

Formosa II Offshore Wind Farm Environmental Monitoring

Report of the Operation Phase

(April to June 2026)

Summary Table of Environmental Monitoring Results and Improvement Measures

Monitoring Item		Monitoring Site	Monitoring Result Summary	Measures & Effects
Bird Ecology	Offshore Birds	Wind Farm and its Periphery	1. Species Composition: 2 orders, 2 families, and 7 species. 2. Protected Species: A total of 2 protected bird species were recorded, including the Bridled Tern (II) and Little Tern (II). 3. Flying Altitude: Below 30 meters accounted for 100.00%.	—
	Coastal Birds	1. Xihu National Wetland 2. Periphery Coast	1. Species Composition: A total of 9 orders, 17 families, 47 species, and 3,202 individuals were recorded. 2. Protected Species: A total of 8 protected bird species were recorded, including Greater painted-snipe (II), Little Tern (II), Greater Crested Tern (II), Chinese Egret (II), Crested serpent eagle (II), Chinese Sparrowhawk (II), Taiwan Hwamei (II), and Brown shrike (III).	—
	Analysis of Tern Migration Routes	Weather Radar Observation Data Analysis	The migratory routes of terns from May to October are analyzed annually, and the results will be presented in the Q3 and Q4 monitoring reports.	—
	Long-term Bird Monitoring System	Wind Farm Area	The long-term bird monitoring system involves year-round surveys, with analysis results to be presented in the monitoring report in the first quarter of the following year.	
Cetacean Sighting		Wind Farm and its	During this season (April to June 2026), a	—

Monitoring Item	Monitoring Site	Monitoring Result Summary	Measures & Effects
	Periphery	total of 6 offshore surveys were conducted. No cetacean sightings were recorded.	
Fishery Resource	3 Survey Lines in Wind Farm Area	1. Fish: 11 families, 11 species, and 119 individuals, with Orbfish being the majority. No protected species were recorded during the survey. 2. Fish Egg: 7 families, 9 genera, and 234 eggs, with Moonfish being the dominant species. No protected species were recorded during the survey. 3. Fish Larva: 5 families, 5 genera, and 7 individuals, with Needleskin queenfish being the dominant species. No protected species were recorded during the survey.	—
Underwater Noise (including Cetacean Acoustic Survey)	5 stations within the wind farm area	1. Whistles: The highest whistle count was recorded at HM-4 (287), followed by HM-2 (77). 2. Clicks: The highest click count was recorded at HM-2 (368), followed by HM-3 (172).	—
Marine and Intertidal Ecology	10 stations within the wind farm area	1. Marine Ecology: (1) Phytoplankton: A total of 112 species from 53 genera and 4 phyla were recorded this season. The Shannon–Wiener diversity index ranged from 1.52 to 2.89, and the evenness index ranged from 0.47 to 0.87. The dominant species was <i>Trichodesmium erythraeum</i> with the highest relative abundance (20.00%), followed by <i>Chaetoceros lorenzianus</i> (16.08%) and <i>Bacteriastrum delicatulum</i>. (8.94%). Chlorophyll-a concentrations ranged from 0.31 to 1.41 µg/L, and primary productivity ranged from 15.11 to 103.77 µg	—

Monitoring Item	Monitoring Site	Monitoring Result Summary	Measures & Effects
		C/L/day. (2) Zooplankton: A total of 30 taxa from 11 phyla were recorded this season. The Shannon–Wiener diversity index ranged from 0.83 to 1.43 and the evenness index ranged from 0.26 to 0.48. The dominant species was Calanoida with the highest relative abundance (72.68%), followed by Cyclopoida (14.48%) and Chaetognatha (2.49%). (3) Benthic Organisms: A total of 19 species from 18 families and 13 orders were recorded this season. The Shannon–Wiener diversity index ranged from 1.32 to 1.88, and the evenness index ranged from 0.93 to 0.97. The dominant species was <i>Euphyllia</i> spp. with the highest relative abundance (12.30%), followed by <i>Eucrassatella nana</i> and <i>Nereis</i> spp.(9.84%). 2. Intertidal Ecology: A total of 8 orders, 11 families, and 12 species were recorded this season. The Shannon–Wiener diversity index ranged from 1.40 to 2.16, and the evenness index ranged from 0.83 to 0.94. The dominant species was Sand-bubbler crab with the highest relative abundance (33.75%), followed by Striped barnacle (14.58%) and Horn-eyed Ghost Crab (12.50%).	
Underwater Photography	Same two wind turbine locations (D01 & D07) as in the pre-construction survey	A total of 17 species from 11 families and 1 order were recorded this season. At station D01, 11 species from 9 families and 1 order were recorded. At station D07, 10 species	—

Monitoring Item	Monitoring Site	Monitoring Result Summary	Measures & Effects
		from 8 families and 1 order were recorded.	
Fishery Economy	Miaoli County	The Fisheries Agency of the Ministry of Agriculture plans to announce the annual fisheries statistics report for the previous year at the end of each year. The analysis results will be presented in the fourth-quarter monitoring report.	—
Terrestrial Ecology	Planned important wetland in Zhunan	1. Plantation: A total of 303 species from 241 genera and 84 families were recorded. Among them, 1 species is <i>Podocarpus costalis</i> (CR), 1 species is <i>Garcinia subelliptica</i> (EN), and 4 species are <i>Calocedrus formosana</i> (VU), <i>Crossostephium chinense</i> (VU), <i>Diospyros blancoi</i> (VU), and <i>Barringtonia racemosa</i> (VU), all of which were artificially planted. 2. Mammal: 7 species from 3 families and 6 individuals were recorded. All bats (1 families, 5 species, 1,238 acoustic records). No protected species were recorded. 3. Amphibian: A total of 7 species from 6 families and 120 individuals were recorded, with no protected species were recorded. 4. Reptiles: A total of 4 species from 4 families and 24 individuals were recorded, with no protected species were recorded. 5. Butterfly: A total of 11 species from 9 subfamilies and 5 families were recorded, totaling 104 individuals, with no protected species were recorded. 6. Bird: A total of 34 species from 19 families and 242 individuals were recorded, including 2 protected species:	—

Monitoring Item	Monitoring Site	Monitoring Result Summary	Measures & Effects
		Collared Scops Owl (II), and Black-headed Munia (III).	
Aquatic Ecology	Planned important wetland in Zhunan	1. Plantation: A total of 17 species from 13 genera and 10 families were recorded, with no rare plants observed. 2. Fish: A total of 14 species from 8 families and 555 individuals were recorded, with no protected species observed. 3. Crabs and Shrimps: A total of 11 species from 5 families and 195 individuals were recorded, with no protected species observed. 4. Conch: A total of 5 species from 5 families and 302 individuals were recorded, with no protected species observed. 5. Aquatic Insects: A total of 3 species from 2 families and 1 order were recorded, totaling 131 individuals. 6. Odonata: A total of 2 species from 2 subfamilies and 1 families were recorded, totaling 84 individuals, with no protected species observed.	—
Groundwater Quality	1. Substation 2. Planned Important Wetland in Zhunan	1. Substation: The water quality parameters were as follows: pH 6.9, BOD 1.5 mg/L, COD 6.6 mg/L, SS 5.2 g/L, ammonia nitrogen 0.24 mg/L, true color N.D., oil and grease 3.6 mg/L, water temperature 28.1 °C, nitrate nitrogen 0.39 mg/L, total phosphorus 0.095 mg/L, and dissolved oxygen 3.5 mg/L. 2. Planned Important Wetland in Zhunan: The water quality parameters were as follows: pH 8.7, BOD 28.0 mg/L, COD	BOD values measured during the EIA phase, the environmental variation (DA) phase, and the construction phase also exceeded the Class IV water quality standard (referring to the Protection Project of National Important Wetlands: https://wetland-

Monitoring Item	Monitoring Site	Monitoring Result Summary	Measures & Effects
		117 mg/L, SS 64.0 g/L, ammonia nitrogen 0.17 mg/L, true color 49, oil and grease 10.6 mg/L, water temperature 31.4 °C, nitrate nitrogen 0.08 mg/L, total phosphorus 0.163 mg/L, and dissolved oxygen 7.5 mg/L. Except for BOD, which exceeded the Class IV water quality standard, all other parameters met the Class IV water quality standard.	tw.tcd.gov.tw/). This is attributed to the accumulation of organic pollutants in the wetland caused by intensive agricultural use of chemical fertilizers, as well as discharges from industrial, aquaculture, and domestic wastewater. These elevated BOD values reflect the wetland's environmental background conditions and are not caused by the Project's construction activities. Monitoring will continue to track any changes.
Electromagnetic Field	1. Substation 2. Residential Area near Kaiyuan Road	1. Substation: (1) Magnetic Field: 12.36 mG (2) Electric Field: 8.00 V/m 2. Residential Area near Kaiyuan Road: (1) Magnetic Field: 5.72 mG (1) Electric Field: 6.00 V/m	—