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Guided Tour to the Three Yellow River

Sun Yangbo

Yellow River Conservancy Commission

RIVER BASIN MANAGEMENT TOOLBOX

Yellow River Conservancy Commission

Legal Tools

Yellow River Protection Law 2023

Yellow River water regulating regulation

Policies and Planning

National Development Strategy

1987 Water allocation Scheme

Master Plan Guidelines (1+X+N)

Economic tools

Water Market and Water Price

Ipsum is not simply random
text. bring together the right

Science & Technology

Digital Yellow River
Smart Dikes
Twin River Basin

Infrastructures

Hydro-power station
Irrigation districts
water supply facilities
flood detention basin



LEGAL - POLICY - ECONOMIC tools

China's Green Development Policy

- Accelerating the transition green development
- Intensifying pollution prevention and control
- Enhance diversity, stability and sustainability in our ecosystems
- toward the goals of reaching peak carbon emissions and carbon neutrality

Master Plan of the Yellow River Basin

- By 2030, to achieve a balanced relation between Humanity and Nature in the Yellow River Basin, with improved governance capability and enhanced synergies of ecological protection, and regional development.
- River Basin flood control and disaster mitigation system completed, water security strengthened, the quality of the ecological environment significantly improved
- Maintain the basin's Food and Energy importance to the country, sustain the urban and rural development

Yellow River Protection Law

- legislative tool to regulate the relationship between protection and development, between humanity and nature.

SCIENCE – TECHNOLOGY - INFRASTRUCTURES tools

DIGITAL River

1

- GIS system
- Satellites and Remote Sensing
- Metrological data
- Hydrological Monitoring
- Flood Forecasting and warning
- Water Regulation
- Asset Management

SCALED MODEL River

2

- River Channel
- Dam/Reservoir
- Loess Plateau Soil Erosion
- Delta/Estuary
- Hydraulics research

PHYSICAL River

3

- Standardized Embankment
- River Training works
- Xiaolangdi Dam Project
- Flood detention basin
- Water Supply Projects
- Irrigation District
- Water diversion project
- Floodplain and wetlands
- Ecological Corridor

Three Yellow River Program

1 Digital Yellow River - Yellow River Central Water Regulation Center

INFORMATION CENTER & DECISION-MAKING CENTER

Hydrological Monitoring and Forecasting

- Rainfall
- Soil moisture
- Water level
- Flow volume
- Reservoir storage
- Water quality

Water Demand Management

- Water Allocation Scheme
- Annual/Month/10 days water use plan

Remote Control System for Water Regulation

- Dams/Reservoirs
- 137 Intake/Drainage sluice gates
- Diversion canals



Water Regulation SCENARIOS

- Prevent low flow and river depletion
- Balance water use between upstream and downstream and two sides of the river
- Improve water security for Agricultural and Industries
- Ecological Restoration of wetlands and floodplain
- Groundwater recharge

2 Scaled Model - Yellow River Hydraulic Laboratory

Scaled Model

- River Channel
- Dam/Reservoir
- Loess Plateau Soil Erosion
- Delta/Estuary
- Hydraulics research

Hydraulic Experiment

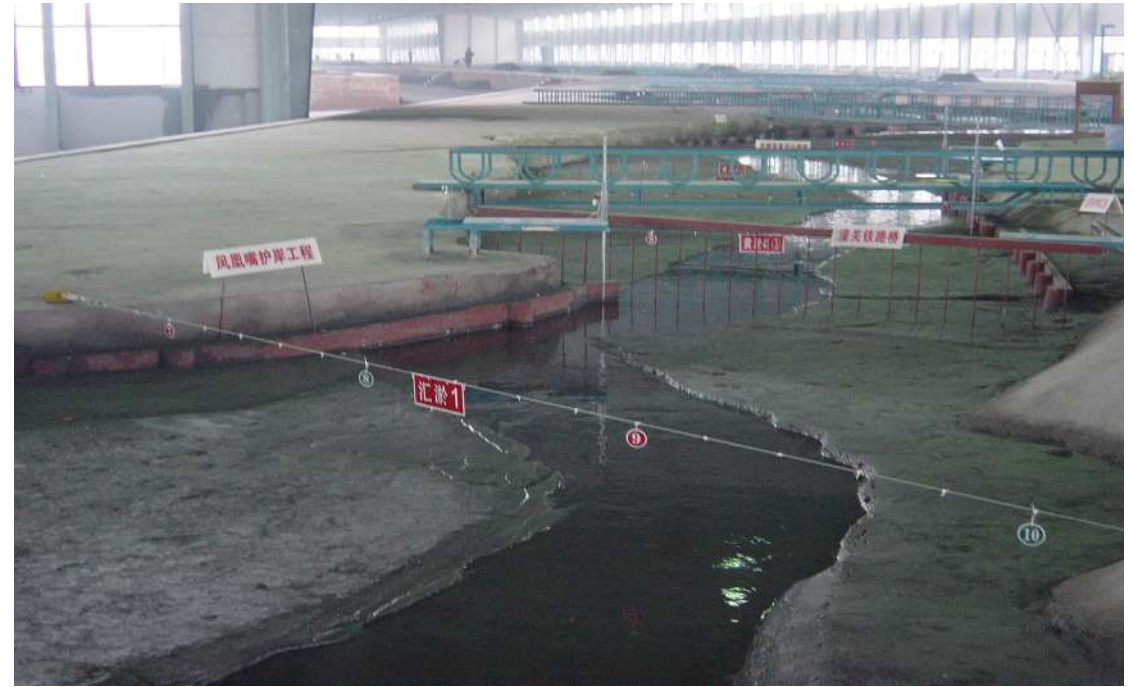
- Soil and water conservation
- Reservoir Design & Operation
- Flood Control and Disaster Mitigation
- River Training works
- Sediment Management



Lower Yellow River Channel Model



480 km downstream Yellow River



800 m river channel model

SOIL EROSION Monitoring and Simulation at LOESS PLATEAU (source of silts)



Onsite Monitoring Station

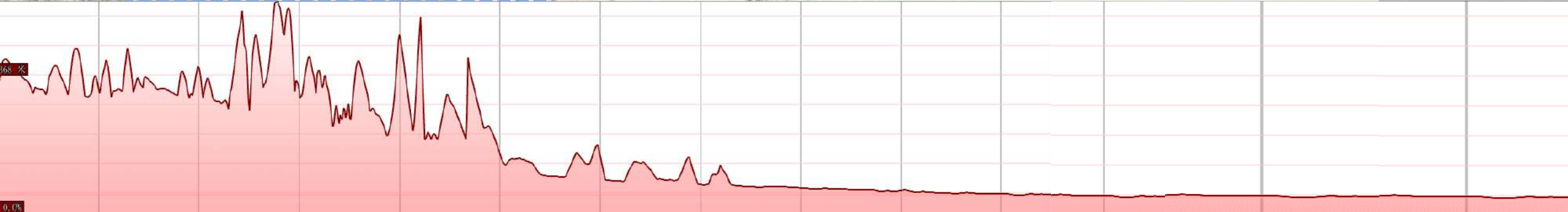
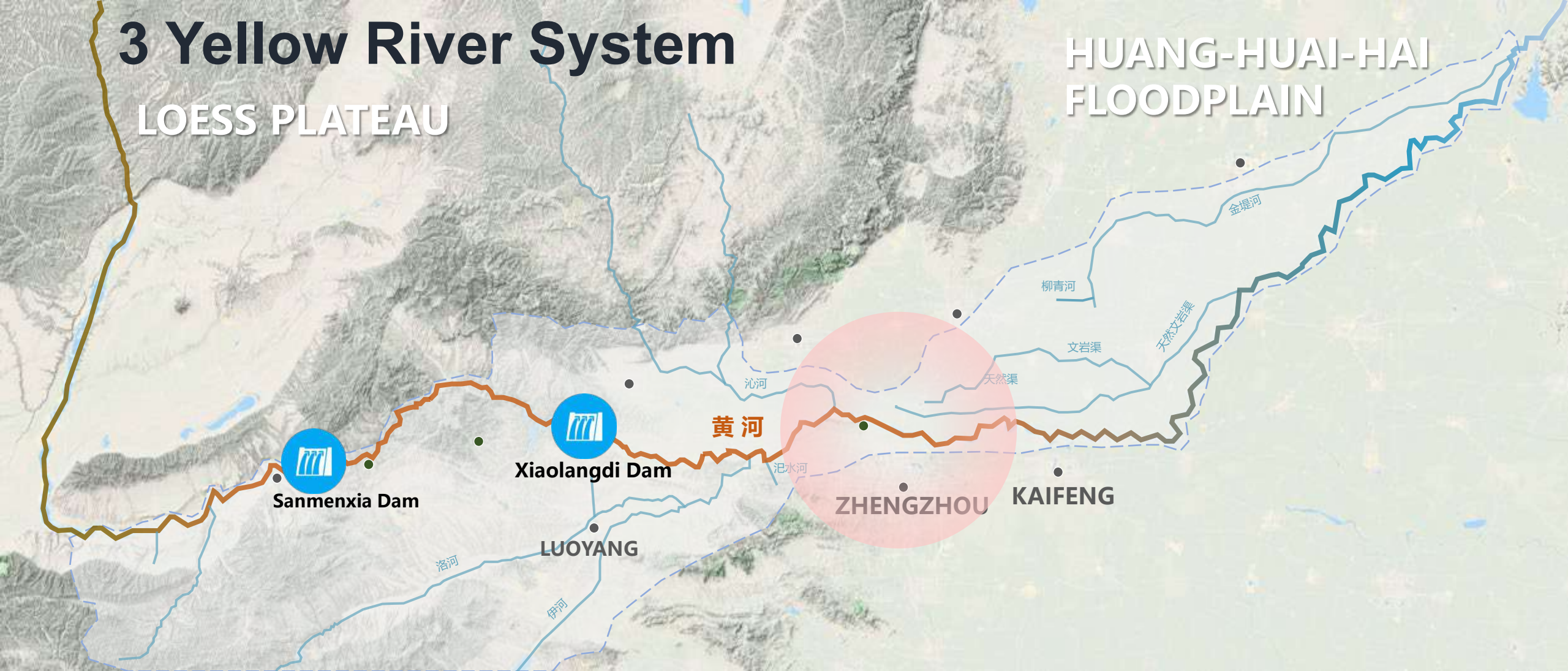


Scaled Model

3 Yellow River System

LOESS PLATEAU

HUANG-HUAI-HAI
FLOODPLAIN



Yellow River - Standardized Embankment



Yellow River - People's Victory Irrigation District



Yellow River Floodplain (Ecological Corridor)



Culture and Natural Heritage Protection

- 20 UNESCO World Culture and Natural Heritage Sites in the 9 provinces of Yellow River Basin
- Various Natural Landscape of snow mountains, Gobi desert, grasslands and pasture, waterfalls, wetlands,
- 84 National Tourist attractions sites
- 45 Historical, Cultural or Geological Museum



Ongoing Projects...

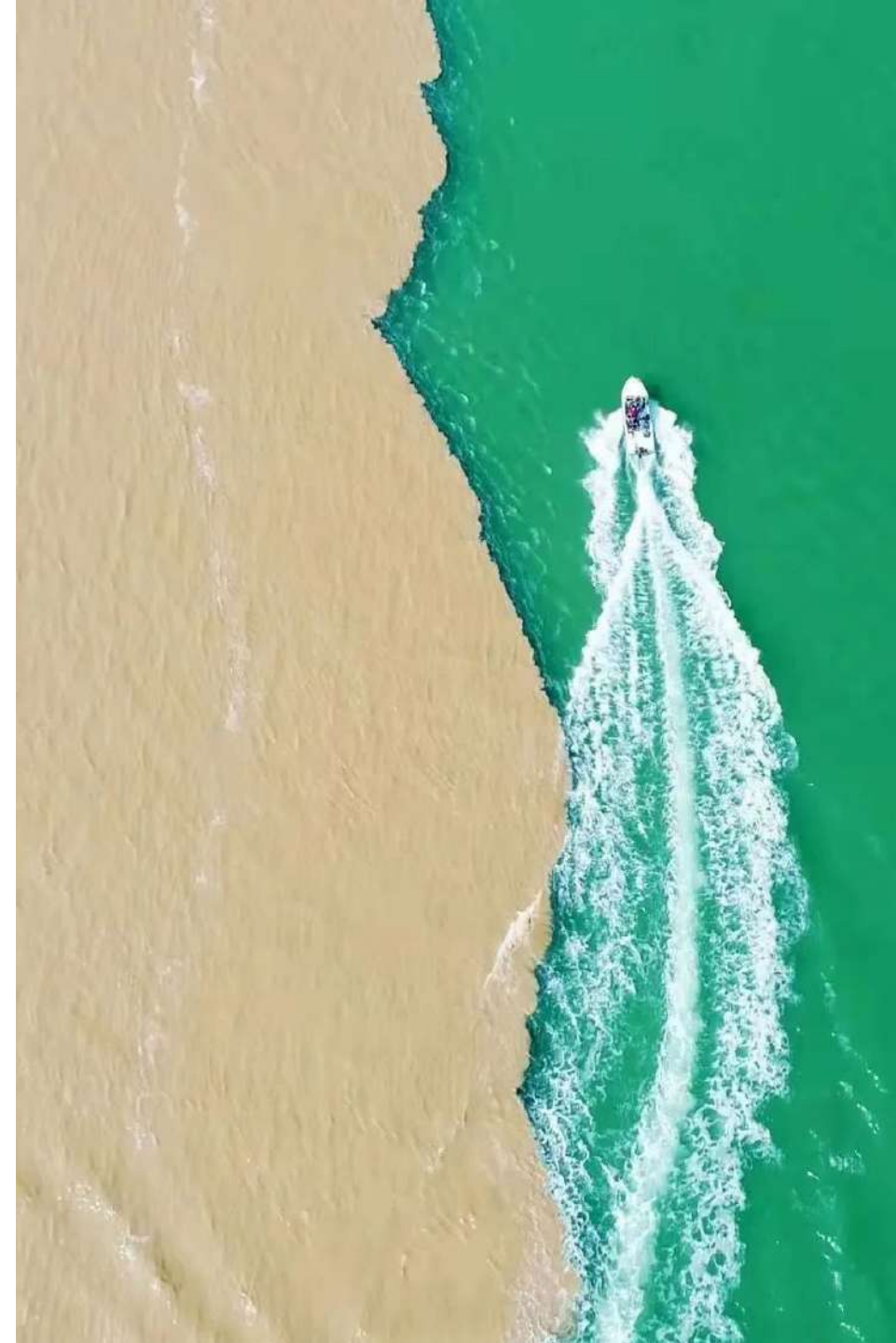
National Park - Sanjiangyuan (Three River Source)

National Park -Yellow River Delta

Yellow River National Museum

Yellow River National Cultural Park





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