

# **The Development & Planning of Bohai Rim Megalopolis**

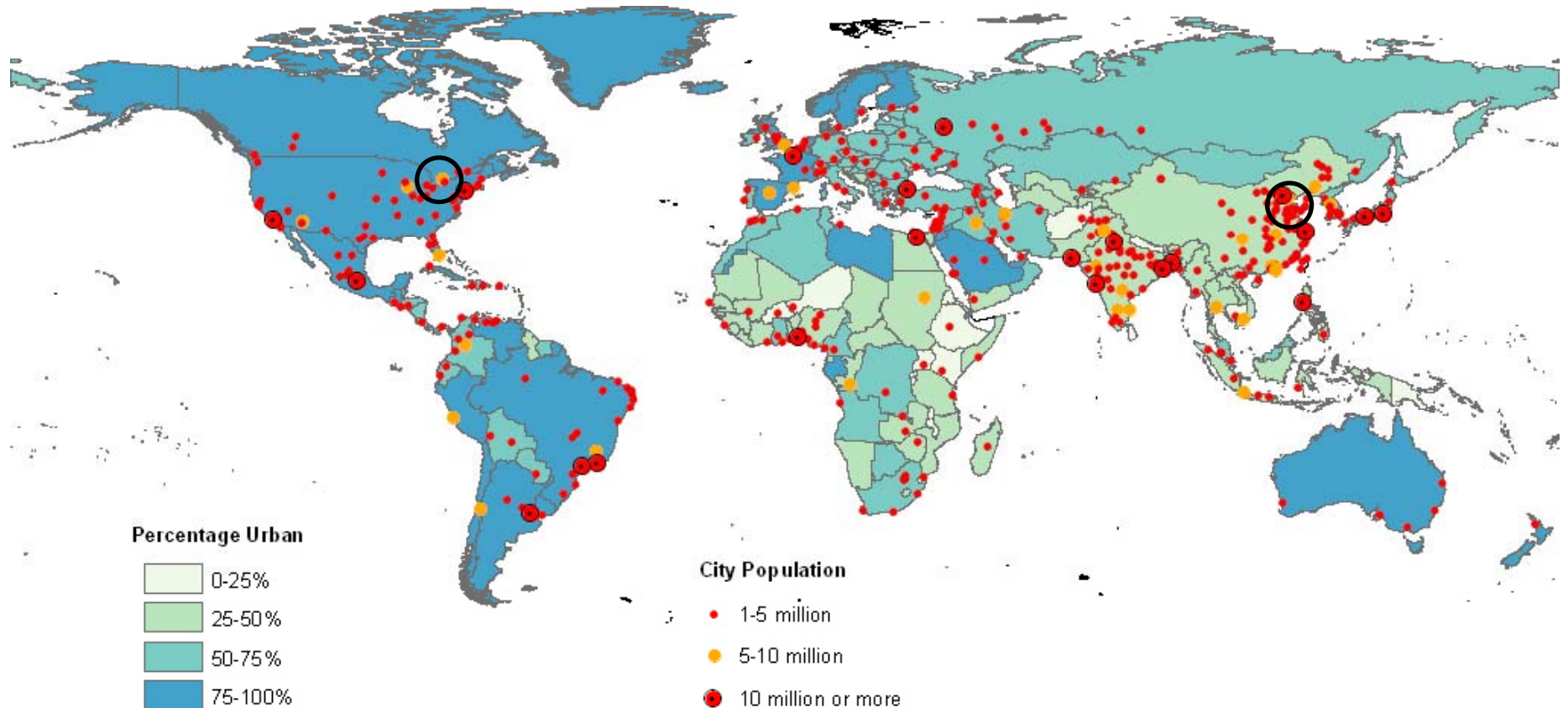
**Tianjin Planning Bureau, China  
August 2011**

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# 1. General Introduction

- Bohai Rim: in north of china, close to Korea and Japan, with includes Beijing and Tianjin in the region
- Great Lakes: in northeastern North America , includes Chicago , Detroit , Cleveland, Pittsburgh, Toronto and Montreal in the region



# 1. General Introduction

## ■ Location

- surrounding the Bohai Sea, with Yellow Sea to the east (coastline 2668 km)

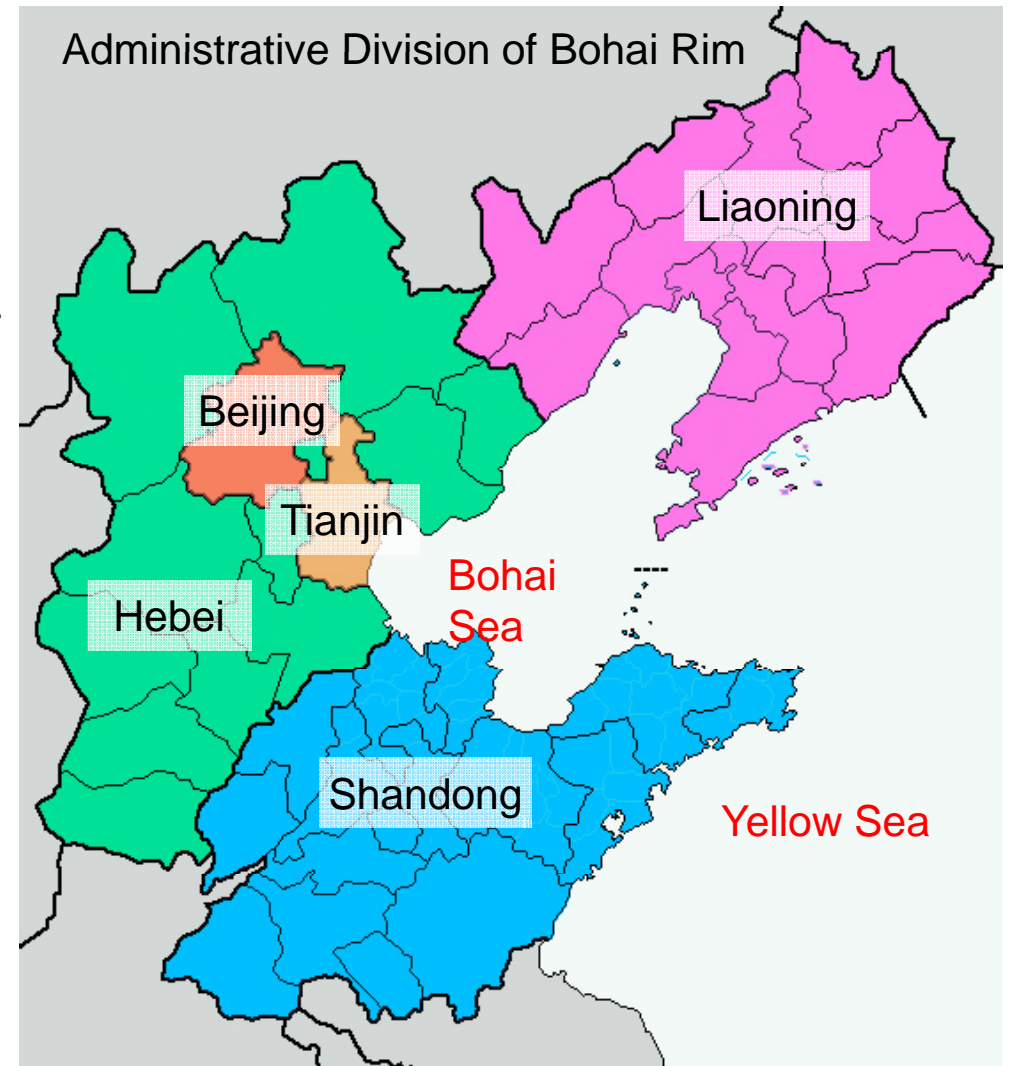
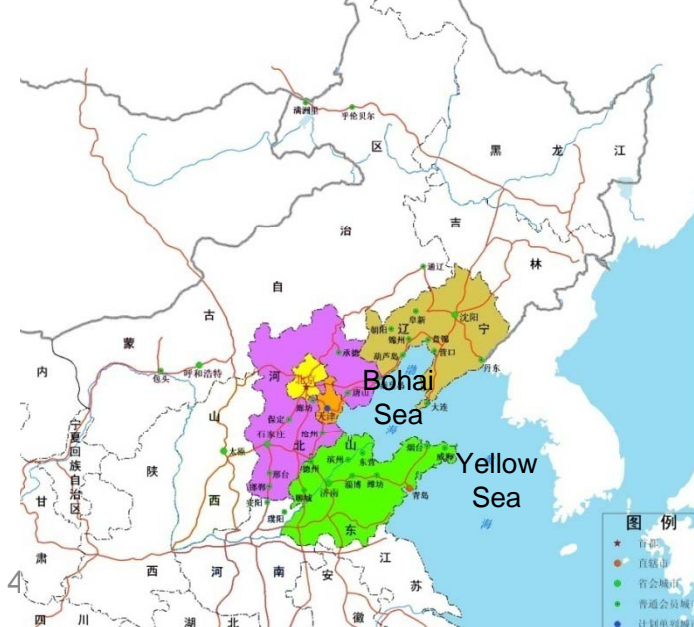
## ■ Area

- Land: 522,000 km<sup>2</sup>;
- Bohai Sea: 77,000 km<sup>2</sup>

## ■ Administrative Division

- 2 municipalities : Beijing, Tianjin
- 3 provinces: Liaoning, Hebei, Shandong, including 42 prefecture-level cities( County + city)

Bohai Rim in North China



# 1. General Introduction

## ■ Transportation

- more than 60 seaports, 2.5 billion tons of cargo per year
- 3 hub ports : Qingdao, Tianjin and Dalian Port
- Beijing is the hub of the national railway and high way network
- high-speed railway: 2 in operation, 4 under construction
- Express way: 12190 km length, 2.3 km/hundred km<sup>2</sup>

Railway network of north China



Seaports of Bohai Rim





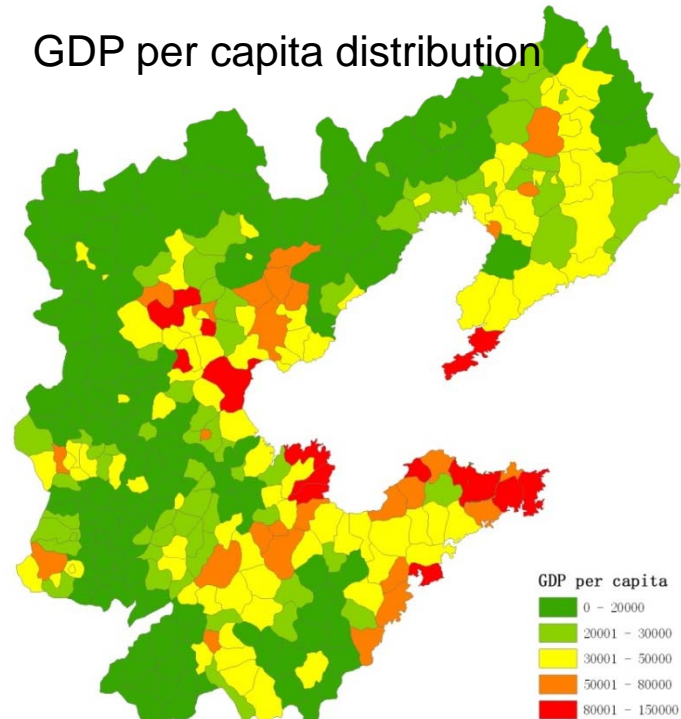
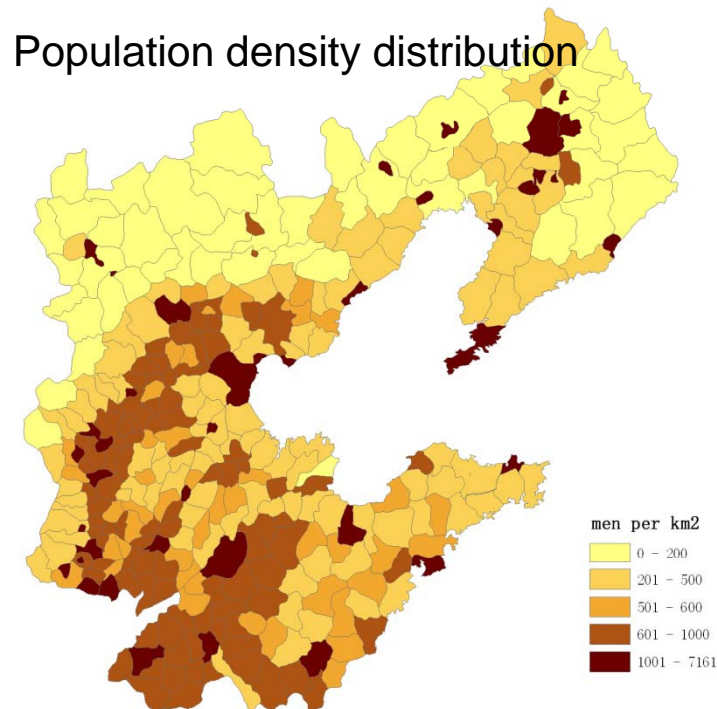
# 1. General Introduction

## ■ Population

- 240 million, 17.8% of China
- 53.2% live in cities and towns, increases 1% per year

## ■ Economy

- 2010 GDP 10.1 trillion RMB ( 1.5 trillion U.S. dollar ) ( above 10% growth rate per year recently ) , 25.3% of china
- GDP per capita 41000 RMB(6300 U.S. dollar)



# 1. General Introduction

## ■ Cities

- major cities: Beijing, Tianjin, Dalian, Shenyang, Qingdao, Jinan, Shijiazhuang

City size	Number	City name(urban population, million)
>8 million	1	Beijing (14)
4-8 million	2	Tianjin (5.7), Shenyang(4.4)
2-4 million	4	Shijiazhuang(2.1), Dalian(2.8), Jinan(2.8), Qingdao(2.8)
1-2 million	9	Tangshan(1.9), Handan(1.5), Baoding(1), Anshan(1.5), Fushun(1.3), Zibo(1.4), Weifang(1.4), Linyi(1.4), Yantai(1.3)
0.5-1 million	20	
<0.5 million	78	
Total	114	

Administrative level	Number	City name
Municipalities	2	Beijing, Tianjin
Province capitals	3	Shenyang, Jinan, Shijiazhuang
Sub-provincial cities	2	Dalian, Qingdao
Prefecture-level cities	38	
County-level cities	70	
total	114	

- 192 county seats

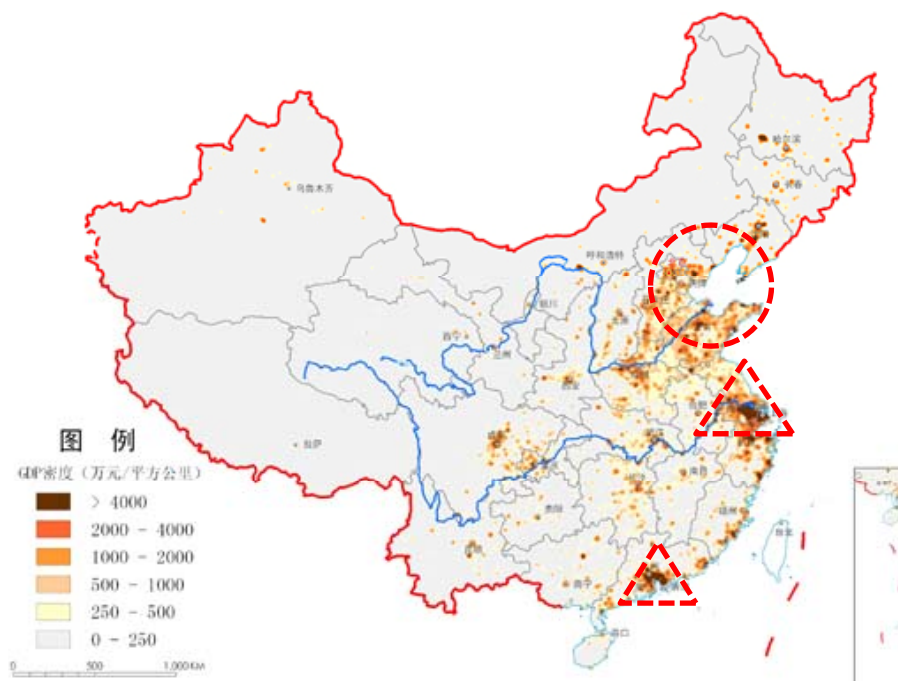
Cities in Bohai Rim (city size)



# 1. General Introduction

- Bohai Rim is one of the three major economic zones of China (the other two are Pearl River Delta and Yangtze River Delta)
- Bohai Rim megalopolis is identified as one of the three most important megalopolis of china (according to National Development Priority Zones Planning )

GDP per square kilometer of China



Megalopolis of China

( National Development Priority Zones Planning )

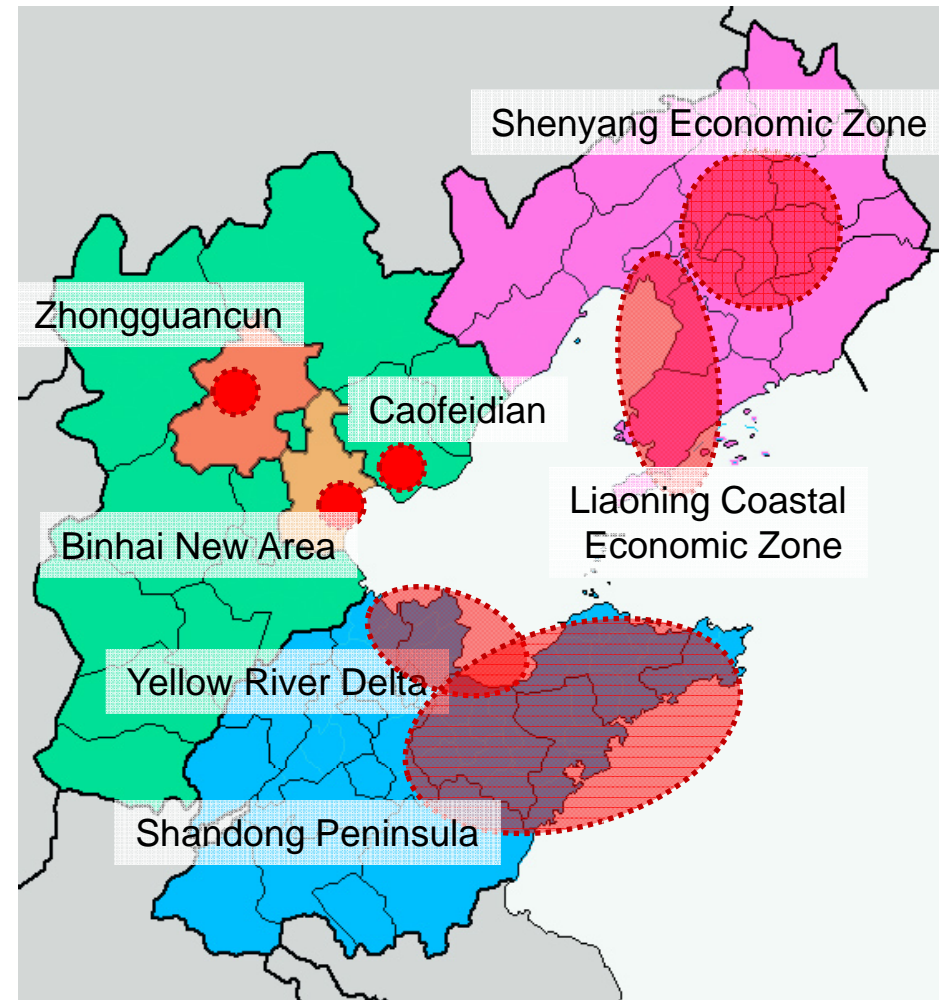




# 1. General Introduction

## ■ Bohai Rim includes 7 development regions according to the planning and policy documents approved by the central government

- Zhongguancun in Beijing: national technology innovation center
- Binhai New Area in Tianjin: growth pole of Northern China
- Caofeidian in Hebei : circular economy demonstration area
- Shenyang Economic Zone and Liaoning Coastal Economic Zone in Liaoning
- Yellow River Delta Eco-Economic Zone and Shandong Peninsula Marine Economic Zone in Shandong



# —Introduction of Tianjin

## ■ Population

- 12.9 million in the city administrative region

## ■ GDP

- 0.9 trillion RMB in 2010 , the fifth city economy of China , following Shanghai, Beijing, Guangzhou and Shenzhen

## ■ Seaport

- 413 million tons cargo in 2010 , including 10 million TEU containers ( the eleventh of the world )

## ■ Manufacturing

- aerospace, petrochemical, equipment manufacturing, electronic information, biological medicine, new energy and new materials, textile, defense technology

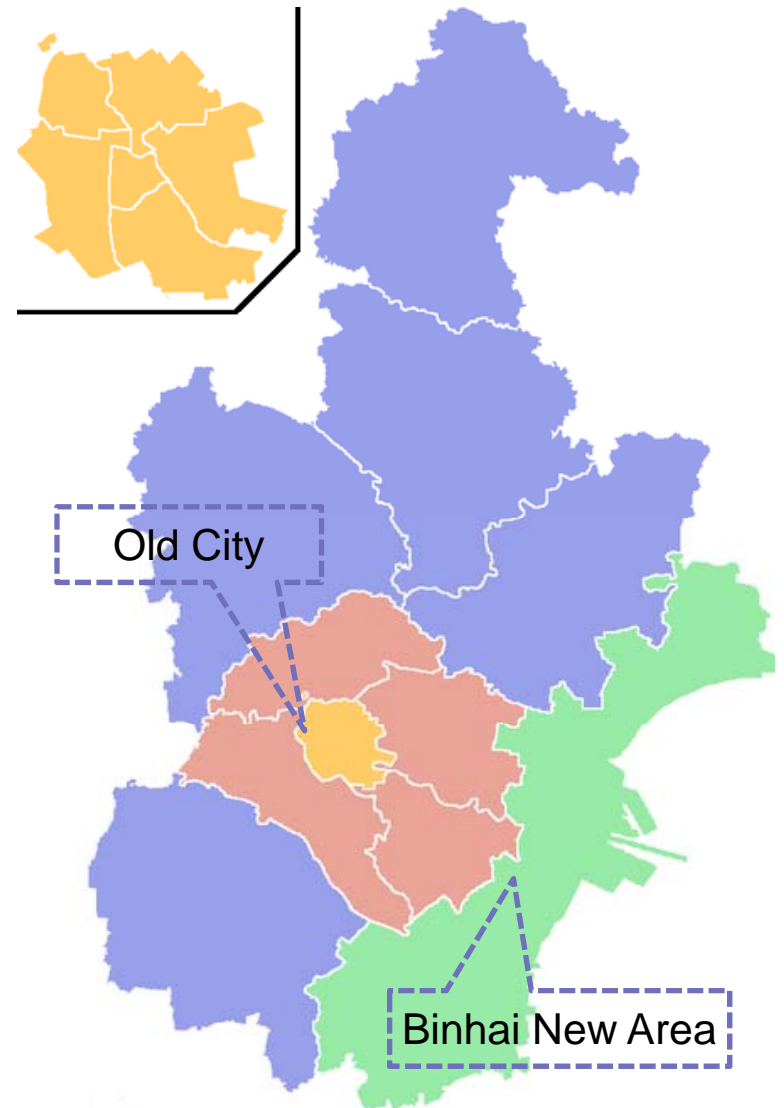
## ■ City Structure

- a dual-core city--the old city (population 5.7 million)and Binhai New Area (population 2.5 million). Binhai New Area is a new growth pole in China, a base of advanced industry,

## ■ Goals

- international port city, northern economic center of China, eco-city; one of the five national central cities

## ■ The office of Bohai Rim Mayors Conference, locates in Tianjin



# —Our Work

## ■ Our work

- Research on spatial development patterns of Bohai Rim megalopolis , sponsored by China Association for Science and Technology
- A long-term observation and study of the region will be carried out
- Aims to promote regional cooperation and sustainable spatial development

## 2. Mission and Strategies

### ■ Mission : a world-class megalopolis

### ■ Goals:

- Builds Beijing as one of the top world cities,
- Builds highly developed economy with strong ability of self-innovation and resource conservation, and
- Builds highly developed city network with high-speed railway and express way connecting all big cities and well cooperated cities

		2010	2020	2050
Population (million)		244	270	300
GDP (billion U.S. dollar)		1500	3800	15000
GDP per capita (U.S. dollar)		6000	14000	50000
Number of big cities	1-2 million	9	19	20
	2-4 million	4	6	8
	4-8 million	2	4	5
	>8 million	1	2	3



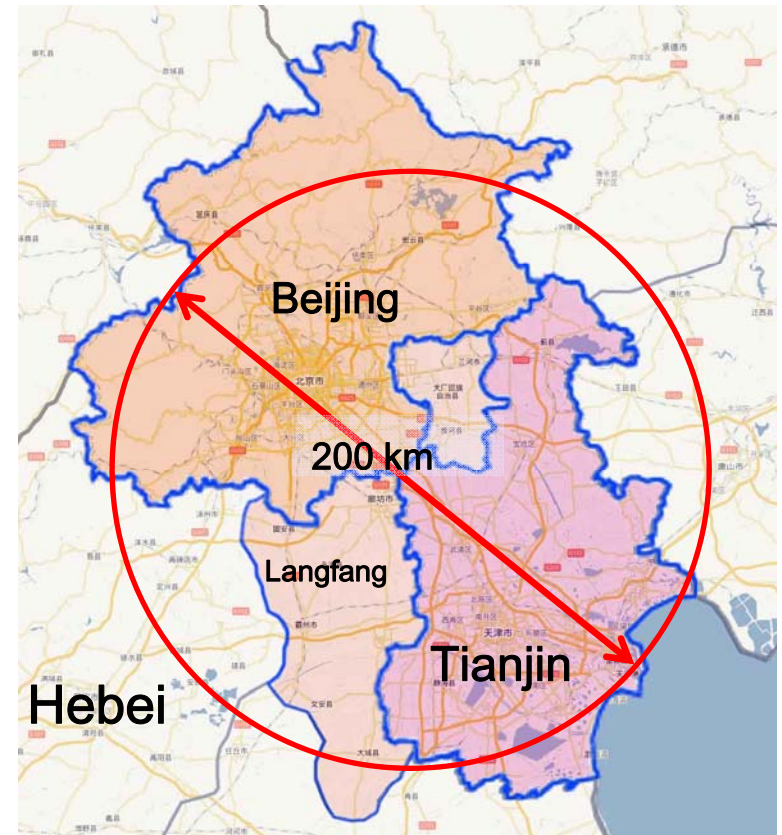
## 2. Mission and Strategies

### ■ Strategies

- ☐ world city strategy
- ☐ coastal zones rising strategy
- ☐ regional integration strategy

## 2.1 World City Strategy

- **World city is Beijing's long-term goal, which demands the regional cooperation**
  - **Tianjin's role:** as the international shipping center and logistics center contributes greatly to the development of Beijing's international economy and trade; advanced manufacturing industry, linking to Beijing's high-tech innovation supports the local hi-tech and manufacturing industry development.
  - In East Asia, the capital city continuously attracts the population and industry of the whole country. Tianjin's development makes Beijing not so crowded (*some research projects that in 2050 Beijing-Tianjin region will have a population of 60 million*)

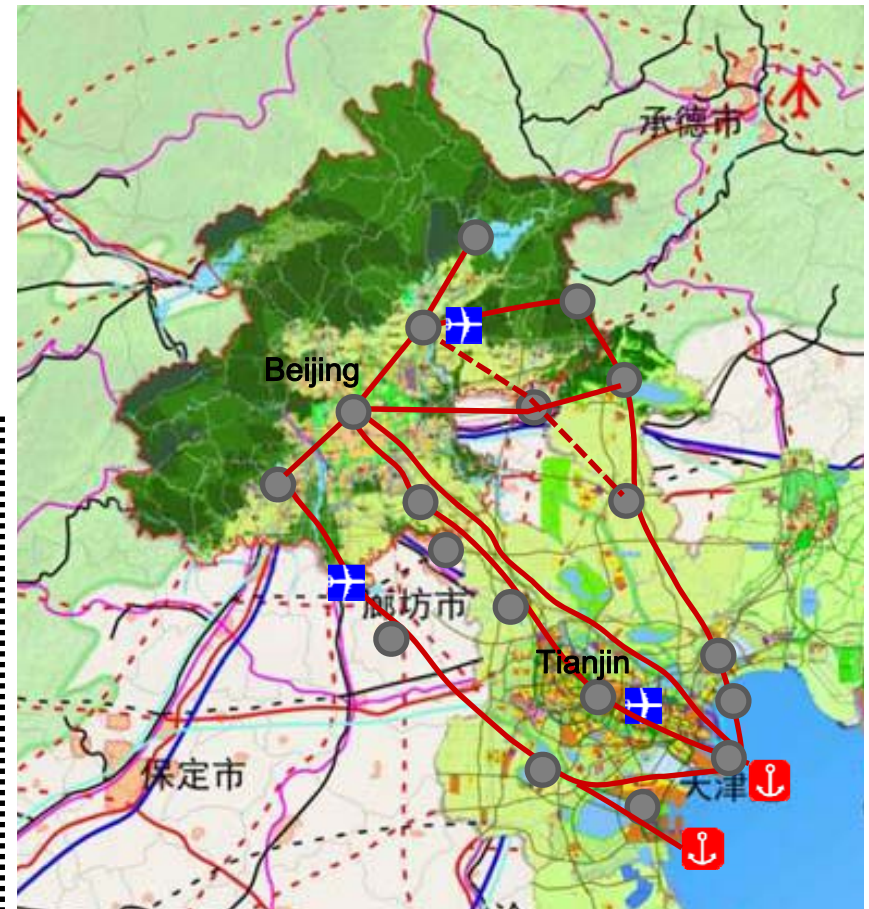
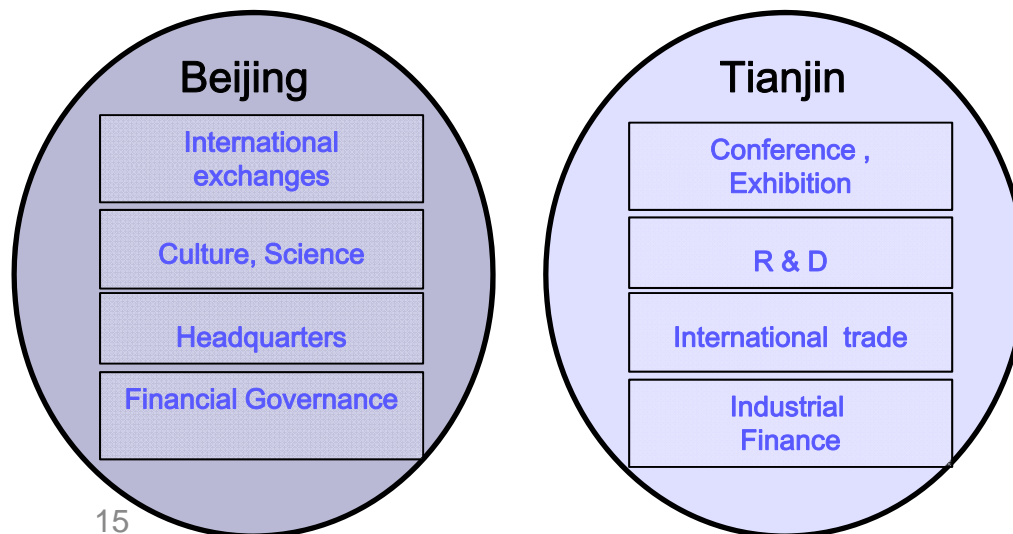


## 2.1 World City Strategy

### ■ Beijing-Tianjin region

- Division of urban functions:
- Spatial plan: sharing new port, new airport and new transportation corridors, improves external transport and capacity of population and industries

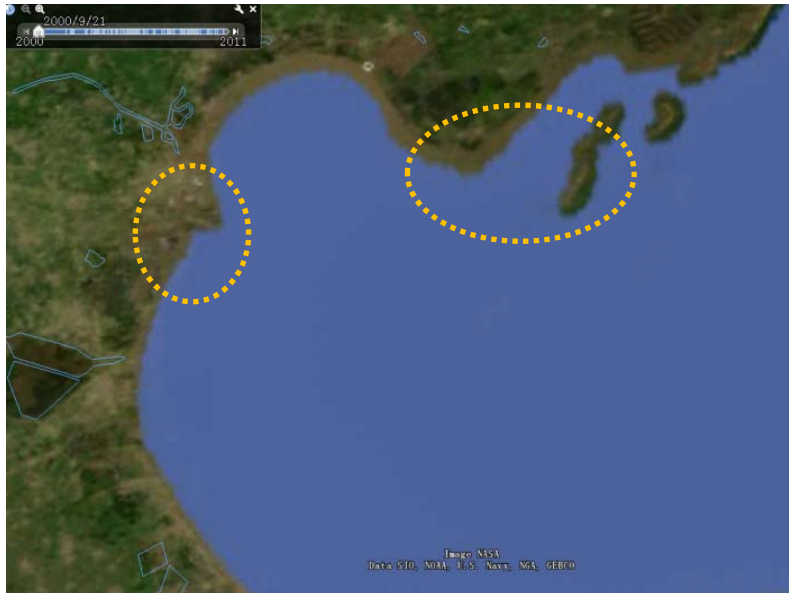
Division of Services industrial



## 2.2 “Coastal Zones Rising”

- Central and local governments carry out large-scale investment and development within coastal areas, while bring possible problems
  - Repeating competition: among ports and among harbor industrial zones
  - Environment pollution : heavy industries produce large amounts of sewage , threatening the Bohai Sea.

Year: 2000



16



Year: 2010

2009年夏季渤海水质等级分布示意图

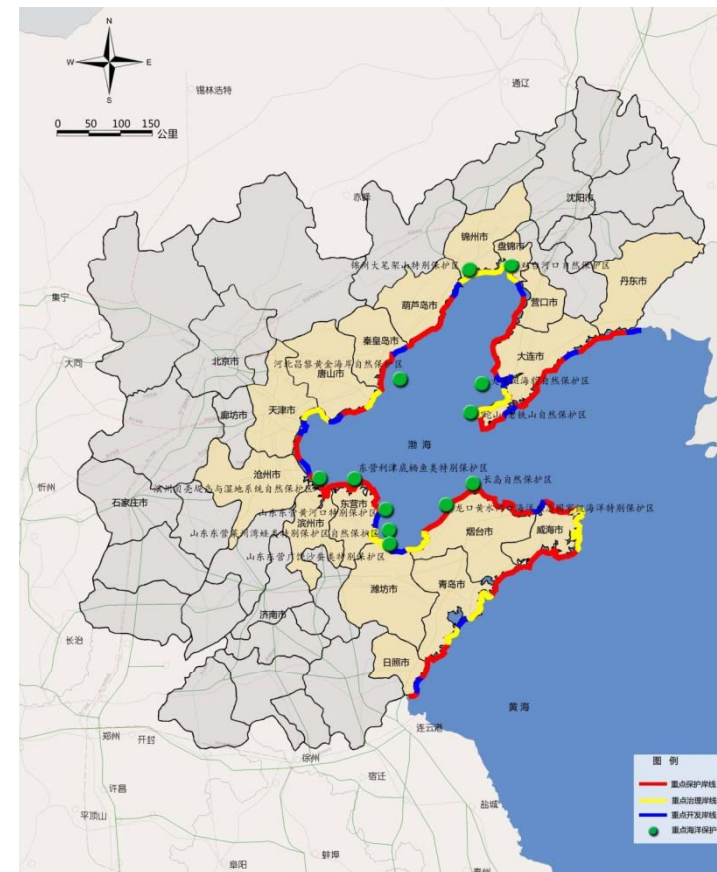
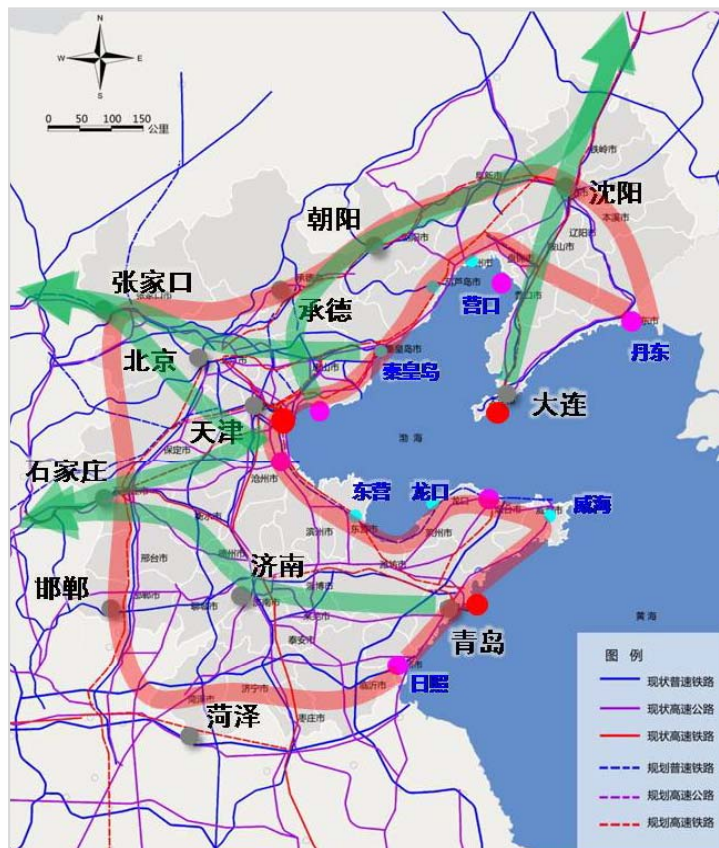




## 2.2 Coastal Zones Rising

### ■ Strategies

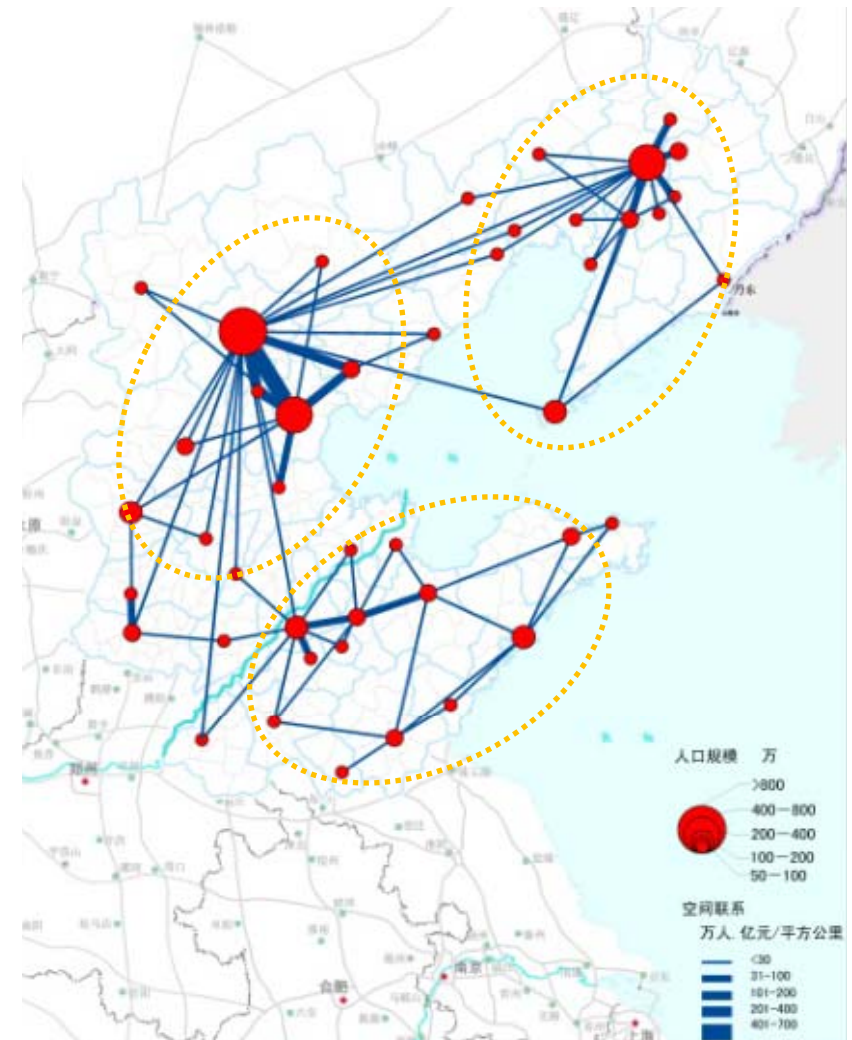
- Ports Combination : clear-cut functions, good collaboration. according to each port's advantages, size, type of goods, transport conditions and other factors.
- Coastline Planning : exploration, conservation, optimization



## 2.3 Region Integration

- **Three economic zones/sub-megalopolis in the region**
  - Beijing-Tianjin-Hebei , Central-Southern Liao , Shandong Peninsula , with Beijing-Tianjin , Shenyang-Dalian , Jinan-Qingdao as regional central Cities
  - In order to strength regional & global competition as one mega-region , the three zones should integrate.

spatial economic interaction



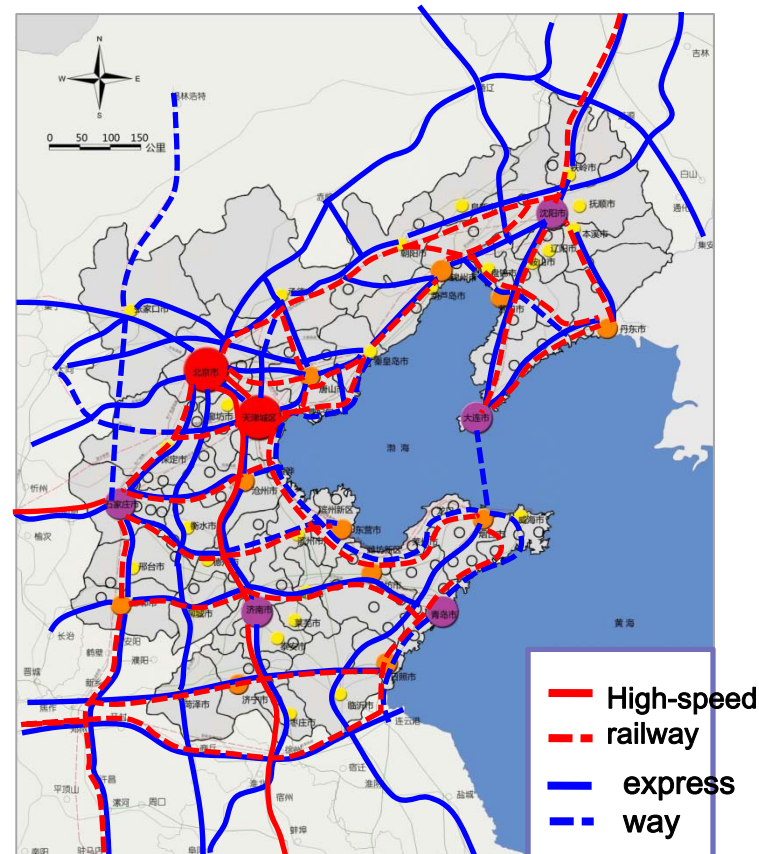
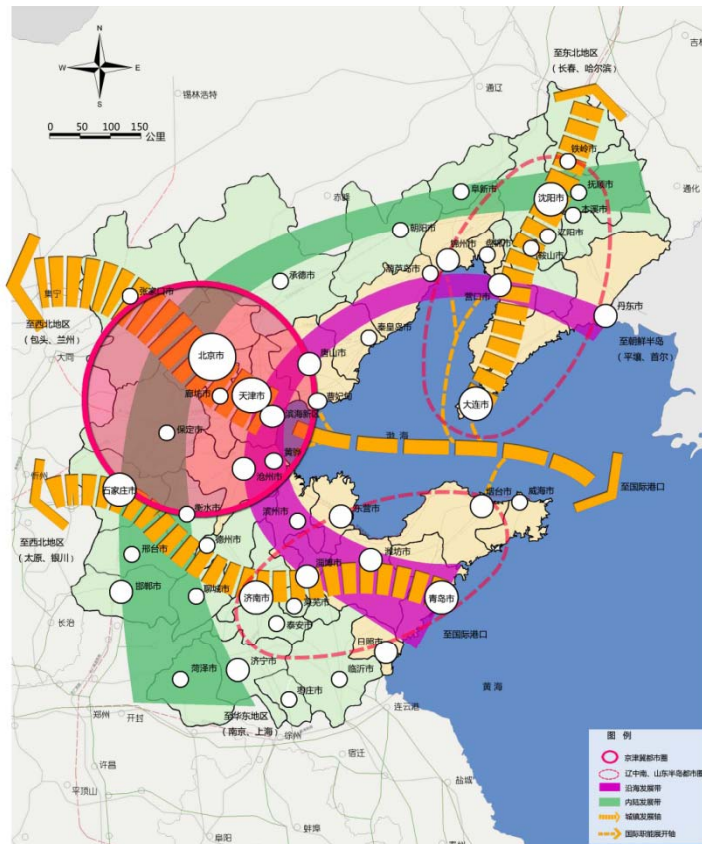
## 2.3 Region Integration

### ■ Regional Structure

- Core region: Beijing-Tianjin world city
- Three corridors: Tianjin-Beijing, Dalian-Shenyang, Qingdao-Jinan
- Coastal zone, and inland region

### ■ Railway and express way network

- Four hours traffic circle



### 3. Challenges to Planning

- **Bohai Sea Environmental Master Plan(2008-2020)**

- ☐ Approved by the central government in 2009
- ☐ How to enhance the implementation of the plan in an era of heavy industries and large scale coastal zone exploration.

- **Bohai Rim Megalopolis Master Plan**

- ☐ We suggest the central government leads the planning mission.
- ☐ What the challenges will be during the preparation and implementation of the plan ?