

# Marine Eco-Environmental Protection in China (II)

## 中国的海洋生态环境保护(中)

### 2. Synergic governance of land-sourced pollution

Marine eco-environmental problems manifest in the sea, but their root causes lie on land. In order to alleviate the impact of land-sourced pollution on the marine environment, China has adopted robust measures to coordinate land-sea pollution control and monitor the key pathways that channel land-sourced pollutants into the sea.

Tightening pollution control for seagoing rivers. Seagoing rivers are the primary routes for carrying land-sourced pollutants into seas.

China has significantly improved its urban sewage treatment quality and efficiency by constructing and upgrading separate pipe networks for rainwater and sewage, tightening supervision over the sewage treatment sector, and reducing the impact of urban industrial and sanitary sewage on the water quality of seagoing rivers. Since 2012, the construction of sewage treatment infrastructure in coastal areas has accelerated markedly, and sewage treatment plants in cities at or above the prefectural level have been upgraded to Grade I-A standards.

Since the beginning of the 14th Five-year Plan period in 2021, China has also initiated efforts to improve its rural environment. Coastal provinces have completed comprehensive environmental improvement for 17,000 administrative villages, enacted livestock and poultry breeding pollution control plans for 170 counties heavily involved in animal husbandry, and reached a sanitary sewage treatment rate of more than 45 percent, substantially reducing sewage discharges in agriculture and rural areas.

China has implemented a comprehensive remediation system to tackle nearshore water pollution and eutrophication caused by excessive nitrogen emissions in river basins. By forming a comprehensive management network covering coastal areas, river basins, and sea areas, China has shifted total nitrogen control to the upper reaches of seagoing rivers, and administered river-specific policy for total nitrogen management.

Between 2012 and 2017, the water quality in the state-monitored sections of China's seagoing rivers generally remained stable with slight improvement, and a substantial improvement was recorded beginning in 2018. Currently, four-fifths of all state-monitored sections have good to excellent water quality (Grade I, II, and III), while sections with very poor water quality (inferior Grade V) have been eliminated.

Strengthening the administration of key sea-entering sewage discharge outlets. Sea-entering sewage discharge outlets are major outlets through which land-sourced pollutants enter the sea. China has promulgated the Implementation Directives on Strengthening Supervision and Administration of Sewage Discharge Outlets into Rivers and Seas, which directs the identification, monitoring, source tracing, and rectification of such outlets and promotes a

### (二) 协同治理陆源污染

海洋环境问题表现在海里，根子在陆上。中国采取有力措施，推进陆源污染协同治理，管住污染物向海洋传输的关键通道，降低陆源污染对海洋环境的整体压力。

抓好入海河流污染防治。入海河流是陆源污染物输入海洋的最重要途径。中国积极提升城镇污水处理质效，建设改造雨污分流管网，加强污水处理行业监管，降低城镇生产生活污水对入海河流水质影响。2012年以来，沿海地区污水处理基础设施建设显著提速，地级以上城市污水处理厂基本完成一级A提标改造。开展农村环境整治，“十四五”以来，沿海省份新增完成1.7万个行政村环境综合整治，编制完成170个畜牧大县畜禽养殖污染防治规划，农村生活污水治理率超过45%，大幅降低农业农村污水排放。着力破解流域氮排放过量的近岸海域水质污染和富营养化问题，建立沿海、流域、海域协同一体的综合治理体系，探索将总氮控制范围向入海河流上游拓展，推动入海河流实施“一河一策”总氮治理。2012-2017年中国入海河流国控断面水质整体保持稳定并有所好转，2018年以后水质整体大幅好转。目前，入海河流国控断面水质优良（I~III类）断面数量约占整体的五分之四左右，丧失使用功能（劣V类）断面基本消除。

守住沿岸污染入海的重要闸口。入海排污口是沿岸陆源污染向海洋排放的重要节点。出台《关于加强入河入海排污口监督管理工作的实施意见》，统筹推进入海排污口排查、监测、溯源、整治，建立健全近岸水体、入海排污口、排污管线、污染源全链条治理体系。按照“有口皆

whole-process management system for nearshore waters, sea-entering sewage discharge outlets, sewage discharge pipes, and pollution sources.

With the goal of enforcing inspection of each and every sea-entering sewage discharge outlet, the country has identified the total number and distribution of all the sea-entering sewage discharge outlets, how sewage is discharged in each outlet and who are in charge of these outlets. Such information helps delineate responsibilities and promote rectification at the source. By the end of 2023, the government had surveyed more than 53,000 sea-entering sewage discharge outlets and rectified over 16,000 of them, amplifying its role in improving nearshore eco-environments.

A unified information disclosure platform has been built to further regulate the setup and administration of sea-entering sewage discharge outlets. The construction of new industrial sewage discharge outlets and urban sewage treatment outlets is strictly prohibited in nature reserves, key fishery waters, bathing beaches, and areas within conservation red lines.

Cleaning up and controlling marine litter. China has issued guiding documents, such as the Directives on Further Strengthening Plastic Pollution Control and the Action Plan for Plastic Pollution Control During the 14th Five-Year Plan Period, to address the issue of marine plastic litter at its source.

Additional measures have been put in place to monitor, intercept, collect, salvage, transport, and process marine litter. Coastal cities have enforced regular control and cleanup of marine litter from seagoing rivers and in nearshore waters through programs such as Sanitation at Sea. The Blue Circle project, a new model of marine plastic waste management initiated by Zhejiang Province, won the UN's 2023 Champions of the Earth award.

China has synergized litter control for rivers, lakes, and seas. In 2022, special actions were taken to clean up marine litter in 11 key bays, including the Jiaozhou Bay. More than 188,000 people participated in the cleanup action and removed a total of 55,300 tonnes of litter from banks, coastlines, and the sea. In 2024, to consolidate the achievements in its marine litter cleanup actions, the country expanded its targets from key bays to all coastal cities.

China has conducted systematic monitoring of marine litter and microplastics. Compared with the results of similar international surveys in recent years, the average density of China's nearshore marine litter and offshore microplastics are at medium and low levels.

### 3. Targeted control of marine pollution

Placing equal emphasis on development and protection, China has continued to tighten regular supervision over industries such as marine engineering, dumping of wastes at sea, mariculture, and maritime transport, and actively responded to marine environmental emergencies, making every effort to improve marine pollution prevention and control and reduce the impact of marine development and utilization on the marine eco-environment.

Exercising strict control over the eco-environmental impact of marine engineering and dumping of wastes at sea. China is continuing to optimize its administration of environmental impact assessment (EIA), exercising management at the source and tightening control on marine engineering operations such as land reclamation from the sea and marine sand and gravel mining. The country has

查、应查尽查”要求，摸清各类入海排污口的数量、分布及排放特征、责任主体等信息，推进入海排污口溯源整治与责任落实。截至2023年底，中国已排查入海排污口5.3万余个，完成入海排污口整治1.6万余个，对改善近岸海域环境质量发挥了重要作用。建设统一的入海排污口信息平台，进一步规范入海排污口的设置与管理，严格禁止在自然保护区、重要渔业水域、海水浴场、生态保护红线等区域新设工业排污口和城镇污水处理厂排污口。

清理整治海洋垃圾。出台《关于进一步加强塑料污染治理的意见》《“十四五”塑料污染治理行动方案》，从源头管住垃圾入海。进一步建立实施海洋垃圾监测、拦截、收集、打捞、运输、处理体系，各沿海城市通过“海上环卫”等制度常态化开展重点海域入海河流和近岸海域垃圾入海防控与清理整治，浙江省“蓝色循环”海洋塑料废弃物治理新模式获得联合国“地球卫士奖”。推进江河湖海垃圾联防联控，2022年在胶州湾等11个重点海湾开展专项清漂行动，出动18.81万人次，清理各类岸滩和海漂垃圾约5.53万吨。巩固提升专项清漂工作成效，2024年将重点海湾清漂专项行动升级为沿海城市海洋垃圾清理行动。持续组织开展海洋垃圾和微塑料监测调查，与近年来国际同类调查结果相比，中国近岸海域海洋垃圾和近海微塑料的平均密度处于中低水平。

### （三）精准防治海上污染

坚持开发和保护并重，不断加强对海洋工程、海洋倾废、海水养殖、海上交通运输等行业产业的常态化监管，积极应对突发环境污染事件，全面提升海上污染防治水平，努力降低各类海上开发利用活动对海洋生态环境的影响。

严控海洋工程和海洋倾废生态环境影响。不断优化环境影响评价管理，从源头入手，严格管控围填海、海砂开采等海洋工程建设项目。加强海洋油气勘探开发污染防治，由国家统一行使环境影响评价审批与污染物排放监管事权。启动编

also strengthened pollution prevention and control for marine oil and gas exploration and development, and exercises unified authority over EIA approval and pollutant discharge supervision.

China is formulating technical standards to bring marine engineering pollutants into discharge permit administration. It selects and delineates ocean dumping sites based on sound planning and with regards to cost and safety considerations. It meticulously assesses the operation of these sites to ensure eco-environmental safety and safe navigable water depths. The Chinese government enforces strict ocean dumping permits, and exercises off-site supervision through automatic vessel identification and online monitoring of ocean dumping to minimize the eco-environmental impact of waste dumping.

Enforcing systematic pollution prevention and control of mariculture. China has issued the Directives on Accelerating the Green Development of Aquaculture and the Directives on Strengthening Eco-Environmental Regulation on Mariculture. These guiding documents set standards for pollution discharge, emphasize the EIA administration, and enable category-specific rectification and tailwater monitoring for sewage discharge outlets. This helps to systematically tighten eco-environmental regulation on mariculture. Coastal provinces and equivalent administrative units have also enacted standards for mariculture tailwater discharge and have intensified their regulation efforts.

Mariculture is regulated by EIA administration, which falls under the List of Construction Projects Under Category-Specific Administration on Environmental Impact Assessment. Local governments have closed down, merged and regulated unauthorized and misplaced mariculture tailwater outfalls, while promoting pond aquaculture, industrial aquaculture, and eco-upgrading of net cages to improve aquaculture environments. Coastal provinces, municipalities and counties have released plans regarding the use of mudflats for mariculture, delineating forbidden zones, restricted zones, and designated zones for mariculture.

Intensifying pollution prevention and control for ships in ports. To comply with the Water Pollutant Discharge Standards for Vessels, China has launched special actions to address water pollution from vessels, and makes sure that environment-friendly standards have been included in shipbuilding technology laws and regulations.

The country has strengthened joint regulation of the transfer and disposal of water pollutants from vessels, and coastal provinces and equivalent administrative units have completed the construction of basic vessel pollutant receiving, transfer, and disposal facilities.

Continuous inspection of vessel fuel quality is conducted, and stricter regulations have been put in place for the provision and use of power facilities for berthed vessels to identify and eliminate hidden risks.

Establishing the marine environmental emergency response system. China has implemented the National Contingency Response Plan for Major Marine Oil Spills and the Contingency Response Plan for Oil Spills Damaging the Environment During Marine Oil Exploration and Development. These plans outline the organizational structure, procedures, information management and disclosure, and safeguard measures for handling marine oil spill emergencies in a relatively complete response system.

制海洋工程排污许可技术规范，推动海洋工程依法纳入排污许可管理。按照科学、合理、经济、安全的原则选划设立倾倒地，科学、精细评价倾倒地运行状况，保障倾倒地生态环境与通航水深安全。严格实施倾倒地许可制度，综合运用船舶自动识别系统、海洋倾倒地在线监控等手段开展非现场监管，最大程度降低废弃物倾倒地对生态环境的影响。

系统开展海水养殖污染防治。印发实施《关于加快推进水产养殖业绿色发展的若干意见》

《关于加强海水养殖生态环境监管的意见》，制定排放标准、强化环评管理、推动排污口分类整治和尾水监测等，系统强化海水养殖环境监管。沿海省（区、市）积极出台养殖尾水排放标准，加大污染排放监管力度。海水养殖纳入国家《建设项目环境影响评价分类管理名录》实施环评管理。各地按照“取缔一批、合并一批、规范一批”要求，对非法和设置不合理的养殖尾水排口开展清理整治，推进池塘养殖、工厂化养殖、网箱环保升级改造，净化养殖环境。沿海省市县已发布养殖水域滩涂规划，科学划定海水养殖禁养区、限养区和养殖区。加大船舶港口污染防治力度。严格执行《船舶水污染物排放控制标准》，组织开展防治船舶水污染专项整治活动，将环保标准纳入船舶技术法规。深入推进落实船舶水污染物转移处置联合监管制度，沿海各省（区、市）已基本完成港口船舶污染物接收、转运、处置设施建设。持续开展船舶燃油质量监督检查，加强靠泊船舶岸电设施配备及使用情况监管，排查并消除污染隐患。

建立海洋突发环境事件应急体系。印发实施《国家重大海上溢油应急处置预案》《海洋石油勘探开发溢油污染环境事件应急预案》，明确应急组织体系、响应流程、信息管理发布和保障措施等，建立起较为完备的海上溢油污染应急预案体系。强化海洋环境风险排查，组织环渤海三省一市完成5400余家涉危化品、重金属和工业废物