

State of Oceans and Coasts: CHINA

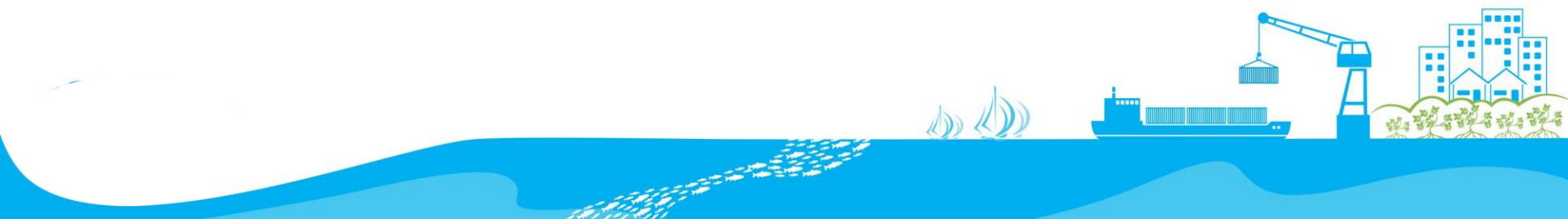
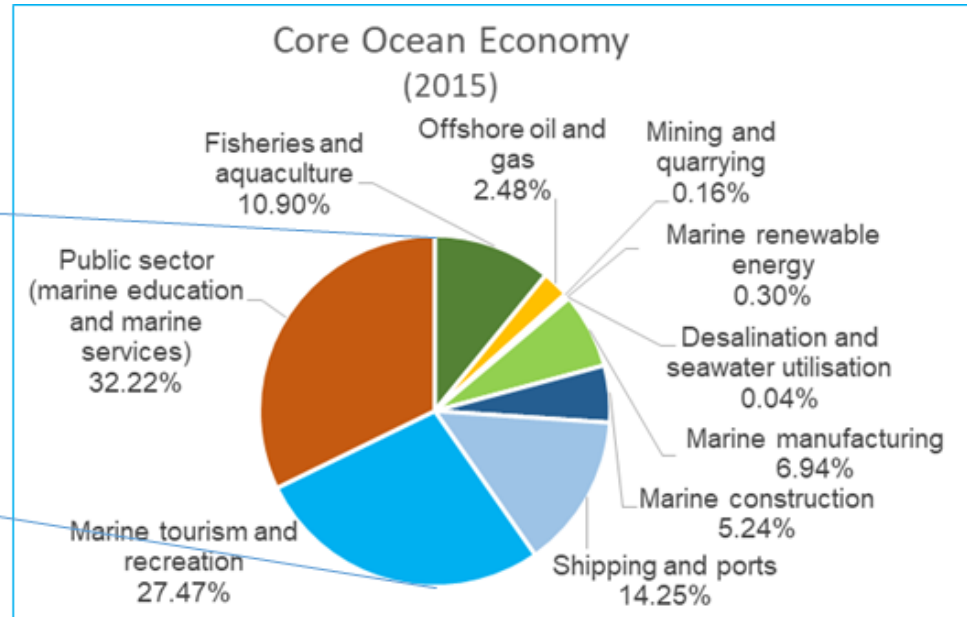
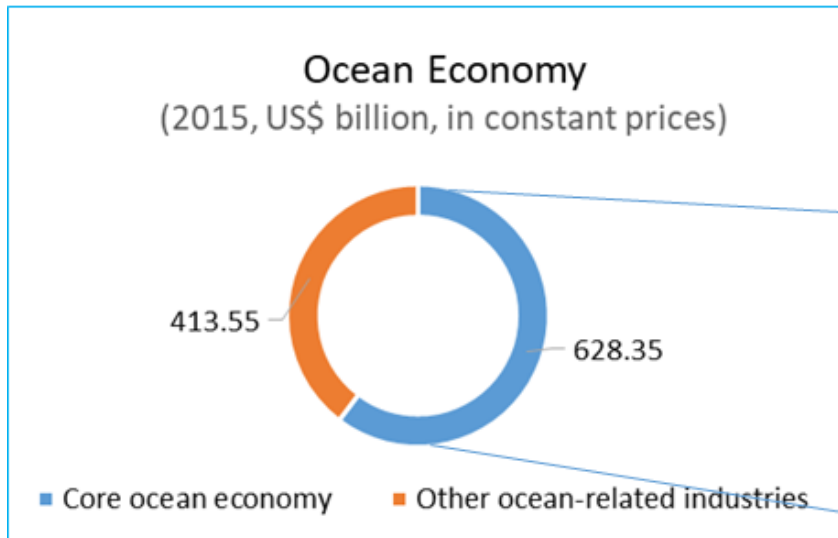
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**China-PEMSEA Sustainable Coastal Management
Cooperation Center**



Ocean economy

- **US\$1 trillion or 9% of GDP**



Ocean health

Valuation of coastal and marine ecosystems	US\$150 billion
Marine protected areas (% of territorial waters)	5.4%
ICM (% of coastline)	29%

Offshore Marine Water Quality (Level 1: Suitable for Marine Fisheries)

Parameters	Spring 97.8%	Summer 98.3%	Autumn 98.7%	Winter 97.9%
Dissolved Oxygen	Good	Excellent	Excellent	Good
Nitrates	Good	Excellent	Excellent	Good
Phosphates	Good	Excellent	Excellent	Good
Petroleum	Good	Excellent	Excellent	Good

- Level 1 is suitable for marine fisheries
- Level 2 is suitable for marine aquaculture and bathing beach
- Level 3 is suitable for industrial manufacture and tourism
- Level 4 is suitable for shipping port and marine development.

Blue economy initiatives: Marine renewable energy

- **Ocean energy**

China has the technical basis for development of marine energy. The main marine energy in China is from the wind farm. China has built dozens of tidal power plants in the past 30 years. The technique of wave power generation is developing very fast, and it is now in the experimental demonstration stage in China. China has also made remarkable progress in research and demonstration of tidal current energy.

In recent years, benefited from the policies, the technique and investment for marine renewable energy grow very fast, many big plans were launched. We can see a powerful and clean future of the coastal area.



Blue economy initiatives

Ocean energy: Innovations and best practices

Tidal Current Energy

A tidal current Power Generation(3.4 MW) was built in Lindong, Zhoushan Islands, Zhejiang Province in 2016 and connected to state grid to serve more and more households.

The annual power generation will be 600 million kilowatt hours.



Blue economy initiatives: Marine renewable energy

- **Offshore wind power**

- China's offshore wind power generation has entered the commercialized operation stage. In 2015, 100 new offshore wind power sets were installed in China, with an installed capacity reaching 360.5 MW, up 58.4% over the previous. China has built up a total installed capacity of 1014.68 MW for offshore wind power projects by the end of 2015.



Offshore Wind Plant



Blue economy initiatives

Offshore wind power: Innovations and best practices

The Xiangshui Offshore Wind Farm

The Xiangshui offshore wind farm is 10 km offshore, with a depth of 8 to 12 meters, a total of 55 wind-generating units. The annual generating capacity is about 493 million kilowatt hours, saving 154,000 tons of standard coal per year.



Blue economy initiatives

Supporting policies and institutional arrangements

- The law of the People's Republic of China on renewable energy
- The 13th Five-year Plan for Renewable Energy Development
- Outline of Marine Renewable Energy Development (2013-2016)
- Special Fund for Marine Renewable Energy (More than 110 projects were funded \$200 million USD(2010.5-2018.6))



Blue economy initiatives

- **Outcomes and benefits**

- Promoted social and economic growth
- China's offshore wind power achieved an added value about 1.8 billion dollars in 2015
- Promoted the development of equipment manufacturing industry
- Increased employment in coastal areas
- Reduced carbon for climate change mitigation

- **SDGs being achieved**

- SDG 7 Affordable and clean energy
- SDG 8 Decent Work And Economic Growth
- SDG 9 Industrial Innovation And Infrastructure
- SDG 13 Climate Action



Recommendations

- **Investigation and assessment of the distribution of Marine renewable resources**
- **Improve the technical level of Marine energy development, Strengthen the scientific research and technical development and introduction**
- **Improve the industrial chain and scaling up the Marine energy industries**
- **Establish a multi-channel funding mechanism and encourage social capital to support the development of Marine energy industries**

