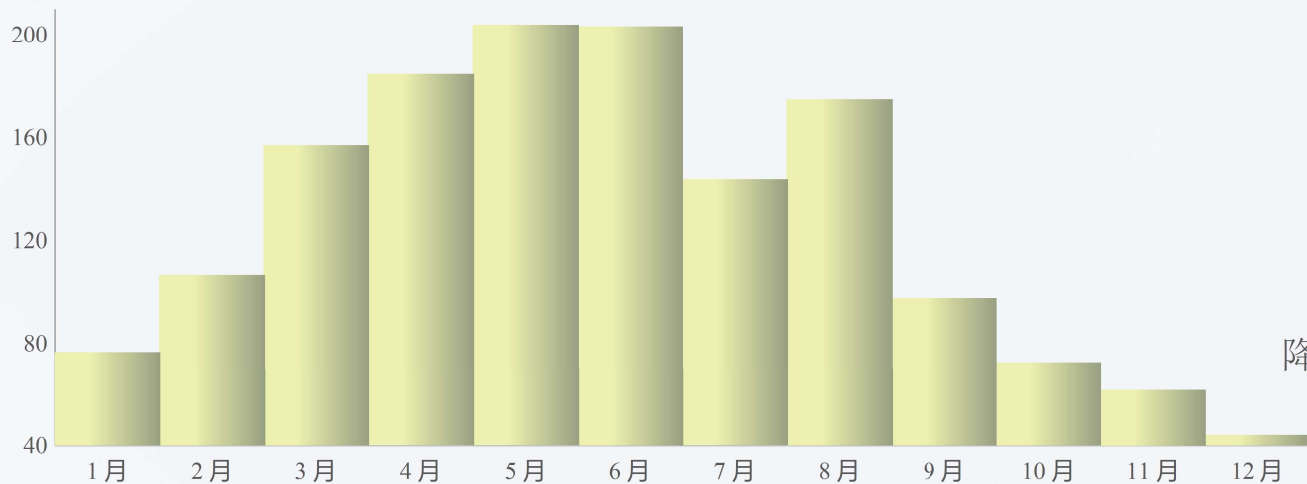
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Realistic choice based on the characteristics of Chenzhou's water resources
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一、基于郴州水资源特点的现实选择

Realistic choice based on the characteristics of Chenzhou's water resources

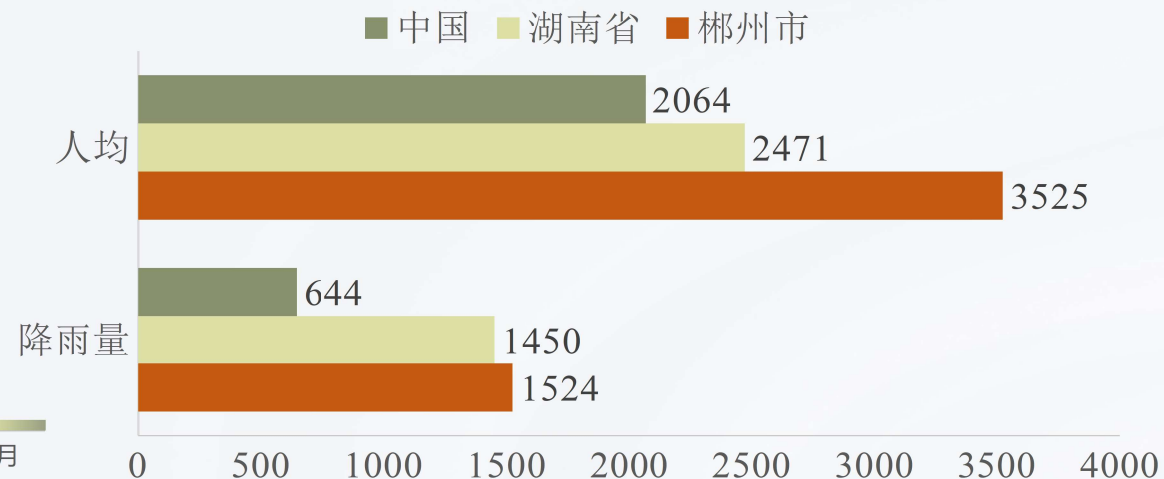
郴州市多年平均降雨月分布图

Chenzhou's multi-year average rainfall by month



郴州市与湖南省、全国的水资源状况对比图

Water resources comparison



1. 水资源总量较多 Rich water resources in total quantity

① 降雨丰沛

Abundant rainfall

冷水资源常年水温

Temperature of cold water resources always stays at

8-13°C

② 水系发达 源丰富多样

Developed water systems

东江湖：中南地区最大 I 类水体

Dongjiang Lake: Largest Class I water body in central and southern China

I

③ 好水资

Good water resources are abundant and diverse

可开发温泉地块

The number of developable hot spring plots

60+

地热水最高温度

Maximum geothermal water temperature

98°C



2. 水污染风险较大 Prominent water contamination risks

① 水环境治理的历史包袱重

Historical issues of water environment treatment

矿产资源的粗放式开发

Extensive exploitation of mineral resources



工矿场地污染

Pollution of industrial and mining sites



河道底泥污染

Sediment contamination in river channels



② 潜在污染风险较高

Potential pollution risks

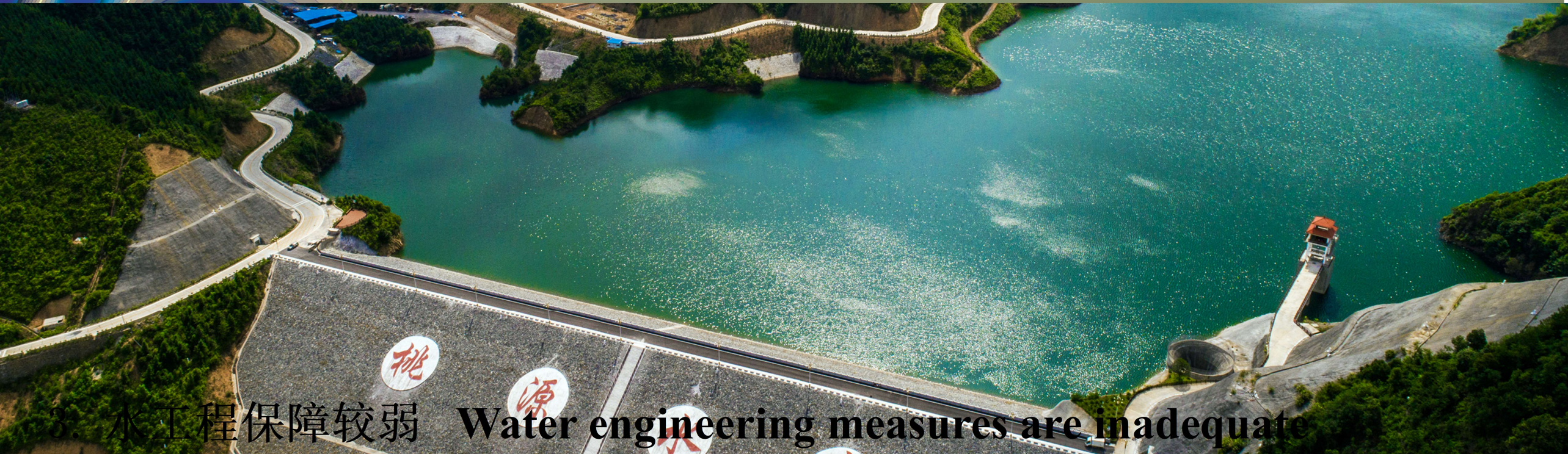
土壤污染

Soil pollution



一、基于郴州水资源特点的现实选择

Realistic choice based on the characteristics of Chenzhou's water resources



3. 水工程保障较弱 Water engineering measures are inadequate

① 南方山丘区水安全保障需求高

② 水利工程建设

和运行管理保障不足

The gap of water security remains in the southern hilly area

Insufficient operation and management capabilities for water conservancy projects

大小水利工程数量
Number of water projects
large and small

小型塘坝、渠道完好率
Integrity rate of small pond
dams and channels

需要除险加固的小型水库占比
The proportion of hazard-prone small
reservoirs that need to be repaired and
reinforced

未闭合达标城市防洪保护圈
The urban flood protection circles yet
to comply with national standards

96,000+

< 50%

23.8%

8

一、基于郴州水资源特点的现实选择

Realistic choice based on the characteristics of Chenzhou's water resources



4. 水利用效益较低 Water use efficiency has huge room to improve

① 水资源转化利用还不足

② 节水技术

工艺和设备相对落后

The conversion and utilization of water resources is insufficient

水资源开发利用率

Water resources development and utilization rate

< 15%

Water-saving technology, processes and equipment is not up-to-date

城市供水管网漏损率

Leakage rate of urban water supply network

18%

一、基于郴州水资源特点的现实选择

Realistic choice based on the characteristics of Chenzhou's water resources



中华人民共和国国务院

国函〔2019〕44号

国务院关于同意郴州市建设 国家可持续发展议程创新示范区的批复

湖南省人民政府、科技部：

你们《关于郴州市创建国家可持续发展议程创新示范区的请示》（湘政〔2019〕10号）收悉。现批复如下：

一、同意郴州市以水资源可持续利用与绿色发展为主题，建设国家可持续发展议程创新示范区。

二、郴州市建设国家可持续发展议程创新示范区，要以习近平新时代中国特色社会主义思想为指导，深入贯彻党的十九大和十九届二中、三中全会精神，坚持稳中求进工作总基调，坚持新发展理念，坚持推动高质量发展，统筹推进“五位一体”总体布局，协调推进“四个全面”战略布局，紧紧围绕联合国2030年可持续发展议程和《中国落实2030年可持续发展议程国别方案》，按照《中国落实2030年可持续发展议程创新示范区建设方案》要求，重点针对水资源利用效率低、重金属污染等问题，集成应用水污染源阻断、重金属污染修复与治理等技术，实施水源地生态环境保护、重金属污染及源头综合治理、城镇污水处理提质增效、生态产业发展、节水型社会和节水型城市建设、科技创新支撑等行动，统筹各类创新资源，深化体制机制改革，探索适用技术路线和系统解决方案，形成可操作、可复制、可推广的有效模式，对推动长江经济带生态优先、绿色发展发挥示范效应，为落实2030年可持续发展议程提供实践经验。

三、湖南省人民政府要建立健全相关工作协调机制，根据实际情况研究制定专门的支持政策，形成推进合力，支持郴州市全面落实和实施好各项行动和工程，实现国家可持续发展议程创新示范区建设的目标。

四、科技部要会同国家可持续发展实验区部际联席会议各成员单位，结合各自职责，在重大项目安排、政策先行先试、体制机制创新等方面支持郴州市建设国家可持续发展议程创新示范区，及时研究解决建设中的重大问题。

五、示范区发展规划、建设方案等事宜，请湖南省人民政府、科技部会同相关部门按照有关规定另行办理。



（此件公开发布）

HNPR-2022-01041

湖南省人民政府办公厅文件

湘政办发〔2022〕57号

湖南省人民政府办公厅关于 印发《支持郴州市建设国家可持续发展 议程创新示范区的若干政策措施》的通知

各州市、县市区人民政府，省政府各厅委、各直属机构：

《支持郴州市建设国家可持续发展议程创新示范区的若干政策措施》已经省人民政府同意，现印发给你们，请认真贯彻落实。



（此件主动公开）

- 1 -

湖南省水利厅办公室

湘水办函〔2020〕105号

湖南省水利厅办公室印发 《关于支持郴州市建设国家可持续发展 议程创新示范区的指导意见》的通知

郴州市水利局，厅直各单位、厅机关各部门（单位）：

为深入贯彻落实《湖南省政府办公厅印发〈关于支持郴州市建设国家可持续发展议程创新示范区的若干政策措施〉的通知》（湘政办发〔2020〕46号）要求，支持郴州市开展创建工作，我厅制定了《关于支持郴州市建设国家可持续发展议程创新示范区的指导意见》，现印发给你们，请参照执行。



- 1 -

郴州市国家可持续发展议程创新 示范区建设工作推进领导小组文件

郴可创发〔2021〕9号

关于印发《郴州市国家可持续发展议程创新示范区 建设“十四五”专项规划》的通知

各成员单位：

现将《郴州市国家可持续发展议程创新示范区建设“十四五”专项规划》印发给你们，请认真组织实施。



2019年5月，国务院同意郴州市以水资源可持续利用与绿色发展为主题建设国家可持续发展议程创新示范，开启了新的发展探索。

In May 2019, the State Council agreed to build an innovative demonstration of the National Sustainable Development Agenda in Chenzhou with the theme of sustainable water resources utilization and green development, charting a new road to development.

二、打造“八水共治”的“水立方”模式的初步探索

Practices on building the "Water Cube" Model featuring "Eight-fold Water Co-Governance"



XVIII
World Water Congress
International Water Resources Association (IWRA)

思想渊源

Foundational thoughts

习近平治水重要论述

节水优先

空间均衡

系统治理

两手发力

Prioritize water conservation;

Pursue spatially balanced development;

Systemic governance;
Harness government & market forces.

习近平
关于社会主义生态文明建设
论述摘编

中共中央文献研究室 编

中央文献出版社



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1. 夯实水安全保障 Strengthen water security

① 百河千库万塘整治

Treatment of rivers, reservoirs, and ponds

新增调蓄能力

New storage capacity

280 mil.

有效灌溉面积

Effective irrigation area

1118 km²

② “郴州好水”普惠全民计划

"Chenzhou Good Water" universal benefit plan

新增年粮食生产能力

New annual grain production capacity

34774.4 t

安全优质饮用水服务人口

Population enjoying safe and quality drinking water

3.1 mil.

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2. 优化水资源配置 Optimize water resources allocation

① 合理分配用水

Rational water use allocation

用水总量
Total water use

2.12 bil.m³

② 统筹实施调水

Coordinate water transfer

新建成水系联通工程
New water system connection
projects

5

③ 全域倡导节水

Advocate water conservation by all

万元 GDP 用水量降幅
The rate of decline in water consumption
per 10,000 yuan of GDP

4.83%

规模以上工业企业重复用水率
Water reuse rate in industrial
enterprises above designated size

91%

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3. 加强水环境整治 Strengthen water environment improvement

① 河流水库治理保护

② 成立水环境保护司法机构

③ 推动流域

生态环境保护立法

Rivers and reservoirs treatment and protection

New judiciaries for water environment

Promote legislation on environmental protection of river

basins

历史性消除劣V类水质

Historically eliminate poor
Class V in water quality

12 个国家控制断面达标率

Compliance rate in 12 state-
controlled sections

集中式饮用水水源地水质优良率

Rate of top quality in centralized drinking
water sources

重要江河湖泊水功能区水质达标率

Water quality compliance rate in important
rivers and lakes water functional areas

✓

100%

100%

100%

二、打造“八水共治”的“水立方”模式的初步探索

2、Practices on building the "Water Cube" model featuring "Eight-fold Water Co-Governance"



4. 提升水生态质量 Improve the quality of water ecosystems

① 推进碧水保卫战

② 构建生态水网

③ 打造幸福河湖

④ 建设水美乡村

Forceful campaign for clear water protection

Build an ecological water network

Happy rivers and lakes

Beautiful villages, beautiful waterscapes

主要河流断面生态流量达标率

国家级绿色小水电示范电站

省级“美丽河湖”

省级以上水利风景区

Environmental flow compliance rate of major river sections

Number of national green smallhydro demonstration power station

Provincial "Beautiful Rivers and Lakes"

Water conservancy scenic areas above the provincial level

100%

6

22

14

二、打造“八水共治”的“水立方”模式的初步探索

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5. 加快水产业发展 Accelerate the development of the water industry

① 水冷却产业

② 温泉康养产业

③ 食品药品产业

④ 生态农业

Water cooling industry

Hot spring health care industry

Food and drug industry

Ecological agriculture

近三年涉水产业累计投资额

近三年建设涉水项目数量

The cumulative investment amount of
water-related industries in the past three
years

The number of water-related projects built in the past three years

33,800,000,000 yuan

28

二、打造“八水共治”的“水立方”模式的初步探索

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6. 抓好水文化建设 Strengthen water culture

① 活化水遗产

Activate water heritage

建立水利遗产名录

Establish a water heritage list

112

② 讲好水故事 明

Communicate water stories

建设“郴州水世界”展馆

Build the "Chenzhou Water World" exhibition hall

CWW

③ 传承水文明

Pass on water civilization

承办水资源（国际）论坛

Organize the Water Resources (International) Forum

WRIF

二、打造“八水共治”的“水立方”模式的初步探索

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XVIII
World Water Congress
International Water Resources Association (IWRA)

7. 强化水科技应用 Ramp up water technology application

① 健全科创平台

Improve technological innovation platform

湖南郴州绿色技术银行
Chenzhou Green Technology
Bank, Hunan



亚欧水资源研究中心
郴州分中心

Chenzhou Branch of Asia-
Europe Water Resources
Research Center



② 加大技术创新

快成果转化

Strengthen technological innovation

“中小流域防洪态势感知预警关键
技术与装备”项目

"Key Technologies and Equipment for Flood
Control Situation Awareness and Early Warning
in Small and Medium-sized
Watersheds" project



③ 加

Accelerate result transformations

三十六湾矿区用纳米零价
铁技术修复技术

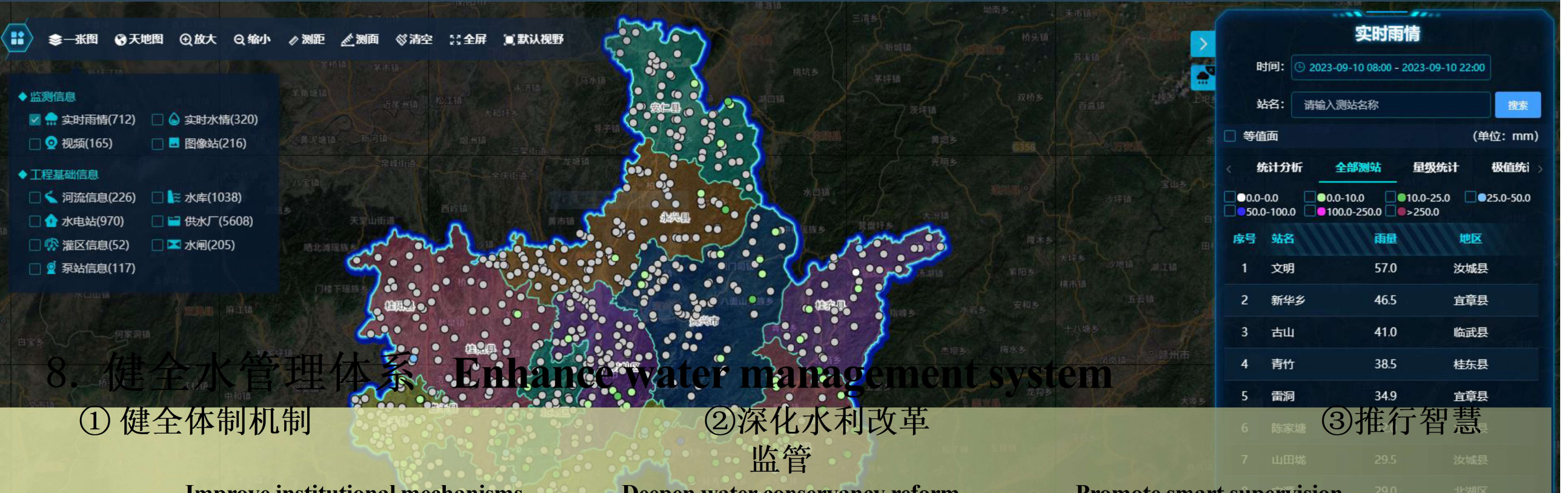
Thirty-Six Bay mining area with
nano-zero valent iron technology
restoration technology



二、打造“八水共治”的“水立方”模式的初步探索

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郴州市水利一张图



8. 健全水管理体系 Enhance water management system

① 健全体制机制

Improve institutional mechanisms

跨地域全流域共治机制
Cross-regional and basin-wide co-governance mechanism



② 深化水利改革 监管

Deepen water conservancy reform

河长制工作省政府真抓实干督查
激励次数

The number of provincial supervision and incentive times on the river chief system

3

③ 推行智慧

Promote smart supervision

水利部安全生产标准化一级
达标水电站

The Ministry of Water Resources first-class hydropower station that meets the standards of safety production standardization

5

三、推进“八水共治”带来的积极变化

Positive changes brought about by the "Eight-fold Water Co-Governance"



1. 思路转变 Thinking shift

① 价值

② 供求

③ 领域

④ 路径

Value

Supply and demand

Fields

Path

粗放用水

供水管理

局部治理

注重行政推动

Extensive water use

Water supply management

Local governance

Administrative push

节约用水

需水管理

系统治理

两手发力和实施创新驱动

Water conservation

Water demand management

Systemic governance

Harness government and private forces
and drive by innovation

三、推进“八水共治”带来的积极变化

Positive changes brought about by the "Eight-fold Water Co-Governance"



2. 治理转化 Governance reform

① 综合治理

Comprehensive treatment

新增人工造林面积
New afforestation
area added

治理水土流失面积
Controlled area of
soil erosion

2.88 hm^2 **108.9** km^2

② 源头治理

Source management

绿色矿山数量
Number of green
mines

工业固体废物综合
利用率
Percentage of industrial
solid wastes utilized

109 **80%**

③ 系统治

Systemic governance

城市污水收集率
Municipal sewage
collection rate

污水集中处理率
Centralized sewage
treatment rate

71.35% **97.4%**

三、推进“八水共治”带来的积极变化

Positive changes brought about by the "Eight-fold Water Co-Governance"



3. 产业转型 Industrial transformation

① 地下转向地上

② 低端转向高端

③ 粗放转向集约

④ 黑色

转向绿色

Underground to aboveground

取缔关闭高污染企业
Shut down highly
polluting enterprises

1000+

Low-end to high-end

建成绿色工厂
Number of green
factories built

21

Extensive to intensive

全国工业资源综合
利用基地
National industrial
resources comprehensive
utilization base



永兴县：国家大宗固废
综合利用示范基地

Yongxing County: National
Demonstration Base for
Comprehensive Utilization of
Bulk Solid Waste



Black to green

郴州高新区：国家
绿色园区

CZNE: National Green
Industrial Park





4. 动能转换 New growth drivers

① 科技赋能

② 人才赋智
度赋力

③ 制

Enabling technologies

湖南省可持续
重大科技专项
Hunan Sustainable
Major Science and
Technology
Project

高新技术产业增加值占
GDP 的比重
The added value of high-tech
industries in proportion of
GDP

64

23.3%

人才发展专项资金
Special funds for talent
development

180 mil.

Top talents

聘任院士专家数
Number of academicians
and top experts
employed

28

Institutional power-up

引进高素质人才数
The number of high-
quality personnel hired

水利吸引社会资本
Private capital in water
conservancy

3200+

10 bil.



5. 价值转化 Value conversion

① 绿水青山转化金山银山

② 广阔水面变成打卡画面
成发展胜势

③ 生态优势变

Green is real gold

国家绿色数据中心
The National Green
Data Center

东江湖大数据产业园

入驻企业 / 安装机架

Dongjiang Lake Big Data
Industrial Park settled in enterprises/
installation racks

3/2.5



Water is the new fashion

粤港澳大湾区“菜
篮子”生产基地
“Vegetable basket”
production bases for GBA

219

Ecological advantages become development drivers

优势特色农业全产业链产
值
Specialty agricultural industry
chain output value

170 bil.

文旅产业规模
The scale of the cultural
tourism industry

100 bil.



山水画卷·郴州相见

第二届湖南旅游发展大会

THE SECOND HUNAN TOURISM DEVELOPMENT CONFERENCE

2023.9.16, 郴州
On 16 September, in Chenzhou





郴州好水 生活更美

Better Water for a Better Life in Chenzhou

水资源可持续利用与绿色发展（国际）论坛

Sustainable Utilization and Green Development of Water Resources (International) Forum

指导单位：

国家科学技术部
Ministry of Science and Technology
of the People's Republic of China

主办单位：

湖南省人民政府
People's Government of Hunan Province

承办单位：

中国21世纪议程管理中心 湖南省科学技术厅 湖南省人民政府外事办公室
湖南省水利厅 湖南省文化和旅游厅 湖南日报社 郴州市人民政府
The Administrative Center for China's Agenda 21
Department of Science and Technology of Hunan Province
Office of Foreign Affairs Commission of CPC Hunan Provincial Committee
Hunan Provincial Department of Water Resources
Hunan Provincial Department of Culture and Tourism
Hunan Daily Press
Chenzhou Municipal People's Government

2023.9.14，郴州
On 14 September, in Chenzhou



**谢谢大家，欢迎各位专家
亲临郴州调研指导！**

Welcome to Chenzhou.

We look forward to your advices and opinions.

THANK YOU!