Inland Shipping and IENC China

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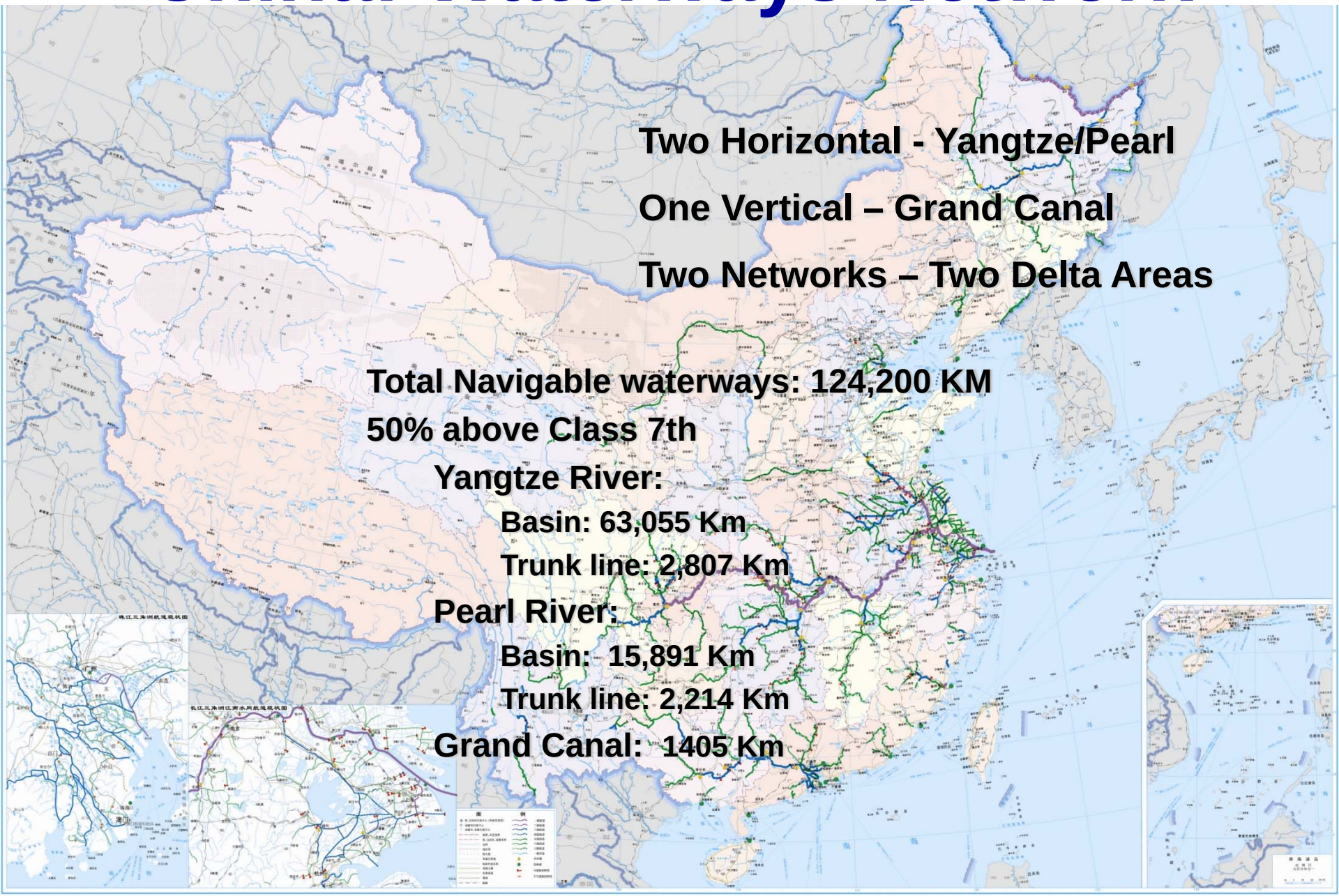
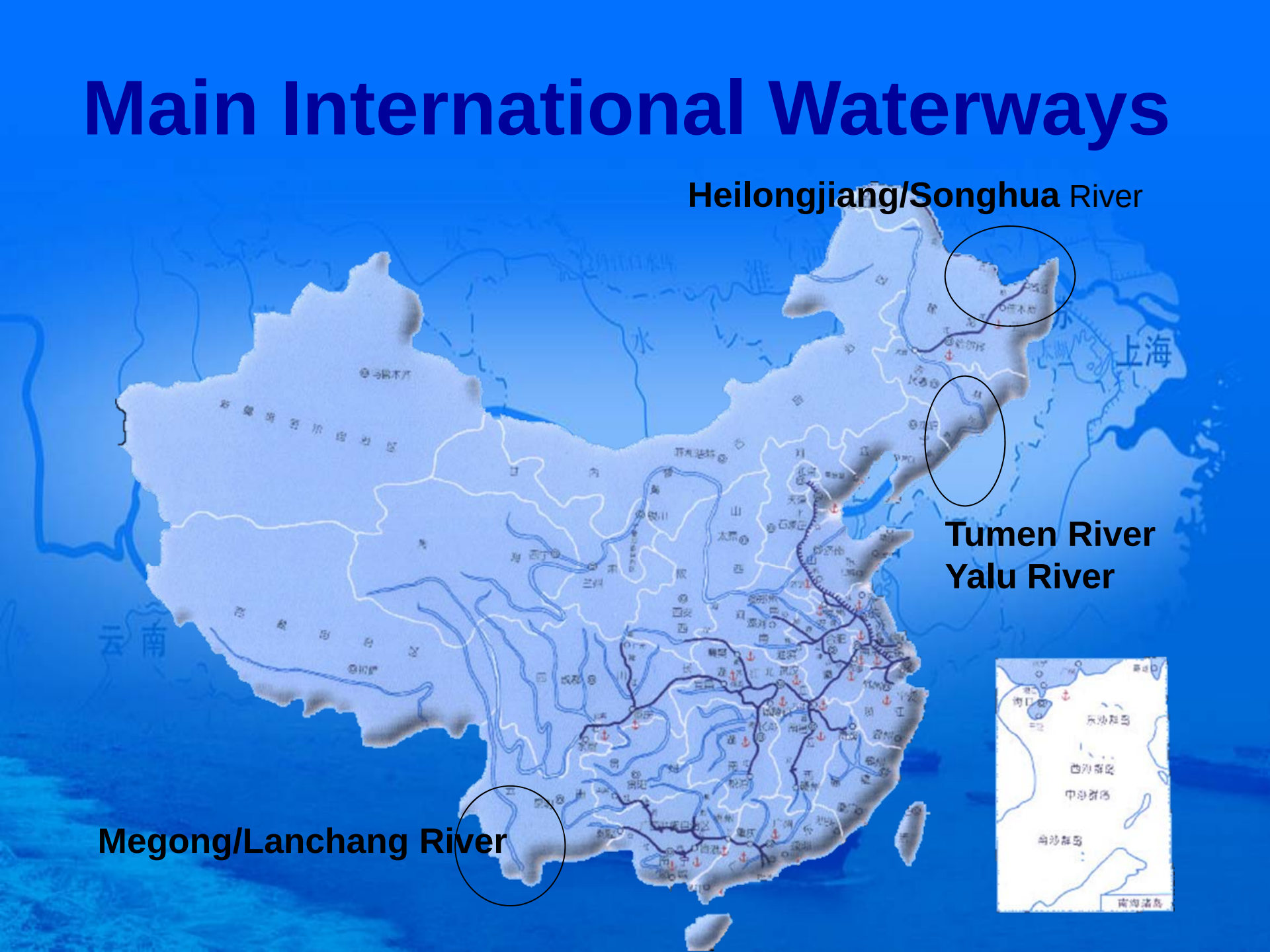
Water Systems China

Mainly 7 river systems to Pacific

China: Waterways Network

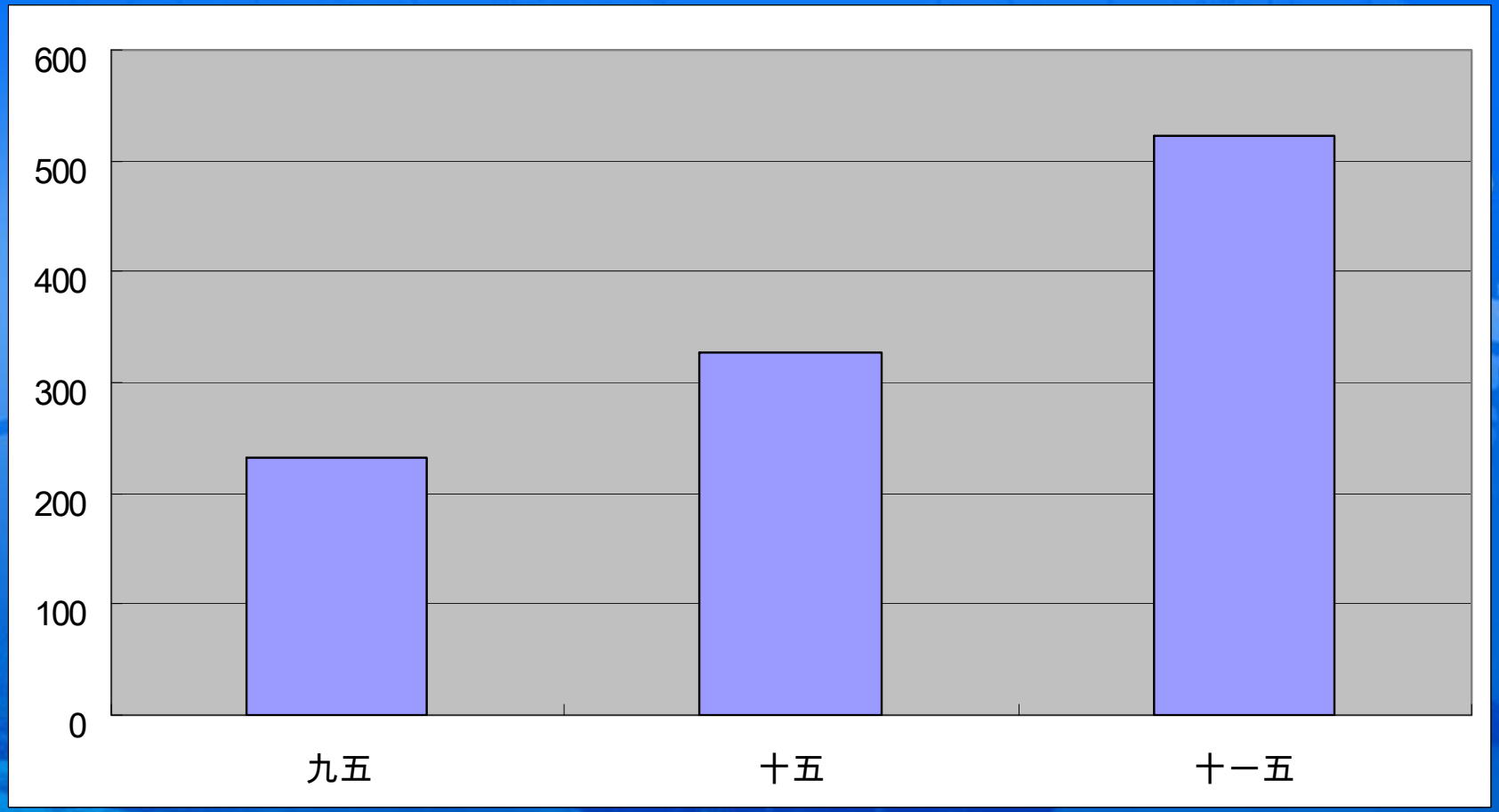


Main International Waterways



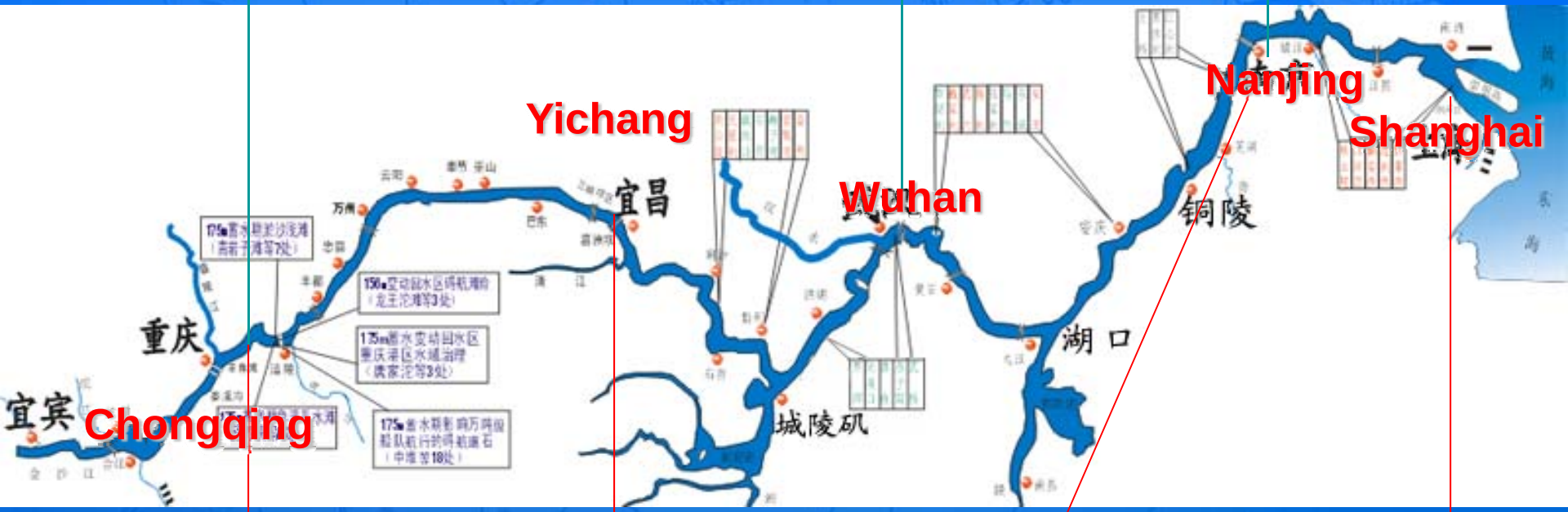
Inland waterways Investments

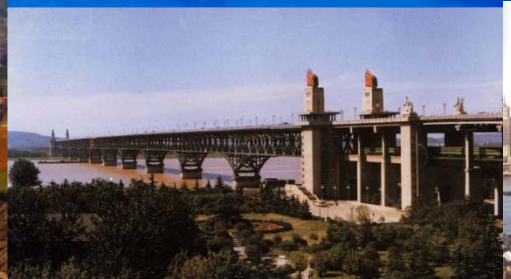
In 100mil. RMB



Yangtze River Waterways Plan

1000DWT 3000DWT 5000DWT 50000DWT



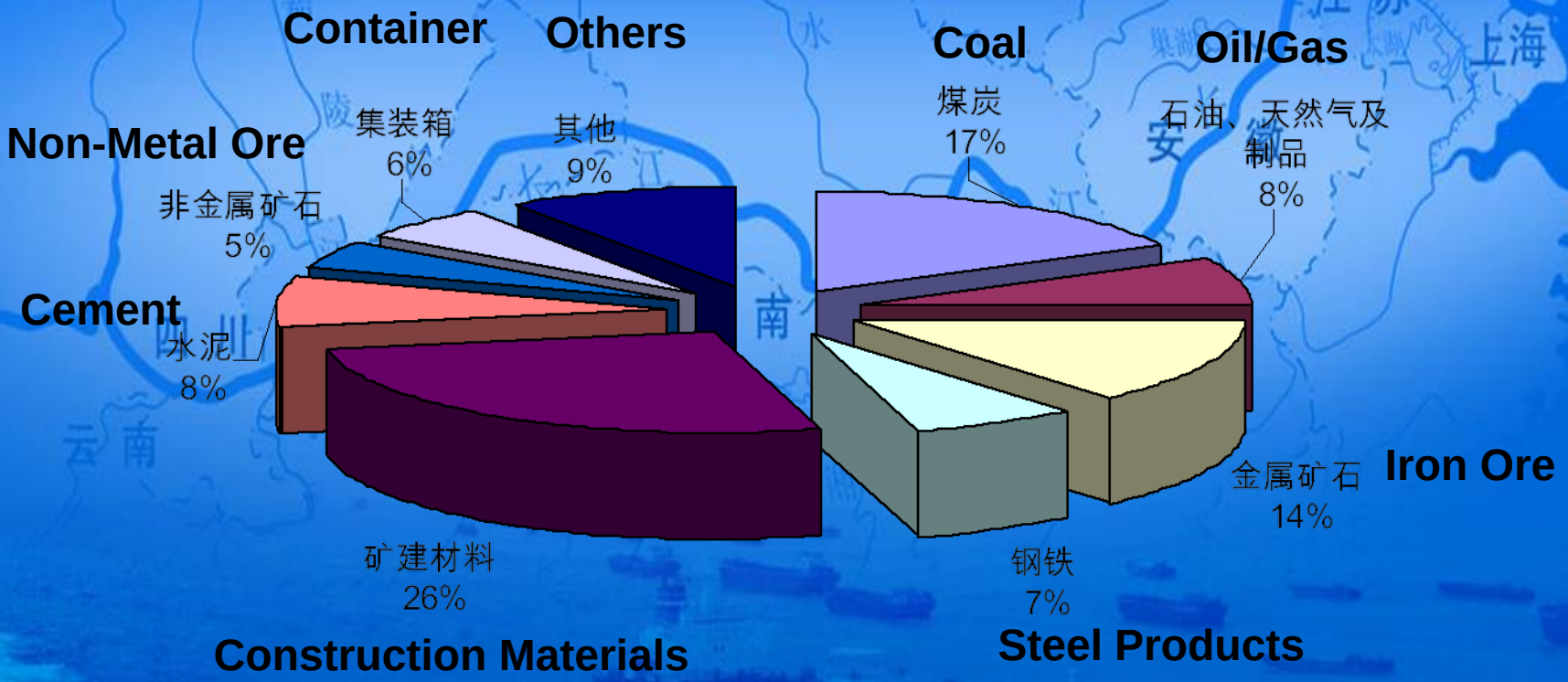


Inland Shipping Updates

Inland Shipping Traffic

Year	Mil. Tons	Bil. T-KM
1995	732	159
2000	688	155
2006	1161	301
2010	1886	536

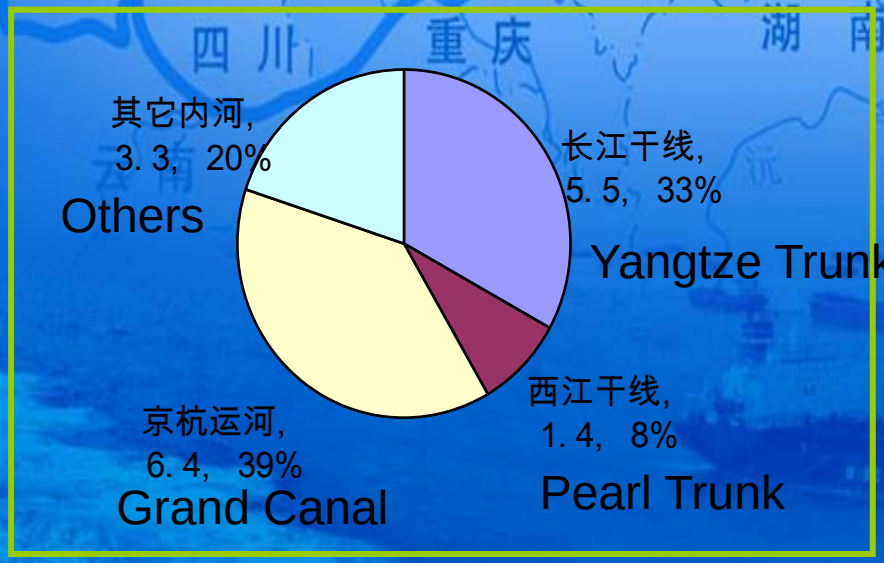
Inland Shipping Cargoes



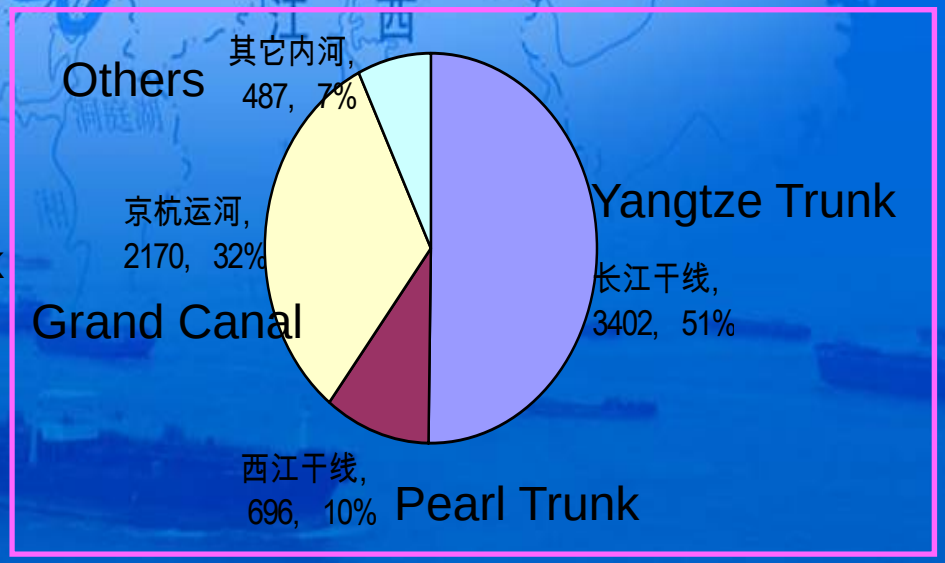
Inland Vessels

166,000 Vessels with 67.54 Mil DWT in 2010

Number of barges



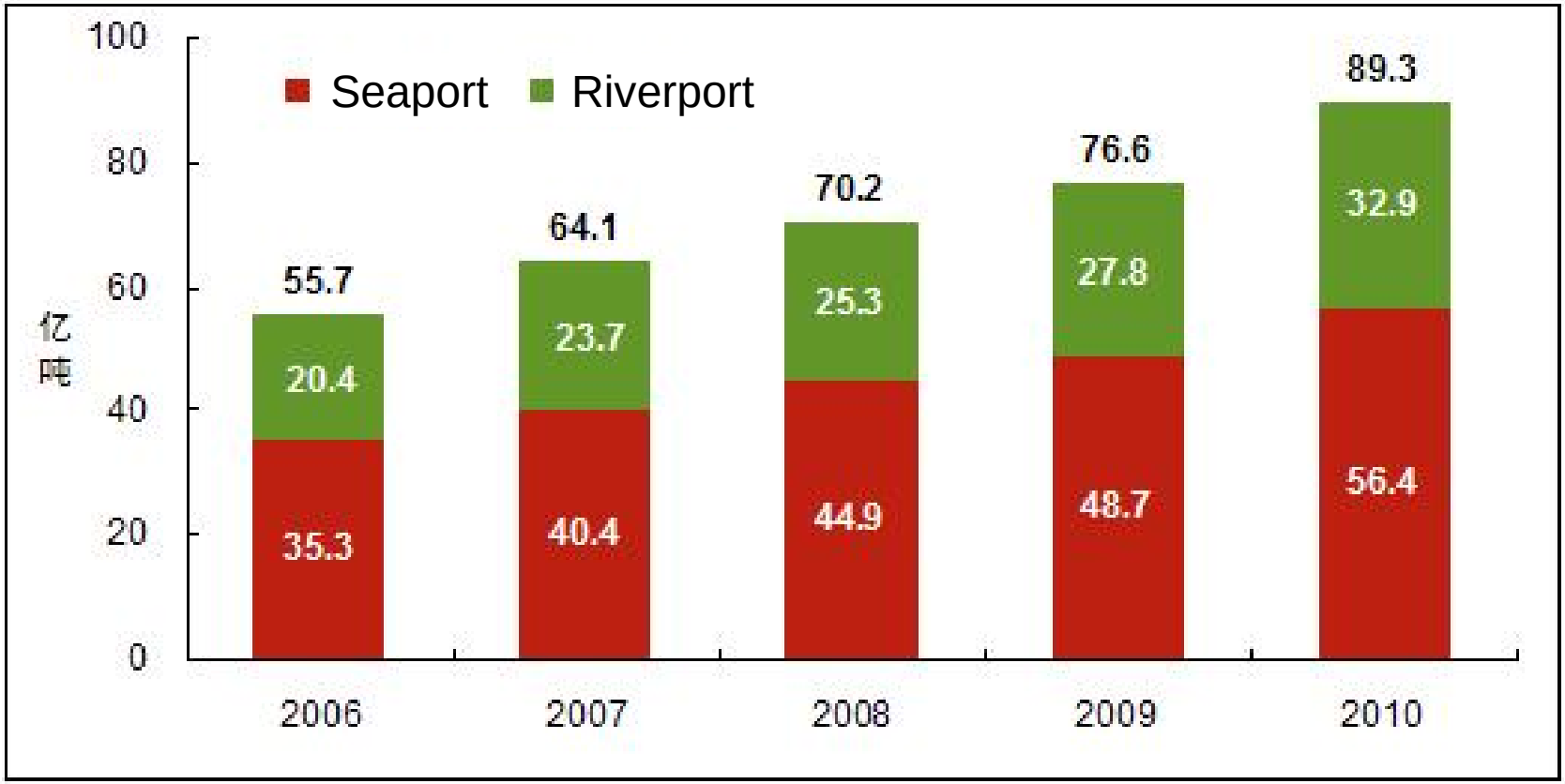
DWT



Inland Vessels by Types and Waterways

Vessel Type	Yangtze Trunk	Pear River Trunk	Great Canal	Others	Total
Passenger	1174			9799	10973
Bulk	40369	9490	44010	19172	113041
Tank	5383	649	1199	450	7681
Container	566	1438	28	212	2244
RORO	215			242	457
Barge	5617		16883	1280	23782
Other	1768	2046	1817	1930	7561

River Port Throughput



China Ports Over 100 Mil Tons

港口	货物吞吐量	港口	货物吞吐量
沿海港口：			
宁波－舟山港	6.33	日照港	2.26
上海港	5.63	营口港	2.26
天津港	4.13	深圳港	2.21
广州港	4.11	烟台港	1.50
青岛港	3.50	湛江港	1.36
大连港	3.14	连云港港	1.27
秦皇岛港	2.63	厦门港	1.27
唐山港	2.46	北部湾港	1.19
内河港口：			
苏州港	3.29	湖州港	1.44
南通港	1.51	江阴港	1.25
南京港	1.47	镇江港	1.06

Inland Shipping of Chongqing

Highlight in 2009,

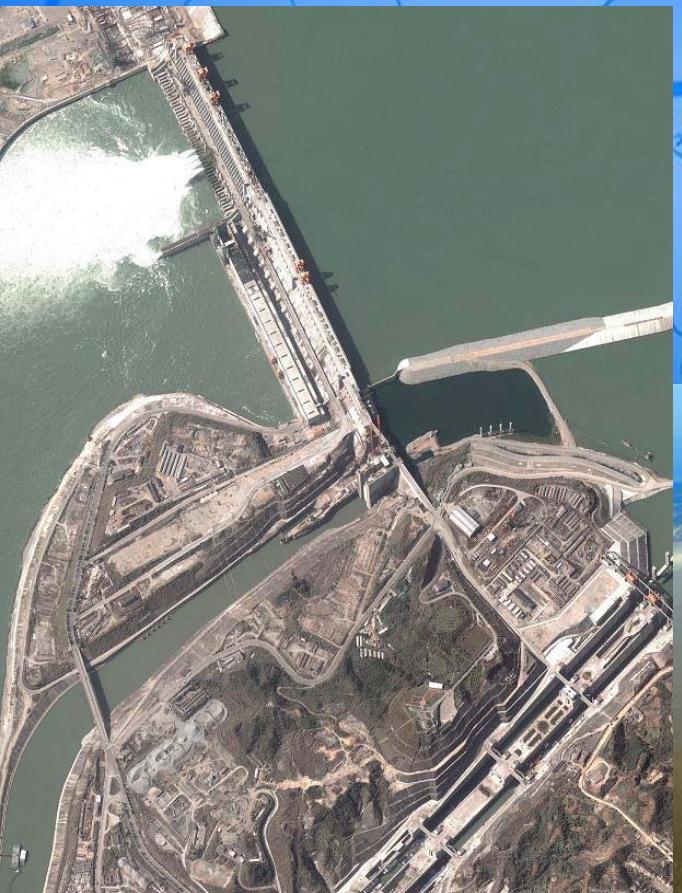
Total Traffic 7771万吨，22.3%

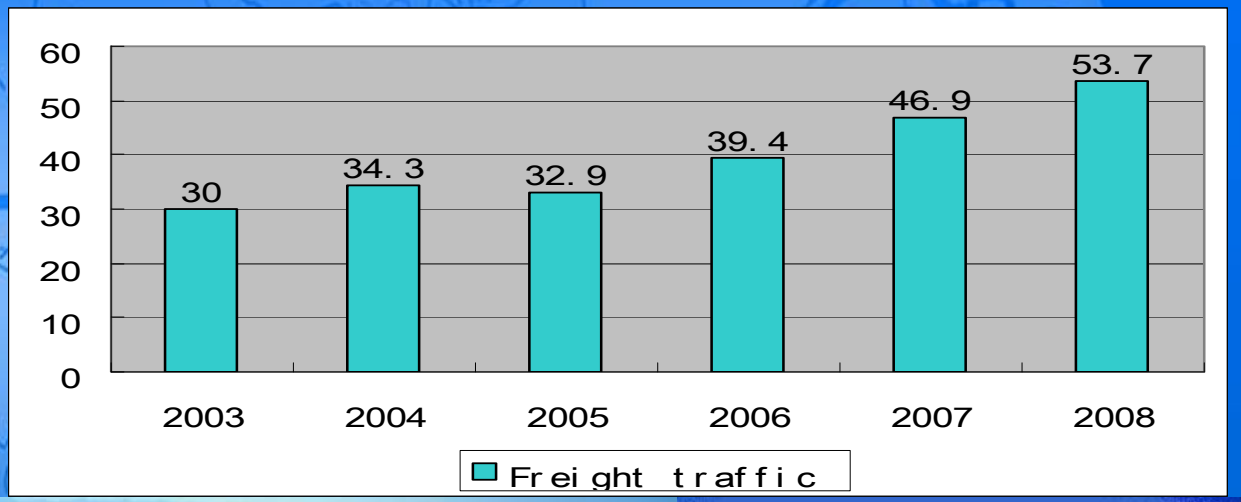
Port throughput 86 million Tons，16.4%

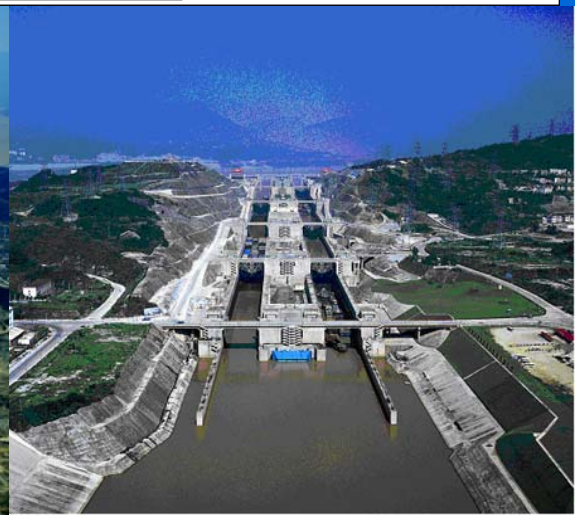
Average Barge Size from 301DWT in 2002, to 1400 in 2010

Av fuel from 7.6Kg/1000ton•Km, to 2.9 in 2010

Traffic Development Three Gorges







Waterways and Traffic Management Structure

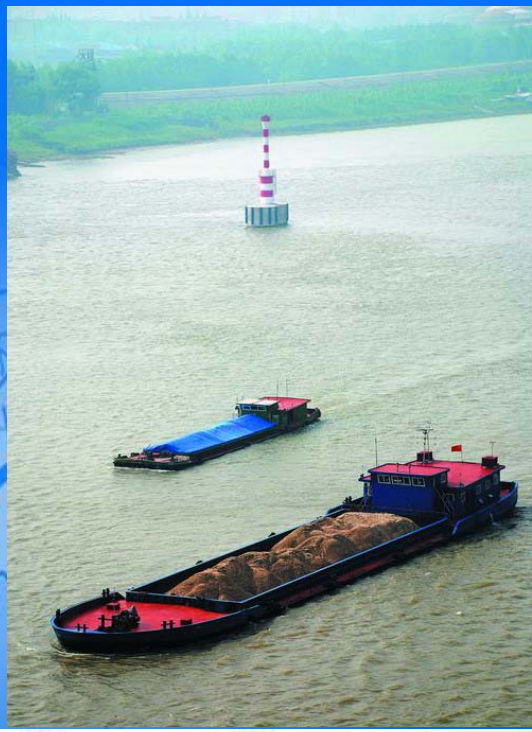
- Department of Water Transport, MOT
- China Maritime Safety Administration (MSA)
- Yangtze River
  - Trunk Line
    - Yangtze Waterways Administration
    - Yangtze MSA
  - Side Rivers
    - Principle or Municipal Waterways Authorities
    - Local MSA
- Other Rivers
  - Principle or Municipal Waterways Authorities
  - Local MSA

Key Traffic Rules

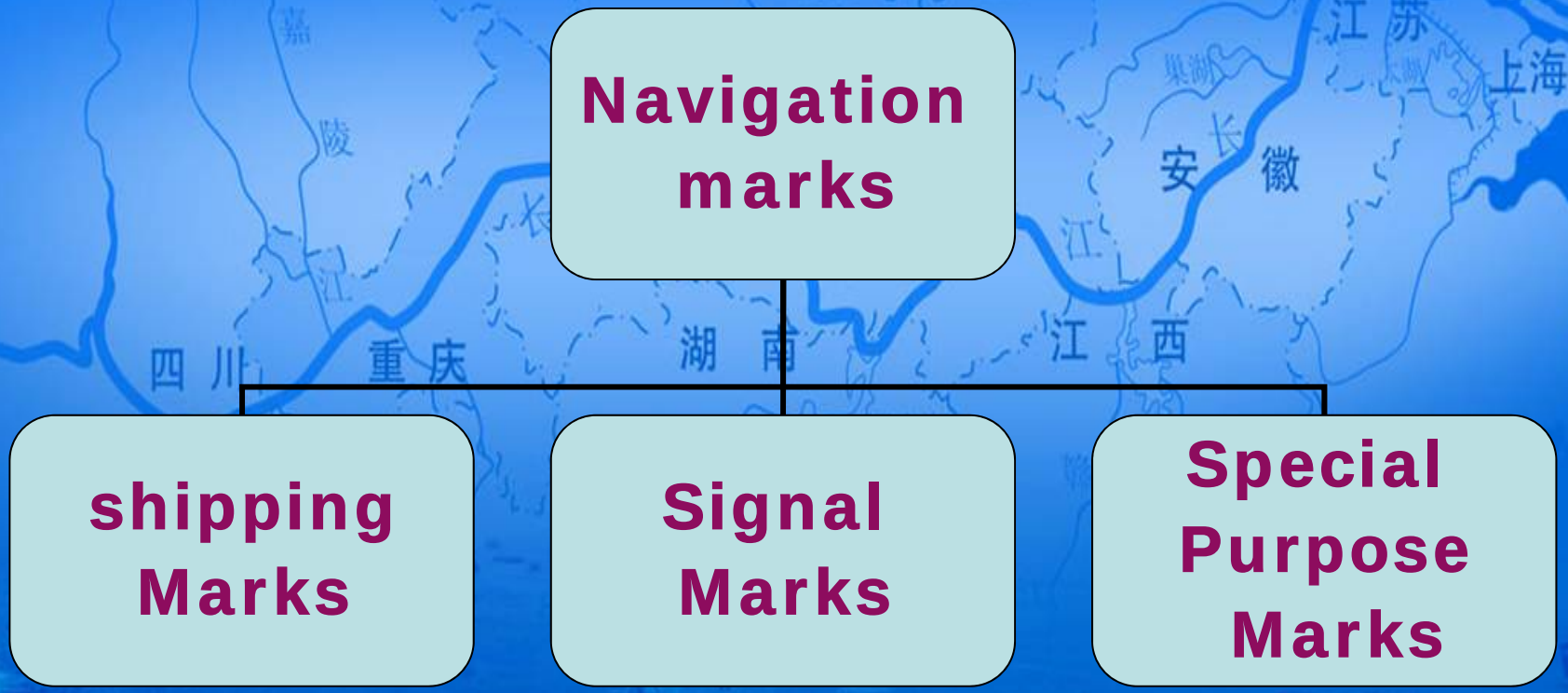
《Regulations for inland shipping》

《Regulations for Preventing Collisions on inland waterway 》

《Regulations for inland traffic safety》



Navigation Marks at inland waterway




Lateral mark
signs of cross the river
navigation line
director of the channel
Leading mark
Shipping Marks
reef
Bridge opening mark
boundary of channel
navigation buoy


航道走向

Boundary mark

One-way channel mark

Mark of whistle

Signal Marks

Depth mark

Other marks

Pipeline mark

Buildings cross the channel

Mark of Special water area

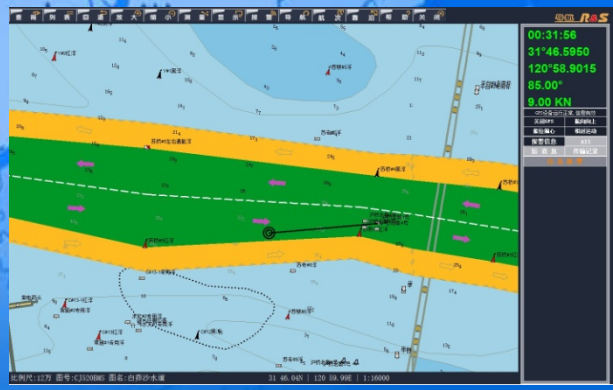
Special Purpose Marks

Buildings along the channel

Other marks

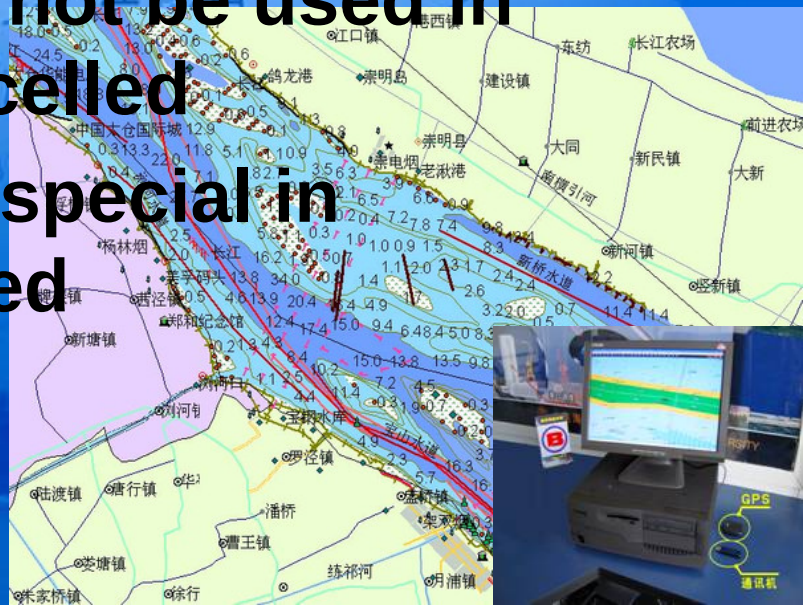
Inland ENC Development in China

- Inland ENC application around 2005
  - Chongqing
  - Downstream Yangtze
  - Three Gorges
  - Few Other Rivers

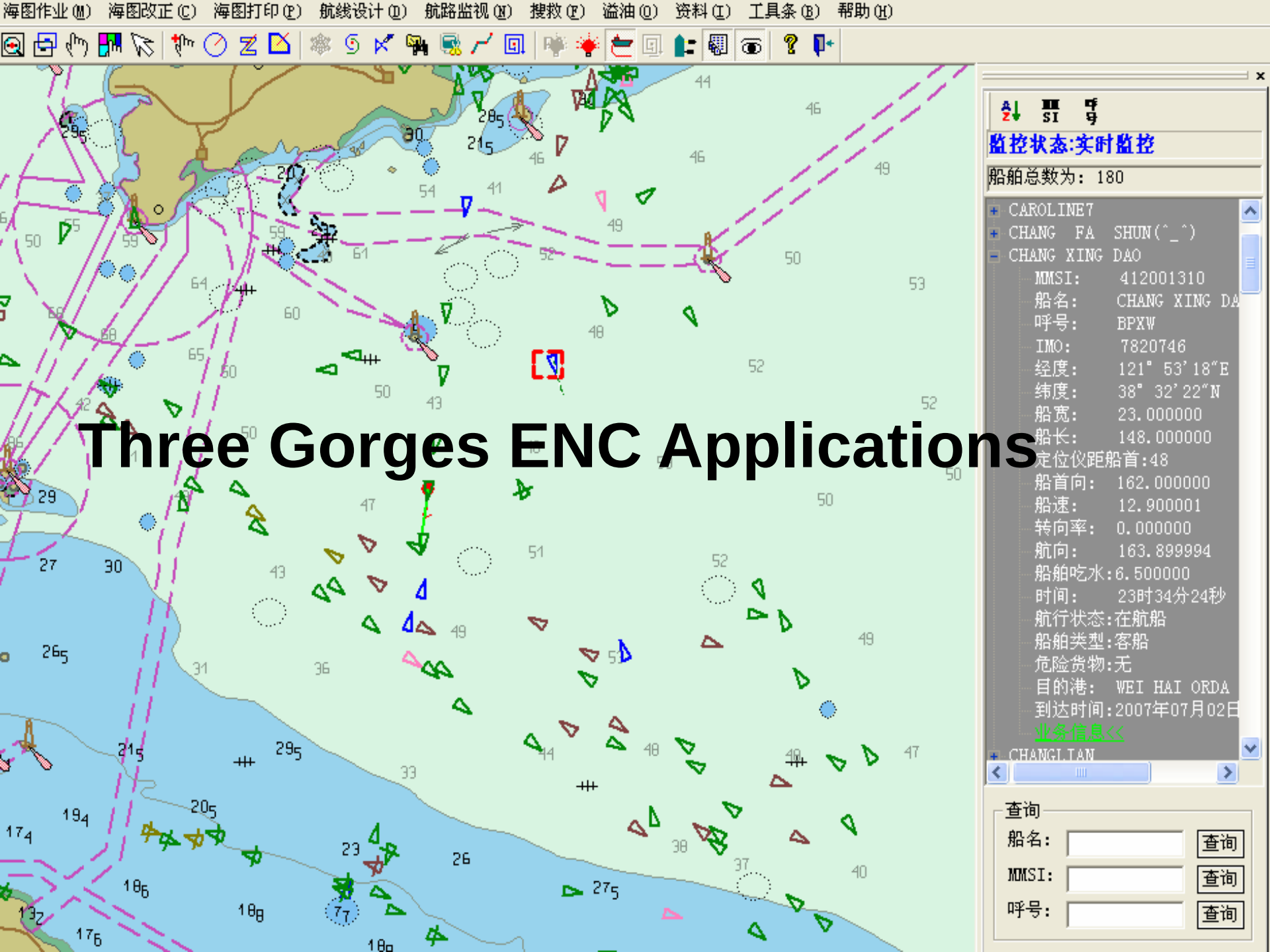


- The ENC of Yangtze River trunk is finished in 2009

- **The Standard for ENCs of Yangtze**
  - **CJ-57, CJ-58, CJ-52, CJ-63**
- **CJ-57 is based on the S-57**
- **Most objects on the S-57 keep same**
  - **Some objects that will not be used in Yangtze River are cancelled**
  - **Some objects that are special in Yangtze River are added**



Vessel Management System in Chongqing Port and Shipping Bureau


海图作业(M) 海图改正(C) 海图打印(P) 航线设计(D) 航路监视(N) 搜救(F) 溢油(O) 资料(I) 工具条(B) 帮助(H)
MMSI
监控状态:实时监控
船舶总数为: 180
CAROLINE7
CHANG FA SHUN(^_^)
CHANG XING DAO
MMSI: 412001310
船名: CHANG XING DA
呼号: BPXW
IMO: 7820746
经度: 121° 53' 18"E
纬度: 38° 32' 22"N
船宽: 23.000000
船长: 148.000000
定位仪距船首:48
船首向: 162.000000
船速: 12.900001
转向率: 0.000000
航向: 163.899994
船舶吃水:6.500000
时间: 23时34分24秒
航行状态:在航船
船舶类型:客船
危险货物:无
目的港: WEI HAI ORDA
到达时间:2007年07月02日
业务信息<<
CHANGLIAN
查询
船名:
MMSI:
呼号:
查询
查询
查询
Three Gorges ENC Applications

Yangtze Trunk ENC

Inland ENC Next

- Yangtze River Update
- Pearl River
- International Rivers
- Grand Canal
- Local Rivers
- Central Database

Key Issues IENC China

- **Currently, both S-57 and CJ-57 are used, One Standard is needed, ideally the IEHG standard.**
- **International Boundary River face more challenges in terms of standards and languages.**
- **The water level changes frequently, especially in the lock area, it is difficult to maintain the depth.**
- **There is a need for better cooperation with sea ENC.**
- **The Language of IEHG standard is English, it will be great if a translator could be developed to meet the needs of inland people.**


Thanks
More Info
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