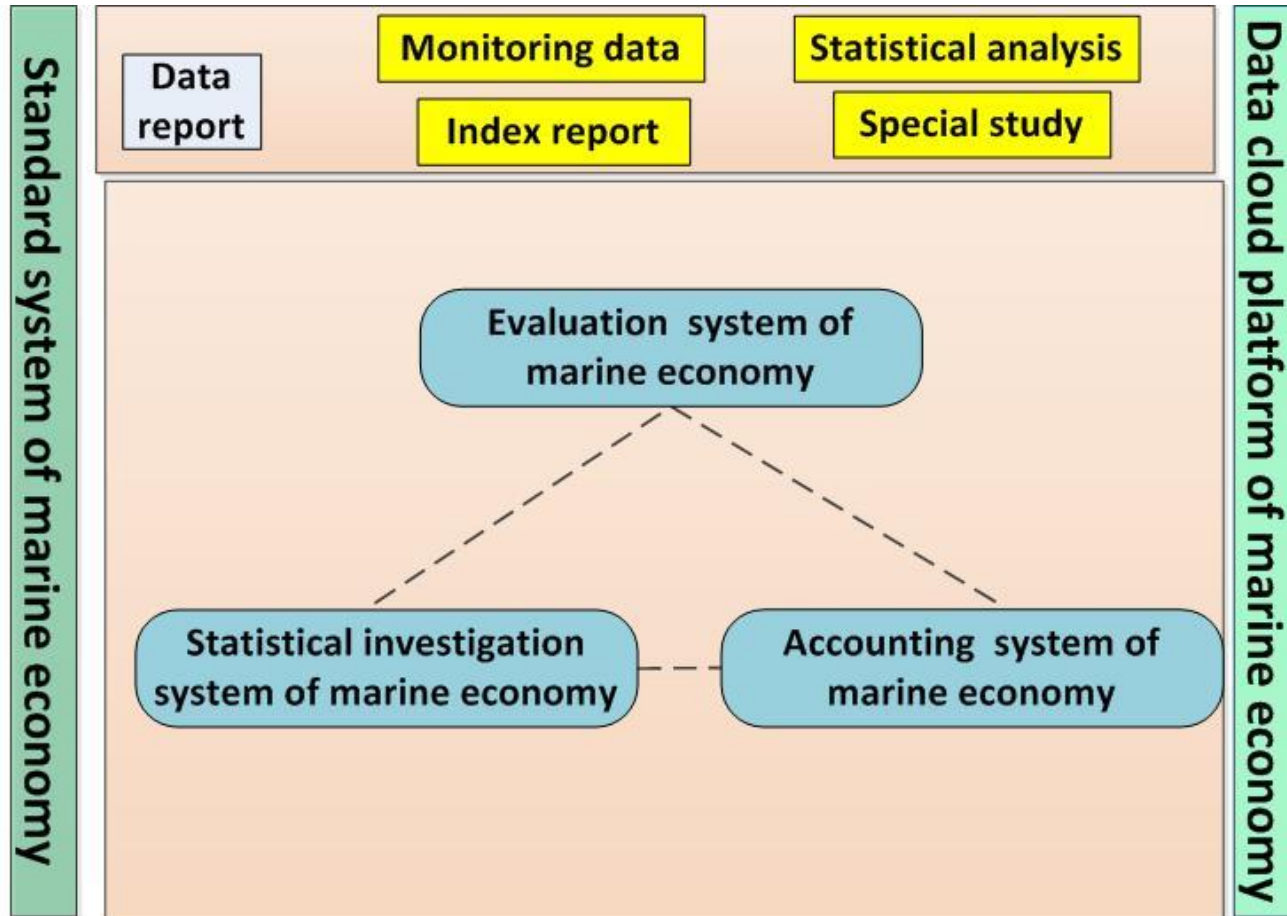


# Marine Economic Monitoring and Evaluation

LU Wenhai  
Brussels, Belgium  
2 June 2017

# Framework



Base——Statistical investigation

system and Accounting system

Major body——evaluation system

Quality guarantee——Standard system

Carrier——Data cloud platform.

# CONTENTS

1

Marine Economy Monitoring

2

Marine Economy Evaluation

3

Proposals for international collaboration



1

## Marine Economic Monitoring



# 1.1 monitoring scale

## 1.1.1 Industrial scale

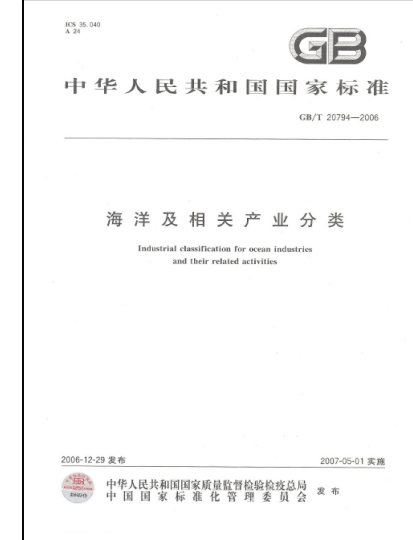
Industrial Classification for Marine Industries and Their Related Activities(GB/T 20794-2006)

**Marine economy:** refers to the summation of industrial activities that explore, use and protect the Marine, and the activities related to them.

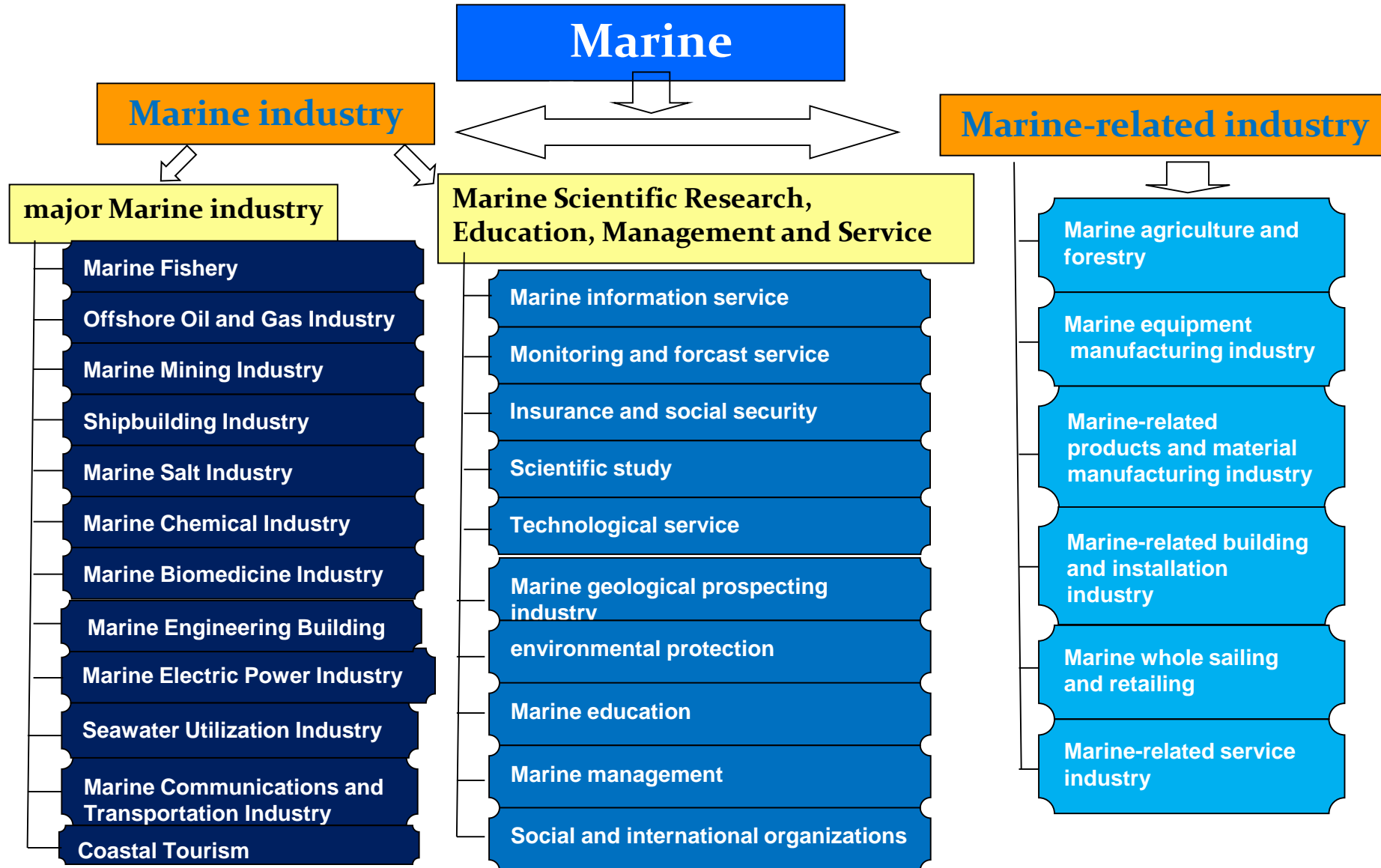
**Marine industry:** refers to the production and service activities that explore, use and protect the Marine. Marine industry include the production and service activities that :

- Obtain product from Marine directly,
- Make the first processing to the product that obtain from the Marine,
- Applied directly to Marine or Marine exploration,
- Using seawater or Marine space as the basic element of its production,
- And marine scientific, research, management and service.

**Marine-related industry:** refers to the industries that has technical or economic relationship with Marine industries, based on different kinds of input-output connections.



# Classification



## Comparison with < International Standard for Industrial Classification >

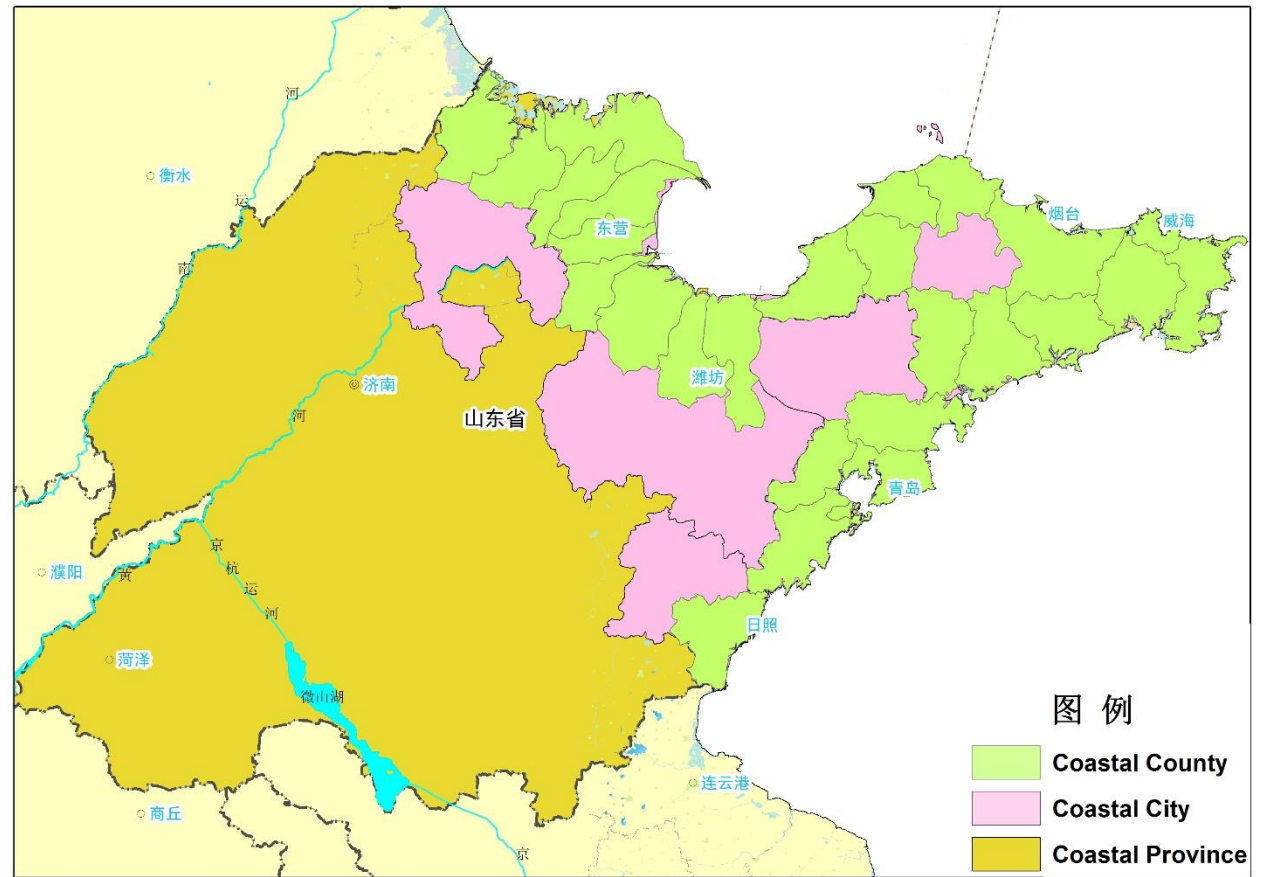
Industrial Classification for Marine Industries an Their Related Activities (GB/T 20794-2006)				International Standard Industries Classification (ISIC/REV.3)			
Category	Sub-category	3-digit code	4-digit code	Category	Sub-category	3-digit code	4-digit code
<b>2</b>	<b>28</b>	<b>107</b>	<b>380</b>	<b>17</b>	<b>60</b>	<b>159</b>	<b>292</b>
GB/T 20794-2006 related to				<b>16</b>	<b>48</b>	<b>91</b>	<b>144</b>

## 1.1.2 Geographic scale

**Coastal Province:** the coastal region in a broad sense, refers to the province **with coastlines** (continental and island coastlines).

**Coastal City :** refers to the municipalities directly under the Central Government and the prefecture-level cities **with coastlines** (including all the districts, counties and county-level cities under them).

**Coastal County:** the coastal region in a narrow sense, refers to the counties, county-level cities and districts **with coastlines**.



Shandong Province case





## Status of China's coastal area

Coastal Province	Coastal City	Coastal County
Total	54	238
Tianjin	1	1
Hebei	3	11
Liaoning	6	22
Shanghai	1	5
Jiangsu	3	15
Zhejiang	7	35
Fujian	6	34
Shandong	7	35
Guangdong	14	55
Guangxi	3	8
Hainan	3	17

# 1.1.3 Data resource

National Marine Statistics Information Network

Marine-related enterprises

More than **20** national ministries or departments

Marine management Departments in Coastal areas

National Bureau of Statistic  
General Administration of Custom  
National Energy Administration  
China Development Bank  
Ministry of Education  
Ministry of Science and Technology  
Ministry of Land and Resources  
Ministry of Transport  
Ministry of Water Resources  
Ministry of Agriculture  
Ministry of Industry and Information Technology  
Ministry of Environmental Protection  
National Tourism Administration  
Chinese Academy of Sciences  
China Earthquake Administration  
China Meteorological Administration  
China State Shipbuilding Corporation  
China Shipbuilding Industry Corporation  
China National Petroleum Corporation  
China Petrochemical Group Corporation  
China National Offshore Oil Industry Corporation  
China National Salt Industry Corporation



Marine or Fishery Departments in **11** coastal provinces and cities and **5** specific cities with independent planning status.

Liaoning

Hebei

Tianjin

Shandong

Jiangsu

Shanghai

Zhejiang

Fujian

Guangdong

Guangxi

Hainan

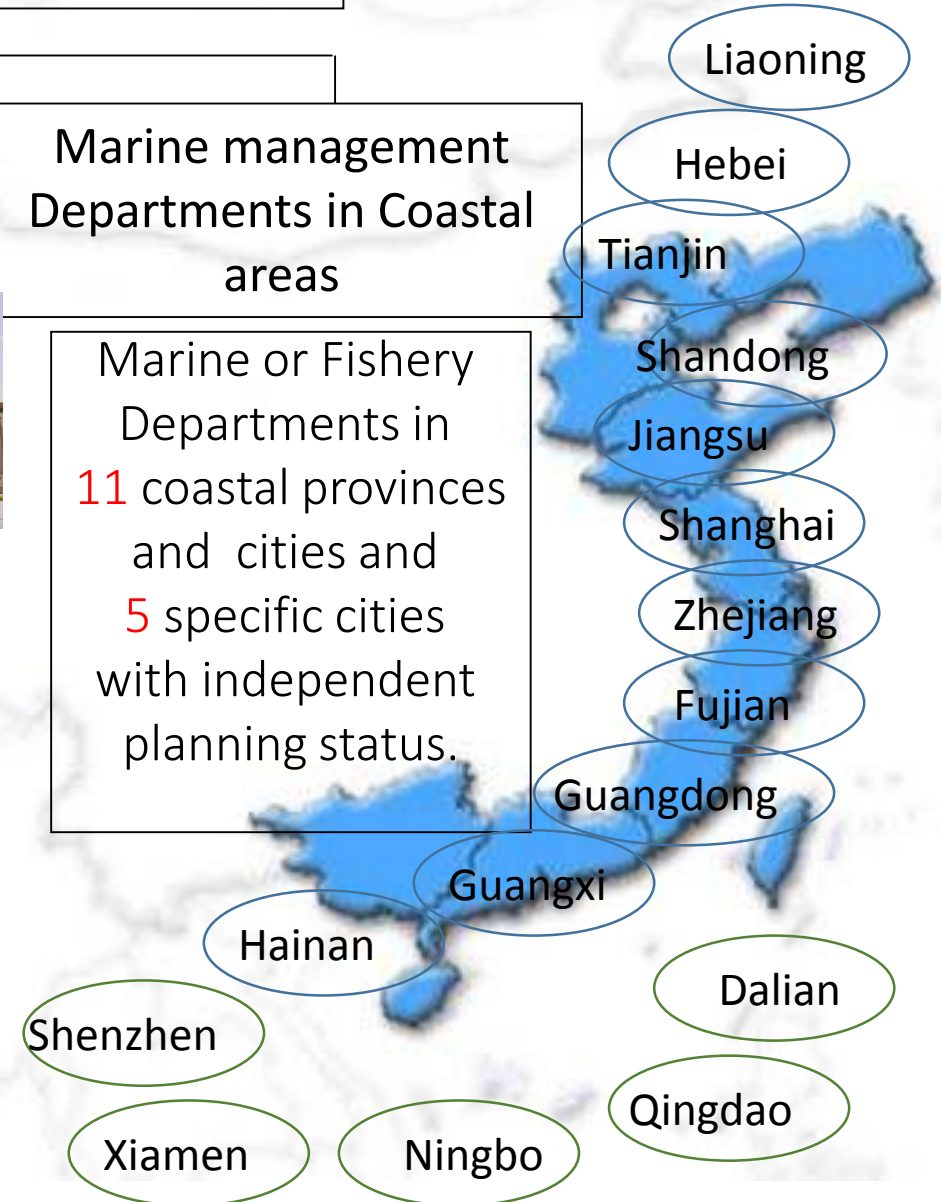
Dalian

Shenzhen

Xiamen

Ningbo

Qingdao

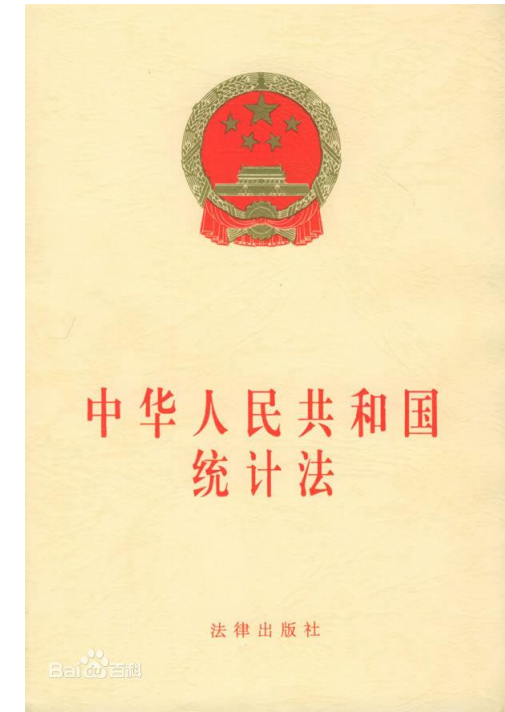


# 1.2 Ways for monitoring

## 1.2.1 Regular form-filling program

According to the *Statistics Law of the People's Republic of China*, the **State Marineic Administration (SOA)** applies for the approval from the **National Bureau of Statistics(NBS)**, and the provincial and multiple Marine administrations implement the program to collect data.

- **Marine Statistical data-collecting program**
- **Gross Marine Product Accounting data-collecting program**



Statistics Law of the  
People's Republic of China

# ➤ Marine Statistical data-collecting program

In 1999, the first — **Integrated Marine Statistical Collecting Forms institution** — was approved by NBS, it has been implemented for more than 20 years, and experiencing many revising and adjusting according to different standards. Recently, according to the Statistic Law, It will be revised every two years.

- **Component:**

- Tables :70

- Indicators :more than 1600

- **Contents:**

- Production and operating activities of every major Marine industries

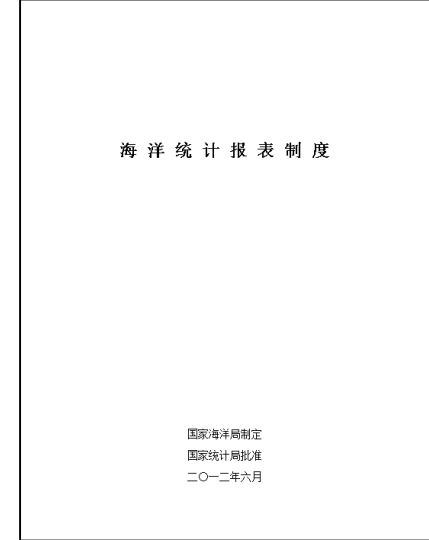
- Production and operating activities of Marine-related enterprises

- Marine scientific and research

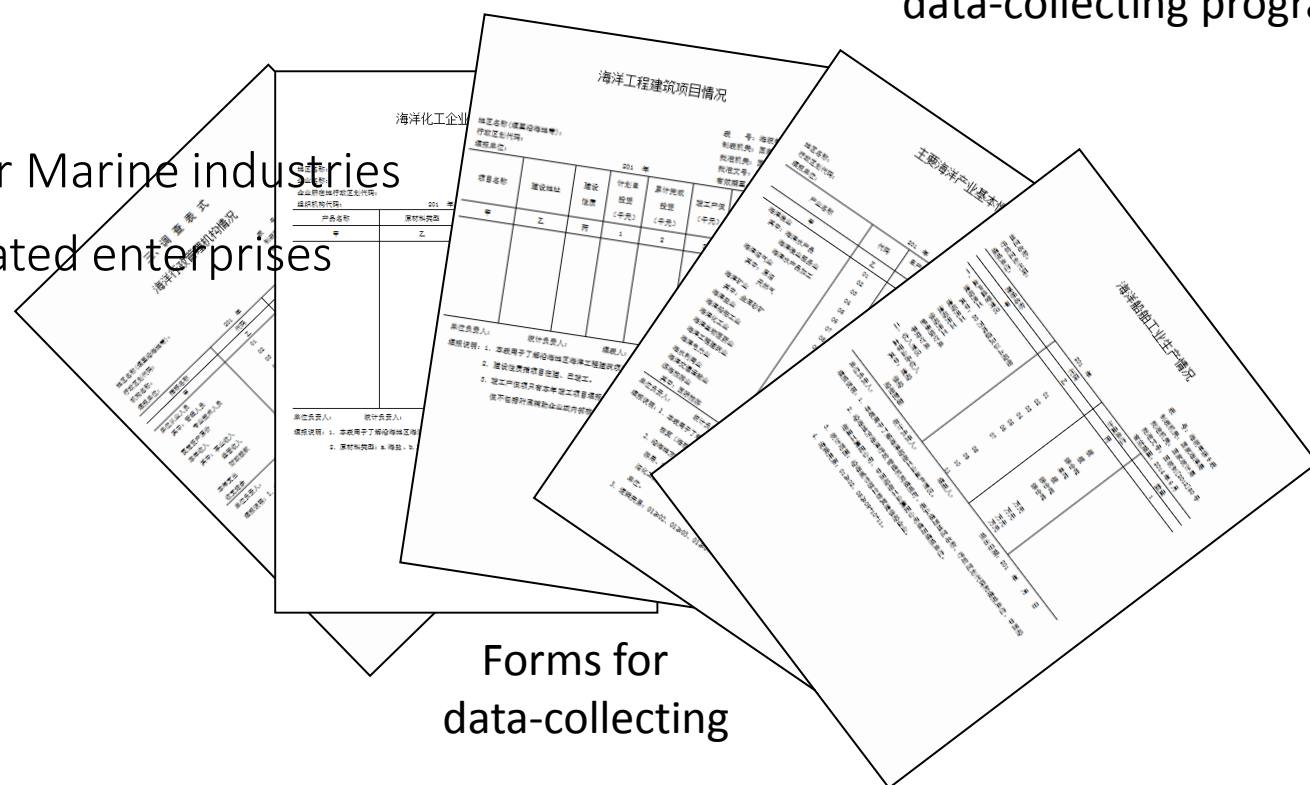
- Marine technical service

- Marine education

...



Marine Statistical data-collecting program



## ➤ Gross Marine Product Accounting data-collecting program

In 2006, the SOA formulated the “GDP accounting system” (NBS, [2006] No.21). Implementation of the system made Marine economic statistics undergo a qualitative leap, which is a new milestone in the work of Marine economic statistics.

- **Component:**

- Tables:6

- Indicator :more than 300

- **Contents:**

- Coastal Gross Domestic Product

- Output value of Marine economy by industry

- Volume of Marine economy by industry

- Gross output of Marine -related sectors under national classification

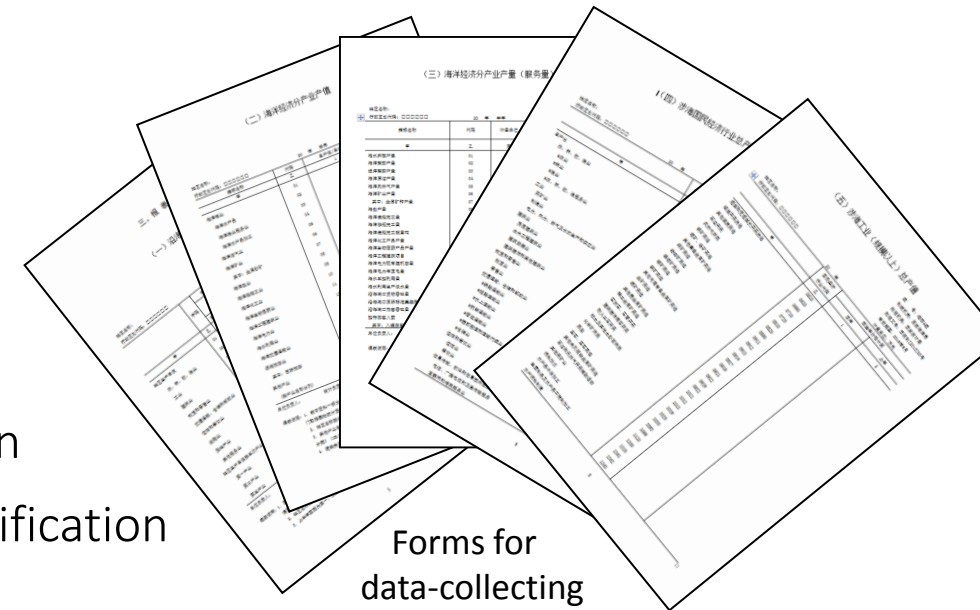
- Gross output value of Marine -related industry under national classification

- Component of coastal Gross Domestic Product

- Input-output tables with 135by 135 department in coastal area

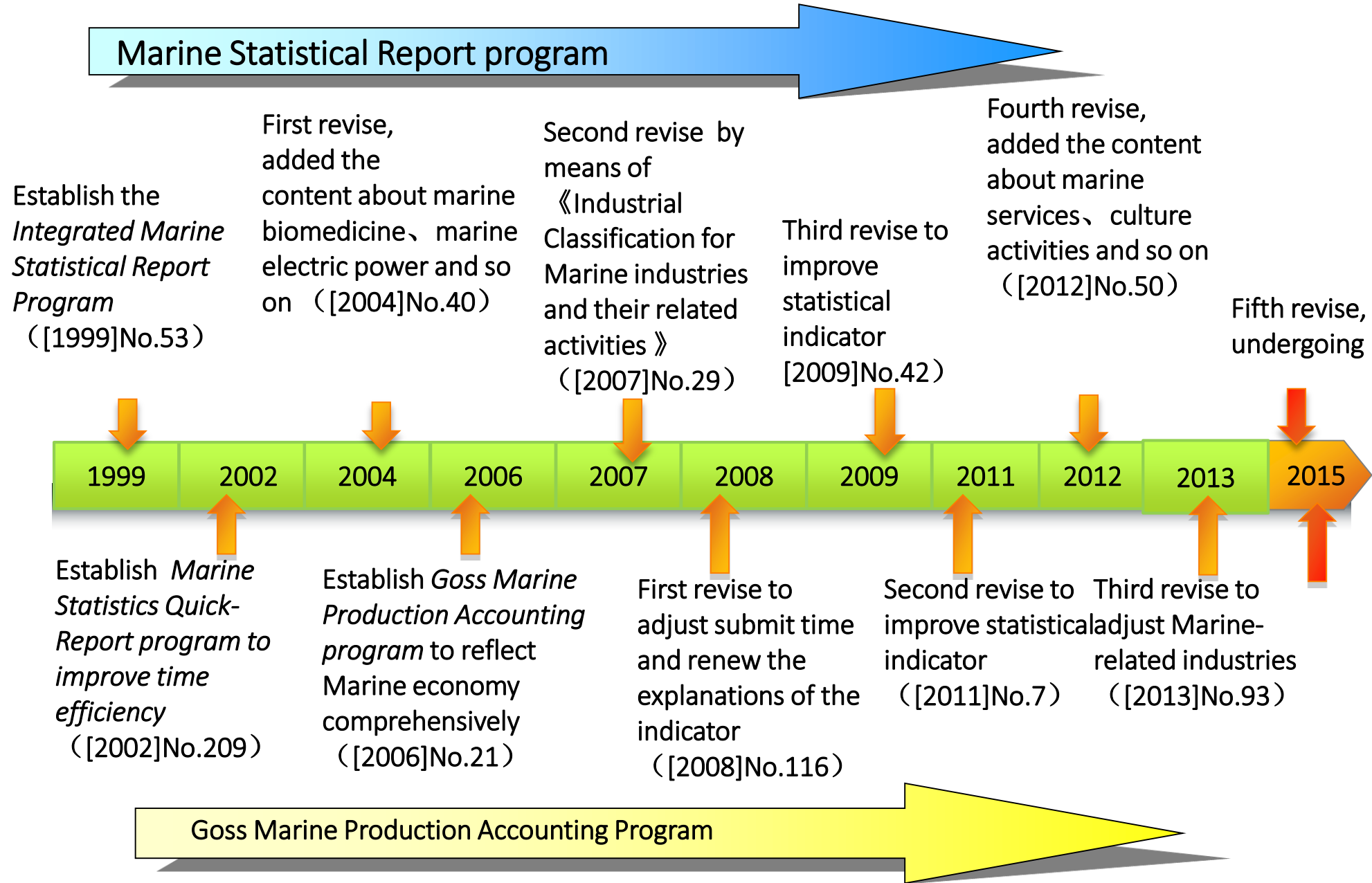


Gross Marine Product Accounting data-collecting program



Forms for data-collecting

## ➤ Revising history



# ➤ Software system

## Enterprise directory management

序号	单位名称	组织机构代码	所属行业	企业类型	业务类型	操作
21002	中交天津航道局有限公司	103061113	海洋工程建筑业	是	是	查看详情 重置用户密码
21002	中交第一航务工程局有限公司	103061068	海洋工程建筑业	是	是	查看详情 重置用户密码
21002	天津新河船务工程有限公司	1030608350	海洋船舶工业	是	是	查看详情 重置用户密码
21001	天津中交博信海洋船舶工程有限公司	666122741	海洋船舶工业	是	是	查看详情 重置用户密码
21001	天津新河船务工程有限公司	718276508	海洋船舶工业	是	是	查看详情 重置用户密码
21001	天津渤海化工集团股份有限公司	103061105	海洋盐业	是	是	查看详情 重置用户密码
21001	中石油天然气股份有限公司天津分公司	103060065	海洋石油业	是	是	查看详情 重置用户密码
21001	中石油(中)南有限公司天津分公司	718249438	海洋石油业	是	是	查看详情 重置用户密码
21001	兴达(天津)水资源开发有限公司	052050210	海洋石油业	是	是	查看详情 重置用户密码
21001	天津渤海船舶重工有限公司	575140661	海洋船舶工业	是	是	查看详情 重置用户密码

## Online form-filling

重点海洋企业情况

填报单位: 石牌市华宝海洋生物化工有限公司

组织机构代码: 91350581796064316P

指标名称	代码	计量单位	累计	当期
甲	乙	丙	1	2
从业人员工资总额	1	千元	4512	2211
税金总额	2	千元	8951	4730
营业税金及附加	3	千元	25	25
主营业务税金及附加	4	千元	25	25
公允价值变动收益	5	千元	0	0
资产减值损失	6	千元	0	0
利润总额	7	千元	23481	11113
营业利润	8	千元	17354	5968
固定资产原价	9	千元	163812	163812
其中: 非折旧	10	千元	8318	8318
负债合计	11	千元	148321	148321

## statistic of filling rate

报表名称	报送情况	报送率	操作
海统计1表:重点海洋企业情况月报_1月	240/5190	4.62%	报送详情 导出 饼图展示
海统计1表:重点海洋企业情况月报_2月	243/5190	4.68%	报送详情 导出 饼图展示
海统计1表:重点海洋企业情况月报_3月	244/5190	4.7%	报送详情 导出 饼图展示
海统计1表:重点海洋企业情况月报_4月	244/5190	4.7%	报送详情 导出 饼图展示
海统计1表:重点海洋企业情况月报_5月	245/5190	4.72%	报送详情 导出 饼图展示
海统计1表:重点海洋企业情况月报_6月	252/5190	4.86%	报送详情 导出 饼图展示
海统计1表:重点海洋企业情况月报_7月	252/5190	4.86%	报送详情 导出 饼图展示

## Level-by-level data checking

报表审核

填报单位名称: 大连银海园科技养殖有限公司

审核意见:

数据报表	频率时段	报出时间	报表单位	审批历史	操作
重点海洋企业情况月报	2016年6月	2016-7-28	大连银海园科技养殖有限公司	历史	详细
重点海洋企业情况季报	2016年2季度	2016-7-28	大连银海园科技养殖有限公司	历史	详细

## Data normalization

日期	沿海客运量(万人)	沿海旅客周转量(万人)	远洋客运量(万人)	远洋旅客周转量(万人)
2015年1月	521	15232	82	10640
2015年2月	892	23321	94	10681
2015年3月	794	23102	96	11961
2015年4月	845	21892	97	12866
2015年5月	876	23375	102	12217
2015年6月	801	21675	92	9993
2015年7月	931	27736	85	8755
2015年8月	1240	38723	104	11070
2015年9月	952	28692	95	10550
2015年10月	865	23998	90	9284
2015年11月	708	18111	92	10623
2015年12月	587	14240	89	9363
2016年1月	582	16836	77	10188
2016年2月	950	26304	93	9046
2016年3月	697	19581	85	9617
2016年4月	768	20405	99	11618
2016年5月	827	22326	98	10496

## Data computation

年份	指标	2016年1-5月(累计)	同比增长(%)	环比增长(%)	环比增长(%)	环比增长(%)	环比增长(%)	环比增长(%)	环比增长(%)
1	总计	913.58	-28.11%	-28.52%	-28.52%	-28.52%	-28.52%	-28.52%	-28.52%
2	总计-海水利用	435.3	-28.62%	-28.24%	-28.24%	-28.24%	-28.24%	-28.24%	-28.24%
3	海水利用	478.28	-29.01%	-18.21%	-20.00%	283.33	-22.52%	-22.52%	-22.52%
4	海洋工程建筑业	-7.46	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长
5	海洋石油业	-4.88	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长
6	海洋船舶工业	19.3	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长
7	海洋盐业	0.56	-3.49%	-19.58%	209.79%	0.56	-5.43%	-2.0	-2.0
8	海洋石油业	44.7	28.80%	27.57%	5.52%	15.9	24.31%	2.0	2.0
9	海洋船舶工业	287.54	167.63%	169.37%	312.34%	288.47	178.90%	1.6	1.6
10	海洋盐业	4.01	-14.24%	-39.38%	-6.00%	0.79	-67.80%	-7.7	-7.7
11	海洋石油业	184.56	56.50%	77.40%	28.28%	184.56	56.50%	7.7	7.7
12	海洋船舶工业	-222.51	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长
13	海洋盐业	110.82	10.32%	19.02%	1.82%	106.89	15.20%	2.0	2.0
14	海洋石油业	46.65	1192.43%	178.13%	276.24%	28.58	同比增长	同比增长	同比增长
15	海洋船舶工业	128.16	14.28%	12.24%	108.58%	122.89	15.10%	1.1	1.1
16	海洋盐业	215.44	20.09%	21.4%	12.28%	195.65	10.30%	1.1	1.1
17	海洋石油业	11.51	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长
18	海洋船舶工业	91.32	-4.53%	-6.7%	-1.4%	89.09	-4.9%	-2.0	-2.0
19	海洋盐业	2.37	-45.91%	-63.78%	-68.01%	-1.3	同比增长	同比增长	同比增长
20	海洋石油业	61.56	-9.80%	-9.68%	11.24%	49.62	-17.41%	-1.1	-1.1
21	海洋船舶工业	-167.53	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长
22	海洋盐业	35.74	1.18%	4.39%	18.37%	34.29	-1.18%	-2.0	-2.0
23	海洋石油业	40.4	210.73%	201.92%	37.21%	40.56	254.79%	2.4	2.4
24	海洋船舶工业	2.4	4.92%	208.02%	1.73	50.12%	208.02%	2.0	2.0
25	海洋盐业	-14.55	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长
26	海洋石油业	-11.28	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长	同比增长
27	海洋船舶工业	58.24	-21.46%	-24.32%	-45.81%	57.66	-18.44%	-2.0	-2.0
28	海洋盐业	264.56	-23.09%	-28.39%	-38.04%	254.41	-23.04%	-2.0	-2.0
29	海洋石油业	88.47	-7.82%	-8.80%	80.80%	84.04	-12.07%	-1.1	-1.1

# The Monthly and Quarterly Report for Marine Economic

<b>Monthly report</b> <b>start from september 2016</b>	<b>Quarterly report</b> <b>start from Spring 2016</b>
<ul style="list-style-type: none"><li>• The Performance Analysis of The Marine Industrial Enterprises above Designated Size</li><li>• The Performance Analysis of The Marine Service Industry Enterprise above Designated Size</li><li>• The Analysis on Energy Consumption of The Marine Enterprises</li><li>• The Analysis of The Marine Foreign Trade</li><li>• The Analysis of The "blue 100" Marine Economic Stocks Price Index</li><li>• The Analysis of sea area use</li><li>• Analysis of seawater aquatic products, marine transportation and crude oil prices</li><li>• The Performance Analysis of The Marine enterprise</li></ul>	<ul style="list-style-type: none"><li>• Management status of marine industrial enterprises above designated size</li><li>• Management status of marine renewable energy utilization enterprises above designated size</li><li>• Management status of marine biomedicine enterprises above designated size</li><li>• Foreign trade</li><li>• Supply side industrial structure adjustment</li><li>• Listed companies financing</li></ul>

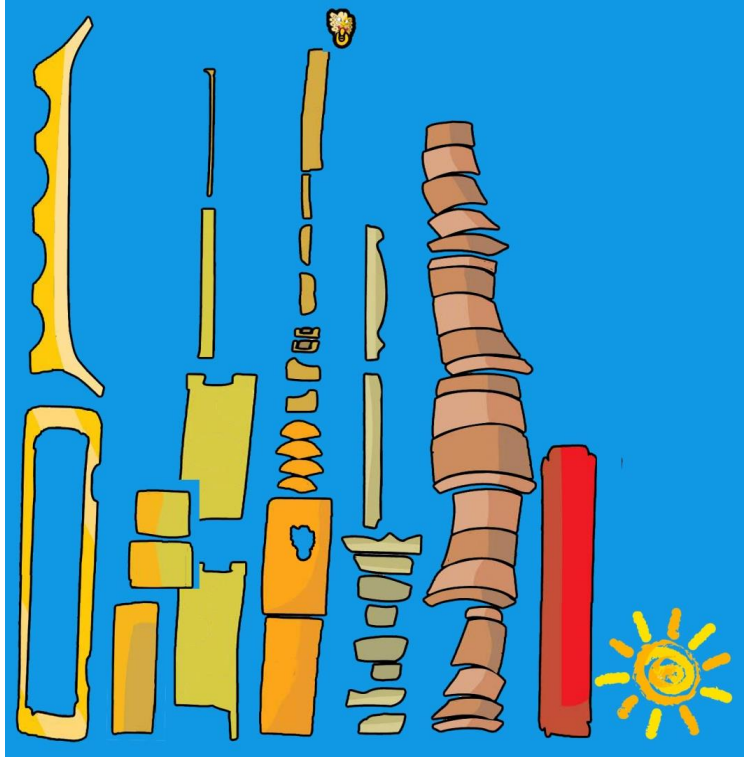


# ➤ *China Marine Statistical Yearbook* (1990–2016) 27 Volumes

0. Summary of China's Marine economic development
1. Integrated data
2. Marine economic accounting
3. Major Marine industrial activities
4. Production capacity of major Marine industries
5. Marine-related employment
6. Marine science and technology
7. Marine education
8. Marine environmental protection
9. Marine administration and public-good service
10. National and coastal socio-economy
11. Part of the worlds Marine economic statistics data

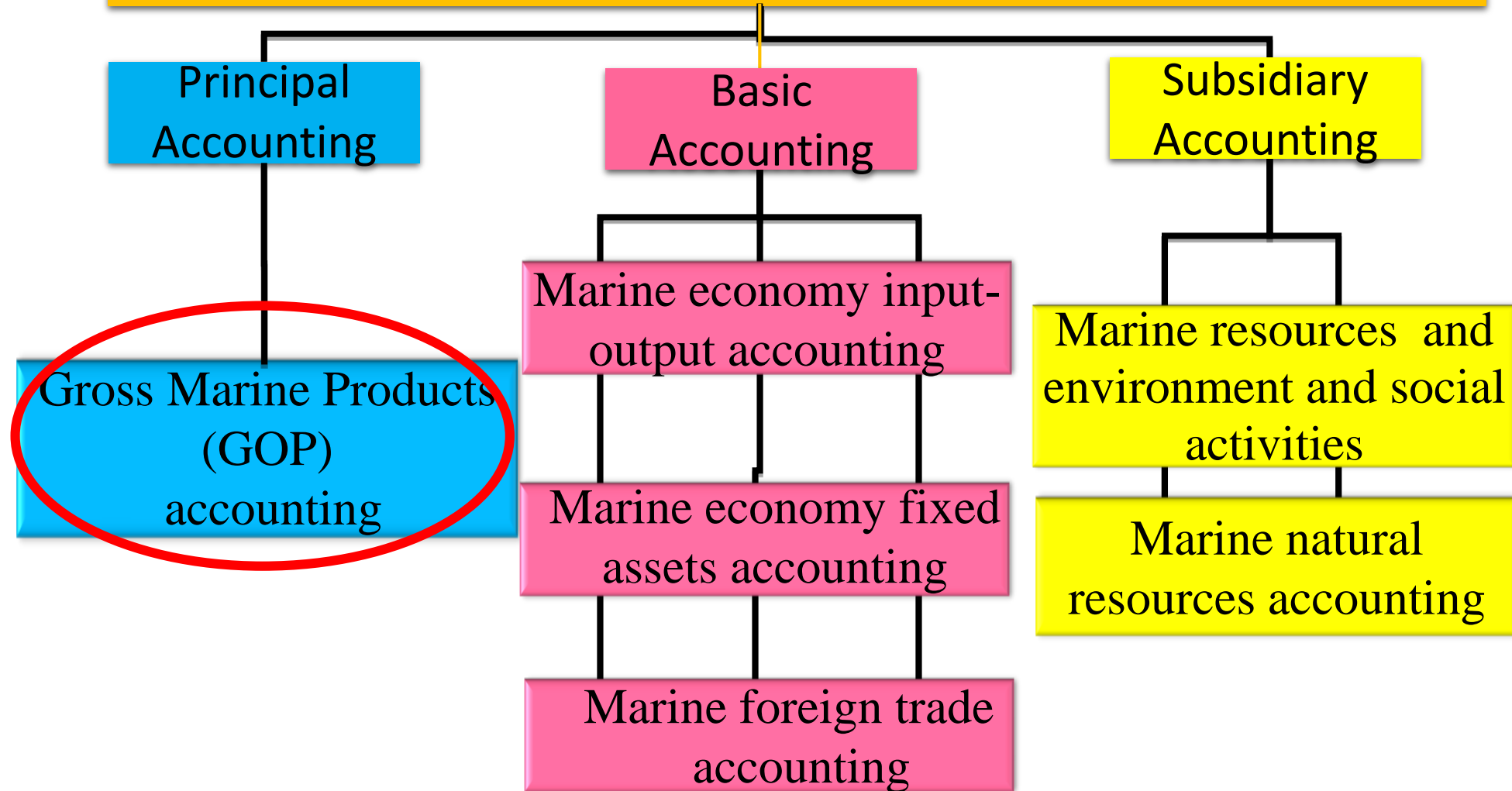


## 1.2.2 Marine economic accounting system

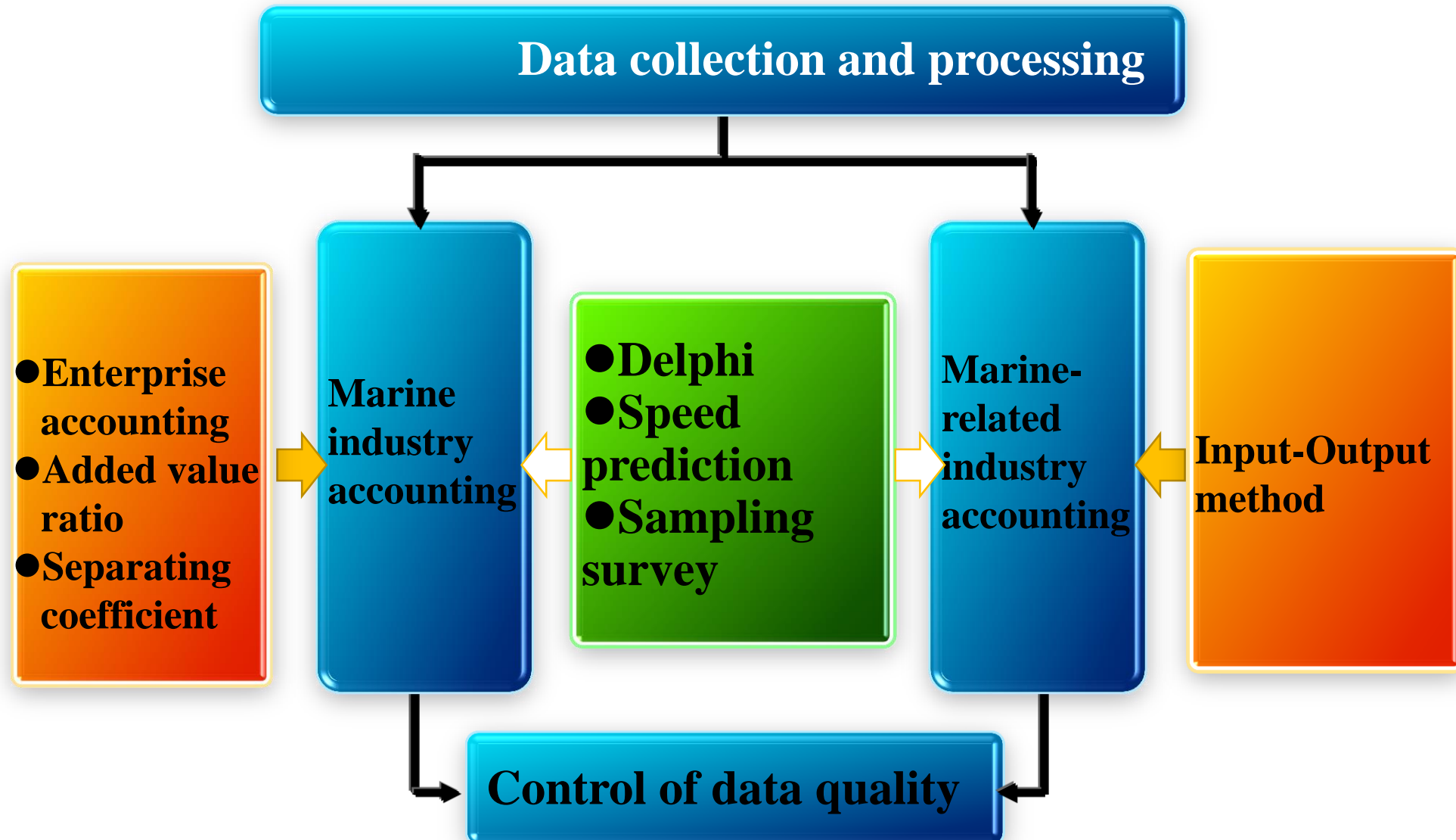


Statistic is only those elements which is hard to see what is it , while accounting is the temple that could show us what is it looks like.

# General Framework of Marine Economic Accounting System



# The accounting methodology of GOP



# ➤ Marine economic accounting software system

## Data import

指数名称	代码	按当年价格计算-2014	按当年价格计算-2013	海洋产业
总产出	1	93411.9654605496	89502.05	
农、林、牧、渔业	2	4498.36	4349.72	
#农业	3	1734.13	1673.86	
#林业	4	152.44	136.49	
#渔业	5	699.8	689.3	海洋渔业
#农、林、牧、渔服务业	6	194.51	174.72	海洋渔业
工业	7	59020.872457885	57415.95	
采矿业	8	3664.36203638763	3502.83	
制造业	9	52527.7614142686	51227.55	
电力、热力、燃气及水的生产和供应业	10	2828.74900722875	2685.57	海洋电力业
建筑业	11	8449.07	8030.98	海洋工程建筑业
房屋建筑业	12	5050.22	4778.86	
土木工程建筑业	13	1822.74	1743.51	
建筑装饰和其他建筑业	14	894.81	816.05	
批发零售业	15	675.8	692.56	
批发业	16	3885.97	3562.93	
零售业	17	1909.65	1758.33	
零售业	18	1976.32	1744.6	
交通运输、仓储和邮政业	19	3873.24	3607.15	
#铁路运输业	20	-405.86	-415.78	
#道路运输业	21	1687.32	1603.29	
#水上运输业	22	600.09	569.87	海洋交通运输业

## Coefficient setting

核算设置对话框

产业名称:

核算区域:

核算年份:

核算类型:

结果是否保存:

>确定 >取消

## Accounting on major marine industry

年份	增加值	核算增加值	核算方法
江苏	2014	21900	基业公司—海洋矿业—增加值
山东	2014	39120.349	基业公司—海洋矿业—增加值
上海	2014		基业公司—海洋矿业—增加值
浙江	2014	6600	基业公司—海洋矿业—增加值
福建	2014	5800	基业公司—海洋矿业—增加值
海南	2014	1600	基业公司—海洋矿业—增加值
河北	2014	53300	基业公司—海洋矿业—增加值
广西	2014	375.8824	基业公司—海洋矿业—增加值
天津	2014	37100	基业公司—海洋矿业—增加值
江苏	2014	24321.0863	基业公司—海洋矿业—增加值
广东	2014	3400	基业公司—海洋矿业—增加值

## Accounting on marine-related industry

核算结果表-选择地区	核算结果表
2014	39446.4
2014	39446.4
2014	39446.4
2014	39446.4
2014	39446.4

➤ *China Marine Economic Statistical Bulletin*  
**(2003—2016) 14 Volumes**



Press Conference

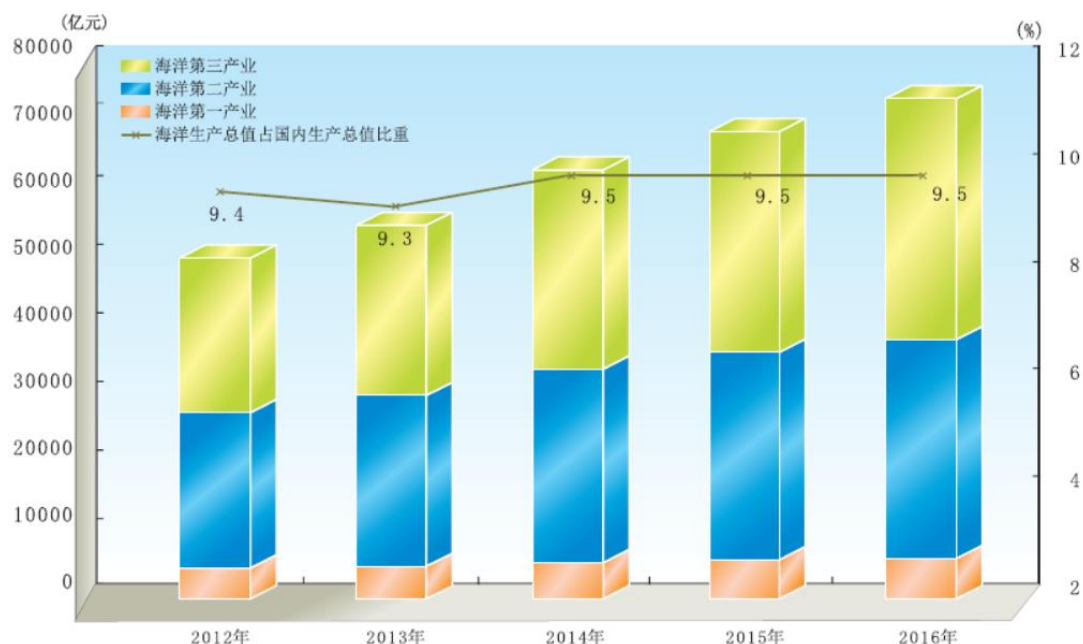


China Marine Economic Statistical Bulletin

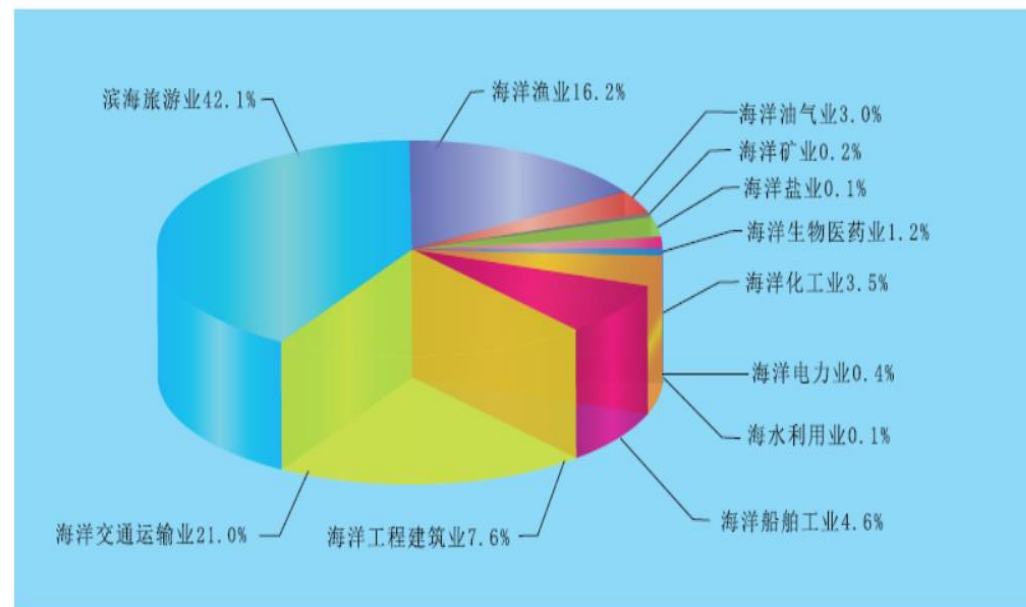
**Contents:**

- **Development of Marine Economy**
- **Development of Major Marine Industries**
- **Development of Regional Marine Economy**

According to the latest released *2016 China Marine Economic Statistic Bulletin*, the national Gross Marine Product amounts to 7,050.7 billion RMB (equivalent to 1,061.5 billion dollars), 6.8% up from the previous year(at comparable price), accounting for 9.5% of GDP.



GMP, its growth rate and three industrial composition in 2014-2016



Industrial composition of major marine industries in 2016

➤ **Standards published—1 National-level standard and 5 industrial standards**

《 Industrial Classification for Marine Industries and Their Related Activities 》 ( GB/T 20794-2006 )

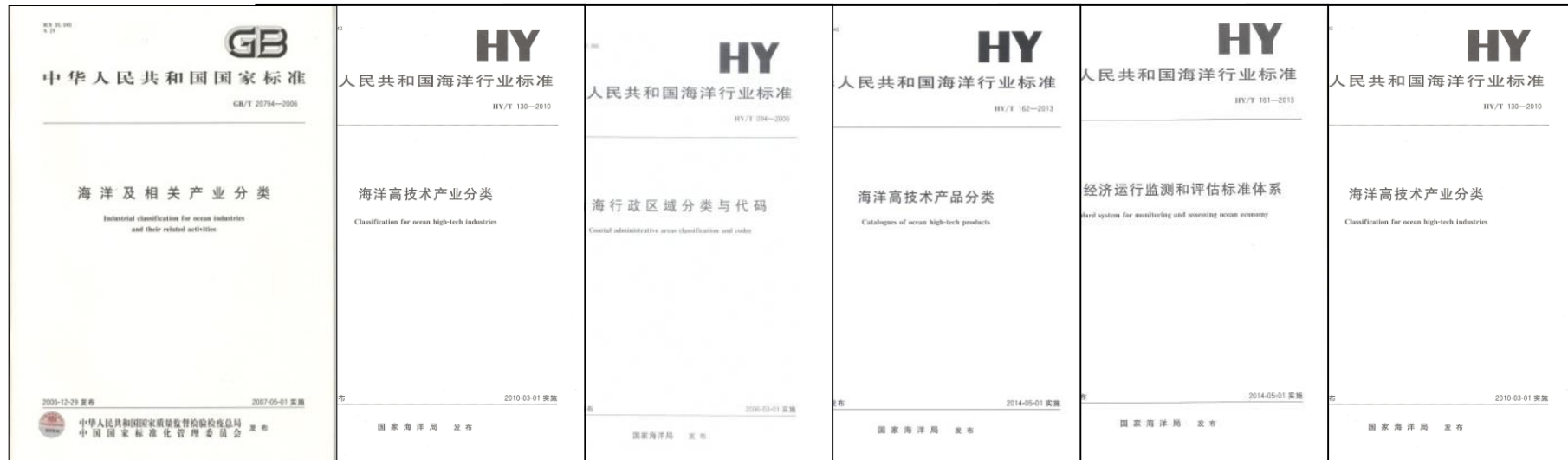
《 Coastal administrative areas classification and codes 》 ( HY/T 094-2006 )

《 Classification for Marine high-tech industries 》 ( HY/T 130-2010 )

《 Index system for Marine economy 》 ( HY/T 160-2013 )

《 Catalogues of Marine high-tech products 》 ( HY/T 162-2013 )

《 Standard system for monitoring and assessing Marine economy 》 ( HY/T 161-2013 )





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## Marine Economic Evaluation



## Issuing schedule of marine economic evaluation results

Name	Contents	Frequency	Issuing Date	Remark
China Marine Development Index report	Reflect the overall development of Marine economy and Marine issues with the comprehensive index.	Yearly	September next year	Public
China Marine Economic Development Index	Reflect the marine economic development status with the comprehensive index	Yearly	November next year	Public
Marine Economic Climate Index Report	Reflect the booming state of marine economy with the comprehensive index.	Yearly	November next year	inner reference
The "blue 100" Marine Economic Stocks Price Index	Reflects the development of the Marine economy from the perspective of the stock market.	Day	Real time	inner reference
Report on China's Economy Development	Analyze the yearly development status of Marine economic overall and in the pilot areas.	Yearly	September next year	Public

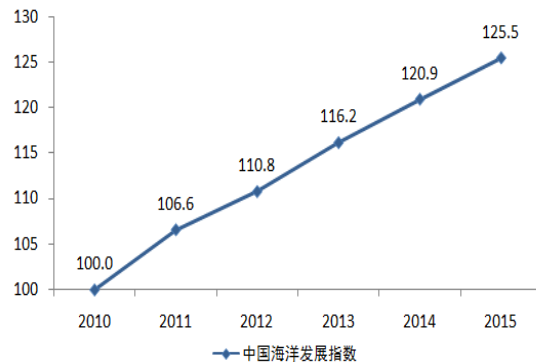
## ➤ China Marine Development Index (2014-2016) 3 Volumes

The China Marine Development Index is a quantitative evaluation about the overall development of Marine economy and Marine issues in a certain period.

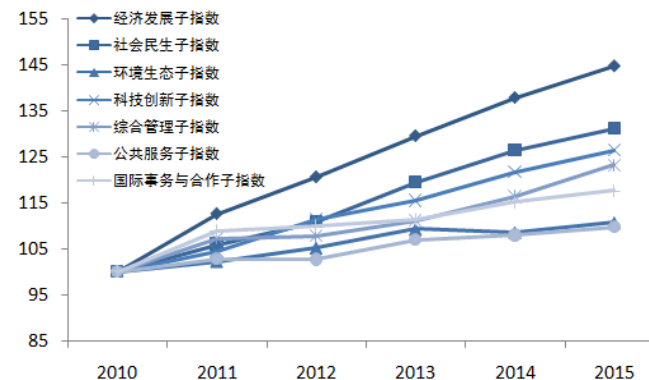
- ◆ economic development
- ◆ social livelihood
- ◆ environmental ecology
- ◆ scientific innovation
- ◆ Comprehensive governance
- ◆ Public service
- ◆ International issues and cooperation



China Marine Development Index



2016 China Marine Development Index



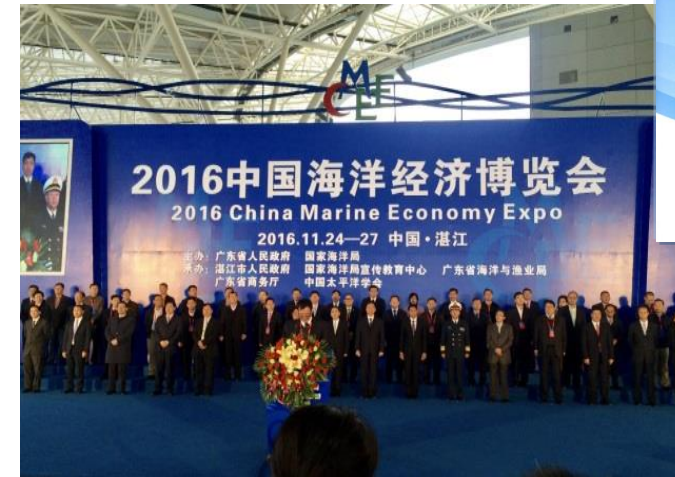
Press Conference

## ➤ China Marine Economic Development Index (2016)

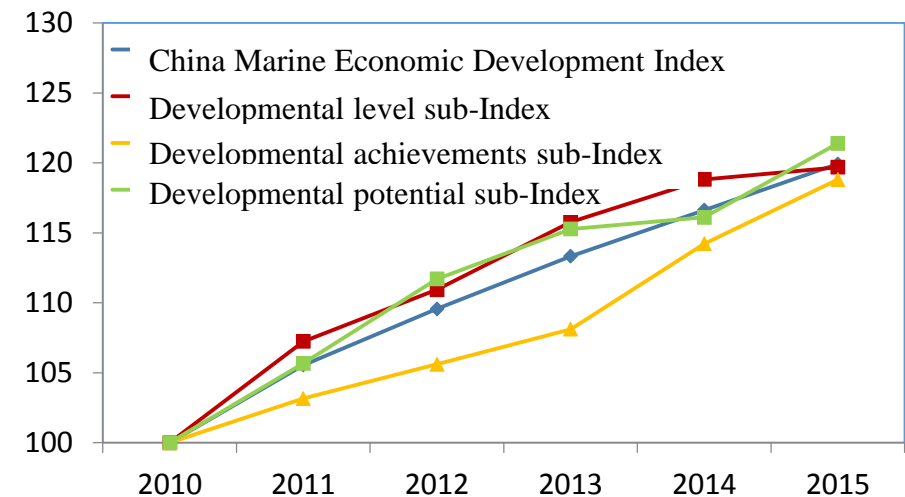
November 24<sup>th</sup>, 2016, NMDIS released the initial *2016 China Marine Economic Development Index Report*.

The China Marine Economic Development Index is a comprehensive index to reflect marine economic development status, which includes:

- ◆ Developmental level  
——size, composition, benefit, openness
- ◆ Developmental achievements  
——stability, livelihood improvement
- ◆ Developmental potential  
——innovation driving force, resource and environmental bearing capacity.



Press Conference



2016 China Marine Economic Development Index

# ➤ Marine Economic Climate Index Report (2015—2016) 2 Volumes

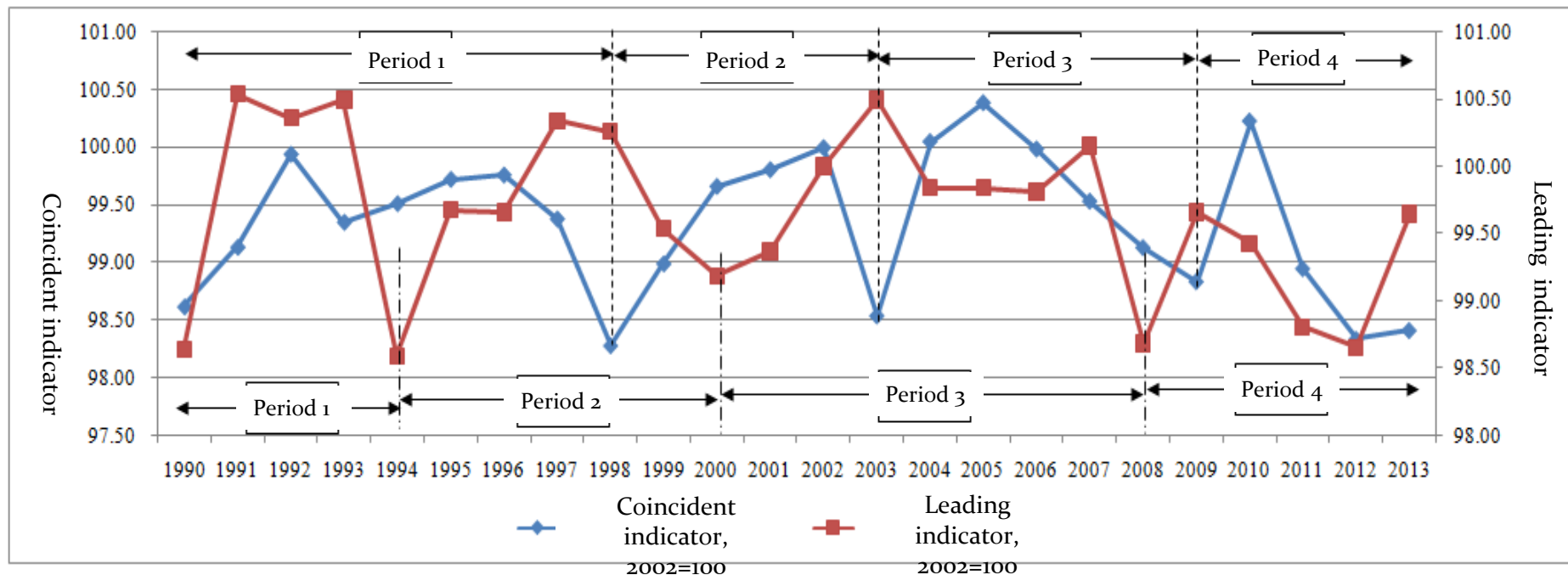
Marine Economic Climate Index is a comprehensive description on the development status of marine economy, which is used to reflect the booming state of marine economy at present . It consists of coincident indicator, leading indicator and lagging indicator.

Due to data limitation, we can only achieve yearly index analysis, quarterly and monthly climate index is to be studied.

中国海洋经济景气指数报告

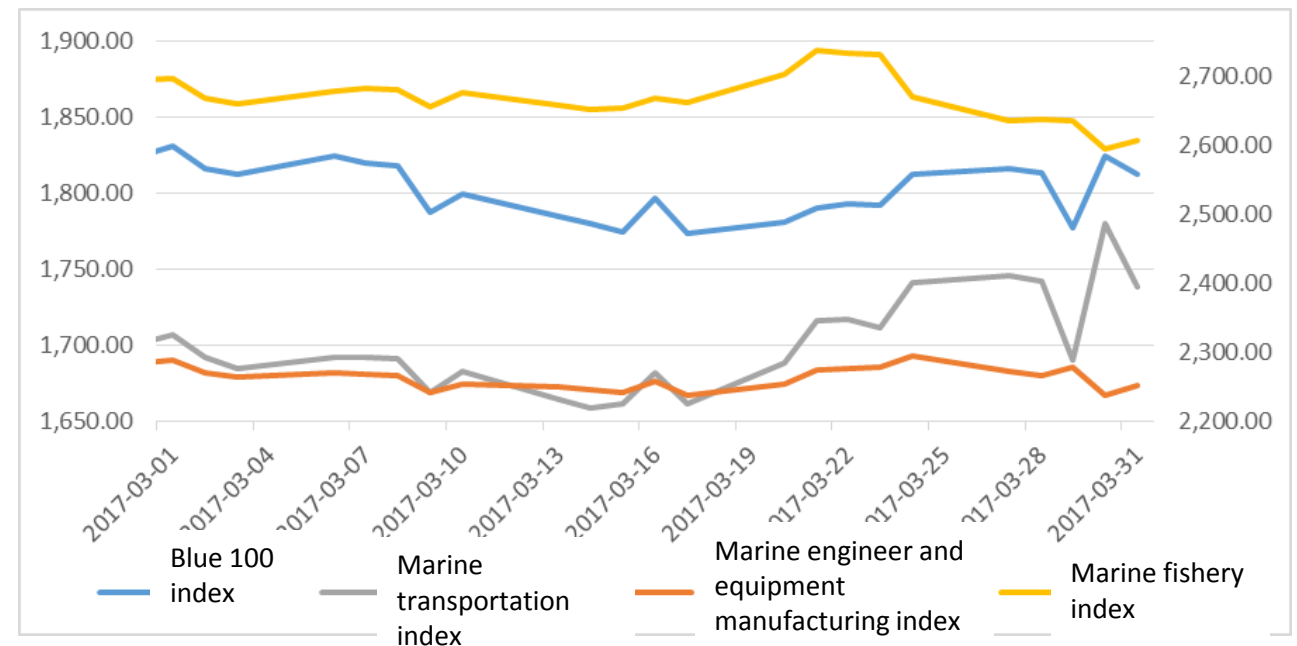
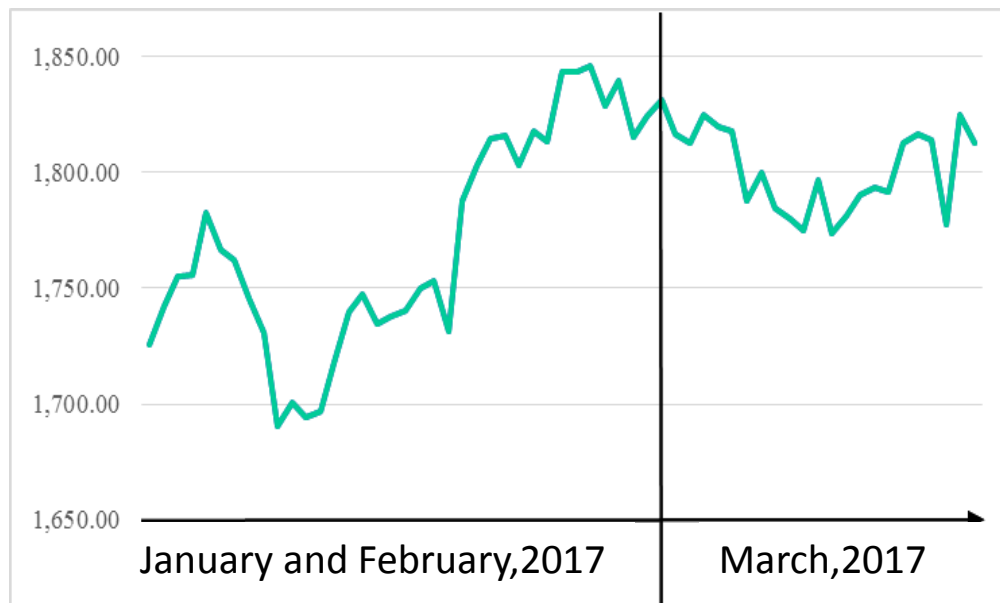
Marine Economic  
Climate Index Report

国家海洋信息中心  
二〇一六年十二月



# The "blue 100" Marine Economic Stocks Price Index

The index is an indicator of changes in the overall price level of the Marine economy. It picks up 100 stocks in both the Shanghai and Shenzhen stock markets that are part of the Marine economy, and by using the pie weighted synthesis, it reflects the development of the Marine economy from the perspective of the stock market.



## ➤ **Report on China's Economy Development (2015—2016) 2 Volumes**

### **Part 1 Summary report**

Chapter 1. National development of Marine economy during the twelve five-year-plan period

Chapter 2. National development of Marine economy in 2014

Chapter 3. The trend and forecast of national Marine economy

### **Part 2 Sub-summary report of Marine economic pilot area**

Chapter 1. Shandong peninsula Blue Economy economic zone

Chapter 2. Zhejiang Marine Economy demonstration area

Chapter 3. Guangdong Marine Economy pilot area

Chapter 4. Fujian Strait Blue Economy pilot area

Chapter 5. Tianjin Marine Economy Scientific demonstration area

### **Part 3 Assessment report of Marine economic pilot area**

Chapter 1. Achievements of the pilot areas

Chapter 2. Remained Problems

Chapter 3. Work to be done next



Report on China's Economy Development



Press conference

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Proposal of international cooperation





## ➤ Collaboration in the past

- October 25-29, 2015, sponsored the Symposium :The Marines in National Income Accounts: Seeking Consensus on Definitions and Standard, in Monterey, California USA.
- October 25-28, 2016, hold the Second Symposium :The Marines in National Income Accounts: Definition, Classification and Methodology, in Tianjin China.
- Hold regular academic exchanges and visits with other countries such as U.S.A.、 Canada、 Australia、 Malaysia and so on.



The Oceans in National Income Accounts: Definition, Classification and Methodology  
25 Oct 2016 TianJin, China



## ➤ Cooperation proposal in the future

- Introduce Non-market value into GOP Accounting in the governmental statistic.
- Seeking joint effort to study Blue Economy in concept, classification and methodology.
- Promote studies and cooperation on international standard for blue economy
- Combining the Belt and Road Initiative, carry out data exchange and sharing with countries along the Belt and Road, establish the Blue Economy database to improve the development level of Blue Economy all over the world.

# Thanks !

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