

构建长三角水域船舶排放控制区介绍

Establishment of Emission Control Area in Yangtze River Delta

上海海事局

Shanghai MSA

女士们，先生们：

Ladies and gentlemen

上午好！

Good morning!

众所周知，船舶废气已经成为重要的大气污染源之一，已越来越引起国际社会的重视。对此，国际海事组织出台了《防止空气污染规则》，对船舶大气污染物的排放控制作出了严格的规定，并划定了四个排放控制区，实行更为严格的控制要求。洛杉矶港作为上海港的友好港，率先开展船舶大气排放控制工作，给全球各大港口的船舶大气污染防治工作树立了典范。

As we know, as the one of the sources of air pollution, the emission from ships is catching more and more attention of the world. IMO adopted the Regulations for the Prevention of Air Pollution from Ships as th Annex VI of MARPOL 73/78 to control the emission from ships, and established 4 ECAs to carry out more stringent requirements. Los Angeles is friendly port of Shanghai and also is pioneer in controlling the emissions from

ships, setting up a good case for the world.

中国政府一直致力于船舶废气排放控制工作，积极探索构建船舶大气排放控制区。中国海事局于今年5月在上海进行了长三角减排研究集体办公，并印发了“海船检[2015]237号”文件，明确了长三角水域船舶排放控制区设立研究工作方案，上海海事局作为主要研究成员之一，参加了设立控制区的相关研究工作。今年8月，中国海事局将起草完毕的《珠三角、长三角、环渤海（京津冀）水域船舶排放控制区实施方案》（以下简称“《方案》”）面向社会公开征求意见，目前该《方案》业经交通运输部部务会议审议通过，待签字生效。下面由我代表上海海事局对《方案》中“设立长三角水域船舶排放控制区”相关内容进行介绍。

The Chinese Government is focusing on the reduction of emissions from ships and actively exploring to establish ECAs. China MSA launched a study on how to establish ECAs and issued a work plan to establish a ECA in the area of the Yangtze River Delta in May this year. Shanghai MSA joined the plan as a member of work team. In August, China MSA drafted the work plan on how to establish ECAs in the Pearl River Delta, the Yangtze River Delta, the Bohai Sea rim (Beijing, Tianjin and Hebei) (hereinafter referred to as "the plan ") to the public for comments. Now, on behalf of Shanghai MSA, I will introduce how to establish the ECA in the Yangtze River delta.

一、关于排放控制区设立原则

Principles on establishing ECAs

(一) 突出国家大气污染联防联控重点区域

Focus on the key zones

国务院办公厅国办发〔2010〕33号文《转发环境保护部等部门关于推进大气污染联防联控工作改善区域空气质量指导意见的通知》提出：“开展大气污染联防联控工作的重点区域是京津冀、长三角和珠三角地区。”此次划定的船舶排放控制区突出国家大气污染联防联控重点区域。

Following the Guidelines about how to implement the joint work to improve the air condition issued by General Office of the State Council, which mentioned that the Pearl River delta, the Yangtze River delta, the Bohai Sea rim are the key areas in air pollution control, the ECAs will be set up in those areas.

(二) 维护区域港口公平竞争，鼓励核心港区先行先试

Fair competition and pilot ports

船舶排放控制区范围的划定应选择一定的连片区域，将经济腹地、货物种类相近的港口包含在内。同时考虑到核心港口区域船舶活动密度大、船舶大气污染减排需求迫切、绿色发展主动性强、实施条件较好等因素，《方案》选择一部分港口作为核心港口区域率先实施泊岸转油，为排放控制区内船舶大气污染防治工作积累经验。

The ECAs will be set up in some certain areas which include the ports who have the same economic hinterlands and similar cargoes in order to prevent frequent ships changing another port to call due to the more stringent requirements. Considering the urgent demand of reduction of the emission in core ports due to the high density of ships, which also have good circumstance to carry out the reduction of the emission, the plan pick up some ports as pilot zones to carry out switching fuel after berthing alongside.

（三）兼顾区域船舶活动密集程度和经济发展水平

In combination with regional ship density and level of economy

为起到更好的减排效果，船舶排放控制区的设立应包含我国主要的船舶活动密集水域，即我国的主要大型港口和通航密集水域应包含在船舶排放控制区范围内。船舶排放控制区的主要目的在于减轻船舶大气污染，维护人民身体健康，但其设立同时也会带来相关企业运行成本甚至区域物流成本的上升，因此排放控制区的范围选定应兼顾区域经济发展水平。

For a better result to reduction of emission, the ECAs shall include the area with high ship density, that is including major ports in China and dense waters. ECAs' main function is to reduce air pollution, but also bring high operating and

regional logistics cost to enterprise, so ECAs' range will be decided considering the regional level of economic.

(四) 遵守国际法和国内法律法规要求

In compliance with international and domestic laws, regulations and rules

排放控制区范围的划定及对中外籍船舶的控制措施, 应不超出国际法框架, 并符合国内法规规范的相关要求。

ECAs' range and controls implemented on vessels in the ECAs will not go beyond the framework of international law, and follow domestic laws and regulations.

二、关于适用对象

Application

从减少船舶排放控制区内船舶排放的角度出发, 适用对象应涵盖区域内的所有船舶, 包括中外籍船舶。但是从管辖权角度考虑, 军用船舶、体育运动船艇、渔业船舶暂时不纳入控制对象。

ECAs shall apply to all ships including foreign and domestic and excluding military ships, sports boats or fishing vessels.

根据上海市环境监测中心提供的数据, 2014 年上海港船舶共排放硫氧化物 4 万吨、氮氧化物 6 万吨、细颗粒物 0.4 万吨, 对全市硫氧化物、氮氧化和细颗粒物的分担率分别为 22.0%、16.7%和 4.4%。其中, 国际航行船舶是上海港船舶大气污染的主要排放源, 虽然国际

航行船舶只占进出上海港船舶总数的 7%，却分担了船舶排放硫氧化物、氮氧化和细颗粒物总量的 80%、95%和 75%，因此从控制效果来看，控制区的使用对象应当包括国际航行船舶。

According to the data provided by the Shanghai municipal environmental monitoring center, in 2014 vessels in shanghai port totally discharge 40000 tons of sulphur oxides, nitrogen oxides, 60000 tons, 4000 tons of particulate matter, whose share rate were 22.0%, 16.7% and 4.4% respectively. The emission of ships engaged in international voyages in Shanghai port is the main source, accounting for 7% of the total, but share discharge of sulphur oxides, nitrogen oxide and particulate matter by 80%, 95% and 75%. So emissions from the ships engaged in international voyages are the key point to control in ECAs.

三、关于排放控制区范围

Delineation of the ECA

(一) 长三角水域船舶排放控制区范围。

Rrange of the ECA

按照国务院 2010 年发布的《长江三角洲地区区域规划》，长三角水域船舶排放控制区包含南京、镇江、扬州、泰州、南通、常州、无锡、苏州、上海、嘉兴、湖州、杭州、绍兴、宁波、舟山、台州 16 个城市的周边海域以及内河通航水域。

The ECA in the Yangtze River delta consists of Nanjing, Zhenjiang, Yangzhou, Taizhou, Nantong, Changzhou, Wuxi, Suzhou, Shanghai, Jiaxing, Huzhou, Hangzhou, Shaoxing, Ningbo, Zhoushan, Taizhou and their surrounding seas and inland river navigable waters.

长江三角洲排放控制区基本情况如下：控制区内 16 个城市 GDP 总量 10.6 万亿元，占全国的 16%多；人口总量约 1.1 亿，占全国的约 8%；港口吞吐量 32 亿多吨，占全国的约 28%；船舶进出港 77 万多艘次，占全国比重约 26%。2014 年长江口断面船舶流量 24 万艘次，长江干线南京断面船舶流量 29 万艘次。

The basic situation of the Yangtze River delta is as follows, GDP in the area is 10.6 trillion yuan, more than 16% of the country. The population is about 110 million, accounting for about 8% of the country. Cargo handling capacity is more than 3.2 billion tons, accounting for about 28% of the country. The total number of vessels is more than 770,000 ships, about 26% of the country. In 2014, the Yangtze estuary section ships movements was up to 240,000 and Nanjing section 290,000.

（二）核心港口区域

core ports area

考虑到核心港口经济发展状况较好，船舶减排的积极性较高，故选择如下港口作为长三角排放控制区核心港口区域：上海港、宁波-

舟山港、南通港、苏州港。

Given the good economy and active willingness to control the emission, we choose the following ports as core port areas in ECA of the Yangtze River delta: Shanghai, Ningbo – Zhoushan port, Nantong port and Suzhou port.

（三）划定范围依据

Range of the ECA

我国是《联合国海洋法公约》的缔约国。根据该公约相关要求，我国针对专属经济区内外籍船舶排放控制的法律规章应符合相关国际公约的规定；针对领海内无害通过的外籍商船可以制定高于国际公约的排放控制标准，但这些标准不应涉及船舶设计、构造、配员及装备；针对进入内水的外籍船舶，可以要求船舶满足高于国际公约要求的标准。目前《方案》提出的排放控制区范围未超出我国领海边界。

China is the party to UNCLOS. In view of UNCLOS ,emission control laws and regulations in the exclusive economic zone should comply with the provisions of the relevant international conventions for foreign ships; Foreign innocent passing ship in china territorial sea can be set more stringent provisions than the international convention, whereas these provisions should not be involved in ship design, construction, manning and equipment; While ships into the inland waters, ships can be asked to meet provisions more stringent than international

convention. The Scope of ECA proposed by” is not beyond China’s baseline.

四、关于控制要求

Requirements in the ECA

排放控制区内相关控制标准及实施时间的确定主要考虑我国现行标准与国际公约相关规定的协调、我国低硫燃料油的供应能力、我国航运市场发展实际、我国船舶发动机技术水平等因素。

The criteria applied in ECA and implementation time will be decided by considering the combination of existing national criteria and international conventions, deliverability of low-sulphur fuel, development of shipping market, Marine engine technical level and so on.

(一) 关于排放污染物控制种类

Species of pollutants of emission to be controlled in ECA

根据国际防止船舶造成污染公约附则VI，排放控制区是指对船舶采取强制措施以防止、减少和控制硫氧化物（颗粒物）或者氮氧化物的区域。硫氧化物和颗粒物排放控制均是通过控制燃油硫含量实现，而氮氧化物主要通过船舶发动机升级、清洁能源使用、尾气后处理来实现。排放控制区可根据区域实际情况选择控制硫氧化物（颗粒物）或者氮氧化物的排放。针对我国当前污染问题现状，《方案》重点控制我国船舶硫氧化物、氮氧化物和颗粒物排放。

According to Annex VI of MARPOL 73/78, ECAs is an area where

the adoption of special mandatory measures for emissions from ships required to prevent, reduce and control air pollution from NO_x or SO_x and particulate matter (PM) or all three types of emissions. The emission of SO_x and PM is controlled by means of reduction of the sulphur of the fuel, while the NO_x is controlled by promoting the marine engine, use of the clear fuel and after-treatment. In view of the current status of the pollution problem, "the plan" will control emission of sulphur oxides, nitrogen oxides and particulate emission from ships.

(二) 关于具体控制要求

Requirements in the ECA

1. 《方案》控制要求第一条内容为：“自《方案》发布之日起，船舶进入排放控制区应严格执行国际防止船舶造成污染公约和国内船检技术法规关于硫氧化物和颗粒物（燃油硫含量低于 3.5% m/m）、氮氧化物的排放控制要求。核心港口区域所在地方政府可先行提出船舶在排放控制区港口靠岸停泊期间使用硫含量 $\leq 0.5\%$ m/m 燃油的要求”。

Airticle 1: All ships in ECA shall comply with the requirements of the MARPOL and domestic survey technical regulations about the SO_x, PM (such as the sulphur content of fuel oil not exceed 3.5% m/m) and NO_x. The government of core port may launch the requirement that ships shall use the fuel,

sulphur content of which not exceeds 0.5% m/m , while berthing alongside.

国际公约和国内船检技术法规对船舶燃油硫含量和船舶发动机氮氧化物排放作出了明确规定。为加强已有标准的执行力度，自《方案》发布之日起，排放控制区内按照国际公约和国内船检技术法规要求加强对船舶的污染排放控制。考虑到核心港口经济发展状况较好，船舶减排的积极性较高，故《方案》发布之日起，核心港口区域所在地方政府可先行提出靠岸停泊期间使用硫含量 $\leq 0.5\% m/m$ 燃油的要求。

International conventions and domestic survey technical regulations make specific provision for ship fuel sulphur content and ship engine NO_x emissions. In order to strengthen the enforcement of existing standards, since the "plan" comes into force, emission control will be strengthened in ECA according to the international conventions and domestic survey technical regulations, where the government of core ports may launch the requirement that ships shall use the fuel, sulphur content of which not exceeds 0.5% m/m , while berthing alongside.

2. 《方案》控制要求第二条内容为：“自《方案》发布之日期之后 12 个月起，在排放控制区内的核心港口区域试点示范，船舶在核心港口区域靠岸停泊期间应使用硫含量 $\leq 0.5\% m/m$ 的燃油”。

Airticle 2: After 12 months since plan comes out, Core ports

will pilot that ships in it should use sulphur content 0.5% m/m or less fuel, while berthing alongside.

排放控制区内核心港口区域具有提前实施或执行更高标准的能力和动力，且国际上已有香港、新加坡、德国汉堡、荷兰鹿特丹等国家或地区对在港停泊期间的船舶要求使用燃油硫含量采取高于公约标准的先例，《方案》规定自方案发布日期之后 12 个月起，在排放控制区内的核心港口区域试点示范，船舶在排放控制区内的核心港口区域靠岸停泊期间，应使用硫含量 $\leq 0.5\%$ m/m 的燃油。

Core port areas in ECA have the ability to implement or enforce higher standards in advance and Hong Kong, Singapore, Hamburg, Germany, Rotterdam, the Netherlands have taken more stringent standards than convention for the use of fuel.

After 12 months since plan come out, Core ports will pilot that ships in it should use sulphur content 0.5% m/m or less fuel, while berthing alongside.

3. 《方案》控制要求第三条内容为：“评估试点示范后，确定实施船舶在排放控制区内港口靠岸停泊期间使用硫含量 $\leq 0.5\%$ m/m 燃油的要求”。

Airticle 3: After piloting, it will be decided if the requirement that using sulphur content 0.5% m/m or less fuel will be spread through the whole ECA.

为了进一步提高在排放控制区的排放控制要求，在评估试点示范

效果后,可确定是否实施船舶在排放控制区内所有港口靠岸停泊期间使用硫含量 $\leq 0.5\%$ m/m 燃油的要求。

In order to improve the emission control in ECA, after the evaluation of pilot, it can be determined whether all the ports in ECA required the use of sulphur content 0.5% m/m or less fuel.

4. 《方案》控制要求第四条内容为：“2018 年 12 月 31 日前,评估前述控制措施实施效果,确定以下行动:

Airticle 4: Before December 31st, 2018, evaluation of the effect of control measures shall been finished to determine the following actions:

(1)2020 年 1 月 1 日起,船舶进入排放控制区使用硫含量 $\leq 0.5\%$ m/m 的燃油;

On January 1, 2020, ships in ECA shall use sulphur content 0.5% m/m or less fuel;

(2) 扩大排放控制区范围;

Expanding the range of the ECA

(3) 向国际海事组织申请设立国际防止船舶造成污染公约框架下的排放控制区”。

Submit the proposals to IMO for designation of ECA under the framework of MARPOL。

参照国际海事组织做法,《方案》规定 2018 年 12 月 31 日前,应组织对排放控制区方案的前期实施情况进行评估。根据评估效果确

定是否采取以下行动：2020年1月1日起，船舶进入排放控制区使用硫含量 $\leq 0.5\%$ m/m的燃油；扩大排放控制区范围；向国际海事组织申请设立国际防止船舶造成污染公约框架下的排放控制区。

In accordance with IMO practices, the "plan" clears that before December 31st, 2018, evaluation of the effect of control measures shall be finished. Following the result, we will determine that: On January 1, 2020, ships in ECA shall use sulphur content 0.5% m/m or less fuel; Expanding the scope of the ECA; Submit the proposals IMO for designation of ECA under the framework of MARPOL.

5. 《方案》控制要求第五条内容为：“船舶可采取连接岸电、使用清洁能源、尾气后处理等与上述排放控制要求等效的替代措施”。

Airticle 5: Ships can make use of shore-base power, clean energy, exhaust after treatment and other equivalent method.

参照 MARPOL 公约和船检技术法规对排放控制区的要求，明确船舶可采取连接岸电、使用清洁能源、尾气后处理等与上述排放控制要求等效的替代措施。

In accordance with MARPOL convention and the requirements of survey technical regulations on ECAs, we will make it clear the ship can take action in ECA such as shore-base power, clean energy, after treatment and other equivalent alternative measures of emission control requirements.

6. 控制要求实施时间表。

The timetable of control requirements

<p>《方案》发布之日起 Plan come out</p>	<p>船舶进入排放控制区应严格执行国际防止船舶造成污染公约和国内船检技术法规关于硫氧化物和颗粒物（燃油硫含量低于3.5% m/m）、氮氧化物的排放控制要求。</p> <p>Ships in ECA shall strictly perform the MARPOL and domestic survey technical regulations on sulphur oxides and particulate matter (fuel sulphur content less than 3.5%m/m), nitrogen oxide emissions control requirements</p>
	<p>核心港口区域所在地方政府可先行提出船舶在排放控制区内港口靠岸停泊期间使用硫含量$\leq 0.5\%$ m/m 燃油的要求。</p> <p>The government of core ports may launch the requirement that ships shall use the fuel, sulphur content of which not exceed 0.5%m/m, while berthing alongside firstly.</p>
<p>《方案》发布日期之后12个月起 After 12 months since plan come out</p>	<p>在排放控制区内的核心港口区域试点示范，船舶在核心港口区域靠岸停泊期间应使用硫含量$\leq 0.5\%$ m/m 的燃油。</p> <p>Core ports will pilot the ships, which should use sulphur content 0.5% m/m or less fuel, while berthing alongside.</p>

<p>评估试点示范 效果后 After the Evaluation</p>	<p>确定实施船舶在排放控制区内港口靠岸停泊期间使用硫含量$\leq 0.5\%$ m/m 燃油的要求。 Determine if ships in ECA shall use sulphur content 0.5% m/m or less fuel;</p>
<p>2018年12月31 日前 Before December 31, 2018</p>	<p>评估前述控制措施实施效果，确定以下行动：1. 2020年1月1日起，船舶进入排放控制区使用硫含量$\leq 0.5\%$ m/m 的燃油；扩大排放控制区范围；向国际海事组织申请设立国际防止船舶造成污染公约框架下的排放控制区。 Evaluate the effect of control measures to determine the following actions: On January 1, 2020, ships in ECA shall use sulphur content 0.5% m/m or less fuel; Expanding the scope of the ECA; Submit the proposals IMO for designation of ECA under the framework of MARPOL.</p>

五、保障措施

Supporting measures

保障措施立足于各级交通运输主管部门的组织领导和协调作用，包括协调出台相关激励政策和配套措施，强调海事管理机构的监督管理职责和手段。鉴于香港特别行政区已于今年7月1日开始实施靠泊转用低硫油法案，因此突出了在珠三角排放控制区建立联动机制的要求。

Supporting measures based on organizing and coordination of the transportation departments, including the relevant incentive policies and supporting measures, should focus on the supervision and administration of MSA. In view of the Act of Hong Kong about switching to low-sulphur fuel, when ships berth alongside on July 1 this year, therefore the plan highlights joint-action mechanism in ECA of the Pearl River delta.

海事管理机构将组织开展船舶大气污染检测技术研究, 不断提高监测能力, 推进船舶大气污染监测工作; 制定和完善监督检查管理规定, 推进检测装备与能力建设; 加强船舶防止空气污染证书和油类记录簿、燃油供应单证及燃油质量的检查; 督促船舶检验机构提高船舶发动机等相关船用产品检验质量; 开展对替代措施有效性的核查。

MSA will carry out study on technology of air pollution from ships, improve detection and monitoring ability, formulate the regulations for the supervision and inspection, promote detection equipment, strengthen the inspection of the ship certificate, fuel oil record book, fuel supply documents, fuel quality, supervise ship classification societies to improve the quality of marine engine related marine product survey, and develop the examination of the effectiveness of alternative measures.

各级政府将出台激励政策和配套措施，对船舶使用低硫燃油、岸电，船舶改造升级和应用清洁能源等实施资金补贴、税费减免和便利运输等优惠措施。

The governments will launch incentive policies and supporting measures to supply favorable measures for the using low sulphur fuel, shore power for ships, shipping upgrade and application of clean energy subsidies, such as reduction or exemption of tax, convenient transportation and so on.

2015年8月18日

August 18, 2015