

7. Relationship between Huai River Commission and Rijkswaterstaat

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中—荷合作情况介绍

Introduction on the cooperation between Huaihe River Commission
and Rijkswaterstaat

2023年9月12日
September 12, 2023



ONE

淮河流域概况

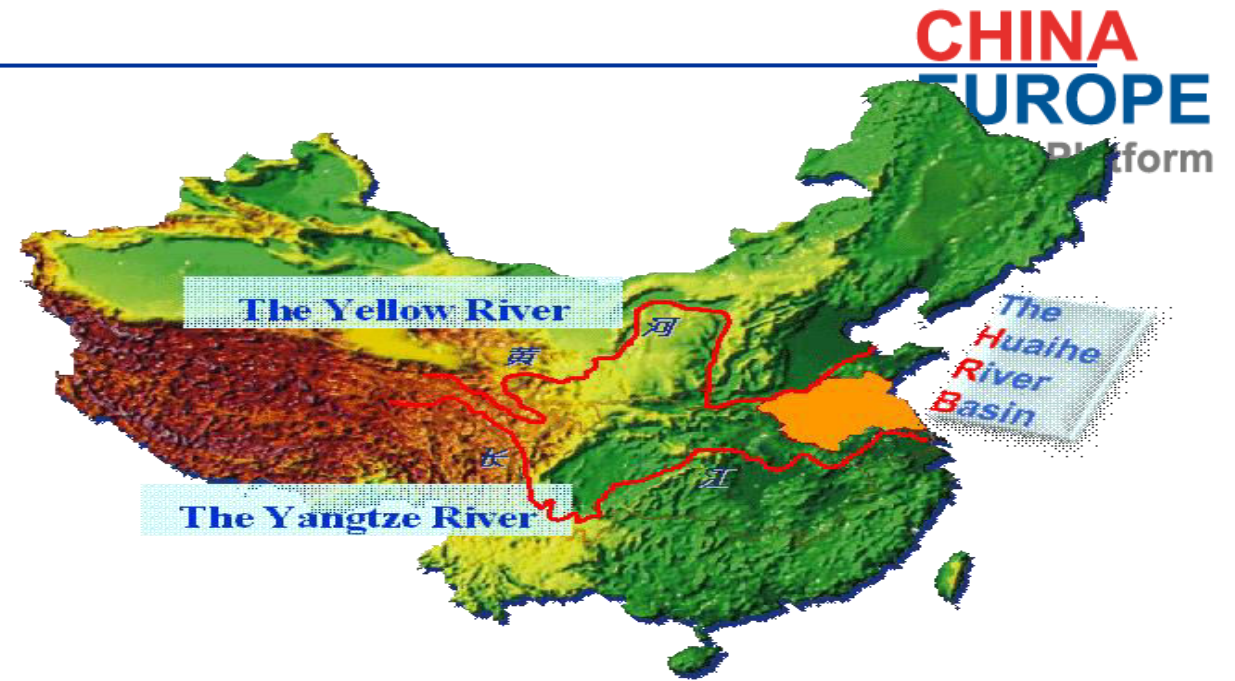
Characteristics of the Huai River Basin

淮河流域特点

Characteristics in the River Basin

淮河流域位于长江和黄河流域之间，流域面积27万平方公里。

The Huai River Basin is located in the east China, with the Yellow River in the north and the Yangtze River in the south, and its catchment area is **270,000 km²**.



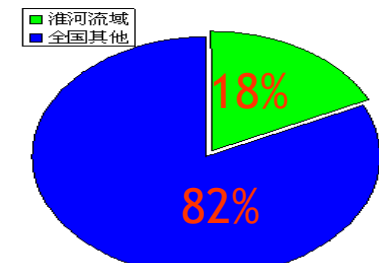
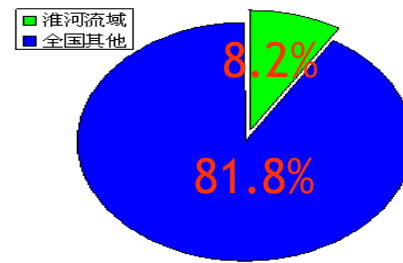
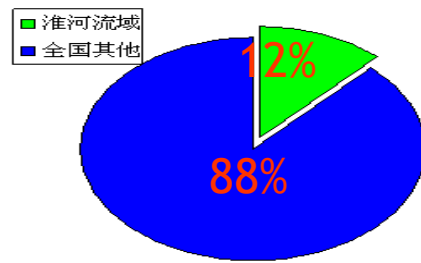
淮河发源于河南省境内的桐柏山，干流总长1000公里，经安徽、江苏流入长江。

Starting in the Tongbai Mountains of Henan province, flows from Anhui and Jiangsu Provinces to the Yangtze River in Yangzhou city of Jiangsu province. Its trunk is about **1,000 kilometers long**.

淮河流域特点

Characteristics in the River Basin

淮河流域总人口1.8亿，耕地面积983万公顷，粮食产量11.4亿吨，分别占全国的16.4%、8.2%和18%。是我国粮食主产区和重要的煤电基地。The HRB has a **population of 0.184billion**, a tillage area of 9.843million hm² and a grain production of 1.1443 billion ton, which account for **16.4%**, **8.2%** and **18%** of the whole country, respectively. It is a major **grain production area**, a **coal power and energy base** in China.



	Population(0.1billion)	Tillage (10 ⁴ hm ²)	Grain (10 ⁴ Ton)
HRB	1.84	984.3	11443
China	13.75	10903.3	62143

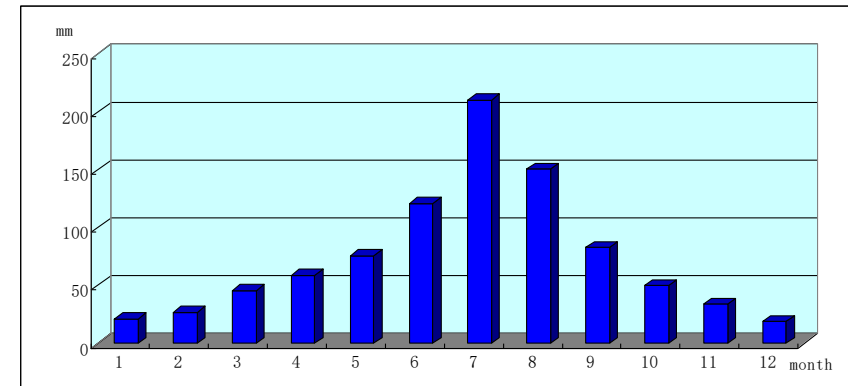
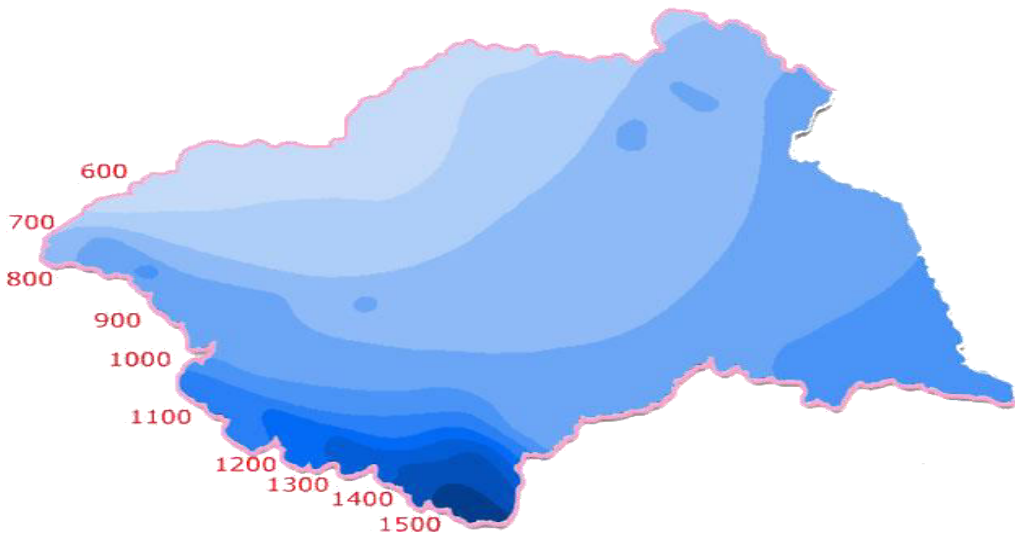
淮河流域人口密度为681人/平方公里，其中农业人口占61%，人口耕地和用水矛盾突出。The population density is **681 per km²**, and agricultural population accounts for **61%** of the total amount of the HRB. As a result, it **closely relies on land** and thus contradictions between human and water are sharp.

淮河流域特点

Characteristics in the River Basin

淮河流域位于南北气候过渡带，气象系统变化剧烈，降水时空分布不均。

于HRB is located in **the transitional zone** from southern to northern climate of China, the weather system changes dramatically, and **precipitation varies greatly in both space and time**



雨季降水（6-9月）占全年降水量的70%。The precipitation **in flood season** (Jun. to Sept.) accounts for **70% of annual amount**.

淮河流域特点

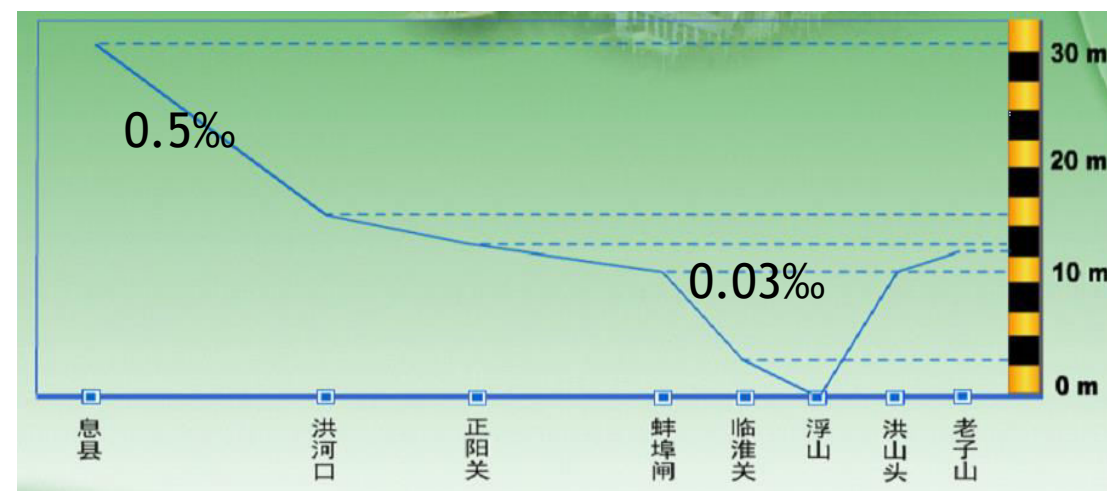
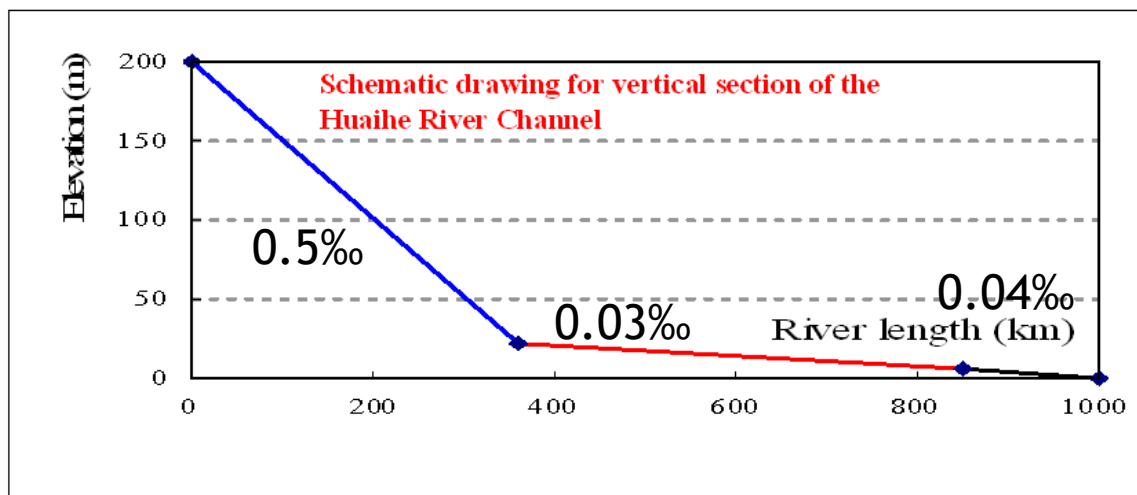
Characteristics in the River Basin



1/3 mountainous area and 2/3 plain area

淮河流域面积约三分之一为上游的山区，三分之二为平原区，淮河干流中下游河道坡度较缓，洪水宣泄不畅。

It has **a broad plain** and it is with flat terrain. The river channels in the middle-lower reaches are **with smaller gradient ratios**, and several **parts of** the reaches even have **inverse slopes**. Therefore floods can not flow smoothly and freely.



淮河流域洪涝和干旱灾害特点

Characteristics in the River Basin

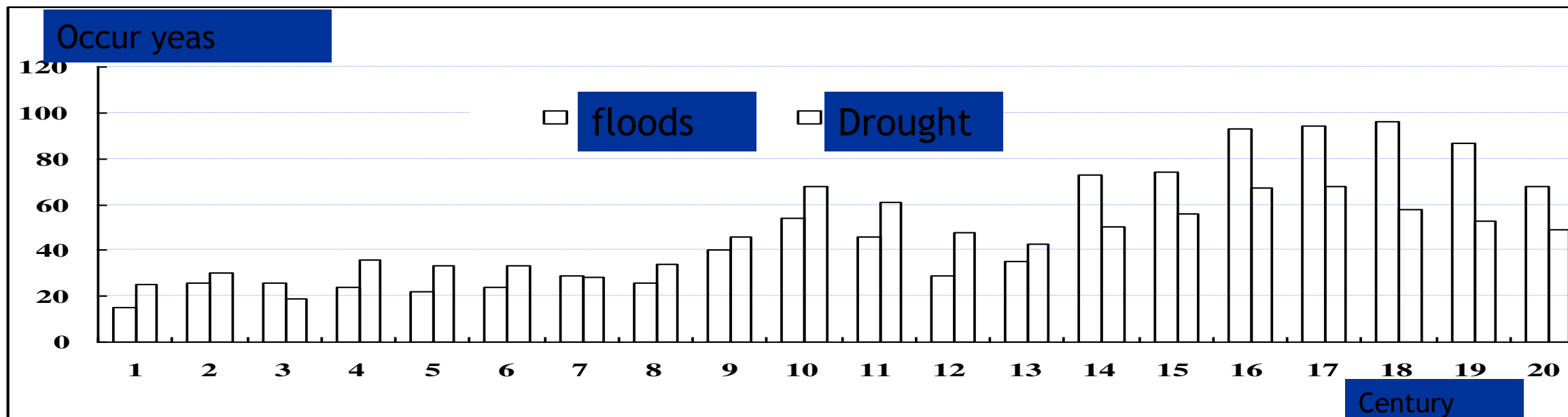
流域洪水和干旱灾害频发，从公元前246到2010年统计，洪水每2.2年发生一次，干旱为每2.4年发生一次。

The frequency of flood disasters is the same as that of drought disasters

From 246 B.C. to 2010

Flood disasters once every 2.2 years

Drought disasters once every 2.4 years

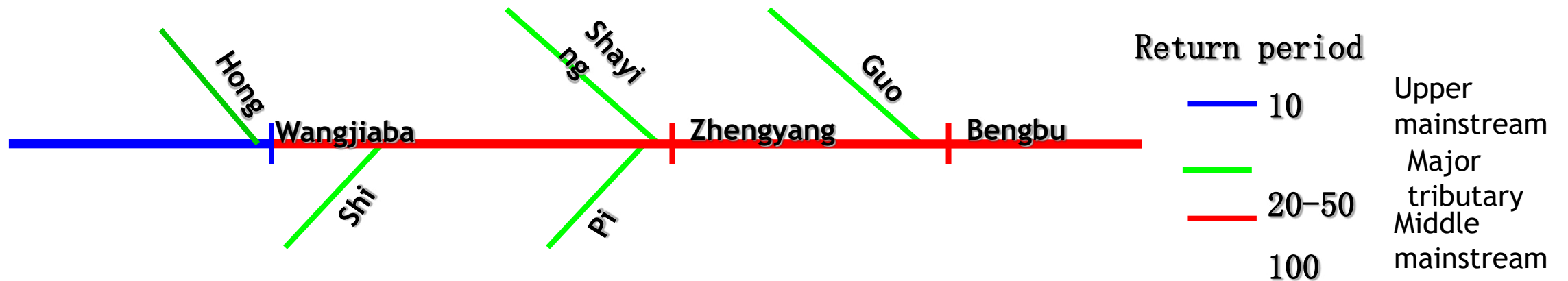


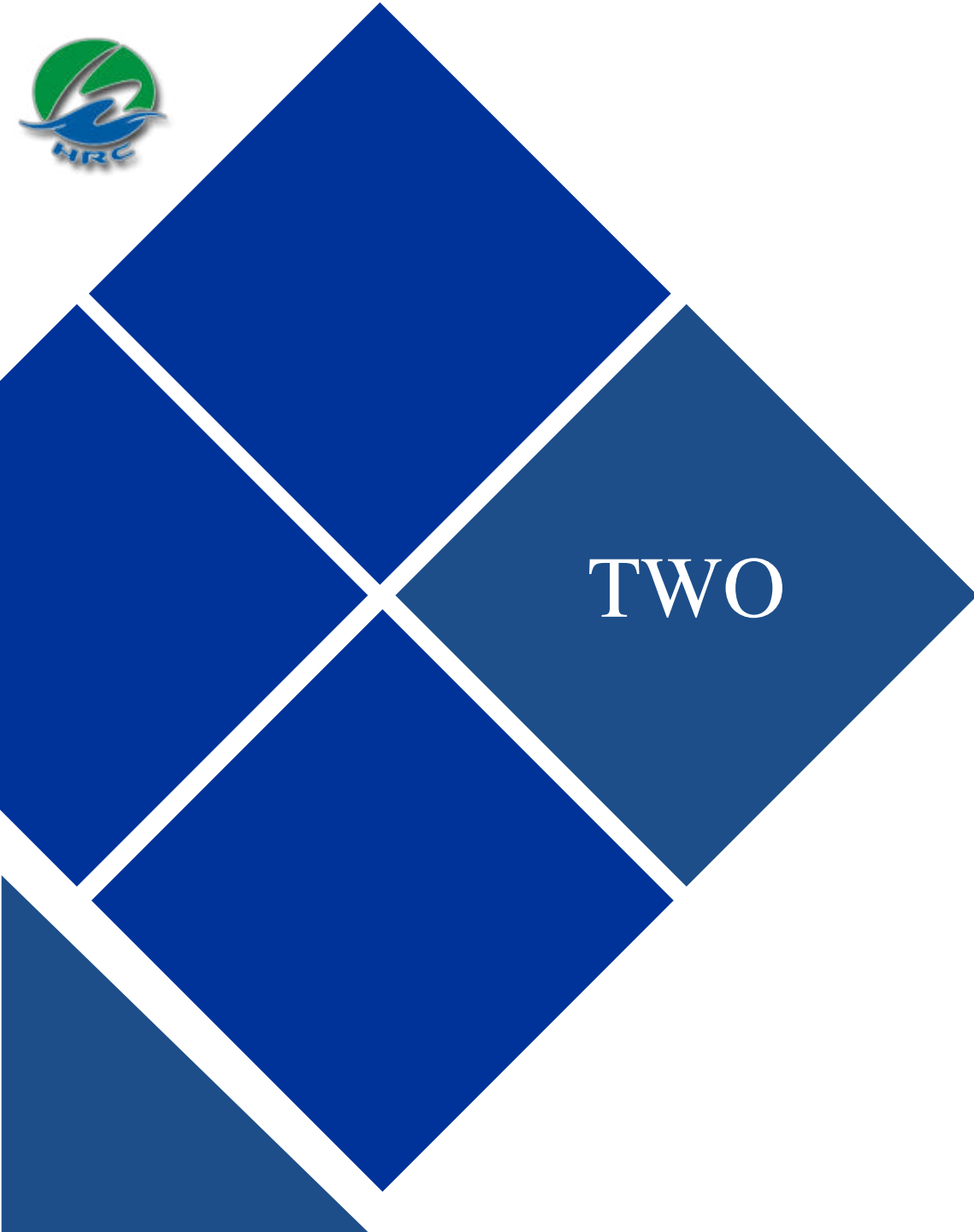
当前淮河流域上游防洪能力为10年一遇，中下游重点防洪保护区和重要城市防洪标准提高到100年一遇，重要支流防洪能力为20到50年一遇。

At present, flood control standard of the mainstream **in the upstream is once-10-years**

Flood control standards of the key flood protection areas and important cities in the middle and lower reaches have been promoted to **once-100-years**.

Flood control standards of the important tributaries reach to **once-20-years to once-50-years**.





TWO

中荷水利合作回顾

Review of Sino-Dutch Cooperation

合作开展成效

The effect of cooperation

积极深化双边合作

Deepen bilateral cooperation

“洪水概率预报方法研究”

Study on flood probability forecasting method

第一期合作

Cooperation, Phase I

2011-2015

“淮河流域行蓄洪区与荷兰洪泛区管理策略对比研究”

Comparative study on management strategies of flood discharge and storage area in Huaihe river basin and flood plain in the Netherlands



“中荷淮河流域防洪减灾二期项目”

Sino Dutch Huaihe River Basin Flood Control and Disaster Reduction Project (Phase II)

第二期合作

Cooperation, Phase II

2016-2022

“中荷大坝安全项目”

Sino Dutch Dam Safety Project

合作开展成效

The effect of cooperation

稳步实施合作项目

Implementation of cooperation projects



合作开展成效

The effect of cooperation

稳步实施合作项目

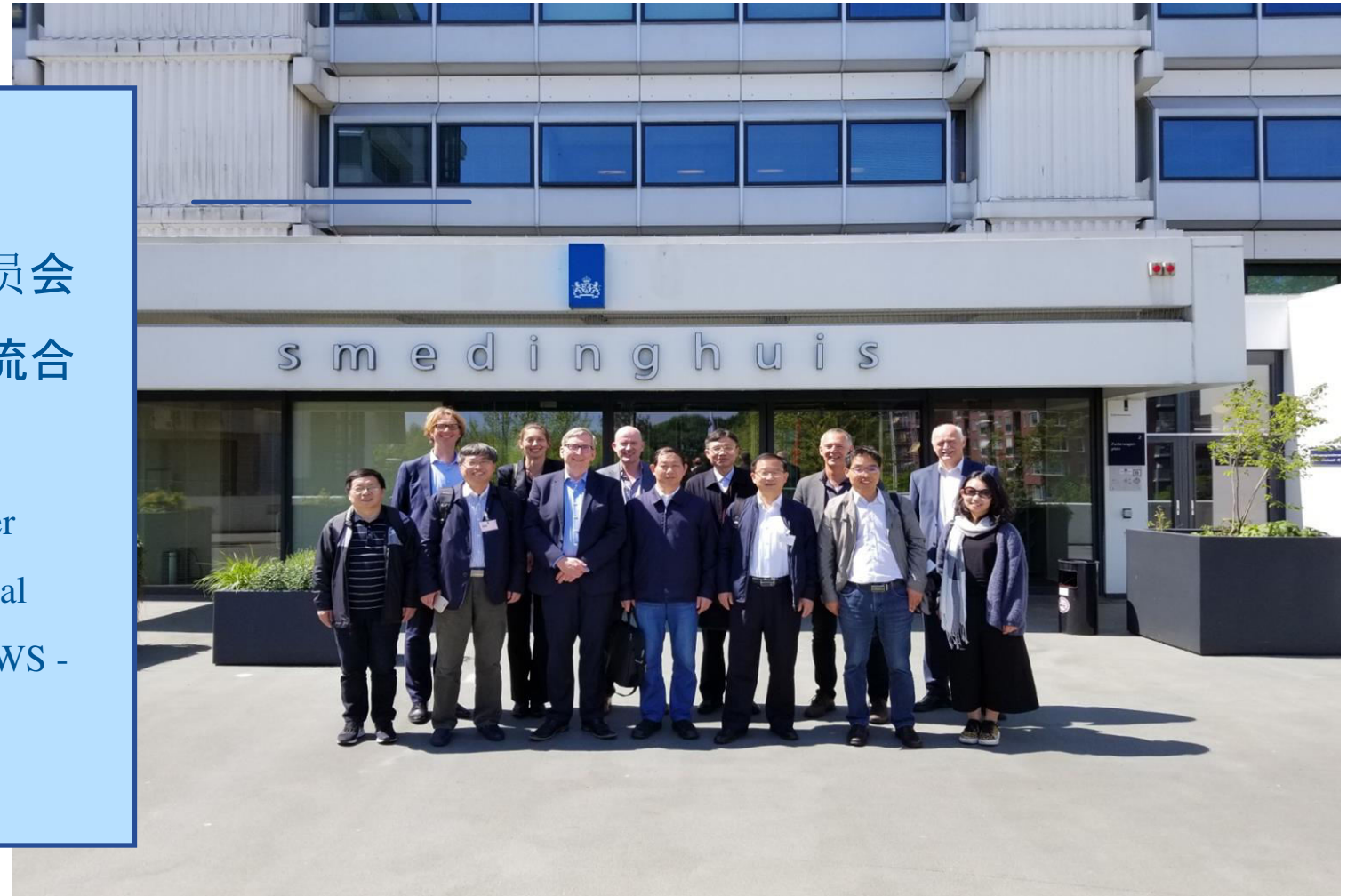
Implementation of cooperation projects

CHINA
EUROPE
Water Platform

2018年5月 May 2018

淮委水文局、莱茵河国际水文委员会
共同签署《淮河—莱茵河技术交流合
作协议》。

The Hydrological Bureau of the Huaihe River
Commission and the Rhine River International
Hydrological Commission signed 《HRC-RWS -
Proposal for topics of cooperation》



合作开展成效

The effect of cooperation

稳步实施合作项目

Implementation of cooperation projects



2019年4月 April 2019

中荷双方专家在荷兰代尔夫特
进行堤防管涌渗流计算和堤防
安全性评估技术交流

Technical exchange between the two
sides on dike piping seepage
calculation and dike safety assessment
in Delft, Netherlands

合作开展成效

稳步实施合作项目

The effect of cooperation

Implementation of cooperation projects

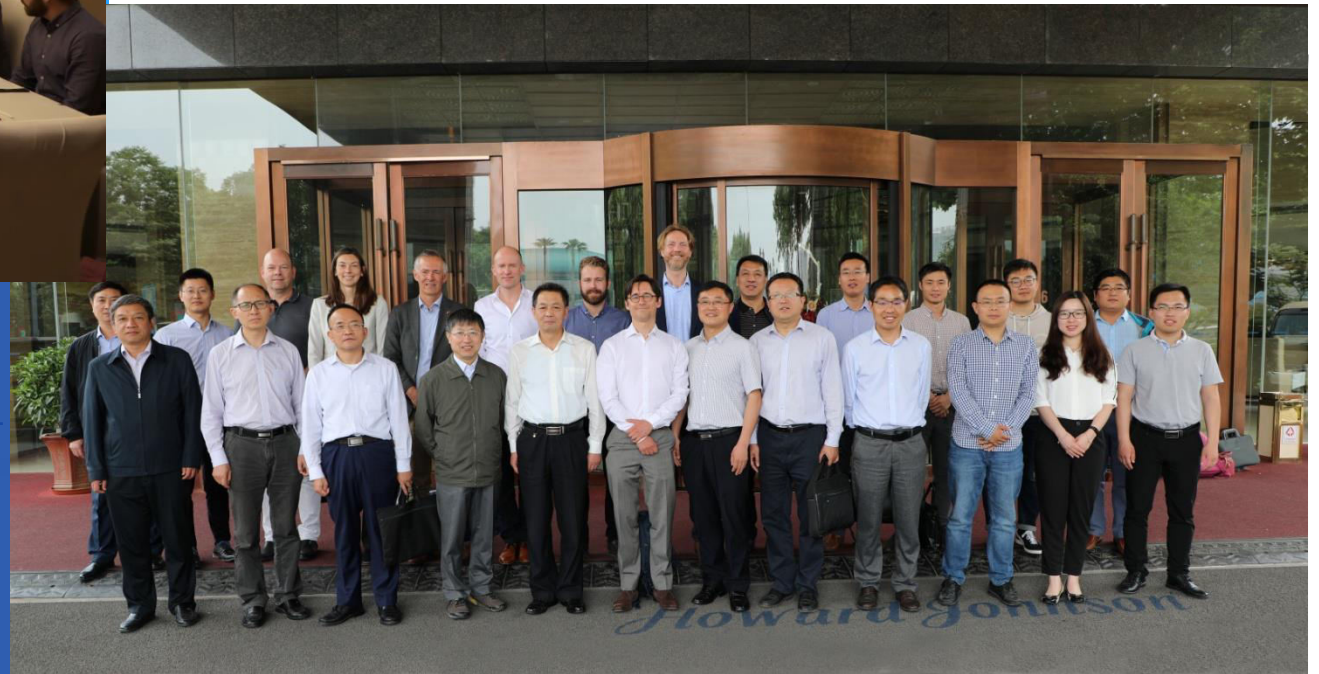


2019年5月

中荷双方专家在安徽开展洪水概率预报与堤防安全评估技术研讨

May 2019

Discussion on Probability Flood Forecast and Embankment Safety Assessment Technology by Both Parties in Anhui Province, China

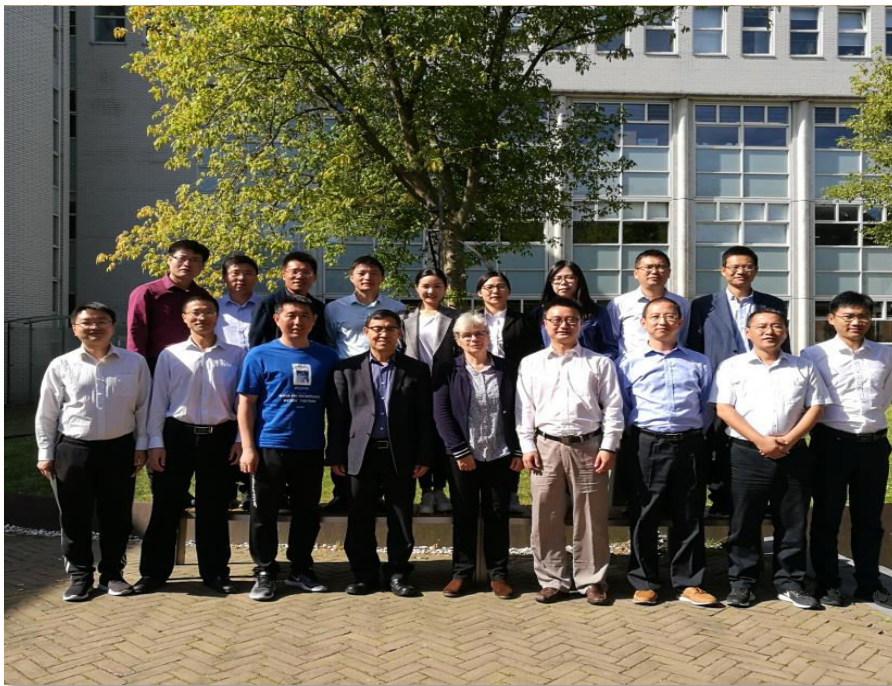


合作开展成效

The effect of cooperation

稳步实施合作项目

Implementation of cooperation projects



2019年8月

August 2019

淮委组织青年技术骨干赴荷兰代尔夫特IHE水教育学院短期
学术交流培训

Huaihe River Commission organized young technical backbone to attend short-term academic exchange training at IHE Water Education Institute in Delft, Netherlands

互利共赢取得实效

Mutual benefit and win-win results

中荷淮河流域防洪减灾二期项目

Sino Dutch Huaihe River Basin Flood Control and Disaster Reduction Project (Phase II)

中国

新安江模型
Xin'anjiang model

API模型
API mode

荷兰

SOBEK水动力学模型
SOBEK hydrodynamic model

贝叶斯概率预报模型
Bayesian probabilistic forecasting model

淮河洪水概率预报系统
FEWS-Huaihe



中荷大坝安全项目

The Project of Sino Dutch Dam Safety

荷兰须德海大堤、海牙新水道挡潮闸
Zuiderzee Enclosed Dike, tide retaining brake of New waterway in The Hague, Netherlands

调研

莱茵河堤防断面数据

Cross section data of Rhine River embankment

收集

堤防安全评估技术交流

Discussion on Levee Safety Assessment Technology

开展

中荷计算方法

The computing method of Sino-Dutch

对比

翻译《防洪基本原理》

The Translation of 《Fundamentals of Flood Protection》



形成

互利共赢取得实效

中荷淮河流域防洪减灾二期项目

Mutual benefit and win-win results

Sino Dutch Huaihe River Basin Flood Control and Disaster Reduction Project (Phase II)

 国家自然科学基金 资助项目结题报告	 国家自然科学基金 资助项目结题报告
项目批准号: _____ 申请代码: _____ 依托管理部门: _____ 收件日期: _____	项目批准号: S1109054 申请代码: E090101 依托管理部门: _____ 收件日期: _____
资助类别: <u>面上项目</u>	资助类别: <u>青年科学基金项目</u>
亚类说明: _____	亚类说明: _____
附注说明: _____	附注说明: _____
项目名称: <u>实时洪水概率预报方法研究</u>	项目名称: <u>基于贝叶斯理论的洪水实时预报调度关键技术研究</u>
负责人: <u>梁忠民</u> 电话: <u>025</u>	负责人: <u>王军</u> 电话: <u>025-83787478</u>
电子邮件: <u>zliang@hhu.edu.cn</u>	电子邮件: <u>wangjun.hhu@gmail.com</u>
依托单位: <u>河海大学</u>	依托单位: <u>河海大学</u>
联系人: <u>周源</u> 电话: <u>025</u>	联系人: <u>周源</u> 电话: <u>025-83787062</u>
资助金额: <u>59.0 (万元)</u> 累计拨款: _____	资助金额: <u>26 (万元)</u> 累计拨款: <u>26.0 (万元)</u>
执行年限: <u>2012.01-2015.12</u>	执行年限: <u>2012.01-2014.12</u>
填表日期: <u>2016年01月16日</u>	填表日期: <u>2015年01月16日</u>
国家自然科学基金委员会制 (2012年)	国家自然科学基金委员会制 (2012年)



获得大禹水利科学技术奖二等奖

Win the second prize of Dayu Water Conservancy Science and Technology Award

国家自然科学基金资助项目

Supported by National Natural Science Foundation of China

互利共赢取得实效

Mutual benefit and win-win results

中荷淮河流域防洪减灾二期项目

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FEWS-Huaihe

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互利共赢取得实效

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中荷大坝安全项目

The Project of Sino Dutch Dam Safety

CHINA
EUROPE
Water Platform



开展堤防安全评估技术交流

Discussion on Levee Safety Assessment Technology



现场调研须德海大堤

Site investigation of the Zuiderzee Levee

防洪基本原理

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《防洪基本原理》

《Fundamentals of Flood Protection》

感谢您的观看

THANK YOU FOR YOUR ATTENTION.

中欧水资源平台（CEWP）--海绵城市及其他：应用“三点法”建设具有气候韧性的城市地区

China-Europe Water Platform (CEWP) - Sponge Cities and beyond: Climate Resilient Urban Areas by application of the Three Points Approach



Time	Topic	Name
15:00 - 15:30	与会者入场、登记和就座 Walk in	登记、设施和翻译方面的组织援助
15:30 - 15:40 15:40 - 15:50	Welcome words 开幕致辞、欢迎辞和今天的目的 China Europe Water Platform (CEWP) Partnership Initiative介绍和视频	Mrs Jasmin Schous 女士 荷兰 Mrs Diana Carlos 女士 葡萄牙
15:50 - 16:00	对CEWP China Europe Cooperation on Sponge Cities (CECoSC) 合作的思考 成果、政策、指导与3PA白皮书的衔接	Mrs Natalie Oonk-Abrahams 女士 荷兰
16:00 - 16:30 16:30 - 16:40	Introduction White Paper Three Points Approach (3PA) emerged from CEWP CECoSC Policy Guidance: A proposal for EU/CN Future cooperation 导言 白皮书 3PA 由 CEWP CECoS 政策指导演变而来 欧盟/中国 未来的合作建议 <i>休息</i>	Mr Frans van de Ven 先生 荷兰
16:40 - 17:10	Reflection on the White Paper & Proposed future water cooperation between EU and China for Water and Urbanization under 3PA 10 分钟 PPT 回应白皮书及 3PA 提议下欧盟与中国未来在水与城市化方面的水合作建议 • NHRI • HRC • UU	Mr Wang Leizhi 博士 中国 Mr Zhi Yang 博士 中国 Mrs Dai Liping 博士 荷兰
17:10 - 17:30	Wrap-up and conclusions 总结与结论	Mr Klaas Groen 先生 荷兰