

Research on the Public Governance Strategy of the Yellow Sea Wetland World Natural Heritage Site in Yancheng, Jiangsu

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ABSTRACT: The Yellow Sea Wetland in Yancheng, Jiangsu Province, China's first coastal wetland World Heritage Site, is a globally important migratory hub for migratory birds and a biodiversity conservation area. However, with the development of the economy and society, the wetland faces the dual challenges of ecological protection and economic development. This paper systematically analyzes the public governance strategies of the Yellow Sea Wetland World Heritage Site in Yancheng from four perspectives: ecological protection measures and future planning, coordination between tourism development and heritage protection, community participation mechanisms, and governance measures to address ecological threats. The study found that Yancheng has effectively improved the quality of the wetland ecosystem and achieved a virtuous interaction between protection and development through a series of innovative measures, including legal protection, wetland restoration, ecotourism development, community participation incentives, and ecological security monitoring. This paper summarizes the governance experience of the Yellow Sea Wetland in Yancheng, providing useful reference and reference for the protection and sustainable development of other World Heritage sites.

Keywords: Yancheng Yellow Sea Wetland; World Natural Heritage; Public Governance; Ecological Protection; Sustainable Development

I. INTRODUCTION

The Yellow Sea Wetlands in Yancheng, Jiangsu Province, are China's first coastal wetland World Heritage Site and the world's second intertidal wetland site, filling a gap in my country's coastal wetland World Heritage status. A key hub along the East Asian-Australasian Flyway, the Yellow Sea Wetlands boast the world's largest intertidal mudflats, serving as a staging, moulting, and

wintering ground for millions of migratory birds. On July 5, 2019, the Yellow (Bohai) Sea Bird Habitat (Phase I) was inscribed on the World Heritage List, marking a breakthrough in China's inclusion of World Heritage sites, extending its reach from land to sea.

However, with rapid economic and social development, the Yancheng Yellow Sea Wetland faces the dual pressures of ecological protection and economic development. Achieving sustainable development while protecting the ecological environment has become a major challenge facing the Yancheng Yellow Sea Wetland. In recent years, the Yancheng Municipal Government and relevant departments have actively explored new models of public governance. Through a series of innovative measures, they have achieved remarkable results in ecological protection, tourism development, community participation, and addressing ecological threats. This article systematically analyzes the public governance strategies of the Yancheng Yellow Sea Wetland World Natural Heritage Site from four perspectives: ecological protection measures and future planning, coordination between tourism development and heritage protection, community participation mechanisms, and governance measures to address ecological threats. This study aims to provide a reference for the conservation and sustainable development of other World Natural Heritage sites.

II. PUBLIC GOVERNANCE MEASURES AND FUTURE PLANNING FOR ECOLOGICAL PROTECTION

2.1 Existing public governance measures for ecological protection

2.1.1 Construction of a legal guarantee system

The Standing Committee of the Yancheng Municipal People's Congress adheres to Xi Jinping

Thought on Ecological Civilization as its guidance, fully leveraging the functions of the People's Congress and using the power of the rule of law to protect clear waters and blue skies. In 2019, Yancheng promulgated and implemented the "Yancheng Yellow Sea Wetland Protection Regulations," which clarify the responsible entities, protection measures, and legal responsibilities for wetland protection. This regulation provides a legal basis for wetland protection and management, ensuring that wetland protection and management have a legal and regulatory framework to rely on. Furthermore, Yancheng has established a judicial protection coordination mechanism, continuously promoting the coordination and cooperation between public interest litigation and ecological damage restoration, and building a multi-faceted governance and cross-domain cooperation mechanism for ecological restoration, providing a solid legal foundation for wetland protection.

2.1.2 Wetland protection and restoration projects

The Yancheng Yellow Sea Wetland has effectively improved the quality of its wetland ecosystem through the implementation of a series of wetland protection and restoration projects. By 2024, the city had added 12,500 hectares of protected wetland area, bringing the wetland protection rate to 50.9%. The Yancheng World Biosphere Reserve actively promotes the coordinated management of various ecological elements, implementing key restoration projects such as the 720-acre high-tide habitat in Dongtai Tiaozini. This project provides a safe, stable, and suitable habitat for migratory birds through micro-topography modification, wetland restoration, environmental remediation, and closed management. Furthermore, Yancheng is actively implementing ecological restoration projects such as riverbank environmental remediation, returning fishing areas to wetlands, and the construction of micro-wetlands, further improving the wetland ecosystem.

2.1.3 Prevention and control of alien species

Spartina alterniflora is the primary invasive alien species facing the Yellow Sea Wetlands in Yancheng, posing a serious threat to the wetland ecosystem. To effectively prevent and control the invasion of *Spartina alterniflora*, Yancheng City has formulated the "Yancheng City *Spartina alterniflora* Control Special Action Implementation Plan (2023-2025)," which clearly defines control objectives and measures. In practice, Yancheng has explored a series of innovative approaches, such as Dongtai City's "rotary tillage of high-lying land + flooding of mid-lying land + deep burial of low-lying

land" control plan, adapting treatment methods to different terrains and regions. As of January 2025, the city had eliminated 276,000 mu (approximately 1,000 hectares) of *Spartina alterniflora*, achieving the control target ahead of schedule and effectively curbing the spread of *Spartina alterniflora*.

2.1.4 Monitoring system construction

Yancheng City has established a comprehensive wetland monitoring system to provide data support for scientific conservation. The Yancheng World Biosphere Reserve, in collaboration with Yancheng Tower Company, has developed a "Smart Management Center" system, achieving a historic shift from offline to online management. This system creates a three-dimensional, integrated "sky-air-ground" monitoring system, ensuring comprehensive, all-weather protection. The custom-developed "Crane Protector" mobile app has effectively improved patrol efficiency for conservation teams. Furthermore, Yancheng is utilizing satellite remote sensing, drones, and on-site surveys to map the distribution of *Spartina alterniflora*, providing data support for scientific management.

2.2 Future ecological protection planning

2.2.1 Strategic Plan for Sustainable Development of World Natural Heritage during the 14th Five-Year Plan Period

According to the "Yancheng City 14th Five-Year Plan for Sustainable Development of World Natural Heritage," by 2025, the Yancheng Yellow Sea Wetland will ensure stable or slightly increased habitat for species such as red-crowned cranes, white cranes, spoon-billed sandpipers, and lesser greenshanks through ecological restoration and conservation management. Specific goals include restoring at least 1,500 hectares of migratory bird habitat and treating at least 500 hectares of *Spartina alterniflora*. These measures will further enhance the stability and biodiversity of the wetland ecosystem.

2.2.2 "Three-step" strategy

According to the Three-Year Action Plan for the Protection, Management and Sustainable Development of the Yellow Sea Natural Heritage Site in Yancheng (2019-2021), Yancheng City has adopted a three-step strategy:

The first step is to achieve comprehensive protection of the Yellow Sea Wetland Heritage in Yancheng by 2021, and to establish a preliminary management, monitoring, research and capacity-building system.

The second step is that by 2025, the Yellow Sea Wetland Heritage in Yancheng will be

scientifically protected, dynamically inherited, and rationally utilized, with its protection and management level at the forefront of the world.

The third step is to look forward to 2035, when the Yancheng Yellow Sea Natural Heritage Site will be presented to the world in a brand new posture, achieving overall system protection and becoming a model for global wetland protection.

2.2.3 Yancheng World Biosphere Reserve Management Plan

The Yancheng World Biosphere Reserve has developed the "Yancheng World Biosphere Reserve Management Plan (2022-2031)" to guide its management over the next 10 years. This plan, centered around the biosphere reserve's three main functions of conservation, development, and support, as well as its governance system, forms the framework for the Yancheng World Biosphere Reserve Action Plan and defines conservation and development goals for the next decade.

III. PUBLIC GOVERNANCE STRATEGIES FOR COORDINATING TOURISM DEVELOPMENT AND HERITAGE PROTECTION

3.1 Successful experience in coordinating tourism development and heritage protection

3.1.1 Construction of ecotourism product system

Yancheng City has meticulously planned six key study routes and over 150 nature-based educational activities, creating a "3+2+5" core product system for World Heritage ecotourism. The "3" refers to the three core areas: the Milu Ecotourism Resort, the Red-crowned Crane Tourism Resort, and Tiaozini (Yellow Sea Forest Park); the "2" encompasses the two key nodes, Doulong Port and Yueliangwan; and the "5" involves accelerating the development of five fishing port towns: Long Port, Doulong Port, Huangsha Port, Xinyang Port, and Fanshehe Fishing Port. Through these initiatives, Yancheng has successfully established an internationally influential ecotourism brand, attracting a large number of tourists.

3.1.2 Construction of transportation and service facilities

Yancheng City has developed the Yellow Sea Tourism Highway No. 1, connecting high-quality resources and products. It has built 18 tourist highway stations and enhanced supporting services along the route. At the same time, it has established a diversified accommodation system, strengthened the training of tour guides, lecturers, and research

instructors, and improved service quality to provide tourists with a more superior travel experience.

3.1.3 Tourism brand building and marketing

Yancheng City is actively building its World Natural Heritage brand, enhancing its international influence through events such as the Global Coastal Forum and the International Birdwatching Festival. It has also developed a cultural and creative IP for the "Three Lucky Treasures of the Yellow Sea Wetlands," collaborated with Ctrip Group to create the "Enjoy a Weekend in Yancheng" marketing campaign, and optimized its marketing of distinctive products. Through these initiatives, Yancheng has successfully raised the profile and reputation of its World Natural Heritage, attracting a large number of domestic and international tourists.

3.2 Balancing mechanism between tourism development and heritage protection

3.2.1 Tourist carrying capacity control

To protect the wetland ecosystem, Yancheng City has implemented strict visitor capacity control measures. Starting May 1, 2022, the Tiaozini Scenic Area will operate under a "reservation and attendance control" system, capping daily visitor capacity at 1,000 people. A real-name reservation system will be implemented, and visitors will be allowed to leave the beach after birds have foraged to avoid disrupting their normal activities.

3.2.2 Zoning and classification management

Yancheng City established the Yancheng Tiaozini Wetland Park, demarcating four functional zones: bird watching, fishing, sea exploration, and bird conservation. These zones are managed and categorized accordingly. The core area is off-limits to tourists, while the buffer zone allows for scientific research and other activities, and the experimental zone allows for visits, inspections, and tourism. This zoning and categorized management effectively protects the integrity of the wetland ecosystem.

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3.2 Balancing mechanism between tourism development and heritage protection (continued)

3.2.3 Ecological compensation mechanism

Yancheng City has established and improved an ecological compensation mechanism, providing financial compensation through fiscal transfers to communities and businesses affected by wetland protection. Simultaneously, the city is exploring diversified ecological compensation

models, including policy support compensation, project compensation, and technical compensation. For example, in the closure of 3,020 mu (approximately 1,000 acres) of enclosure aquaculture in Dazong Lake, a "compensation fund pool" was established, providing ecological compensation of 20,000 yuan per mu (approximately 1,000 yuan) to retired fishermen. Simultaneously, a pilot program for wetland carbon trading was promoted, allowing protectors to reap economic benefits and achieving a win-win situation for both ecological protection and economic development.

IV. PUBLIC GOVERNANCE MECHANISMS AND INCENTIVES FOR COMMUNITY PARTICIPATION

4.1 Guiding Mechanisms for Community Participation in Heritage Site Conservation

4.1.1 Community education and publicity

Yancheng City conducts various community education and publicity activities to raise residents' awareness of and protection of World Natural Heritage. The "Yancheng Yellow Sea Wetland World Natural Heritage, Our Home" community outreach program, featuring accessible performances such as songs, rap, and situational interpretations, allows residents to tangibly experience the wetland's ecological charm, foster a sense of ownership of the heritage site, and encourage them to consciously participate in its protection. Furthermore, the Yancheng Yellow Sea Wetland World Natural Heritage site has been promoted at nearly 100 universities across China, raising awareness of ecological conservation among young students and gradually establishing a collaborative mechanism for "sharing, co-governance, co-management, and shared prosperity" within the heritage site community.

4.1.2 Community organization building

Yancheng City actively fosters and develops community conservation organizations, forming a conservation framework characterized by government leadership, community participation, and multi-party governance. The Yellow Sea Wetland Conservation and Management Committee has been established, building a comprehensive support system encompassing government, industry, academia, and research. At the community level, the formation of community conservation associations and volunteer groups is encouraged to participate in wetland conservation efforts. For example, the Yandu District People's Congress partnered 120 representatives with wetland conservation communities, establishing a new conservation framework characterized by government leadership, social collaboration, and public participation. In the

Dazong Lake Wetland, retired fishermen have spontaneously formed a "Wetland Conservation Team," transforming former fishermen into bird protectors, creating a captivating scene in wetland conservation.

4.1.3 Community Supervision Mechanism

Yancheng City has established and improved a community supervision mechanism to encourage community residents to participate in wetland protection supervision. On the one hand, a public reporting and exposure system for illegal and irregular behaviors has been established and improved, and a supervision reporting hotline has been opened to encourage the public, media, and social organizations to participate in the protection and supervision of heritage sites, ensuring the public's right to know, right to participate, and right to supervise. On the other hand, the Environmental and Resources Committee of the Standing Committee of the Yancheng Municipal People's Congress took the lead in establishing a joint meeting system for wetland protection supervision with the Environmental and Resources Court of the Municipal Intermediate People's Court, the Public Interest Litigation Department of the Municipal Procuratorate, and the Food, Drug, and Environmental Investigation Detachment of the Municipal Public Security Bureau. Through the three mechanisms of "full-chain linkage and interaction, full-cycle closed-loop management, and all-round transformation and application", the three mechanisms are transmitted in sequence and interacted progressively to achieve the full integration of "subjects, procedures, channels, and results" of supervision, drive each supervisory force to perform its duties and complement each other's strengths, and promote the supervision of Yancheng wetland protection from tangible to effective.

4.2 Incentives and Successful Experiences for Community Participation

4.2.1 Economic Incentives

Yancheng City uses a variety of economic incentives to encourage community participation in wetland conservation and ecotourism development. First, an ecological compensation mechanism has been established to provide financial compensation to community residents affected by wetland conservation efforts. For example, during the 3,020 mu (approximately 1,000 acres) of enclosure aquaculture in Dazong Lake, a "compensation fund pool" was established to provide 20,000 yuan per mu (approximately 1,000 square meters) of ecological compensation to retired fishermen. Simultaneously, a pilot program for wetland carbon trading was

launched, allowing protectors to reap tangible benefits. Second, efforts are being made to realize the value of ecological products, allowing community residents to benefit from conservation efforts. For example, Qi Lanfang, a fisherman from Badou Village, returned to her hometown and founded the "Badou Fisherwoman" restaurant, combining traditional fisherman's cuisine with birdwatching culture, generating annual revenue exceeding 500,000 yuan. Badou Village in Jianggang Town, responding to the call for repatriating fishermen to wetlands, has fostered a "birdwatching economy," with fishermen transitioning from selling seafood to selling ocean views.

4.2.2 Employment and Entrepreneurship Support

Yancheng City actively provides employment and entrepreneurship support for community residents to promote sustainable development. On one hand, by developing green industries such as ecotourism and eco-agriculture, job opportunities are created and community residents are employed. Data shows that by 2024, Dongtai's coastal tourism revenue had increased by 300% compared to before the World Heritage application, creating 12,000 jobs. On the other hand, entrepreneurial support is provided through various channels to help community residents start their own businesses. For example, Li Xiuqin, owner of the "Tinghai B&B" in Badou Village, transformed a dilapidated seaside hotel into a bird-watching destination, embarking on a unique development path of "B&B + Birdwatching," attracting tourists through creative design.

4.2.3 Skills training and capacity building

Yancheng City prioritizes skills training and capacity building for community residents, enhancing their ability to participate in wetland conservation and ecotourism development. On one hand, skills training in wetland conservation, ecotourism, and eco-agriculture is conducted to enhance the professional skills of community residents. On the other hand, community participation in emerging areas such as carbon trading and ecological compensation is encouraged, and training is provided to enhance their capacity to participate. For example, Huangjian Town in Tinghu District, Yancheng City, received the nation's first batch of green inclusive agricultural carbon sink loans totaling 11.6 million yuan to support the development of village collectives and township enterprises. This innovative pilot project by the Yancheng Branch of the People's Bank of China integrates the "green finance + inclusive finance + agricultural carbon sink" model, providing a practical

path for realizing the value of agricultural carbon sinks.

4.2.4 Successful Cases of Community Participation

Yancheng City has achieved a series of successful cases in community engagement. For example, Tiaozini Community in Dongtai City has achieved a virtuous interaction between conservation and development by developing a "birdwatching economy." Community residents have shifted from traditional fishing to ecotourism services, increasing their income and raising awareness of conservation. Another successful case is Dazonghu Community in Yandu District. The district's Standing Committee has identified wetland conservation as a key area for implementing the "Two Mountains" theory. Through institutional innovation, it has established a legal framework for wetland protection, leaving behind an ecological foundation for sustainable development for future generations. Through the establishment of a "compensation fund pool" and the promotion of wetland carbon trading, a win-win situation for conservation and development has been achieved. Furthermore, Yancheng has actively promoted the participation of veterans in wetland conservation, establishing the "Yellow Sea Wetland Veteran Guardian" veteran volunteer service program. This program leverages the veterans' organizational discipline and dedication to provide strong support for wetland conservation.

V. PUBLIC GOVERNANCE MEASURES TO ADDRESS ECOLOGICAL THREATS

5.1 Prevention and control of invasive alien species

5.1.1 Comprehensive management of *Spartina alterniflora*

Spartina alterniflora is the major invasive alien species facing the Yellow Sea Wetlands in Yancheng, posing a serious threat to the wetland ecosystem. To effectively prevent and control the invasion of *Spartina alterniflora*, Yancheng City has formulated the "Yancheng City *Spartina alterniflora* Control Special Action Implementation Plan (2023-2025)," which clearly defines control objectives and measures. In practice, Yancheng has explored a series of innovative approaches. For example, Dongtai City has adopted a control plan of "rotary tillage of high-lying land + flooding of mid-lying land + deep burial of low-lying land," adapting different control methods to different terrains and regions. Furthermore, the innovative cofferdam dewatering method is used to lower the water level and promote the dehydration of *Spartina*

alterniflora, achieving the control goal. As of January 2025, the city had eliminated 276,000 mu of *Spartina alterniflora*, achieving the control target ahead of schedule and effectively curbing the spread of *Spartina alterniflora*. At the same time, Yancheng is actively exploring ways to utilize *Spartina alterniflora* as a resource, turning a "hazard" into a valuable asset. For example, the Jiangsu Yancheng National Rare Bird Nature Reserve uses deep plowing technology to eliminate *Spartina alterniflora*, while exploring the utilization value of *Spartina alterniflora* extracts, developing related products, and creating economic value.

5.1.2 Enteromorpha green tide prevention and control

Enteromorpha green tides pose another ecological threat to Yancheng's Yellow Sea wetlands. To effectively prevent and control these green tides, Yancheng City has formulated the "2025 Yancheng City Enteromorpha Green Tide Joint Prevention and Control Work Plan," which clearly defines prevention and control objectives and measures. According to the plan, Yancheng will organize pre-emptive salvage operations during the early stages of the green tide to minimize the initial biomass of floating Enteromorpha and effectively reduce the impact of the green tide. Salvage operations will begin in early May and end around July 10th, divided into two batches, with each batch comprising no fewer than 22 vessels. Yancheng has also established a regular cleanup system, clarifying the responsibilities of all parties, organizing specialized teams, equipping specialized equipment, and conducting regular inspections to clear floating debris from coastal beaches and the ocean. Cleanup results will be verified through drone aerial photography and manual patrols, ensuring a "zero accumulation" environment at all times.

5.2 Environmental Pollution Prevention and Control

5.2.1 Prevention and control of land-based pollution

Yancheng City is strengthening land-based pollution prevention and control to reduce pollutant emissions at the source. On one hand, it is strengthening the management of industrial pollution sources, strictly enforcing pollutant emission standards, and increasing penalties for enterprises that exceed emission standards. On the other hand, it is strengthening the prevention and control of agricultural non-point source pollution, promoting ecological agriculture models, reducing the use of chemical fertilizers and pesticides, and strengthening pollution control in livestock and poultry farming.

Furthermore, it is accelerating the construction and upgrading of sewage treatment facilities to enhance sewage treatment capacity. For example, the Huangjian Town Sewage Treatment Plant Upgrading Project in Tinghu District began in November 2023 with an investment of 19.5 million yuan. Upon completion in 2024, the effluent quality is expected to meet the provincial sewage treatment standard of D in DB32.

5.2.2 Marine pollution prevention and control

Yancheng City is strengthening marine pollution prevention and control to protect the marine ecological environment. On the one hand, it is strictly controlling marine dumping to prevent marine pollution; on the other hand, it is strengthening pollution prevention and control from ships, strictly enforcing ship pollutant emission standards, and strengthening supervision of ship pollutant emissions. At the same time, it is establishing and improving a marine garbage monitoring, cleanup, and disposal system to effectively improve the quality of the marine environment. In February 2022, Yancheng City was the first in the province to issue the "Opinions on Further Strengthening Beach Garbage Removal." This policy combines strict control of land-based garbage entering the sea, strengthening marine garbage management, standardizing the disposal of land-based garbage, and improving supporting infrastructure. It also established an assessment mechanism to evaluate the performance of relevant departments. The Yancheng City government allocates 4 million yuan annually to subsidize beach garbage management in six coastal counties (cities, and districts). Dafeng District invested approximately 3.5 million yuan to organize five large-scale marine garbage cleanups, mobilizing nearly 9,000 personnel daily and clearing approximately 7,769 tons of various beach garbage, effectively improving the quality of the marine environment.

5.2.3 Ecological restoration and governance

Yancheng City is actively carrying out ecological restoration and governance efforts to restore damaged ecosystems. On one hand, measures such as returning fisheries to wetlands and returning aquaculture to beaches are being implemented to restore wetland ecological functions. For example, since 2017, Dongtai has invested 70 million yuan in a "returning fisheries to wetlands" campaign, dismantling 17,000 mu (approximately 1,000 acres) of high-lying aquaculture ponds and restoring the original mudflat landscape. On the other hand, coastal restoration is being strengthened, improving the stability of coastal ecosystems through measures

such as coastal protection and vegetation restoration. For example, the Sheyang County Marine Ecological Protection and Restoration Project has been recognized by the Ministry of Natural Resources as a model case study for marine ecological protection and restoration by 2025. The project has restored 890 hectares of land, returned 305 hectares of land to wetlands, and rehabilitated 16.9 kilometers of coastline. Furthermore, biodiversity conservation efforts are being actively pursued, with measures such as establishing nature reserves and protected areas to protect rare and endangered species and their habitats. For example, the Yancheng World Biosphere Reserve has conducted the first-ever reintroduction of migratory coastal populations of crested ibises into the wild and artificial breeding of wintering shorebirds, both of which have achieved initial success.

5.3 Ecological security monitoring and early warning

5.3.1 Construction of ecological monitoring network

Yancheng City has established a robust ecological monitoring network to support ecological security. The Yancheng World Biosphere Reserve, in collaboration with Yancheng Tower Company, has developed a "Smart Management Center" system, achieving a historic shift from offline to online management. This system creates a three-dimensional, integrated "sky-air-ground" monitoring system, ensuring comprehensive, all-weather protection. The custom-developed "Crane Protector" mobile app has effectively improved patrol efficiency for rangers. Yancheng also utilizes satellite remote sensing, drones, and on-site surveys to conduct ecological monitoring. For example, Dongtai City, in accordance with provincial technical regulations, has fully utilized these technologies to map the distribution of *Spartina alterniflora* and identify key areas of control. Yancheng has also established a wetland monitoring network for long-term monitoring of wetland ecosystems, providing data support for scientific conservation.

5.3.2 Ecological risk warning

Yancheng City has established and improved an ecological risk early warning mechanism to promptly identify and address ecological safety hazards. On one hand, a sound ecological and environmental monitoring and early warning system has been established to collect, analyze, and assess risk information that could lead to ecological and environmental incidents. On the other hand, a comprehensive ecological and environmental emergency plan has been developed,

clarifying emergency response procedures and measures. According to the "Measures for Response to Sudden Ecological and Environmental Incidents in Jiangsu Province," after an ecological and environmental emergency occurs, local governments at or above the county level, ecological and environmental authorities, and park management agencies shall immediately initiate an emergency response of the appropriate level in accordance with the emergency plan, implement emergency response measures, and submit and report relevant information in accordance with the law. When an ecological and environmental emergency occurs in areas prone to significant impacts, such as centralized drinking water sources, or during critical periods, the response level may be appropriately increased.

5.3.3 Emergency response and disposal

Yancheng City has established and improved an emergency response and disposal mechanism for ecological and environmental incidents, enhancing its ability to respond to emergencies. According to the "Measures for Response to Ecological and Environmental Sudden Incidents in Jiangsu Province," when an ecological and environmental emergency occurs or is likely to occur, enterprises and institutions must immediately take measures such as cutting off or controlling the pollution source, promptly notify potentially affected units and residents, and report the incident to the relevant departments, including the ecological and environmental department and emergency management department, in accordance with the law, and accept investigation and handling. Local people's governments at all levels, relevant departments, and enterprises and institutions must take necessary measures to avoid or reduce harm to the ecological environment during emergency response to natural disasters, accidents, and public health incidents. Public security, transportation, maritime affairs, and other relevant departments and agencies must coordinate emergency response to secondary ecological and environmental pollution caused by traffic accidents on roads, waterways, bridges, docks, and other areas, in accordance with their respective responsibilities. Emergency management departments must coordinate emergency response to secondary ecological and environmental pollution caused by production safety accidents, etc., in accordance with their respective responsibilities. Fire and rescue agencies must implement measures to reduce and reuse firefighting water, and to intercept, collect, and dispose of contaminated firefighting water, taking into account actual circumstances, to control and mitigate the hazards posed by leaked substances and contaminated firefighting water. The

competent departments for ecological and environmental protection shall, in accordance with the law, conduct emergency monitoring for sudden ecological and environmental incidents and promptly report the results. They shall focus on monitoring centralized drinking water sources, nature reserves, densely populated areas, and other areas requiring special protection. Following the completion of emergency response to a sudden ecological and environmental incident, the relevant local people's government shall immediately organize an assessment of the ecological and environmental impacts and losses caused by the incident and promptly publish the assessment results to the public. The assessment results shall serve as the basis for investigations and handling of sudden ecological and environmental incidents, compensation for damages, and ecological restoration.

VI. CONCLUSION AND IMPLICATIONS

6.1 Major achievements in public governance of the Yancheng Yellow Sea Wetland World Natural Heritage Site

The Yellow Sea Wetlands World Heritage Site in Yancheng, Jiangsu Province, has achieved remarkable results in ecological protection, tourism development, community engagement, and addressing ecological threats through a series of innovative public governance strategies. In terms of ecological protection, the quality of the wetland ecosystem has been effectively improved through legal safeguards, wetland restoration, invasive species control, and the development of a monitoring system. By January 2025, the city had eradicated 276,000 mu (approximately 16,000 acres) of *Spartina alterniflora*, achieving the "three-year task, two-year completion" goal ahead of schedule. By 2024, the city had added 12,500 hectares of protected wetlands, bringing the wetland protection rate to 50.9%. The 720 mu (approximately 16,000 acres) of high-tide habitat in Tiaozini has become a "Chinese model" for global biodiversity conservation. In terms of coordinating tourism development and conservation, a "3+2+5" World Heritage ecotourism core product system has been established, including the Yellow Sea Tourism Highway 1 and the development of the "Three Lucky Treasures of the Yellow Sea Wetlands" IP and cultural and creative products. By 2024, the world-class coastal tourism corridor is expected to receive 28.03 million visitors, a year-on-year increase of 57%. At the same time, a balance between tourism development and heritage protection has been achieved through visitor capacity control, zoning and classification management, and an ecological compensation mechanism. Regarding community engagement, community education and

publicity, community organization building, and a community supervision mechanism have increased residents' awareness and participation in conservation. Economic incentives, employment support, and skills training have been implemented to ensure that residents benefit from conservation efforts. For example, Qi Lanfang, a fisherman from Badou Village, returned home and founded the "Badou Fisherwoman" restaurant, generating over 500,000 yuan in annual revenue. Dongtai's coastal tourism revenue has increased by 300% since the time of the World Heritage application, creating 12,000 jobs. Regarding ecological threats, comprehensive management of *Spartina alterniflora*, prevention and control of green tides of *Enteromorpha*, environmental pollution control, and ecological safety monitoring have effectively safeguarded the ecological security of the wetlands. *Spartina alterniflora* control efforts are at the forefront nationwide, providing a "Yancheng solution" for nationwide *Spartina alterniflora* control. Significant progress has been made in marine pollution prevention and control. The water quality of the Dafeng District Bay is 100% excellent, with no water quality exceeding Class IV. The coverage of marine debris is 0.23%, and the coverage of beach debris is 0.24%.

6.2 Lessons from Public Governance of the Yellow Sea Wetland World Natural Heritage Site in Yancheng

The public governance practices of the Yellow Sea Wetland World Natural Heritage Site in Yancheng provide valuable experience and inspiration for the protection and sustainable development of other world natural heritage sites.

- Adhering to the rule of law and building a comprehensive legal system: Yancheng has promulgated and implemented the "Yancheng Yellow Sea Wetland Protection Regulations," established a judicial protection coordination mechanism, and built a multi-faceted governance and cross-domain assistance mechanism for ecological restoration, providing a solid legal foundation for wetland protection. This demonstrates that the rule of law is a crucial safeguard for protecting World Natural Heritage. We must establish and improve a comprehensive legal system, strengthen law enforcement and oversight, and provide institutional support for heritage protection.
- Innovating ecological protection models and promoting the integration of natural and artificial restoration: Yancheng has innovatively proposed "Nature-Based Solutions" (NbS) and implemented key restoration projects, including the 720-acre high-tide habitat restoration project in Tiaozini. This

has charted a path for ecological protection and restoration that aligns with Yancheng's specific circumstances. This demonstrates that ecological protection must respect the laws of nature, adapt to local conditions, and integrate natural and artificial restoration to improve the quality and stability of ecosystems.

- Promoting the realization of the value of ecological products and fostering a positive interaction between conservation and development: Yancheng has achieved the transformation of the value of ecological products by developing green industries such as ecotourism and eco-agriculture, and by innovating mechanisms such as carbon sink trading and ecological compensation. This has enabled protectors to reap economic benefits. This suggests that conservation and development are not mutually exclusive. By promoting the realization of the value of ecological products through innovative mechanisms, a win-win situation for both can be achieved.

- Strengthen community participation and build a multi-governance pattern: Yancheng encourages community residents to participate in wetland protection and ecotourism development through community education, economic incentives, employment support and other measures, forming a protection pattern with government leadership, community participation and multi-governance. This tells us that the community is the key to heritage protection.

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