



**YSLME**

UNDP/GEF Yellow Sea  
Large Marine Ecosystem

**3<sup>rd</sup>** Interim Commission  
Council Meeting

12-14 MARCH 2019 • QINGDAO, PR CHINA

## **Interim Review Report**

# **on Progress of Implementation of National Strategic Action Programme of China for YSLME**

**RWG-Governance of PR China**



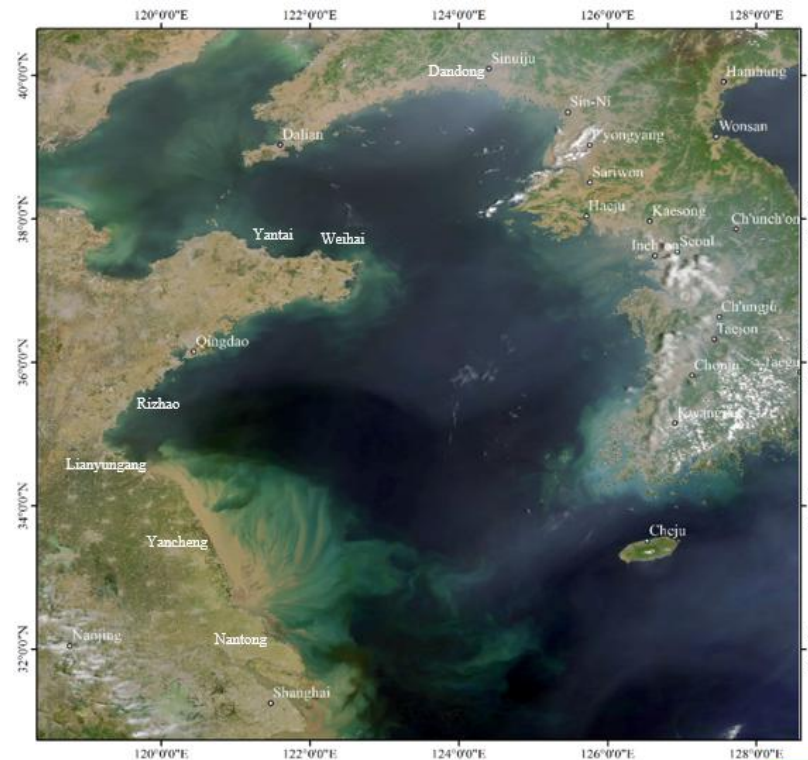
# Restoring Ecosystem Goods and Services and Consolidation of a Long-term Regional Environmental Governance Framework

## Main content

- ◆ Progress of Implementation of NSAP
- ◆ Legal and regulatory framework for conservation of marine environment and living resources

## In YSLME region

- **Population:** In 2016, the total population of YS coastal provinces was about 218 million, accounting for 15.8% of the total population of China.
- **Major Cities:** 9 major coastal cities of Yellow Sea from north to south are **Dandong, Dalian, Yantai, Weihai, Qingdao, Rizhao, Lianyungang, Yancheng and Nantong.**
- **GDP:** GDP of the three coastal provinces was 16.5 trillion yuan, which was about 22% of the whole country in 2016.



# SAP Targets

- **Tasks Assignments of Working Groups**

Target 1: 25-30% reduction in fishing effort (**Fishery**) (**YSFRI**)

Target 2: Rebuilding of over-exploited marine living resources (**Fishery**) (**YSFRI**)

Target 3: Improvement of mariculture techniques to reduce environmental stress (**Mariculture**) (**YSFRI**)

Target 4: Meeting international requirements on contaminants (**Pollution**) (**NMEMC**)

Target 5: Reduction of total loading of nutrients from 2006 levels (**Pollution**) (**NMEMC**)

Target 6: Reduced standing stock of marine litter from current level (**Pollution**) (**NMEMC**)

Target 7: Reduce contaminants, particularly in bathing beaches and other marine recreational waters, to nationally acceptable levels (**Pollution**) (**NMEMC**)

Target 8: Better understanding and prediction of ecosystem changes for adaptive management (**Ecosystem**) (**FIO**)

Target 9: Maintenance and improvement of current populations/distributions and genetic diversity of the living organisms including endangered and endemic species (**Ecosystem**) (**FIO + YSFRI**)

Target 10: Maintenance of habitats according to standards and regulations of 2007 (**Ecosystem**) (**FIO**)

Target 11: Reduction of the risk of introduced species (**Ecosystem**) (**FIO**)

## Target 1: 25%-30% reduction in fishing effort

- Action 1-1: Control fishing boat numbers**

- In 2003, “the control system of marine fishing vessels during 2003-2010” was issued, which was an effective measure to relieve the decline of fishery resources in China (a total of 30, 000 fishing vessels was reduced).
- In the 13th five-year plan, the fishing vessel buy-back programme is continued, 20, 000 fishing vessels will be reduced. The reducing fishing vessels in each province per year is not lower than 10% of total reducing fishing vessels.

**Table 2.1 Control large and middle size fishing vessels in 2020\***

Provinces <sup>Ⓐ</sup>	2015 <sup>Ⓐ</sup>		2020 <sup>Ⓐ</sup>	
	Fishing vessels (number) <sup>Ⓐ</sup>	Fishing vessels(kW) <sup>Ⓐ</sup>	Fishing vessels (number) <sup>Ⓐ</sup>	Fishing vessels(kW) <sup>Ⓐ</sup>
Liaoning <sup>Ⓐ</sup>	7084 <sup>Ⓐ</sup>	703520 <sup>Ⓐ</sup>	6177 <sup>Ⓐ</sup>	614660 <sup>Ⓐ</sup>
Shandong <sup>Ⓐ</sup>	10355 <sup>Ⓐ</sup>	1292888 <sup>Ⓐ</sup>	8976 <sup>Ⓐ</sup>	1129267 <sup>Ⓐ</sup>
Jiangsu <sup>Ⓐ</sup>	4274 <sup>Ⓐ</sup>	550932 <sup>Ⓐ</sup>	3644 <sup>Ⓐ</sup>	480192 <sup>Ⓐ</sup>

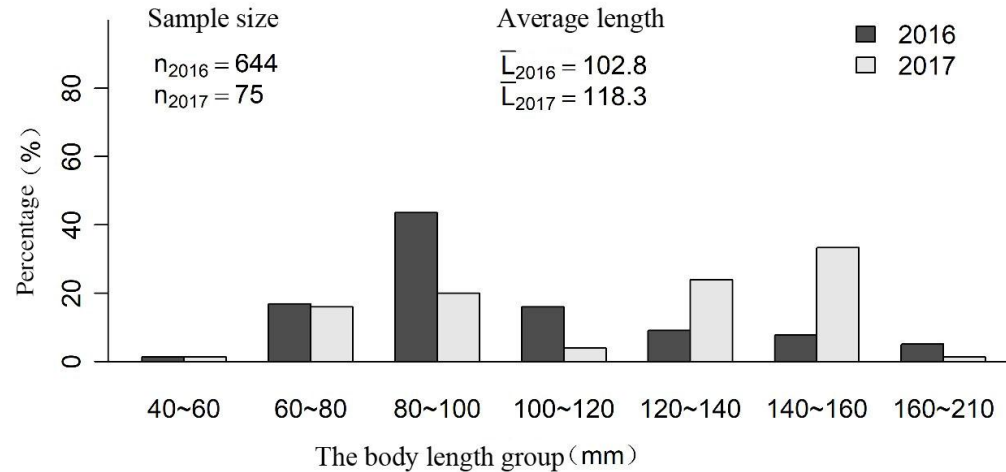
\* not include distant water fishing vessels.

- **Action 1-2: Stop fishing in certain areas /seasons**
- Summer fishing ban is a set of important measures to protect fishery resources.
- Summer fishing ban was enforced from June 1 to Sept 1 (3 months) during 2009~2016.
- Since 2017, the summer fishing ban has extended to 4 months, from May 1 to Sept 1, which is called “**the strictest in history**”.

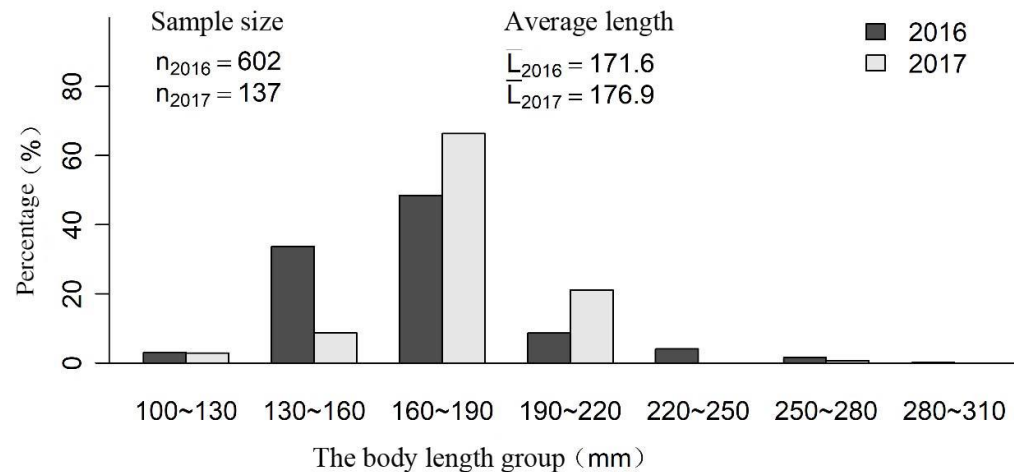


The average body length of commercial species (small yellow croaker and largehead hairtail) increased.

Body length distribution of small yellow croaker

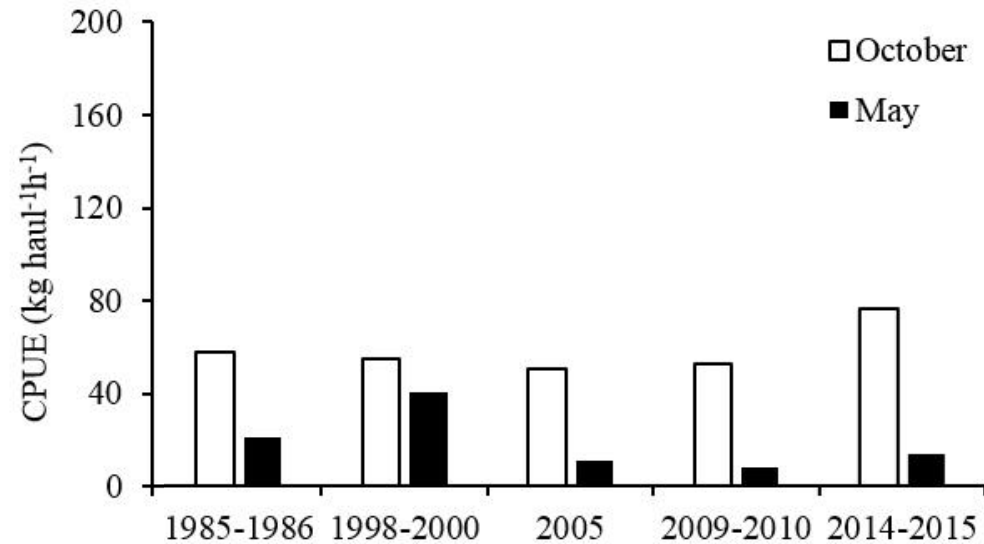
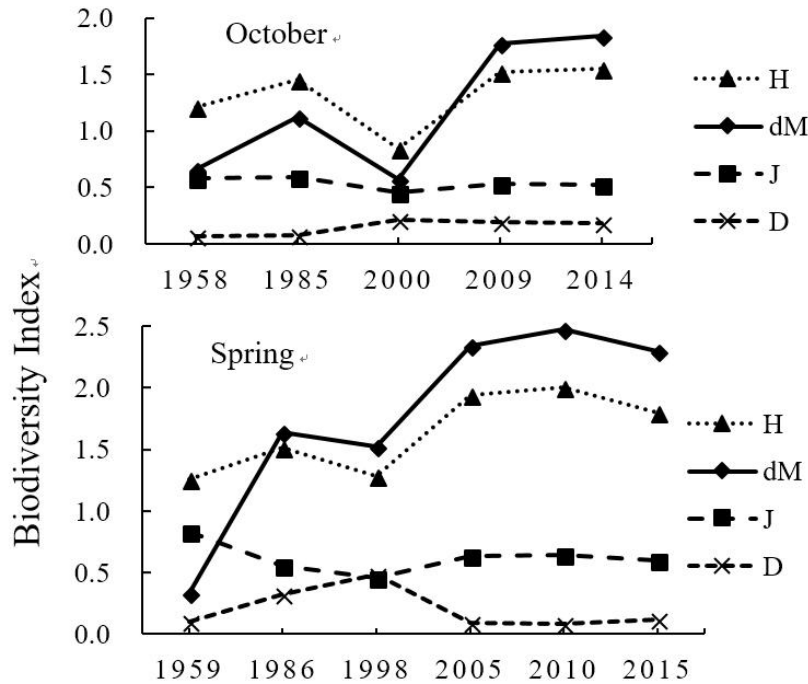


Body length distribution of largehead hairtail



**Action 1-3: Monitor and assess stock fluctuations**

- The biodiversity and biomass of fishery resources was relatively stable in the past 30 years.



Long-term CPUE changes of fishery resources in the YS

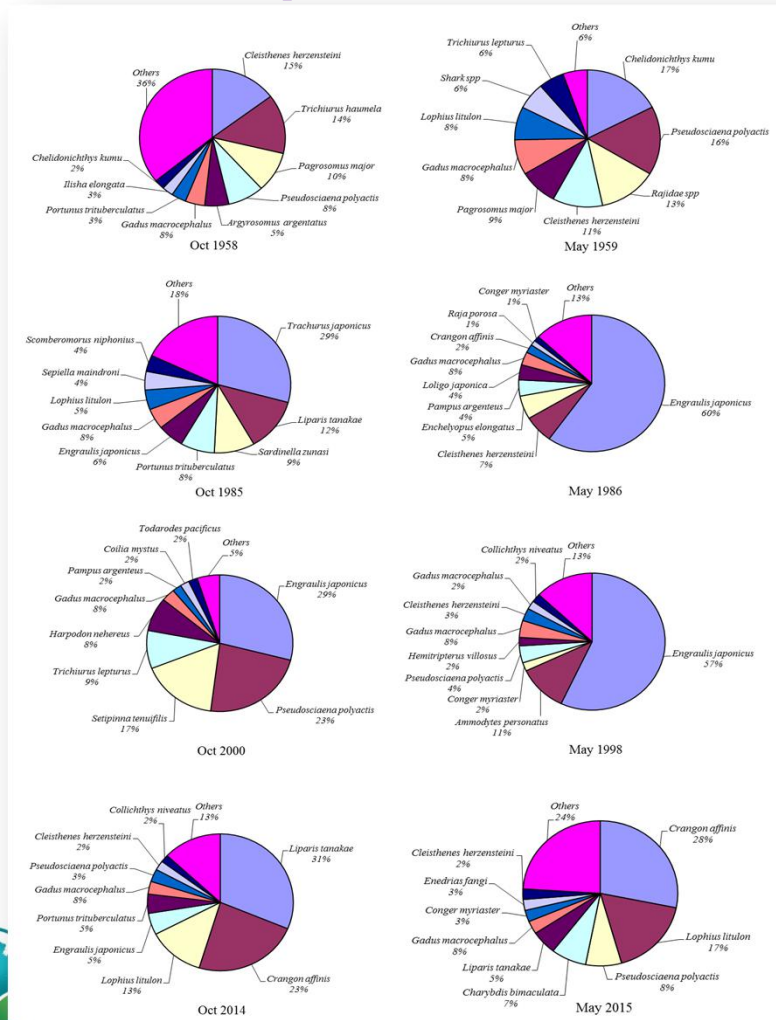
**biomass**

**biodiversity index**



# Action 1-3: Monitor and assess stock fluctuations

## Long-term changes of fishery species composition in the YS



### Dominant species changed.

- There were **two different types of species shift**. One is from demersal, high valued species to pelagic, low valued species during 1958 to 2000, and the other one is from pelagic, low valued species to demersal, low valued species during 1998 to 2015.



## Target 1: 25%-30% reduction in fishing effort

Indicators	Progress
<b>Control fishing boat numbers</b>	<ul style="list-style-type: none"> <li>✓ A total of 30,000 fishing vessels had been reduced during 2003-2010;</li> <li>✓ 20,000 fishing vessels will be further reduced during the 13<sup>th</sup> five-year plan;</li> <li>✓ The fuel subsidies have been greatly reduced since 2015 and will be just 40% of that of 2014 in 2019, which indirectly reduce the fishing vessels;</li> <li>✓ Strengthening alternative job markets, training, and financial support for retiring fishermen;</li> </ul>
<b>Stop fishing in certain areas/seasons</b>	<ul style="list-style-type: none"> <li>✓ The summer fishing ban has extended to 4-4.5 months since 2017; ( 4 months to the north of 35°N, and 4.5 months to the south of 35°N)</li> <li>✓ Strengthening of fishing vessels management and monitoring by AIS and radar;</li> </ul>
<b>Monitor and assess stock fluctuations</b>	<ul style="list-style-type: none"> <li>✓ Kickoff the annual survey of fishery resources in China coastal waters during 2014-2019, as well as the survey of spawning ground distribution;</li> <li>✓ Make the plan on annual survey of fish stock;</li> </ul>

## Target 2: Rebuilding of over-exploited marine living resources

- Action 2-1: Increase mesh size**

Ministry of Agriculture and Rural Affairs announced the limit of **catchable size of 15 commercial fishery species** and the limit of their juveniles and young fish proportion in the total catch in 2018.

The catchable mesh size (mm) of 15 commercial fishery species in China coastal waters\*

Species	Bohai Sea, Yellow Sea, East China Sea	South China Sea
Largehead hairtail	Anal length $\geq$ 210	Anal length $\geq$ 230
Small yellow croaker	Body length $\geq$ 150	/
Silver pomfret	Fork length $\geq$ 150	Fork length $\geq$ 150
Chub mackerel	Fork length $\geq$ 220	Fork length $\geq$ 220
Japanese butterfish	Fork length $\geq$ 130	Fork length $\geq$ 130
Spanish mackerel	Fork length $\geq$ 380	/
<i>Decapterus maruadsi</i>	Fork length $\geq$ 150	Fork length $\geq$ 150
Silver butter-fish	Fork length $\geq$ 180	Fork length $\geq$ 180
White croaker	Body length $\geq$ 150	Body length $\geq$ 150
<i>Parargyrops edita</i>	Body length $\geq$ 100	Body length $\geq$ 100
<i>Thamnaconus septentrionalis</i>	Body length $\geq$ 160	Body length $\geq$ 160
<i>Thamnaconus hypargyreus</i>	Body length $\geq$ 100	Body length $\geq$ 100
<i>Priacanthus macracanthus</i>	Body length $\geq$ 160	Body length $\geq$ 160
<i>Taius tumifrons</i>	Body length $\geq$ 130	Body length $\geq$ 130
<i>Trachurus japonicus</i>	Fork length $\geq$ 150	Fork length $\geq$ 150
The method of measurement is according to the standard of 14.3.4.1.1 in GB/T12763.602007		

- **Action 2-2: Enhance stocks**

- Since “The Action Outline of Aquatic Living Resources Conservation in China” issued in 2006, more than 100 species (including freshwater species, endangered species, etc.) have been released every year.
- The conservation measures, such as artificial reef and marine ranching have been developed as well.



- **Action 2-3: Improve fisheries management**

The input control and output control are the main part of China fishery management system.

**Table 2.3 The main fishery management measures in China**

<b>Management measures</b>	<b>Year of issue</b>
Summer fishing ban 2 or 3 months closed fishing were issued from 1995 in Bohai Sea, YS and East China Sea; and from 1998 in South China Sea; 4-4.5 months since 2017	Since 1950's in limited areas; Trawling was banned from 1988 in whole Bohai Sea; Summer ban fishing, 1995
Fishery genetic resource protection area	2007
The “zero-growth” policy	1999
The fishing license	1979
Limits of catchable size and the proportion of juveniles in the catch	2000
Environmental fee for stock protection and enhancement activities	2000
Control fishing capacity	1987
The fishing vessel buy-back program	At the beginning of 2003, 30000 fishing boats (~2010), 20000 fishing boats (~2020)
Reduce fuel subsidies	2015, reduce by 60% of 2014 during 2015-2019

- **Action 2-3: Improve fisheries management**

- **TAC management**

- Total allowable catch (TAC) management conducted since 2017.
- The total catch in China coastal waters will be no more than 10 million tons in 2020, the proportion of reducing catch in each province is not lower than 23.6% of that in 2015.

**Control fishing production in 2020 in provinces along YS waters\* (tons)**

<b>Provinces</b>	<b>2015</b>	<b>2020</b>
Liaoning	1107857	846514
Shandong	2282340	1743937
Jiangsu	554314	423552

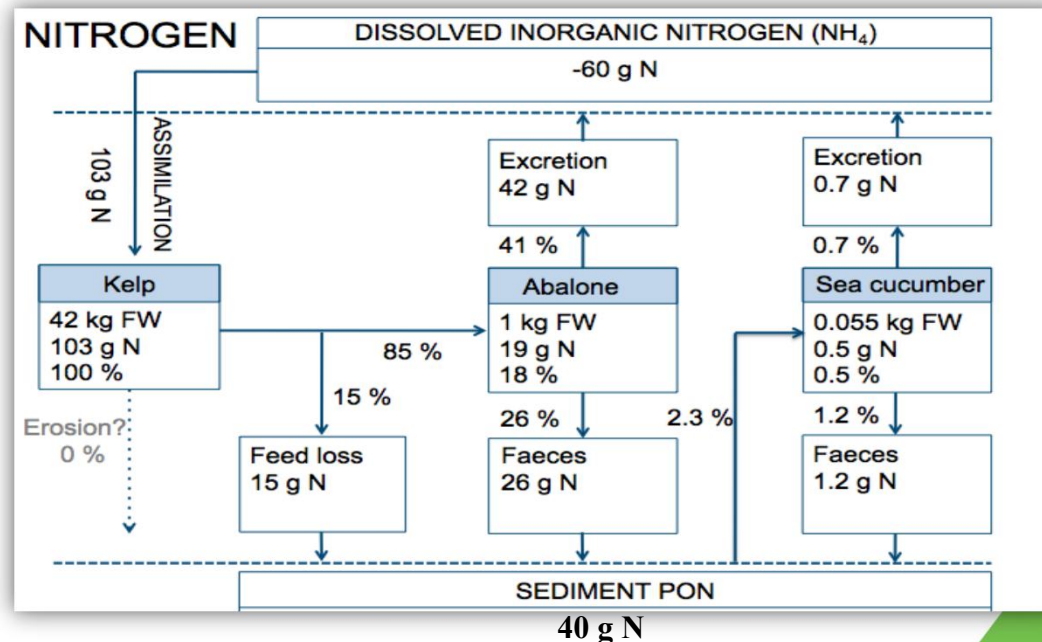
## Target 2: Rebuilding of over-exploited marine living resources

Indicator	Progress
<b>Increase mesh size</b>	<ul style="list-style-type: none"> <li>✓ Conduct the catchable size of 15 fishery species in China coastal waters since 2018;</li> <li>✓ Limit the juveniles and young fish proportion of 15 fishery species in the catch during 2018-2020;</li> </ul>
<b>Enhance stocks</b>	<ul style="list-style-type: none"> <li>✓ The releasing aquatic species is more than 100 species;</li> <li>✓ The releasing scale greatly increased, as well as the investment and personal;</li> <li>✓ The more focus on stock enhancement is the releasing effects evaluation, including the ecological and genetic risk;</li> </ul>
<b>Improve fisheries management</b>	<ul style="list-style-type: none"> <li>✓ Reduce the fuel subsidies since 2015;</li> <li>✓ Reduce the total catch since 2017;</li> <li>✓ Conduct the quota management of swimming crab and jellyfish since 2017, and expand to 5 provinces (Liaoning, Shandong, Zhejiang, Fujian and Guangdong provinces) in 2018;</li> <li>✓ Extend the summer fishing ban since 2017;</li> <li>✓ Strengthen fishery law enforcement during summer fishing ban, combined with China Coast Guard;</li> </ul>

## Target 3: Improvement of mariculture techniques to reduce environmental stress

- The indicators are developing environment-friendly and higher efficiently IMTA models and technologies to reduce environmental stress.
- In the shellfish-seaweed IMTA model, the kelp could not only produce large amounts of oxygen, but also remove carbon, nitrogen and phosphorus.

The nitrogen budget in the abalone-kelp-sea cucumber model



18% N was transferred into abalone.



## Target 3: Improvement of mariculture techniques to reduce environmental stress

Evaluation of effects of different aquaculture models on regulating climate change

model <sup>↵</sup>	Carbon Sink <sup>↵</sup> (kg/ha/a) <sup>↵</sup>	Released CO <sub>2</sub> <sup>↵</sup> (kg/ha/a) <sup>↵</sup>	Value (Y/ha/a) <sup>↵</sup>				
			Benefit <sup>↵</sup>		Lost <sup>↵</sup>		Total value <sup>↵</sup>
			Reforested cost <sup>↵</sup>	Carbon tax <sup>↵</sup>	Reforested cost <sup>↵</sup>	Carbon tax <sup>↵</sup>	Average value <sup>↵</sup>
Kelp <sup>↵</sup>	8424.00 <sup>↵</sup>	0 <sup>↵</sup>	2197.82 <sup>↵</sup>	9232.70 <sup>↵</sup>	0 <sup>↵</sup>	0 <sup>↵</sup>	5715.26 <sup>↵</sup>
Scallop <sup>↵</sup>	1741.17 <sup>↵</sup>	22.3460 <sup>↵</sup>	454.27 <sup>↵</sup>	1908.32 <sup>↵</sup>	5.83 <sup>↵</sup>	24.49 <sup>↵</sup>	1166.14 <sup>↵</sup>
Kelp + Abalone IMTA <sup>↵</sup>	23638.85 <sup>↵</sup>	32.0394 <sup>↵</sup>	6167.38 <sup>↵</sup>	25908.18 <sup>↵</sup>	12.37 <sup>↵</sup>	51.95 <sup>↵</sup>	16005.62 <sup>↵</sup>
Kelp + Abalone +Sea cucumber IMTA <sup>↵</sup>	24054.75 <sup>↵</sup>	31.02 <sup>↵</sup>	6275.88 <sup>↵</sup>	26364.01 <sup>↵</sup>	8.0934 <sup>↵</sup>	34.00 <sup>↵</sup>	16298.54 <sup>↵</sup>

- Now the developed IMTA models mainly include: shellfish-seaweeds, abalone-kelp-sea cucumber model, fish-shellfish-kelp model, abalone-sea cucumber-clam-sea grass integrated model, etc. Most of them have been successfully demonstrated in Sanggou Bay.



## Target 3: Improvement of mariculture techniques to reduce environmental stress

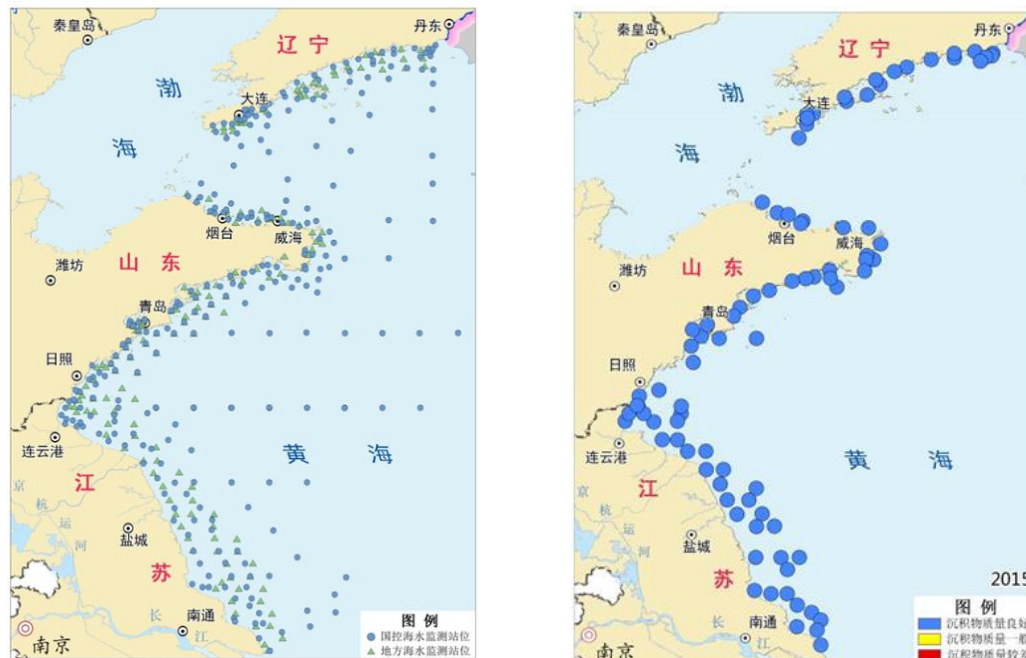
Indicator	Progress
Reduced environmental stress as a result of the widespread adoption of environment-friendly and sustainable mariculture techniques.	Inshore IMTA is demonstrated in YS region, but land-based IMTA is just at primary stage.

## Target 4: Meeting international requirements on contaminants

### Action 4-1: Conduct intensive monitoring and assessment

#### 1) Monitoring network

- China has established a comprehensive marine monitoring network to conduct marine environmental monitoring.



Monitoring Sites in Yellow Sea

## Action 4-1: Conduct intensive monitoring and assessment

### 2) Assessment – Improved Seawater quality

The area of polluted seawater decreased after 2012.



Areas of worse than Category IV sea water quality in summer (2001-2016)

- **Action 4-1: Conduct intensive monitoring and assessment**

### 3) Information Dissemination

#### Bulletin of Marine Environmental Quality of China:

<p>2014年 中国海洋环境状况公报</p> <p>国家海洋局 二〇一五年三月</p>	<p>2013年 中国海洋环境状况公报</p> <p>国家海洋局 二〇一四年三月</p>	<p>2012年 中国海洋环境状况公报</p> <p>国家海洋局 二〇一三年三月</p>	<p>2011年 中国海洋环境状况公报</p> <p>国家海洋局 二〇一二年六月</p>	<p>2010年 中国海洋环境状况公报</p> <p>国家海洋局 二〇一一年五月</p>	<p>2009年 中国海洋环境质量公报</p> <p>国家海洋局 二〇一〇年三月</p>
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<p>2013年 辽宁省海洋环境状况公报</p> <p>辽宁省海洋与渔业厅 二〇一四年四月</p>	<p>2016年 江苏省海洋环境质量公报</p> <p>江苏省海洋与渔业局 二〇一六年一月</p>	<p>2017年 山东省海洋环境状况公报</p> <p>山东省海洋与渔业厅 二〇一八年四月</p>
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- **Action 4-2: Control contaminants discharge with reference to Codex alimentarius and Stockholm Convention**

### 1) Control contaminants discharge

- 64 environmental protection standards related to water pollutant have been issued (COD, ammonia nitrogen, heavy metals) .
- In addition, 25 industries pollutant emission standards are releasing and revising (textile, synthetic ammonia, citric acid, iron and steel).

- **Action 4-2: Control contaminants discharge with reference to Codex alimentarius and Stockholm Convention**

## 2) Codex alimentarius and Stockholm Convention

- China joined the Codex Alimentarius Commission (CAC) in 1984 and established the CCAC (Chinese codex alimentarius commission) in 1986.
- In 2015, “Action Plan for the zero-growth of pesticide use by 2020” was formulated, which emphasizes control on agricultural non-point source pollution.

The 50th session of the Codex Committee on Pesticide Residues, China Haikou



- **Action 4-3: Implementing MARPOL 1973/78 effectively**
  - China has conducted actively management about ship-source pollution and enhanced the prevention and control of pollution in port and offshore platform.
  - “Regulations on the prevention of Marine pollution from ship of China” plays an important role in preventing marine pollution and protecting marine ecosystem.
  - There are two specific technical standards.
    - **“Concentration limits of pollutant discharge by offshore oil exploration and development (GB4914-2008)”**
    - **“Emission standards of water pollutants discharge by ships (GB3552- 2018)”**



## Target 4 Meeting international requirement on contaminants

Indicator	Progress
<b>Well-operated regional monitoring network</b>	National level: YES Regional level: NO
<b>Provision of access to reliable monitoring information on environmental quality for state governance bodies and the public</b>	YES. Both national and local level
<b>Control contaminants discharge with reference to Codex alimentarius and Stockholm Convention</b>	YES. Including environmental protection standards and regulations

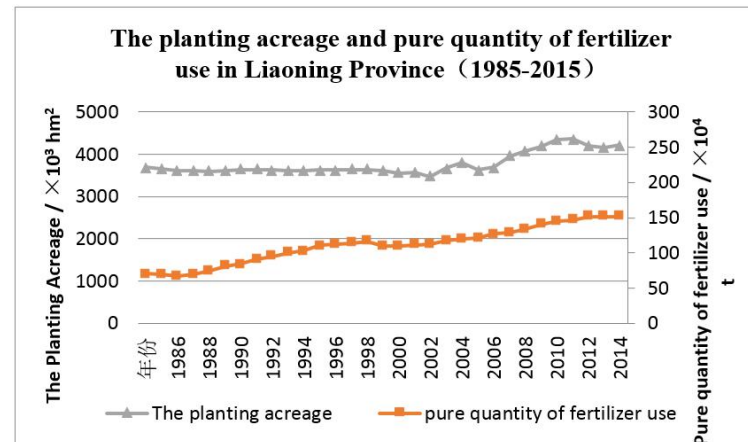
## Target 5: Reduction of total loading of nutrients from 2006 levels

- **Action 5-1: Control total loading from point sources**
- The total loading from point sources has been controlled strictly in recent decades. Local governments around YS have done a lot of work, however, under pressure of massive urbanization and industrialization, the actual effectiveness maybe not very significant from 2010 to 2016.

## Action 5-2: Control total loading from non-point sources and sea-based sources

- Control Fertilizer usage

“Action Plan for the zero-growth of fertilizer use by 2020” was issued in 2015 to strictly control the use of chemical fertilizers.



The planting acreage and fertilizer use in Liaoning Province

- Atmospheric deposition monitoring

There are 3 marine atmosphere monitoring stations in the Yellow Sea.

(Qianliyan island station, XiaomaiDao island station, Lianyungang station )

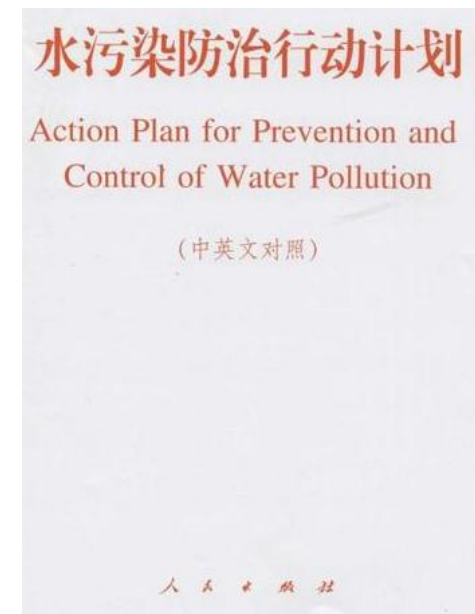
Monitoring content: **dry deposition** and **wet deposition**

Monitoring indicators: **heavy metals, nutrients and organic pollutants.**

## Action 5-3: Apply new approaches for nutrient treatment

- In 2015, China issued “Action Plan for Prevention and Control of Water Pollution”, which strengthens control of urban domestic pollution. To accelerate construction and alteration of urban sewage treatment.

- I. Overall Control of Pollutant Discharge
- II. Promotion of transformation and updating of economic structure
- III. Focus on water resources saving and conservation
- IV. Strengthening of Sci-Tech Support
- V. Give full play to the function of market mechanism
- VI. Tightening of environmental law enforcement and supervision
- VII. Effective Strengthening of water environmental management
- VIII. Full Guarantee of Water Ecological Environment Safety
- IX. Defining and Fulfilling the Responsibilities of Each Party
- X. Strengthening of Public participation and Social Supervision



## Target 5 Reduction of total loading of nutrients from 2006 levels

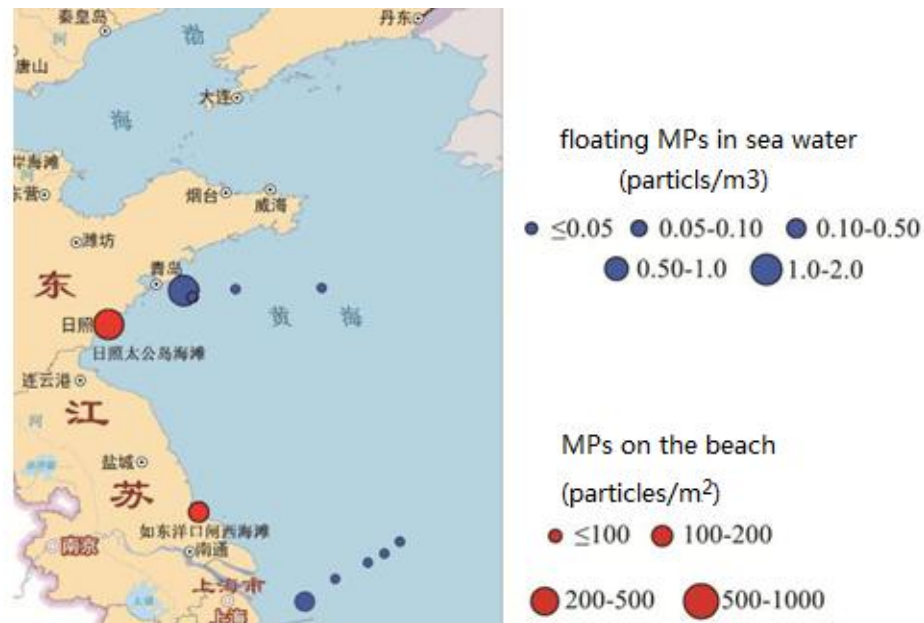
Indicator	Progress
<b>Significant reduction of total loading of pollutants</b>	Input from land-based sources of pollutants still remains a very serious threat to marine environment
<b>Significant improvement of seawater quality with reduction of human health risk</b>	Partly, Seawater quality is not stable, but compared with 2012, there is a good trend.  No data is available on the human health risk.

## Target 6: Reduced standing stock of marine litter from current level

- Control source of litters and solid wastes**

Since 2016, SOA has launched a pilot monitoring program of marine microplastics.

In May 2017, the first marine microplastics survey was conducted in the Yellow Sea.

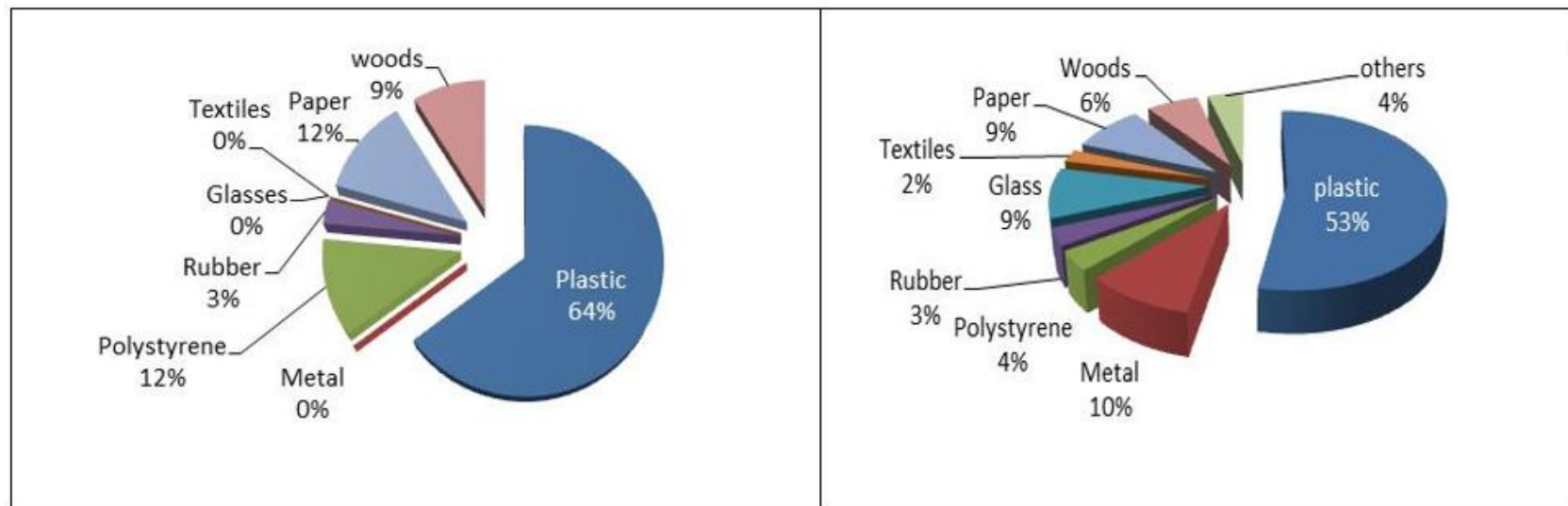


Floating and beach microplastics distribution in Yellow Sea

## Target 6: Reduced standing stock of marine litter from current level

- Control source of litters and solid wastes**

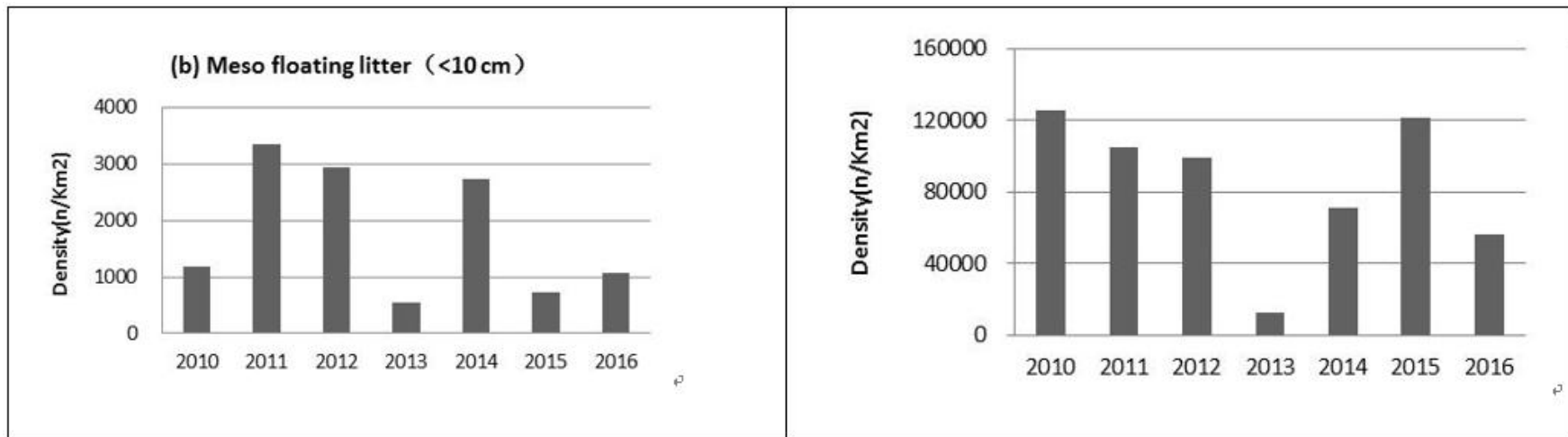
The main types of floating litter along the coast of Yellow Sea of China were plastic, of which accounted for 64% of the total amount of collected litter.



**Main types of marine litters along the coast of Yellow Sea**  
(Left: floating litter; Right: Beach litter)

## Target 6: Reduced standing stock of marine litter from current level

In recent years, the overall density of marine garbage has fluctuated. In 2016, the overall densities of floating, beach and marine litters were lower than in previous years.



**Marine Litters in Yellow Sea in 2010 to 2016**  
(Left: floating litter; Right: Beach litter)



## Target 6: Reduced standing stock of marine litter from current level

Indicator	Progress
<b>Regional guidelines for marine litter monitoring and assessment</b>	Marine Litter: YES Microplastics: On going.
<b>Establishment of operational mechanism for beach cleaning</b>	YES, need to be more efficient (Weihai established a long-term operational mechanism).
<b>Increase public awareness of marine litter</b>	Clean beach activities, propaganda and Education activities were carried every year.(World Oceans Day, International Coastal Cleanup Day and China Ocean Day, etc.).

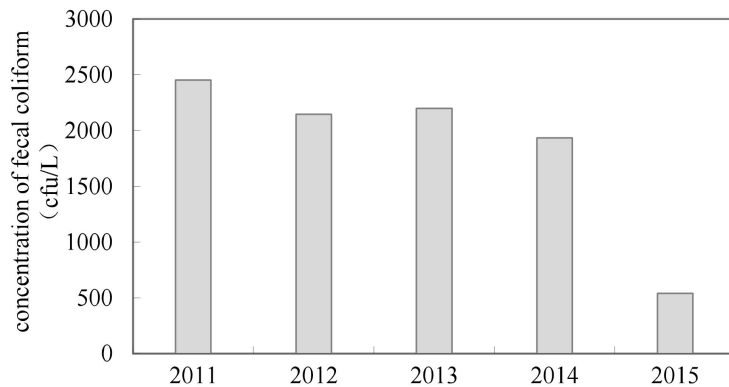
## Target 7: Reduce contaminants, particularly in bathing beaches and other marine recreational waters, to nationally acceptable levels

- Regular monitoring and assessment of bathing beaches and other recreational waters have been conducted since 2002.
- At present, 6 bathing beaches and 5 coastal resorts have been monitored around the Yellow Sea.



# Target 7: Reduce contaminants, particularly in bathing beaches and other marine recreational waters, to nationally acceptable levels

Monitoring information is released to the public in a timely manner.



Annual average of the fecal coliform group in WIBB (2011~2015)



Annual average of the fecal coliform group in LLBB (2011~2015)

## Target 7: Reduce contaminants, particularly in bathing beaches and other marine recreational waters, to nationally acceptable levels

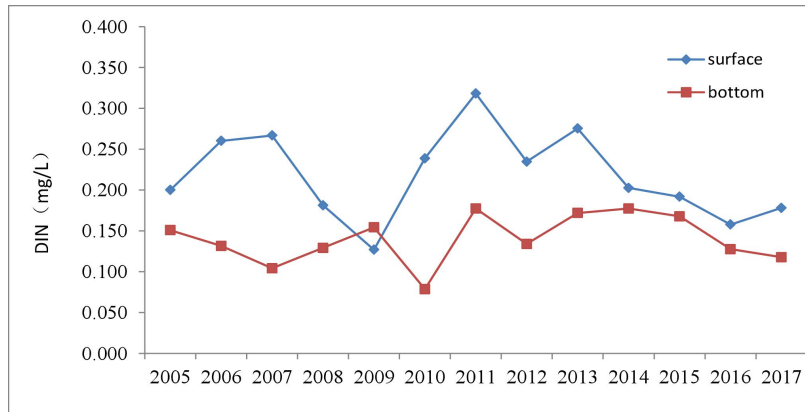
Indicator	Progress
<b>Published educational information package</b>	Data is limited
<b>Improved legislation on waste and litter management</b>	Partly, not enough for litter management No legislation on marine litter

# Target 8 Better understanding and prediction of ecosystem changes for adaptive management

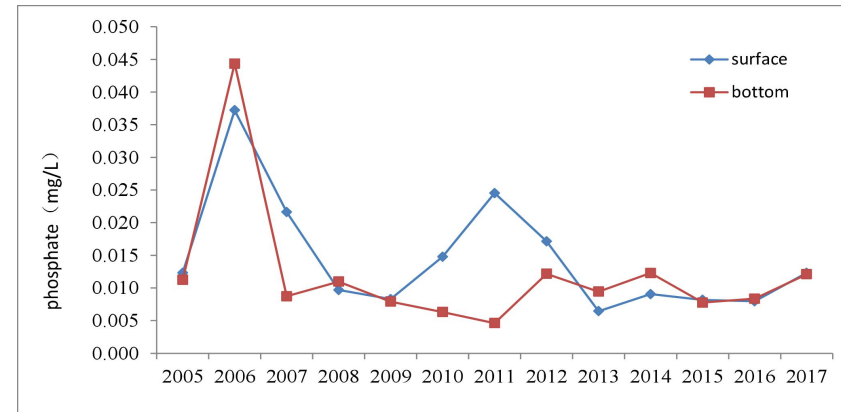
Each year, continuous monitorings of marine environment and ecological status and trend were conducted across the country.

## Trends of nutrients:

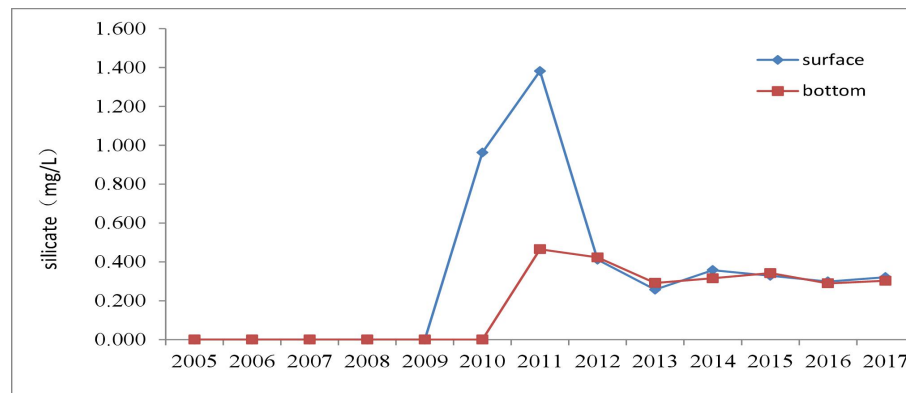
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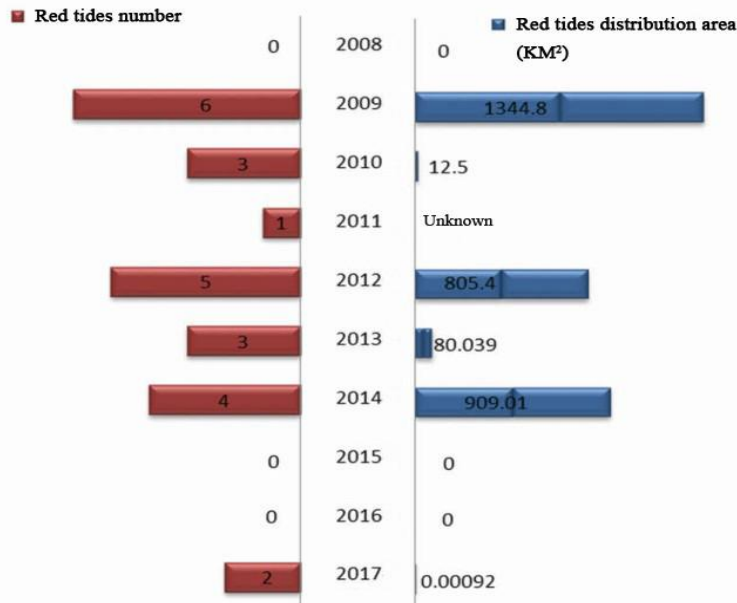
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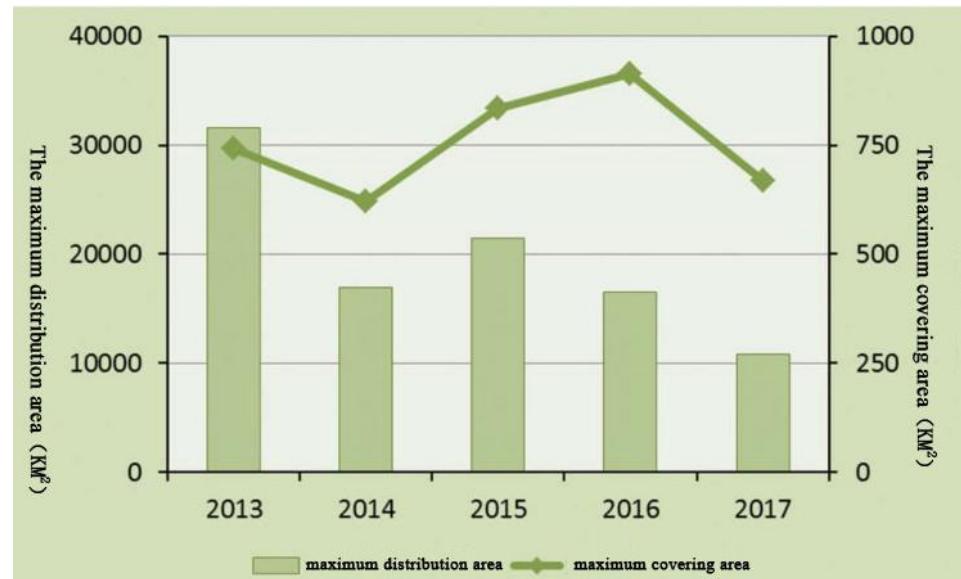
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# HAB and drifting macroalgae blooms



2008-2017 Shandong Province red tide number and distribution area.

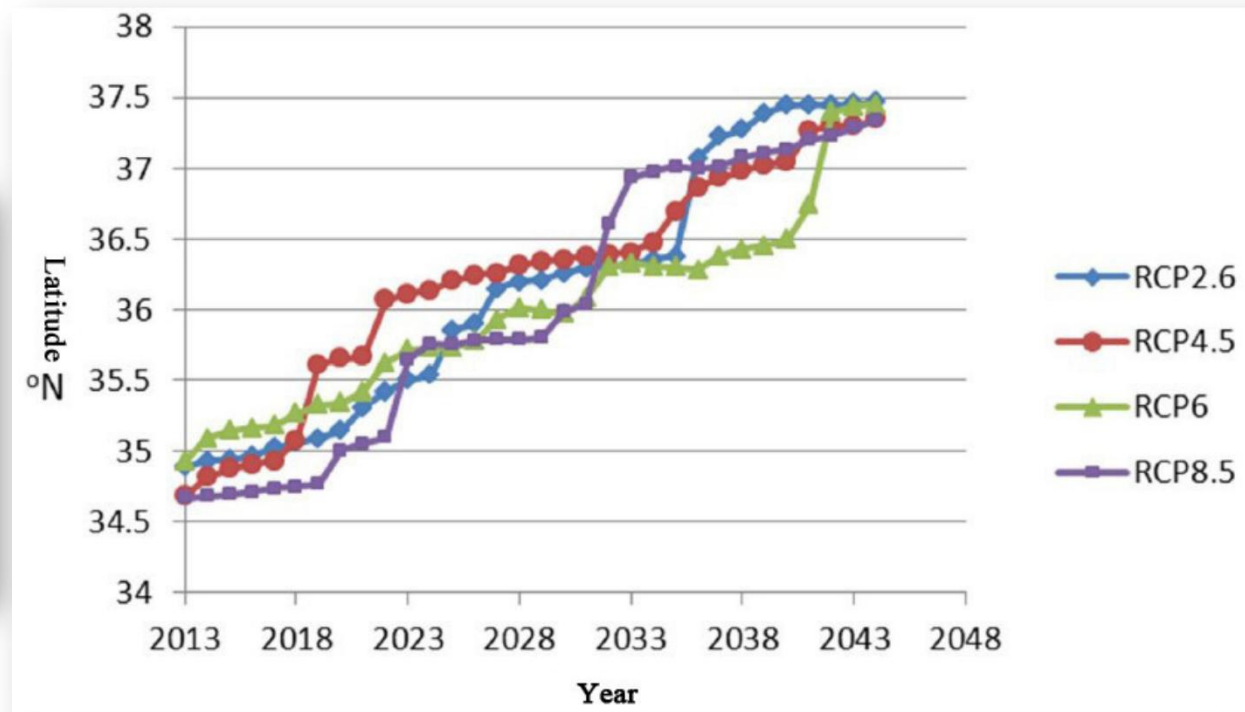


The maximum distribution area and maximum covering area of green tide from 2013 to 2017 in Shandong Province.

# Distributions of key species under climate change



*Engraulis japonicas*



## **Adaptive management regarding the climate change**

- Work Plan for Controlling Greenhouse Gas Emissions
- National Strategy for adapting Climate Change
- China's policies and actions for addressing climate change

**China's Policies and Actions for  
Addressing Climate Change  
(2017)**

National Development and Reform Commission

P.R. China

October 2017



## Target 8 Better understanding and prediction of ecosystem changes for adaptive management

Indicator	Progress
<b>Monitoring of nutrients, HAB and drifting macroalgae blooms, jellyfish bloom</b>	<b>YES.</b> An comprehensive marine environment and ecological monitoring network has been established .
<b>Effect of climate change on ecosystem</b>	<b>YES.</b> Distributions of species under climate change
<b>Development of adaptive management strategies and policy regarding the climate change</b>	<b>YES.</b> China’s police and actions for addressing climate change, etc.

# Target 9-11: Habitat and species

**Marine Eco-Redline: 21% of YS areas are designated as redline zones**

- ✓ wetlands
- ✓ Major Estuaries and Islands
- ✓ Sandy Coastlines
- ✓ Important fishery waters
- ...

Yellow Sea eco-redline designation in 3 Provinces

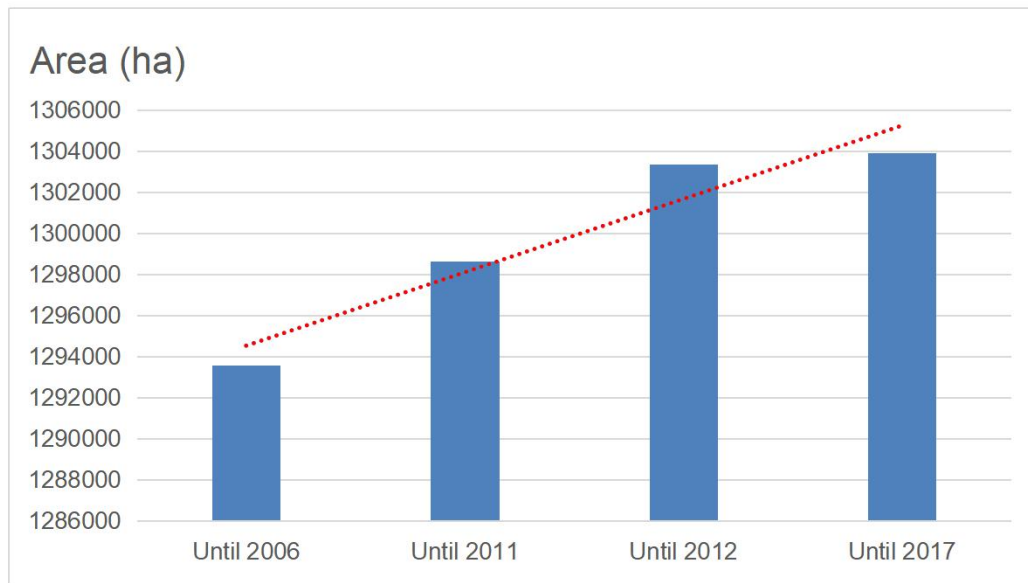
Province	Number	Area (km <sup>2</sup> )	% of YS area in that Province
Liaoning	52	6796.90	25.4
Shandong	151	3134.84	10.1
Jiangsu	73	9676.07	27.8
<b>TOTAL</b>	<b>276</b>	<b>19607.81</b>	<b>21.2</b>



# Target 9-11: Habitat and species

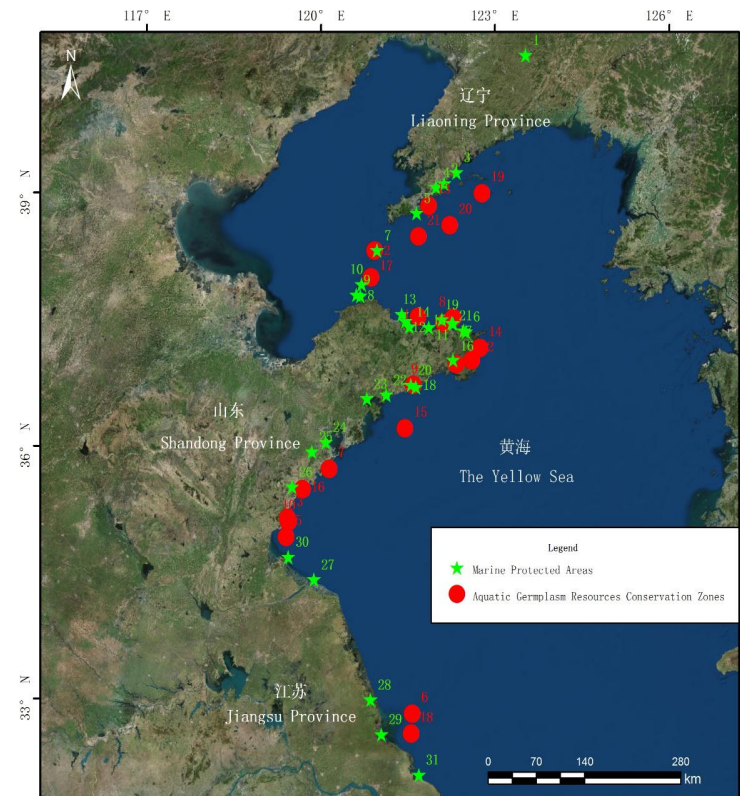
## MPAs

- More MPAs have been designated, which indicating more rare species are being protected



The increase in area of rare marine species protection MPA after 2006

National MPA and Aquatic Germplasm Resources Conservation Zones



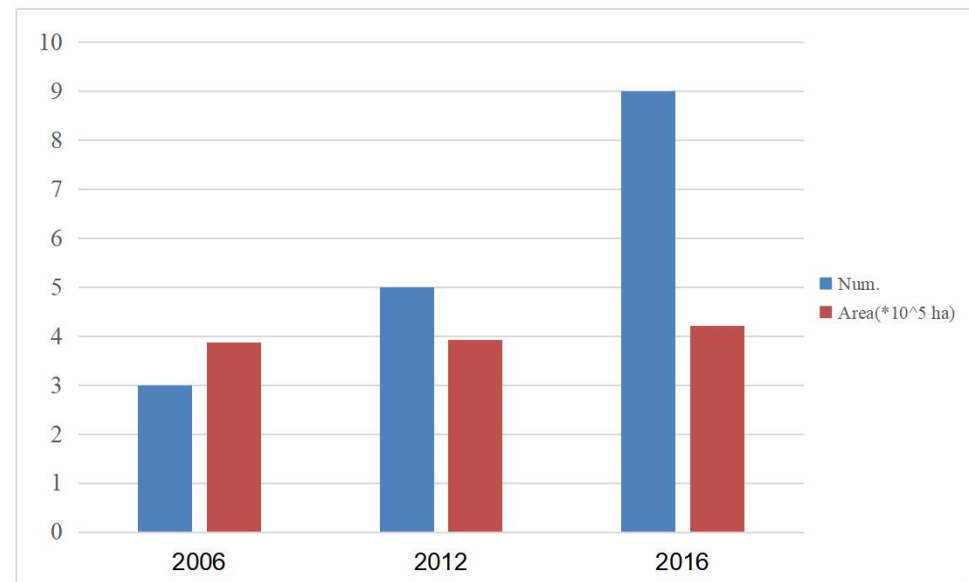
## Target 9-11: Habitat and species

### Coastal wetlands

The coastal wetland protection area is growing continuously.

The coastal wetland information in 3 provinces

Province	Area(million ha)	% of total wetland
Jiangsu	2.82	5.28
Shandong	1.74	3.25
Liaoning	1.39	2.61
total	5.95	11.15



### Two International important wetlands

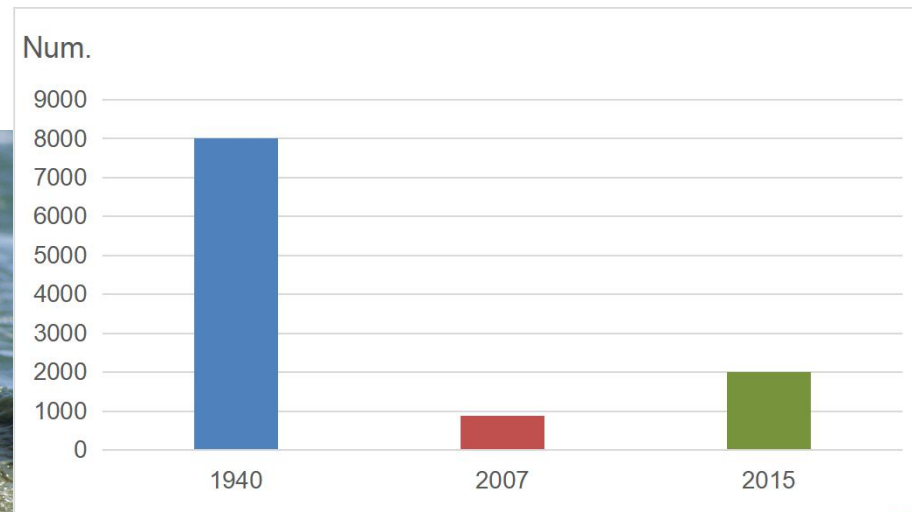
- ✓ The National Nature Reserve for Rare Birds in Yancheng, Jiangsu;
- ✓ National Nature Reserve for David's Deer in Dafeng, Jiangsu.

## Target 9-11: Habitat and species

### Endangered and threatened species

The recovery of spotted seal population is effective. In 2015, the population of spotted seal rise to 2000.

#### Spotted seal

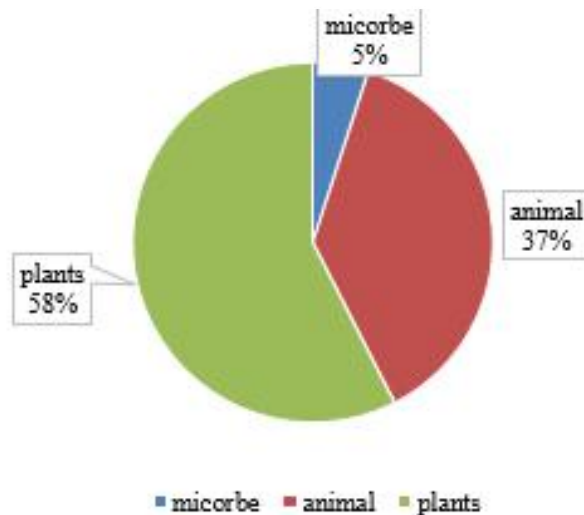


The long term change in population of spotted seal in Dalian

## Target 9-11: Habitat and species

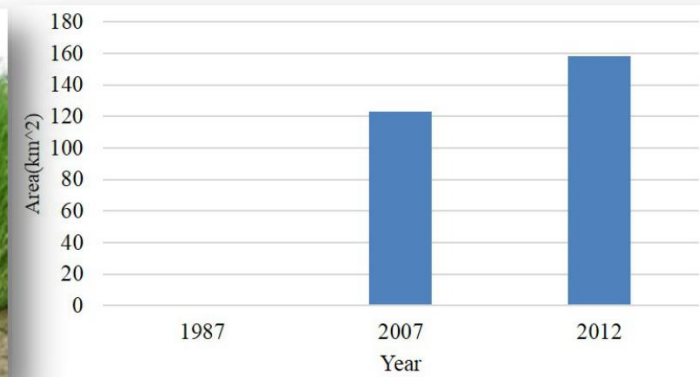
### Invasive Alien Species

- There were about 120 marine invasive species in YS, 6 were microbes, 45 were animals and 69 were plants.
- The expansion of *S.alterniflora* in Jiangsu province was still increasing.



*S.alterniflora*

The area of *S.alterniflora* in Yancheng, Jiangsu



## Target 9-11: Habitat and species

Indicator	Progress
<b>Maintenance and improvement of current populations and distributions and genetic diversity of the living organisms</b>	<b>YES.</b> Each year, continuous monitoring of marine environment status was conducted in China.
<b>Maintenance of habitats according to standards and regulations of 2007</b>	<b>YES.</b> Chinese government has launched several large-scale ecological rehabilitation and conservation programs.
<b>Reduction of the risk of introduced Species</b>	<b>Ongoing.</b> Some introduced species still have significant impact on wetland ecosystem health.



# Implementation of NSAP Targets

Target	Indicators	Progress
Target 1	Control fishing boat numbers	A total of 30,000 fishing vessels had been reduced during 2003-2010; 20,000 fishing vessels will be further reduced; The fuel subsidies have been greatly reduced since 2015; Strengthening alternative job markets, training, and financial;
	Stop fishing in certain areas/seasons	The summer fishing ban has extended to 4-4.5 months since 2017
	Monitor and assess stock fluctuations	Kickoff the annual survey of fishery resources in China coastal waters during 2014-2019, as well as the survey of spawning ground distribution; Make the plan on annual survey of fish stock;
Target 2	Increase mesh size	Conduct the catchable size of 15 fishery species in China coastal waters since 2018; Limit the juveniles and young fish proportion of 15 fishery species in the catch during 2018-2020;
	Enhance stocks	The releasing aquatic species is more than 100 species; The releasing scale greatly increased, as well as the investment and personal; The more focus on stock enhancement is releasing effects evaluation
	Improve fisheries management	Reduce the fuel subsidies since 2015; Reduce the total catch; Conduct the quota management of swimming crab and jellyfish; Extend the summer fishing ban since 2017; Strengthen fishery law enforcement
Target 3	Integrated multi-trophic aquaculture	Inshore IMTA is demonstrated in YS region, but land-based IMTA is just at primary stage.
Target 4	Well-operated regional monitoring network	National level: YES; Regional level: NO
	Provision of access to reliable monitoring information	YES. Both national and local level
	Control contaminants discharge with reference to Codex alimentarius and Stockholm Convention	YES. Including environmental protection standards and regulations
Target 5	Significant reduction of total loading of pollutants	Input from land-based sources of pollutants still remains a very serious threat to marine environment
	Significant improvement of seawater quality	Partly. Seawater quality is not stable, but compared with 2012, there is a good trend. No data is available on the human health risk.
Target 6	Regional guidelines for marine litter monitoring and assessment	Marine Litter: YES; Microplastics: On going.
	Establishment of operational mechanism for beach cleaning	YES, need to be more efficient (Weihai established a long-term operational mechanism).
	Increase public awareness of marine litter	Clean beach activities, propaganda and Education activities were carried every year (World Oceans Day, International Coastal Cleanup Day and China Ocean Day, etc.).
Target 7	Published educational information package	Data is limited
	Improved legislation on waste and litter management	Partly, not enough for litter management; No legislation on marine litter
Target 8	Monitoring of nutrients, HAB and drifting macroalgae blooms, jellyfish bloom	YES. An comprehensive marine environment and ecological monitoring network has been established .
	Effect of climate change on ecosystem	YES. Distributions of species under climate change
	Development of adaptive management strategies and policy regarding the climate change	YES. China's police and actions for addressing climate change, etc.
Target 9-11	Maintenance and improvement of current populations and distributions and genetic diversity of the living organisms	YES. Each year, continuous monitoring of marine environment status was conducted in China.
	Maintenance of habitats according to standards and regulations of 2007	YES. Chinese government has launched large-scale ecological rehabilitation and conservation programs.
	Reduction of the risk of introduced Species	Ongoing. Some introduced species still have significant impact on wetland ecosystem health.



# China's Compliance of International Conventions – from the Perspective of Legal and Regulatory Framework

- As a contracting party of important international conventions, China has been working to improve national laws, regulations and policies to fulfill the obligations.
- China has set up a basic legal and regulatory framework for conservation of marine environment and sustainable use of living resources.
  - **National Laws Issued by National People's Congress and Its Standing Committee**
  - **National Regulations Issued by the State Council**
  - **Department Rules Issued by the Administrative Departments**
  - **Local Laws and Regulations**
  - **Policy Issued by the National and Local People's Governments**

# National Laws Issued by National People's Congress and Its Standing Committee

- The fundamental legislation is **Marine Environment Protection Law**, which provides an overall regulation on pollution control, ecosystem protection and resources conservation.

## Supplemental laws and regulations

- On the management of living resources: Fisheries Law and Wild Animal Conservation Law;
- On the protection of biodiversity and wetland: Island Conservation Law, Regulation on the Management of Nature Reserve, Rule for Management of Marine Special Protected Areas and Rule for Wetland Protection;
- On spatial management: Law on the Administration of Sea Areas; and
- Other laws, such as Law on Prevention and Control of Water Pollution, Law on Prevention and Control of Air Pollution, Environmental Impact Assessment Law, Planning Law, that relate to or provide useful tools for the protection and conservation of marine environment and resources.

# National Regulations Issued by the State Council

- The State Council issued about 15 national regulations since the 1980s.
- Of these 15 regulations, pollution, fishery and nature conservancy are the three areas that attract more attention of the State Councils.

No.	Name	Issuing Authority	Date Issued	Effective Date
1	Regulations of the People's Republic of China Concerning Environmental Protection in Offshore Oil Exploration and Exploitation.	State Council	1983.12.29	1983.12.29
2	Implementation Rules of the Fisheries Law of the People's Republic of China	State Council	1987.10.19	1987.10.19
3	Provisions of the People's Republic of China on Administration of Foreign-related Marine Scientific Research	Decree No. 199 of the State Council	1996.06.18	1996.10.01
4	Regulations of the People's Republic of China on Fishing Vessel Inspection	Order No. 383 of the State Council	2003.06.27	2003.08.01
5	Measures for the Collection and Use of Proliferation Protection Fees of Fishery Resources (2011 Revision)	Order No. 588 of the State Council	2011.01.08	1989.01.01
6	Regulation on the Administration of Ocean Observation and Forecasting	Order No. 615 of the State Council	2012.03.01	2012.06.01
7	Regulations of the People's Republic of China on the Protection of Aquatic Wild Animals (2013 Revision)	Order No. 645 of the State Council	2013.12.07	1993.10.05
8	Administrative Regulation on the Prevention and Control of Pollution Damages to the Marine Environment by Vessels. (2017 Revision)	Order No. 676 of the State Council	2017.03.01	2010.03.01
9	Regulations on Prevention of Environmental Pollution by Ship Breaking. (2017 Revision)	Order No. 676 of the State Council	2017.03.01	1988.06.01
10	Administrative Regulation on the Prevention and Control of Pollution Damages to the Marine Environment by Coastal Engineering Construction Projects. (2017 Revision)	Order No. 676 of the State Council	2017.03.01	1990.08.01
11	Administrative Regulation on the Prevention and Treatment of the Pollution and Damage to the Marine Environment by Marine Engineering Construction Projects. (2017 Revision)	Order No. 676 of the State Council	2017.03.01	2006.11.01
12	Regulations of the People's Republic of China on the Control over Dumping Wastes into the Sea Waters. (2017 Revision)	Order No. 676 of the State Council	2017.03.01	1985.04.01
13	Regulations of the People's Republic of China on Wild Plants Protection (2017 Revision)	Order No. 687 of the State Council	2017.10.07	1997.01.01
14	Regulations of the People's Republic of China on Nature Reserves (2017 Revision)	Order No. 687 of the State Council	2017.10.07	1994.12.01
15	Regulation on Administration of Safety of Agricultural Genetically Modified Organisms (2017 Revision)	Order No. 687 of the State Council	2017.10.07	2017.10.07

## Local Laws and Regulations

- The local coastal provinces and cities have also issued local laws and local regulations on marine environment protection. These laws and regulations have further improved the marine environment protection legal system.
- In the three coastal provinces along the Yellow Sea, about 23 local laws have been issued by the local People's Congress and its standing committee.

## Policy Issued by the National and Local People's Governments

The Government of PR China has issued a variety of national policies and launched a number of projects to protect the marine environment.

- Policies and Projects on **Pollution Control**
- Policies and Projects on **Biodiversity Conservation and Wetland Protection**
- Policies and Projects on **the Integrated Management of Coastal Zones**
- Policies and Projects on **the Adaptation and Mitigation of Climate Change**
- Policies and Projects on **the Protection and Utilization of Fishery Resources**
- Policies and Projects on **Marine Administration**



Thanks for your attention!