## "环湾保护、拥湾发展" 全力打造海湾型生态城市

——青岛新一轮城市空间战略概述 "Protection Along the Bay, Development Around the Bay" for Qingdao



## 青岛市规划局 陶瑞平

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# 要点 Hot Tip

- ❖如何实现城市和海湾的和谐共生?
  How to be compatible between cities and natural bay?
- ❖青岛如何走向未来的生态城市?
  What is the eco-city for the future?

# 目录 Contents

- 1.城市概况 Introduction
- 2.发展战略 Strategy
- 3.环湾保护 Protection
- 4.拥湾发展 Development
- 5.未来青岛 Future

1.城市概况 Introduction



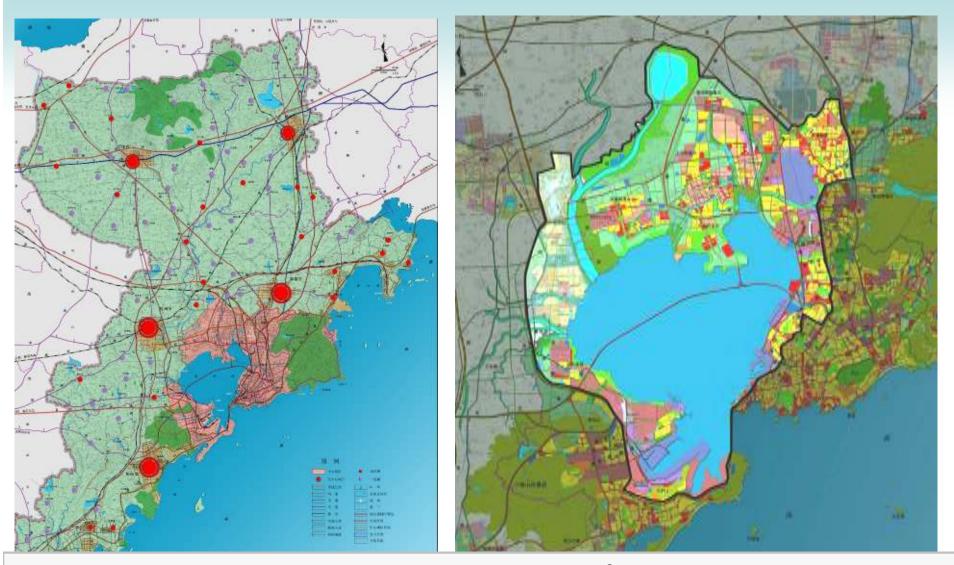
青岛位于山东半岛黄海之滨,是我国东部重要港口城市、旅游观光城市和海洋科研基地。 Lying in Shandong Peninsula on the coast of Yellow Sea, Qingdao is an important city of port, tourism and sight-seeing as well as marine science and research in eastern China.





青岛属海滨丘陵城市,海岸线总长862.64公里,岬湾相间,有49个海湾,69个海岛。青岛地处北温带季风区域,呈显著海洋性气候特点,市区年平均气温12.3度,温度适中,四季分明。 As a coastal terrain city, Qingdao has a total of 862.64 km coastlines, dotted with 49 bays and 69

islands. Located in northern temperate monsoon zone, Qingdao has a distinctive marine climate, featured with pleasant temperature and clear-cutting four seasons.

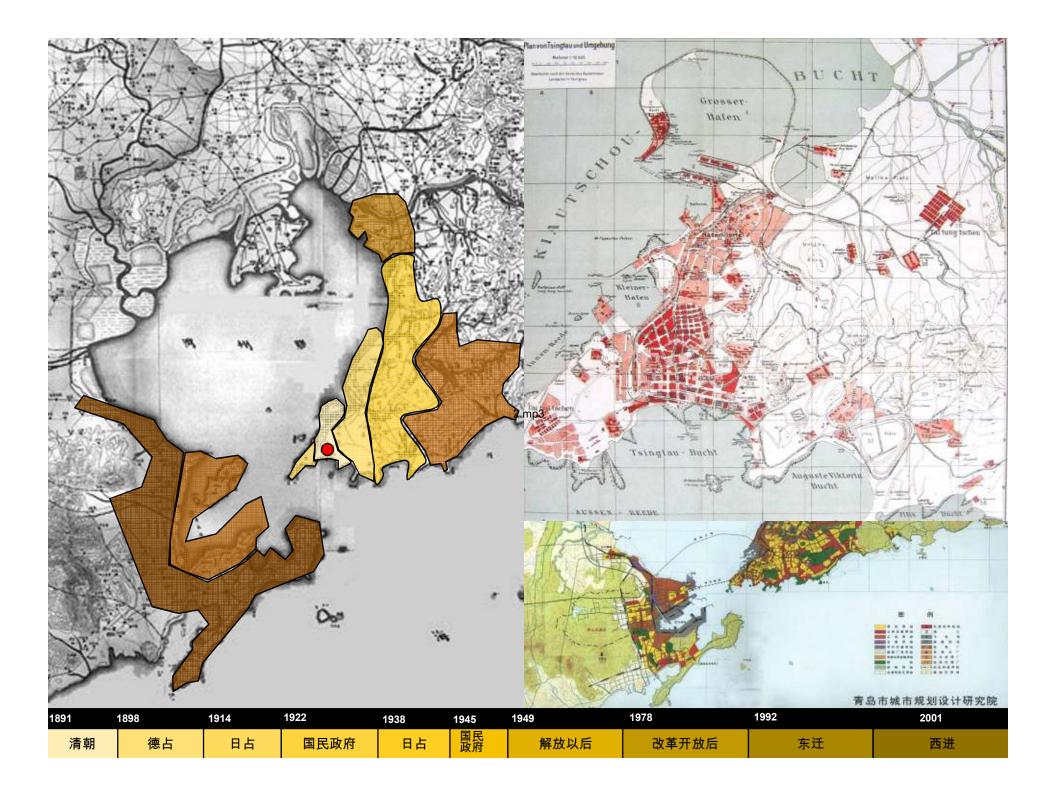


青岛于1891年建置,史称胶澳。市域7区5市,总面积10654 km², 2007年末总人口为838.67万人。 Qingdao was established in 1891 in the name of "Jiao'ao". Now there are seven urban districts and five county-level cities, with a total area of 10,654 km². By the end of 2007, Qingdao has had a population of 8,386,700.

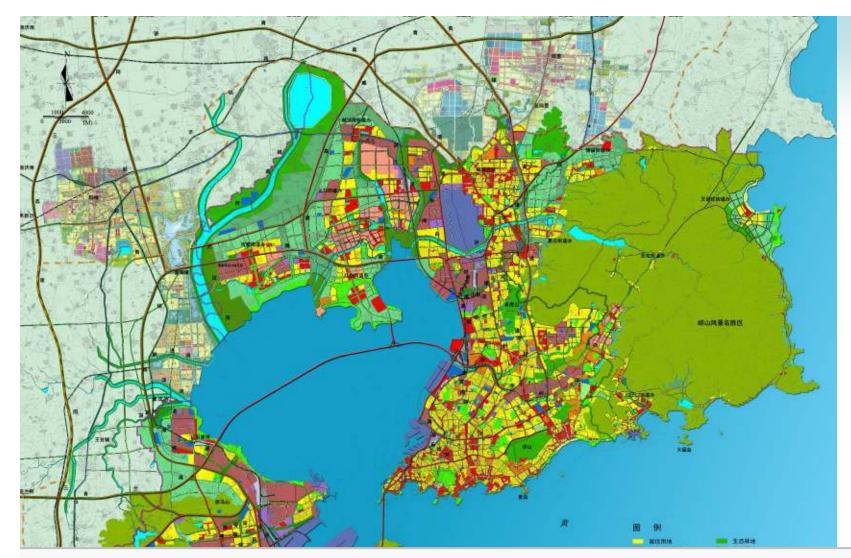


胶州湾位于山东半岛南部,东西最宽28公里,南北最长33公里,湾口最窄处3公里,湾内岸线长度240公里,水域面积362平方公里。

Jiaozhou Bay lies in south Shandong Peninsula, with a east-to-west width of 28 km and south-to-north length of 33 km, and the narrowest area hitting 3 km. The coastline within the bay reaches 240 km, and its water area stands at 362 km<sup>2</sup>.

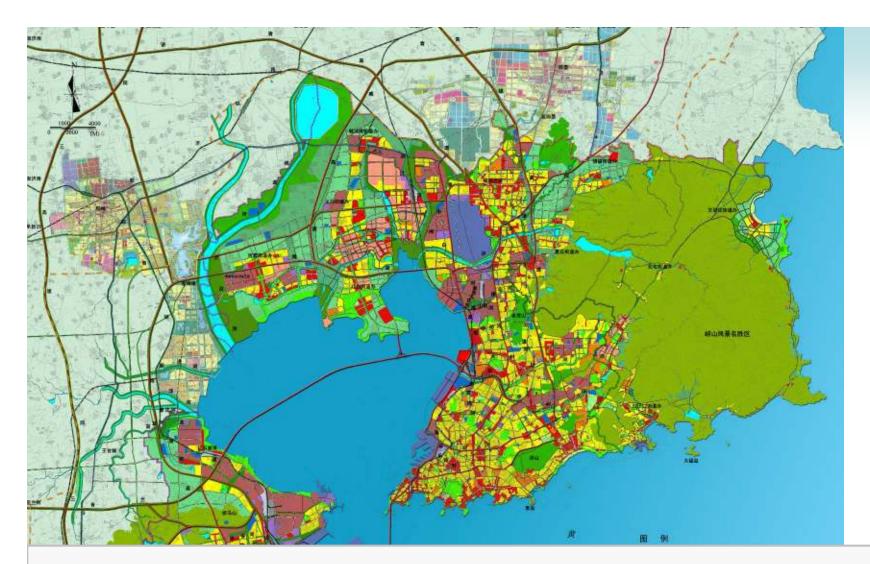


2.发展战略 Strategy



青岛按照建设海湾型都市圈的先进规划理念,以胶州湾生态保护为核心,积极提升中心城区的辐射带动能力,促进胶州湾区域各城市组团间的联系协作。

In the light of the advanced planning perspective of creating a gulf-based metropolitan area, Qingdao has been vigorously elevating the radiation and driving capacity of the central area, focusing on Jiaozhou Bay's ecological protection, facilitating the connection and collaboration among the group developments of cities around Jiaozhou Bay.

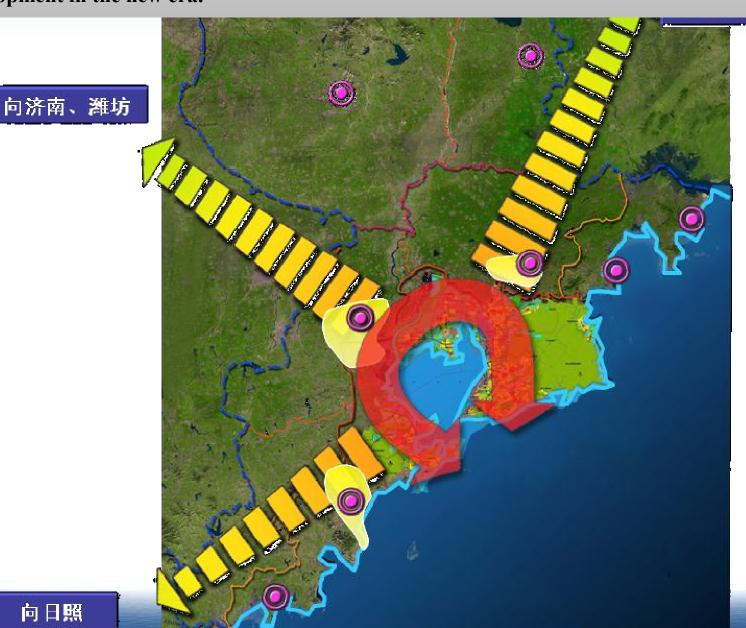


科学引导城市空间拓展,推动区域基础设施网络化与城市空间一体化发展,将环胶州湾区域规划建设成以轴向发展、圈层放射、生态相间为空间结构的国际化、生态型、花园式的环湾城市组群。Guiding urban spatial expansion, and promoting regional network infrastructure and integrated development of urban space. As a result, the round-bay area is expected to be built in to an international, ecological and garden-like urban group area, with a spatial structure of axial development, interface radiation and ecological alternation.

#### 战略意义1:为新时期城市建设、经济发展提供新的空间载体

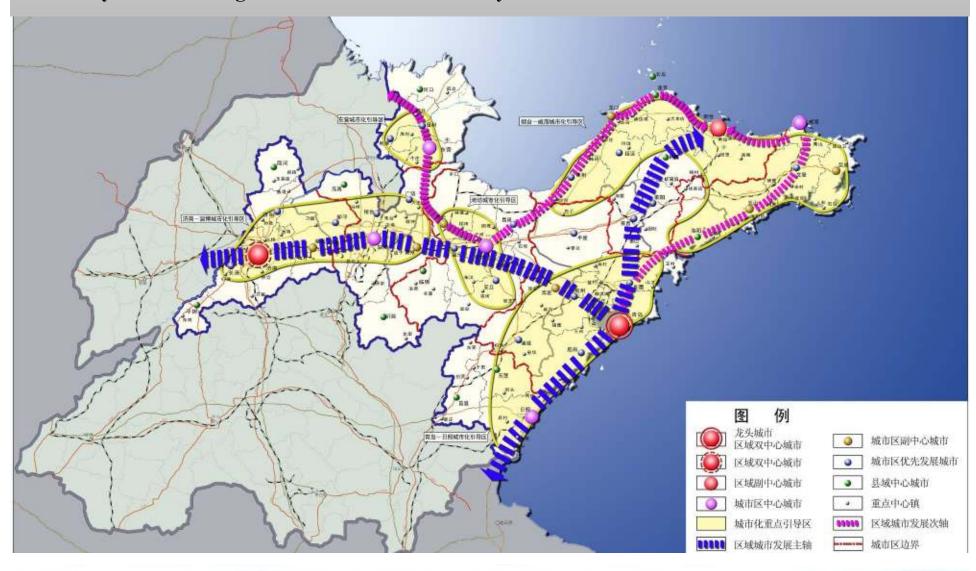
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Strategic significance 1: Providing a new spatial carrier for urban construction and economic development in the new era.



#### 战略意义2:突出青岛在全省"一体两翼"和海洋经济战略格局中的龙头作用

Strategic significance 2: Highlighting Qingdao's leading role in Shandong Province's strategic layout of "one body with two wings" and its maritime economy.



战略意义3:为打造国际知名生态新城、融入国家可持续发展战略创造了条件 Strategic significance 3: Creating conditions for becoming a new world-renown ecological city and enlisting itself into the national sustainable development strategy.



规划原则: Guiding principles

在保护的前提下发展,在发展的过程中保护

Develop under the pre-condition of protection, and protect in the process of developing.

#### 主要内容: contents:

◆研究胶州湾的整体环境容量,科学确定环湾地区的城市发展规模;

Researching the overall environmental capacity of Jiaozhou Bay, and scientifically determining round-bay area's urban development scale.

- ◆制定区域环境政策,进行生态环境空间管制分区,建立产业发展的环境管制体系; Formulating regional environmental policies, management division of ecological environment space, and forming the environmental control system of industrial development.
- ◆制订区域的产业引入标准,提高产业准入门槛,形成以高科技产业为主导、以循环经济为特色的生态型工业体系;

Formulating standards of regional industrial introduction, and forming an ecological industrial system dominated by high technology and featured with circular economy.

- ◆建立发展与保护的良性互动,协调经济发展与自然文化遗产保护的关系;Establishing a benign interaction between development and protection, and coordinating the relations between regional economic development and natural and cultural relic protection.
- ◆平衡地区发展与保护的矛盾,建立区域补偿机制,使得禁止开发与限制开发地区能够 分享发展的成果。

Balancing the conflicts between regional development and protection, and forming regional compensation mechanism.

行动1、专题规划研究 Action 1: Thematic planning research

针对环湾保护进行胶州湾生态承载力、环境资源容量、岸线保护等专题研究,作为下一步规划建设的基础。

Conducting thematic research of round-bay protection on its ecological bearing capacity, environmental resource capacity, and coastline protection that will serve as the base of planning and construction next step.

序号	专题研究
1	胶州湾海洋环境保护研究
2	胶州湾防风暴潮及流入胶州湾水系防洪排涝研究
3	胶州湾生态湿地保护研究
4	青岛市海洋功能区划修编
5	胶州湾地质灾害影响研究
6	胶州湾气象变化和城市规划关系研究
7	环湾高速跨海大桥北侧拦坝蓄水工程可行性研究
8	环湾地区重大基础设施布局专题研究
9	胶州湾保护专题研究汇总报告

### 行动2、专项规划 Action 2: Thematic planning

针对拥湾发展战略的推进与实施,编制完善近期启动片区的详细规划以及环湾交通、旅游等专项规划。

With view to the advancement and implementation of Jiaozhou Bay development, formulating and perfecting the detailed planning of newly-launched areas, and other thematic planning of the round-bay area's transportation and tourism, etc.

序号	编制项目
1	"三半岛及团岛"区域规划
2	胶州湾东岸老港区规划研究
3	四方滨海新区修建性规划
4	胶州湾东岸滨海区域概念规划
5	青岛新客站及周边区域控制性详细规划
6	临空经济区概念规划
7	胶州湾北部新城总体规划概念方案
8	高新区核心区控规
9	胶州市少海新城规划
10	胶州市胶州湾产业基地规划
11	黄岛北部滨海区域及薛家岛旅游度假区规划
12	环胶州湾交通专项规划
13	环胶州湾旅游专项规划

3.环湾保护 Protection

现状1、海湾面积逐年缩小,纳潮能力下降。

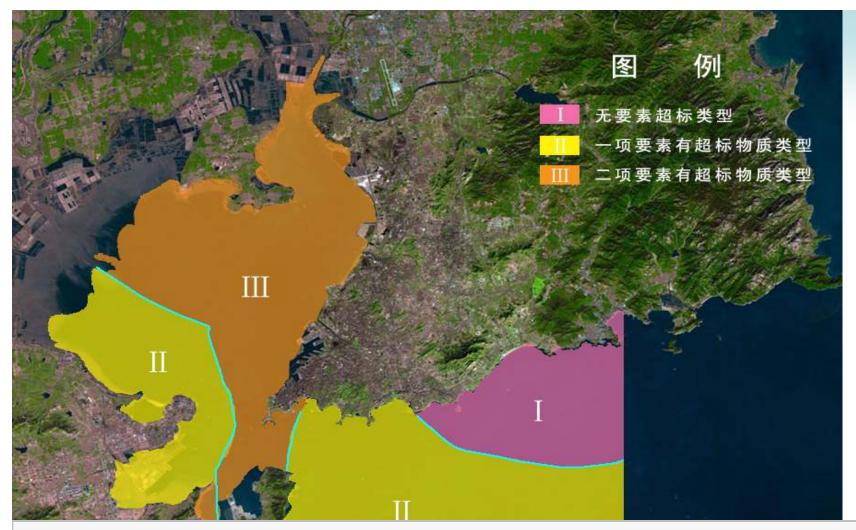
Current situation: Decrease in bay area and tidal bearing capacity year by year.

**不同年份胶州湾面积的变化** (单位:平方公里)

年份	海湾面积	滩涂面积	水域面积	备注
1928 年	560			
1975 年	427.24	124.33	302.91	1977年1:25000地形图
1988 年	390			1988年遥感1:50000卫 片
1992 年	388.12	85.21	302.91	1992年的测量资料
2003	362			2003年的测量资料

自1928年至今,胶州湾水域面积缩小了1/3,从560平方公里减少到362平方公里胶州湾纳潮量由1935年的11.8亿立方米,减少到现在的7亿多立方米。

Since 1928 till now, Jiaozhou Bay's water area has decreased by one third specifically from 560 square km to 362 square km. Accordingly, its tidal bearing capacity reduced from 1.18 billion cubic meters in 1935 to over 0.7 billion cubic meters presently.

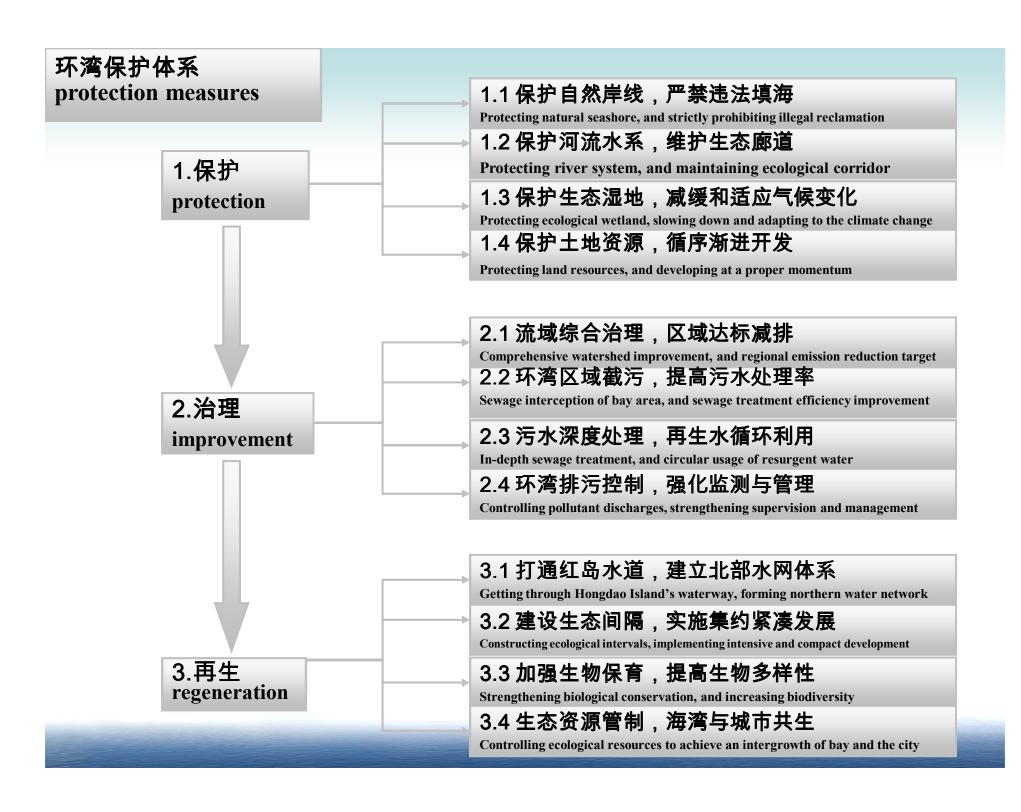


现状2、近岸地区污染严重,水质日益恶化。

Current situation: Serious pollution in inshore areas and increasing deterioration of water quality.

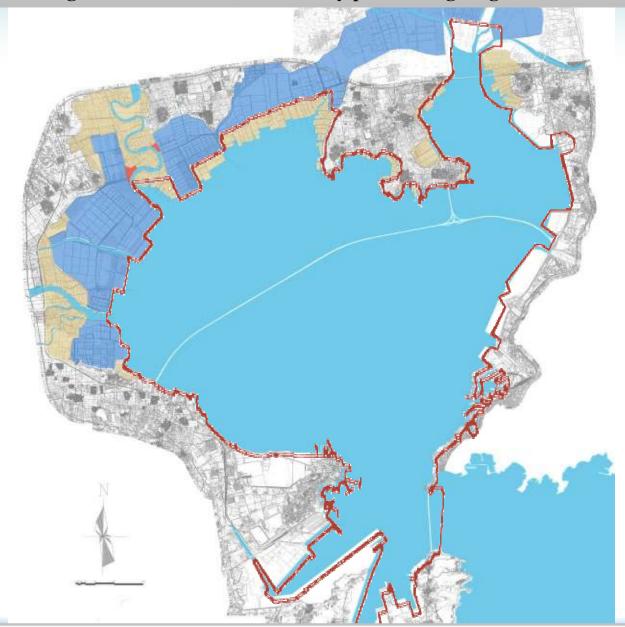
胶州湾接纳了青岛10个区市的大部分污染物,湾内中度污染和轻度污染海域约占胶州湾总面积的3/5。

Jiaozhou Bay has accepted most pollutants from Qingdao's 10 districts and cities. As a result, three fifth of the bay area have become moderately and mildly polluted.

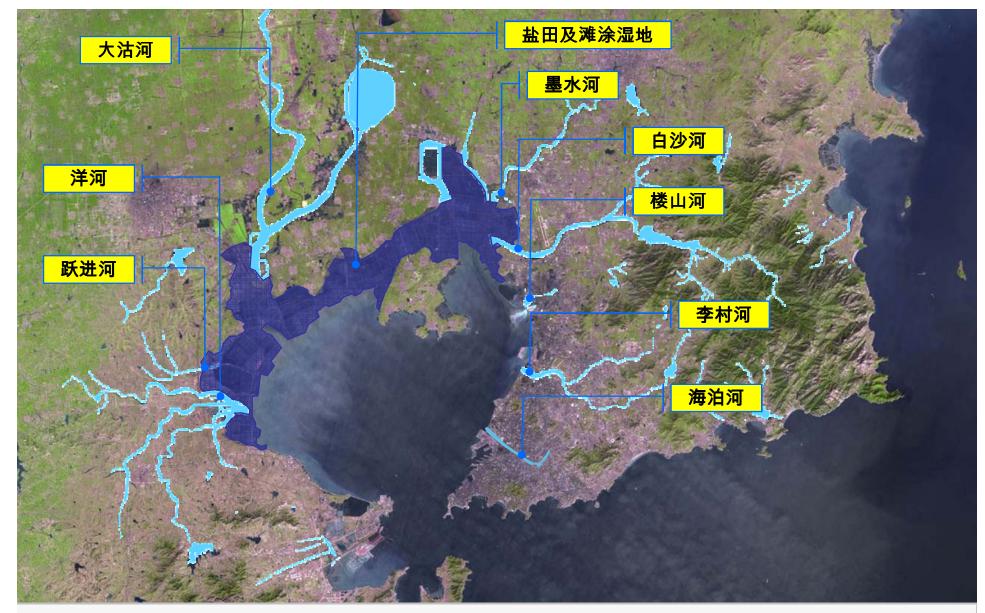


#### 1.1 保护自然岸线,严禁违法填海

Protecting natural seashore, and strictly prohibiting illegal reclamation



划定海岸保护控制线,严禁填海,保护岸线的自然属性。



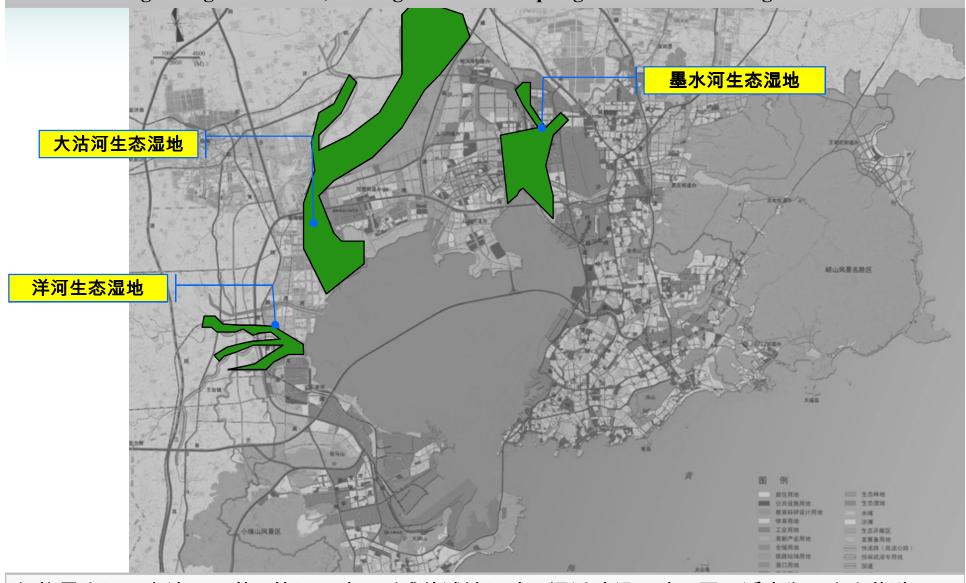
1.2 保护河流水系,维护生态廊道

Protecting river system, and maintaining ecological corridor.

划定河道保护兰线以及两侧的生态绿线,打通海滨与内陆的联系廊道。

#### 1.3 保护生态湿地,减缓和适应气候变化

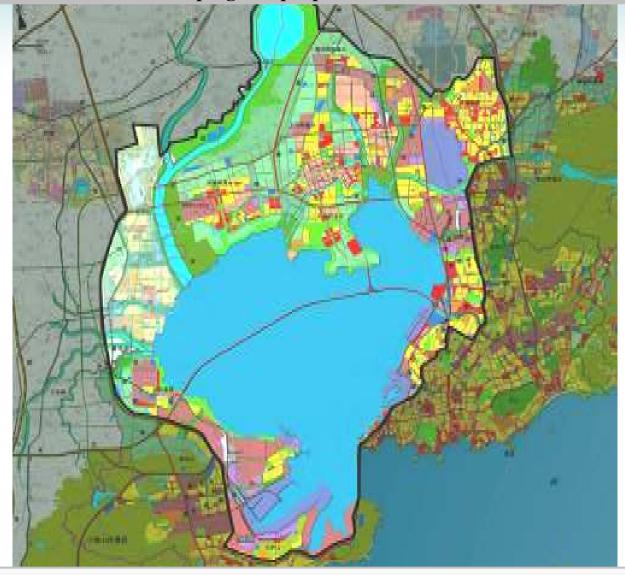
Protecting ecological wetland, slowing down and adapting to the climate change.



保护墨水河、大沽河、洋河等河口地区形成的滩涂湿地,通过建设湿地公园,适度发展生态旅游。 顺应自然演进规律,建立良好的城市结构和布局形态,有利于提高应对气候变化的能力以及增强应对 气候灾害的能力。

#### 1.4 保护土地资源,循序渐进开发

Protecting land resources, and developing at a proper momentum.



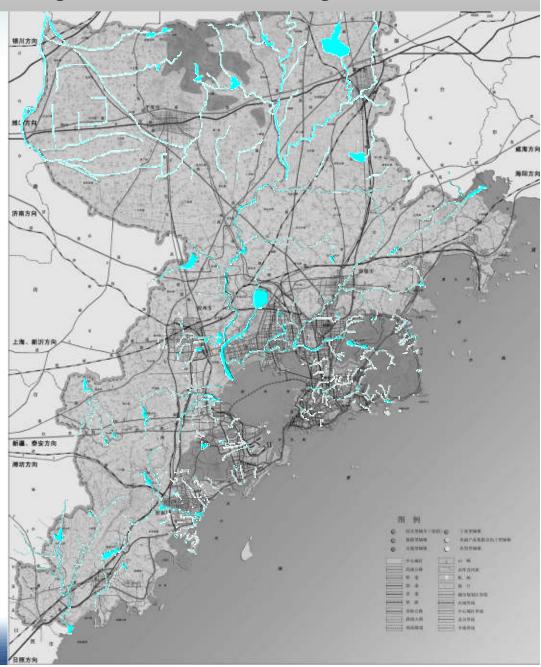
强化集约节约理念,对建设用地、海域和海岸线等空间资源进行战略储备,加强区域性重大基础设施的规划控制,为未来发展预留空间;严格控制开发时序,制定年度开发计划,确保土地资源的可持续开发。

#### 2.1 流域综合治理,区域达标减排

Comprehensive watershed improvement, and regional emission reduction target.

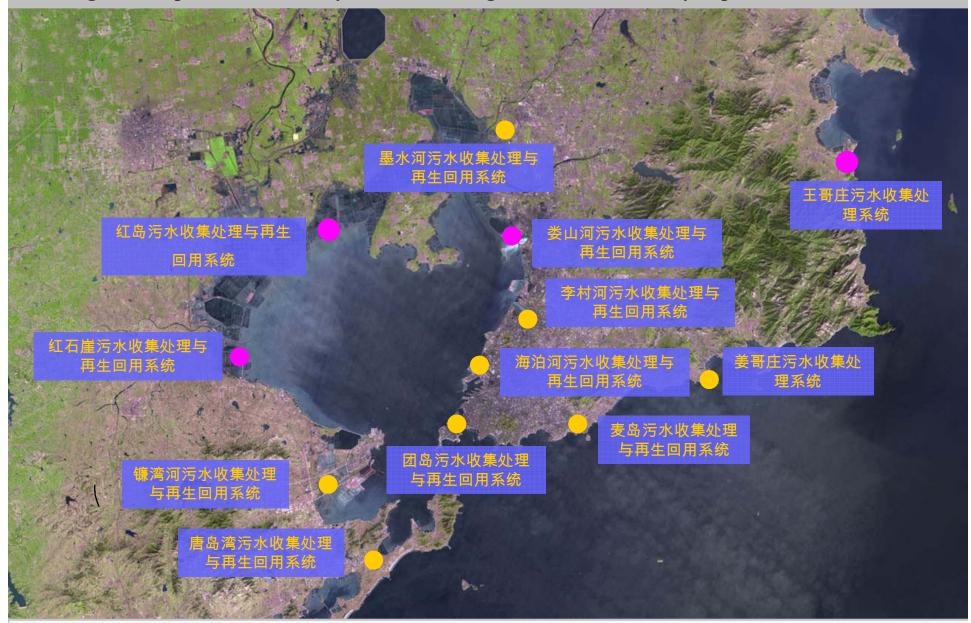
加强环湾区域产业布局研究和建立项目环保准入制度

按照产业布局规划和产业引入标准严格把关,将环境影响评价作为项目选址建设的前置条件,杜绝高污染、高能耗项目落户环胶州湾区域。同时,对不符合产业发展方向的项目结合环境指标体系提出相应的整改措施,加快产业结构的转型升级,引导企业逐步从污染物减排向零排放转变。



#### 2.2 环湾区域截污,提高污水处理率

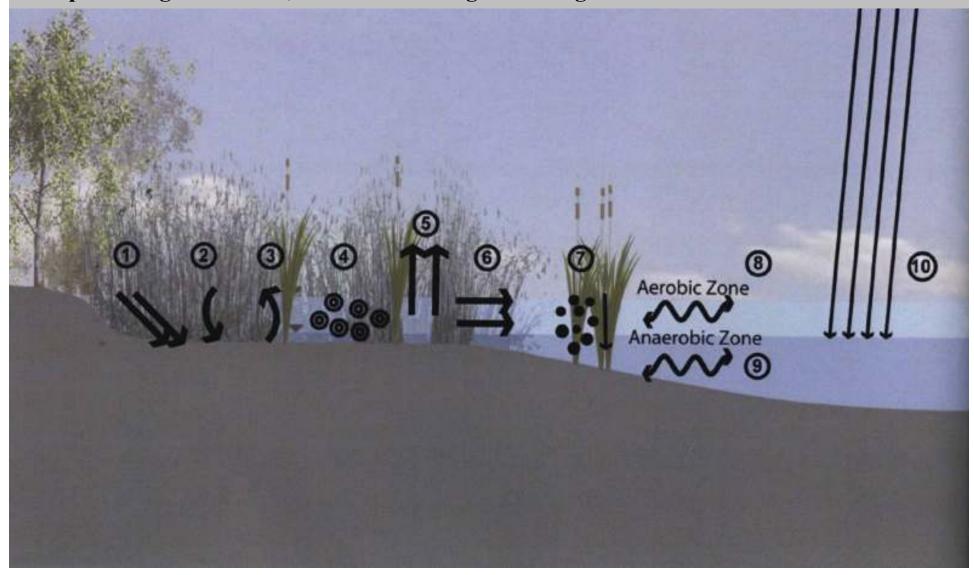
Sewage interception of round-bay area, and sewage treatment efficiency improvement.



加快城市污水处理系统的建设,实现污水收集和处理率达到100%,并逐步提高再生水的利用率。

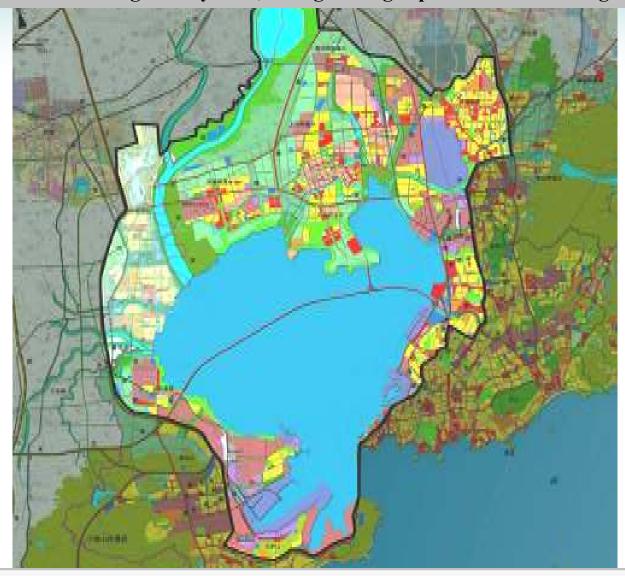
#### 2.3 污水深度处理,再生水循环利用

In-depth sewage treatment, and circular usage of resurgent water.



通过人工湿地技术推进污水深度处理与再生水利用,维系良好的水循环。

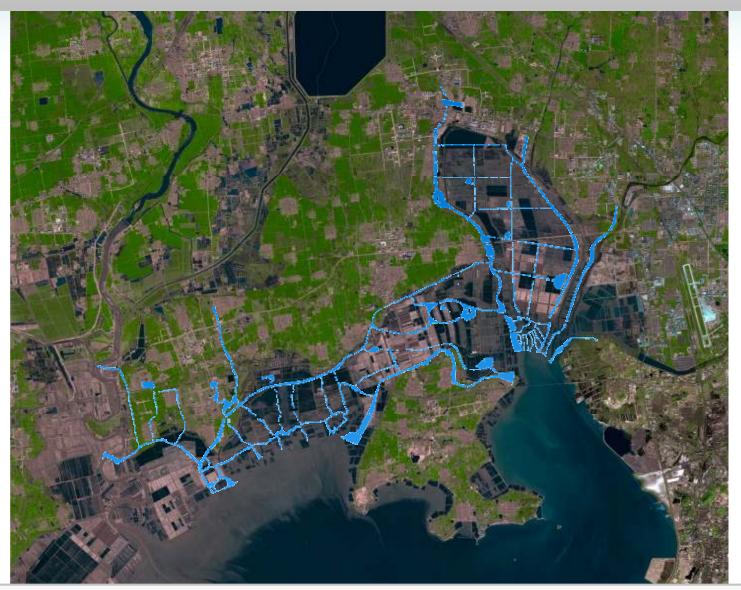
2.4 环湾排污控制,强化监测与管理 Controlling pollutant discharge in bay area, strengthening supervision and management.



编制针对主要污染源的总量控制计划和逐年削减排污总量的规划,确定胶州湾水质达到相关功能区划标准的具体计划;建立环胶州湾环境监测系统,实施动态监察;建立环境事故应急反应体系,提高胶州湾的生态安全。

#### 3.1 打通红岛水道,建立北部水网体系

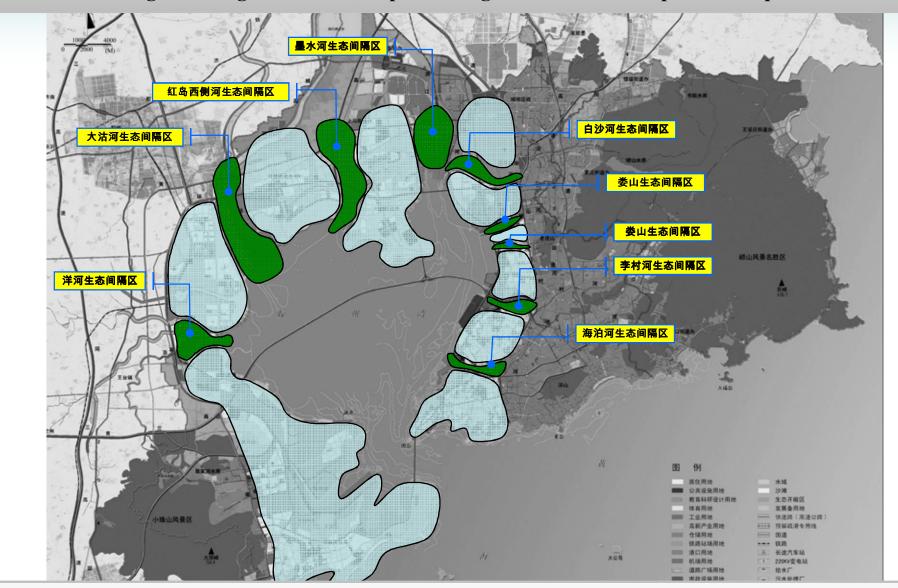
Getting through Hongdao Island's waterway, and forming a northern water network system.



结合现状自然水系脉络,开挖人工河道,恢复红岛自然水道,打造胶州湾北部生态岛链。增强区域综合防洪排涝、防风暴潮的能力,建设城市综合防灾体系。

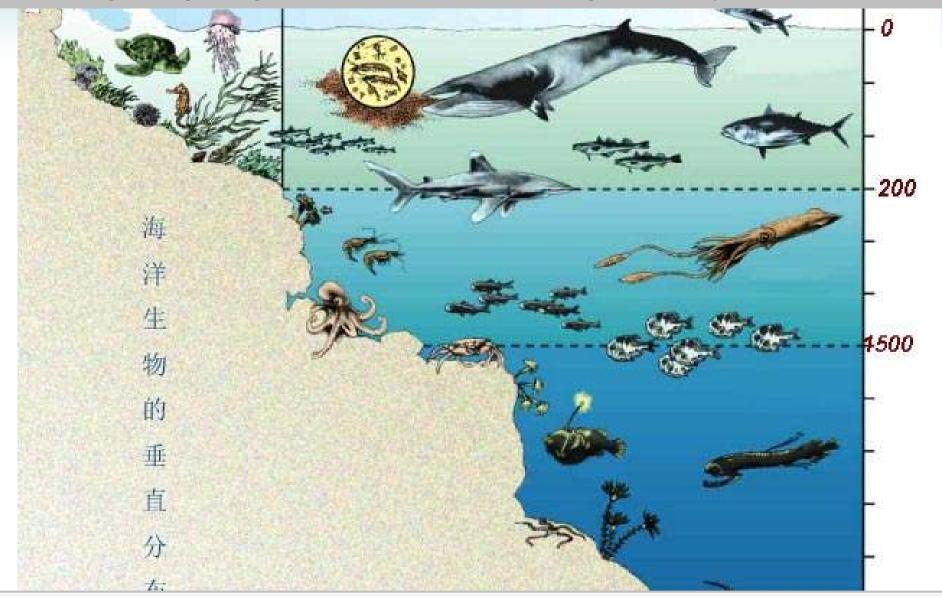
#### 3.2 建设生态间隔,实施集约紧凑发展

Constructing an ecological interval, implementing intensive and compact development.



依托水体、农田、山体、道路等规划建设沿湾城市生态间隔区,严格控制城市环湾各组团的连绵开发 趋势,防止城镇空间的随意扩张和无序蔓延。

#### 3.3 加强生物保育,提高生物多样性 Strengthening biological conservation, and increasing biodiversity.



严格保护生物栖息地,通过人工措施适度引入适宜物种,提高胶州湾生态系统的能级,恢复胶州湾的 生机与活力。

#### 3.4 生态资源管制,海湾与城市共生

Controlling ecological resources to achieve an intergrowth of bay and the city.



加强环湾地区的生态资源管制,按照生态城市建设的要求,恢复并完善胶州湾地区的物质与能量循环实现区域碳氧平衡,逐步提高太阳能、风能、潮汐能、生物质能等清洁能源的使用,走可持续发展之路。

4.拥湾发展 Development





#### 西海岸(以二产为主)

港口、制造业新城,主要依托港口进行相关产业功能拓展,强化青岛港在环渤海以及东亚经济圈的枢纽港地位,促进产业集群的集聚与辐射。

West Coast (Secondary Industry)

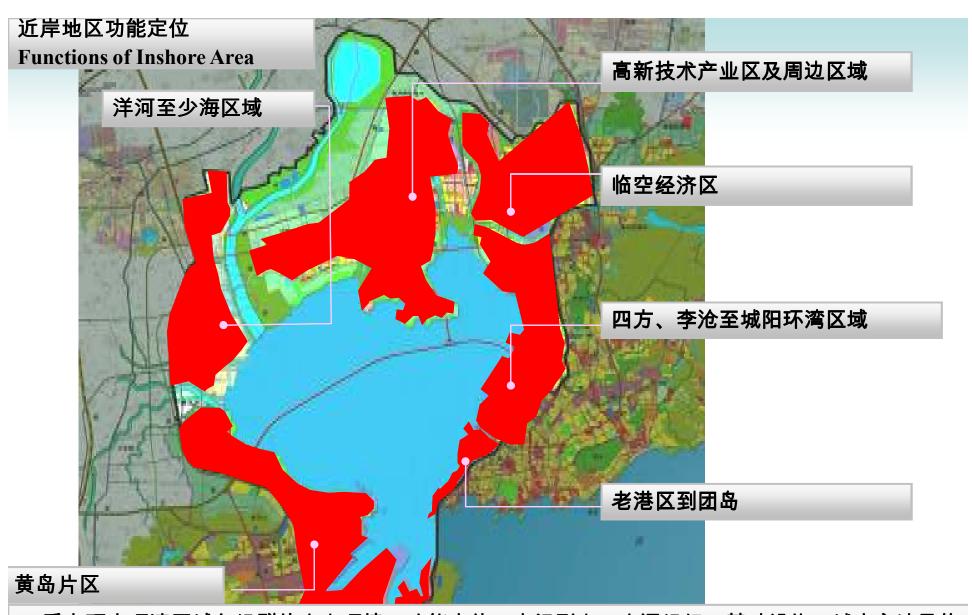
It's a new urban area featured by port and manufacture, focusing on the industrial functions relating with the port. The west coast will enhance the status of the Qingdao Port as the hub in the area around Bohai Sea and East-Asia Economic Circle, accelerating the concentration and influence of industrial clusters.

东海岸(以三产为主) 以金融、信息、商务商贸、旅游等为 主的现代服务业集聚地。

**East Coast (Tertiary Industry)** 

北海岸(主导产业为2.5产)

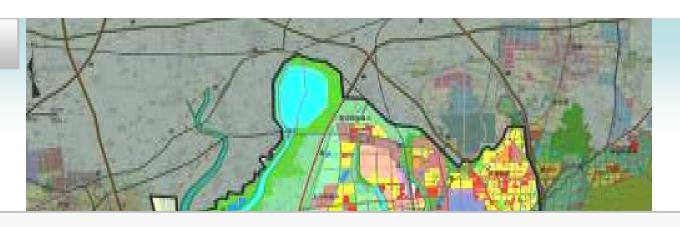
The east coast is featured with modern service industry including Finance, Information, Business and Trade as well as tourism.



重点研究环湾区域各组群的生态环境、功能定位、空间形态、交通组织、基础设施、城市主流风格等规划要素的基础上,提出环湾区域近岸地区功能定位。

We put forward the definition of functions of offshore area around Jiaozhou Bay based on the study of key elements such as ecological environment, functions, space, transportation, infrastructure and styles

#### 环胶州湾旅游发展 Tourism around the Bay



#### 环湾岸线旅游功能

旅游的发展贯穿胶州湾全线,环湾形成以唐岛湾中心区、胶州少海新城、大沽河生态湿地、红岛生态城、四方滨海新区、邮轮母港、小港湾等区域为主构成的旅游格局;

Tourism will be developed along the Jiaozhou Bay. Tourist spots will be established such as Tangdao Bay Center Area, Jiaozhou Shaohai New City, Dagu River Wetland, Hongdao Ecological City, Sifang Coastal New Area, Cruiser Terminal as well as Xiaogang Bay.

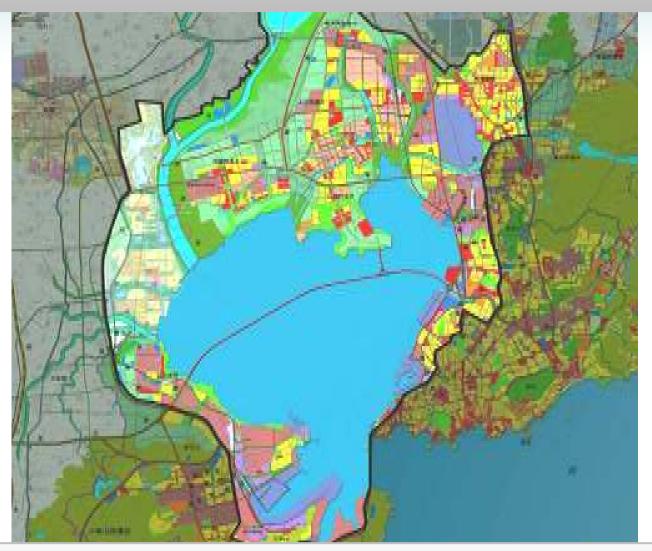
突出区域特色,东海岸重点发展以大规模旅游观光、运动娱乐、餐饮购物为主的都市型旅游产业, 北部地区依托大型生态湿地的建设,形成以健身休闲度假为主的生态型旅游产业,西海岸形成以大 型工业港口为特色的产业旅游;充分发挥"同城同业"的效应,推动胶州湾旅游资源的整合与提升

Unique characteristics of each area will be highlighted. The east coast will focus on urban tourist industry, such as large-scale tourist sightseeing, sport entertainment, catering and shopping. Based on large-scale ecological wetland, the north coast will highlight ecological tourist industry featuring fitness and holiday-making. The west coast will be characterized with industrial tourism, highlighting large-scale industrial port. Taking the advantage of tourist industries, we have integrated and upgraded the tourist resources along the Jiaozhou Bay.

大力发展水上旅游,环湾建设轮渡、游艇、帆船、邮轮等各类码头,完善水上娱乐设施的规划建设, 形成中国北方水上旅游活动中心。

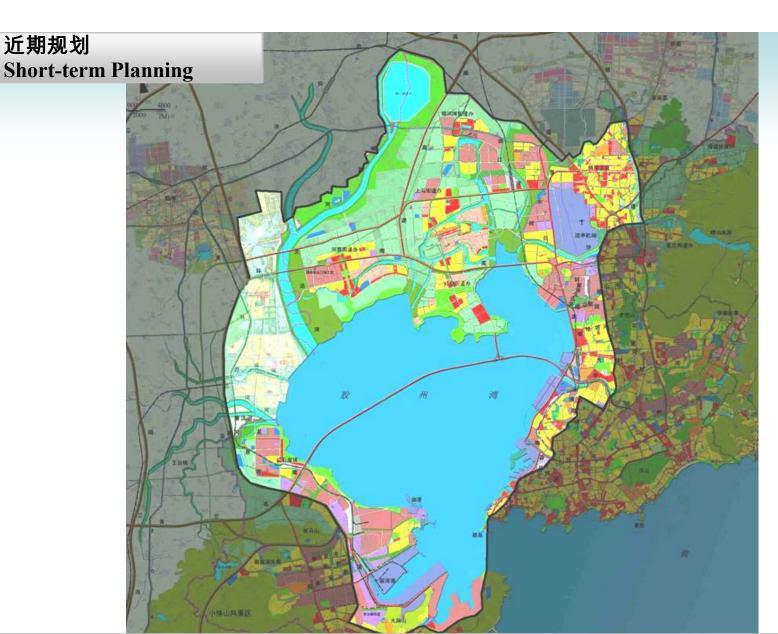
Push forward on-the-water tourism. Establish docks and terminals for ferry boats, yachts, sailing boats and cruisers. Improve the planning and construction of water entertainment facilities. Build on-the-water tourist center in northern China.

近岸地区发展规划目标 Planning Goal of the Inshore Area Development



整体上环胶州湾区域将建设成为集高新技术产业、科技研发、商贸旅游、文化娱乐和优质人居环境等功能于一体的国际一流滨海城市组群。

World-class coastal urban areas will be developed along the Jiaozhou Bay, featuring new and hi-tech industries, science and technology research and development, business, trade and tourism, culture and entertainment as well as high quality habitable environment



近期发展从"六片四区"上重点突破,实现"率先启动六片、重点规划四区",全力营造特色鲜明、布局合理、支撑有力的发展片区。率先启动以下六个片区:

Make breakthrough on "6 areas and 4 districts". Launch the planning for the 6 areas first and give priority to the planning of the 4 districts. The areas and districts will be featured with distinctive characteristics, reasonable layout and sustainable development. The 6 areas whose planning will be carried out first are as follows:,



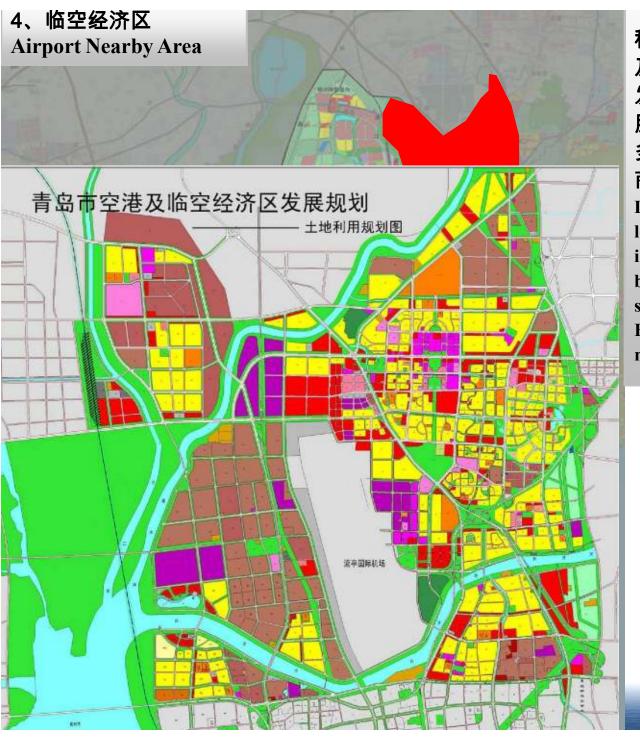


组织四方港区岸线功能调整研究,其北部结合铁路新客站的商贸、物流优势,其南部区域承接老港区现代服务业发展辐射,打造商贸文化旅游片区,建设欢乐滨海城,并预留港口建设条件。

Organize the study of adjusting functions of Sifang port area. Combining the advantages of Sifang railway stations in business, trade and logistics in northern part and modern service industry in southern part, we will build this area a tourist spot featuring trade, business and culture and suitable for port construction.







积极发展航空服务业及航空物流及相关加工业等配套产业;加快发展临空商贸旅游业,丰富现代服务业和生活服务等功能,建设多业态、综合性、现代化的临空商务区。

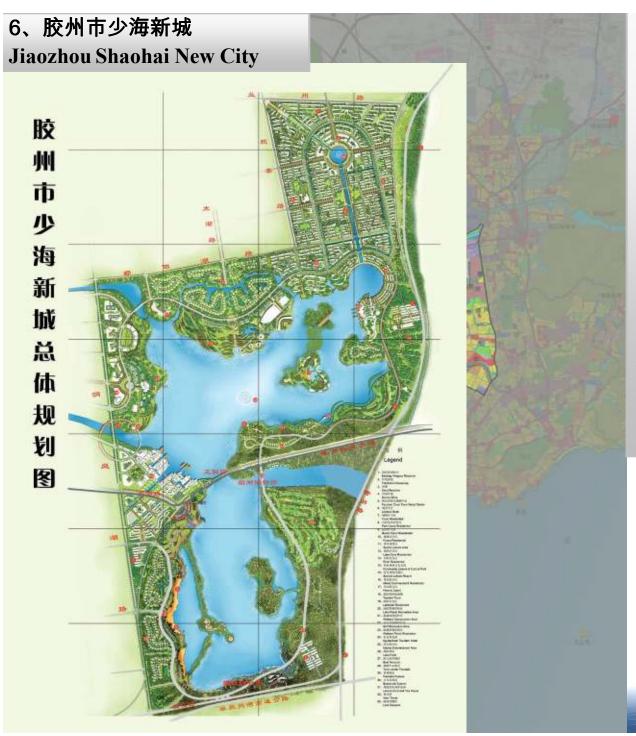
Develop the aviation service industry, logistics, processing and supporting industries. Develop airport trade and business tourism, enrich the modern service industry and daily life services. Build a diversified, comprehensive and modern business area.



按照起小步、快起步、起好步的要求,在完成总体规划、专业规划的基础上,抓紧完善详细规划及产业发展规划、贯彻"生态城市"原则,提高产业引入标准,杜绝高污染、高能耗项目落户,打造成为电子信息、新材料、生物医药、海洋科技、高速列车等高新产业复合的生态新城区、

Implement the principle of "ecological city", level up the industrial access standard, refuse the projects of high pollution and high energy consumption. The area will become a new ecological urban area which is home to new and high-tech

ronics and information, new materials, narine science, high speed locomotives.



按照建设集自然生态、滨水休闲、高档居住、度假旅游、历史人文等功能于一体的城市滨水复合功能区的要求,以水系、绿化、道路等生态廊道为骨架,以城市大型水体为核心,实现功能互补、互动发展。

The area will embody the requirement of integrating the nature, water entertainment, high-end living, holiday-making, historical and cultural functions. Water, vegetation and streets comprise the framework of the area, with a large scale lake as the core. The area realizes complementary advantages and interaction development.

环湾交通系统的组织是基于道路网、轨道网和重要交通枢纽的有机结合,共同构筑一个集公共交通 和低技生态型自行车和步行交通为主,小汽车友好型交通为辅的城市交通组织系统。

环湾的快速、大容量、便捷的交通联系主要依靠环湾道路网和轨道网完成,利用胶州湾高速公路、 跨海大桥及海底隧道等开辟快速公交线路,并通过各类交通枢纽实现与慢行系统实现接驳,从而最大 程度的降低对小汽车的依赖。同时,在环湾核心区域,鼓励使用电力、燃气等环保、低污染型交通工 具。

逐步形成以公共交通引导环湾土地开发的交通发展模式(即TOD模式)。

The transportation system is an integration of express way network, track network and transportation hubs. It is an urban transportation system with public transportation, bicycling and walking as the major means, and the car-friendly transportation as the complementary means.

The rapid, large-amount and convenient transportation will be provided by the expressway network and track network along Jiaozhou Bay. The rapid public transportation will be operated on the expressway, oversea bridge and underwater tunnel. Various transportation means will be connected with slow speed system, thus greatly reduce the demand of cars. At the same time, environment-friendly and low pollution transportation tools using electricity and natural gas are encouraged in the core area along Jiaozhou Bay.

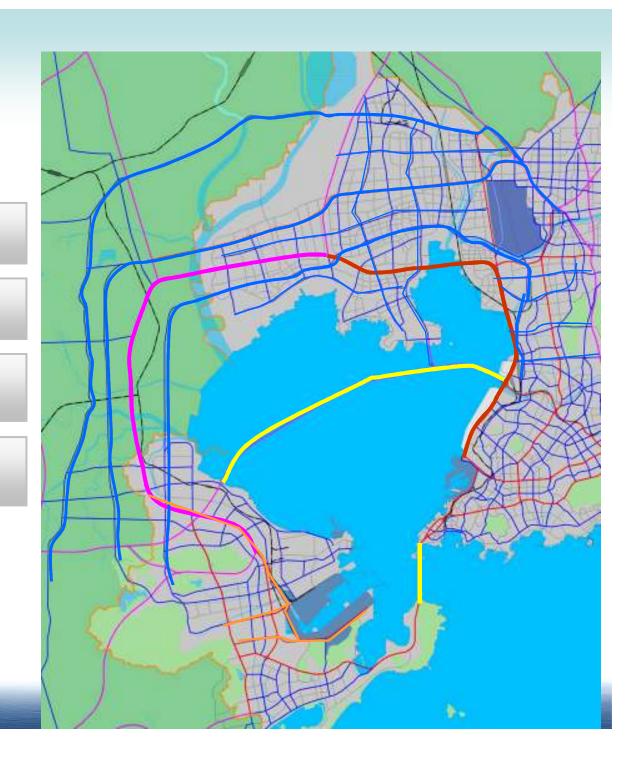
1、道路网 Road networks

(1)环湾四环 Four road ring along the Bay

(2)跨海联系 Cross-Bay connection

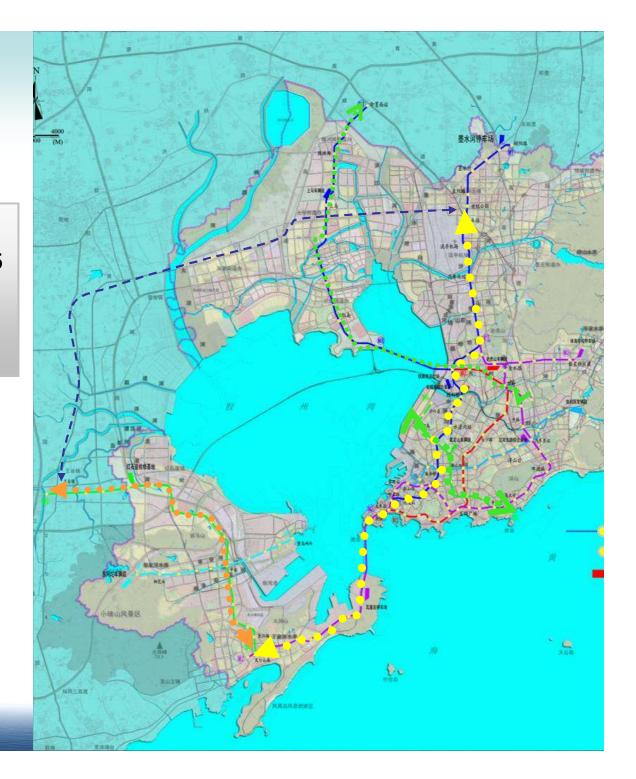
(3) 疏港通道 Port related roads

(4)多条拥湾主干路 Several main roads



# 2、轨道网 Subway Network

由轨道交通M1、M2、M6及L2号线 构成环湾轨道交通线。通过M3及M5 线增强环湾带与城市中心地带联系。 Six lines will connect different urban areas.



3、主要交通枢纽 Transportation Hubs

(1)大型客运枢纽:包括青岛火车站、中港客运站等。 Improve and launch the planning of large-scale passenger transportation hubs such as Qingdao Railway Station and Qingdao Passengers Port.

(2)旅游码头 Tourism docks



#### 4、慢行系统 Low-speed system

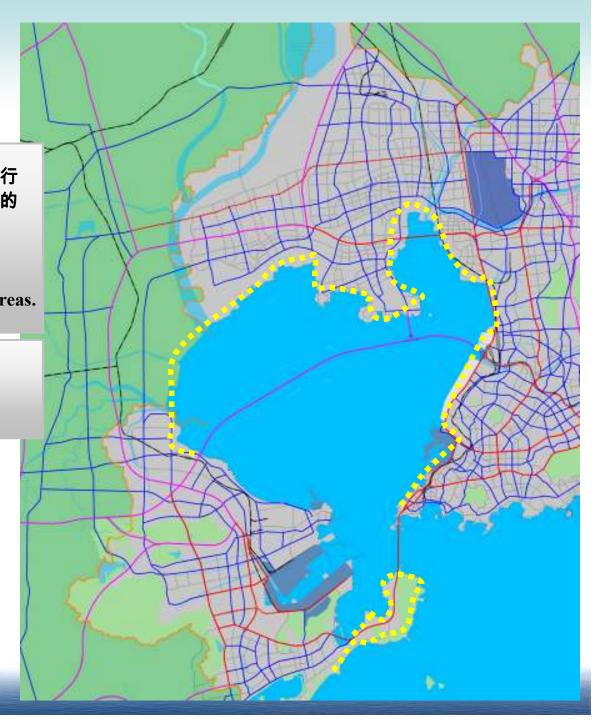
构筑和推广自行车交通和步行为主的交通出行 方式,在各填海地及滨海岸线构筑局部连续的 步行及自行车等慢行交通系统。

Promote the transportation of bicycling and walking. Establish the consecutive low-speed system for bicycling and walking in coastal areas.

建立自行车交通系统,实施绿色交通模式。 Establish a transportation system for bikes, carry out green traffic mode.



oto by Neo Chen



5.未来青岛 Future

明天的青岛,一个生态、和谐、繁荣、宜居的生态化海湾型城市,将从这里起航。 Qingdao of tomorrow, towards an ecological, harmonious, prosperous and habitable coastal city.

1、根据生态城市建设的要求,建立产业准入标准,形成区域循环经济体系和生态产业链。 In line with the requirement for an ecological city, we will establish the industrial access standard and regional circular economic system and ecological industrial chain.





2、保护原有的生态湿地,发展生态农业,建设以生态湿地作为过度和间隔的组团型生态城。 Protect the original ecological wet land, develop ecological agriculture and establish ecological city.



## 3、建立一个以共同交通为主体的绿色交通模式,降低小汽车的使用率。

Establish the green traffic mode with public transportation as major means, reduce the utilization of cars



## 4、建立一个布局合理的生态城市结构,避免城市的无序蔓延。

Establish the structure for an ecological city with rational layout, avoiding the disorderly expansion of the city.



## 5、积极发展新能源和环保产业,提高生态技术的应用能力。

Develop new energy and environmental protection industry, improve the application of ecological technology.

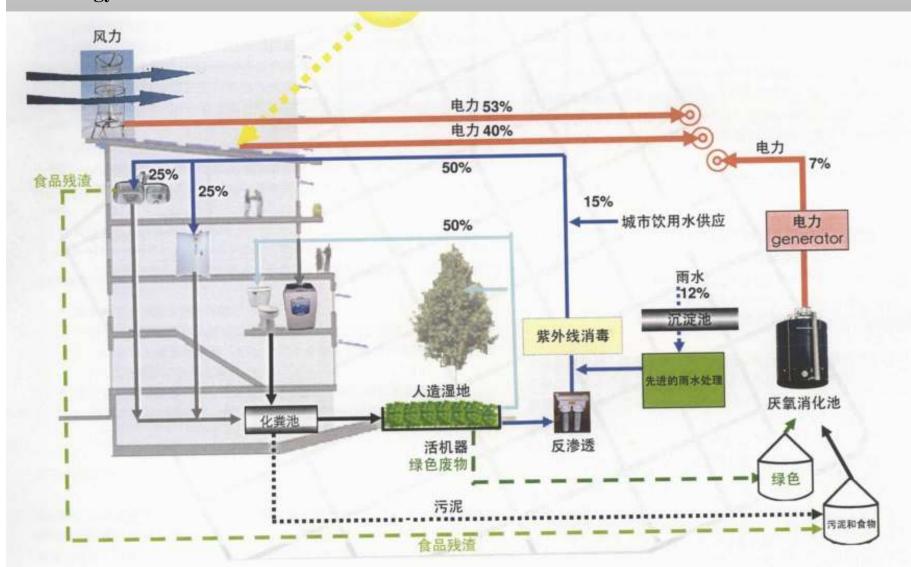


图13: 能源、供水和废品系统之间的关系和协同效应

6、塑造独具特色的城市风貌和建筑风格,延续地方文化和环境特 征。

Establish unique urban landscape and architecture style, carrying down the local culture and environmental features.











最终,通过几代人的努力,青岛将形成一个城市结构合理,功能健全,分工合理的组团型滨海生态城市。

By the efforts of several generations, Qingdao will become a coastal ecological city with rational urban structure, comprehensive functions and sound division of labor.

谢谢! Thanks for your kind attention!