

Environmental Monitoring Report of Formosa II
Operation Phase (July to September 2024)
Monitoring & Improvement Summary

Monitoring Item		Monitoring Site	Monitoring Result Summary	Measures & Effects
Bird Ecology	Offshore Bird	Wind farm and its Periphery	<ol style="list-style-type: none"> Species Composition: 4 orders, 5 families, and 9 species. Protected Species: 2 species were recorded, including Greater Crested Tern (II) and Little Tern (II). Flying Altitude: All of recording were below 10 m. 	—
	Coastal Birds	<ol style="list-style-type: none"> Xihu National Wetland Periphery Coast 	<ol style="list-style-type: none"> Species Composition: A total of 7 orders, 14 families, 32 species and 2,765 individuals were recorded. Protected Species: 6 protected species were recorded, including Painted Snipe (II), Little Tern (II), Chinese Egret (II), Osprey (II), Black-Winged Kite (II), Crested Serpent Eagle (II), and Chestnut Munia (III). 	—
	Analysis of Tern Migration Routes	Weather Radar Observation Data Analysis	<p>Observations from the Nantun precipitation radar show that an additional survey was conducted in April 2024. The highest number of birds passing through the wind farm area in April was recorded on April 29, with the primary flight direction being north. In May, the highest number of birds was recorded on May 3, with relatively higher numbers compared to May 2023, and the primary flight direction was from north to north-northwest. In June, the number of birds passing through the area dropped significantly, similar to June 2023, as the birds' spring migration returning north was nearing its end.</p>	—
	Long-term	Wind Farm Area	Long-term bird monitoring is conducted	

Monitoring Item		Monitoring Site	Monitoring Result Summary	Measures & Effects
	Bird Monitoring System		annually, and the analysis results will be presented in the monitoring report for the first quarter of the following year.	
Cetacean Sighting		Wind farm and its Periphery	A total of 16 offshore surveys were conducted this quarter (July-September 2024). No cetaceans were sighted this quarter.	—
Fishery Resource		3 Survey Lines in Wind Farm Area	<ol style="list-style-type: none"> 1. Fish: 11 families, 14 species, and 54 individuals, with Slimy Soapy being the majority. 2. Fish Egg: 7 families, 7 genera, and 1,187 eggs, with Moonfish being the dominant species. 3. Fish Larva: 7 families, 11 genera, and 72 individuals with Shorthead Anchovy being the most dominant species. 	—
Underwater Noise (including Cetacean Acoustic Survey)		5 stations within wind farm area	<ol style="list-style-type: none"> 1. Whistles: No whistles were detected this quarter. 2. Clicks: No clicks were detected this quarter. 	—
Marine and Intertidal Ecology		10 stations within wind farm area	<ol style="list-style-type: none"> 1. Marine Ecology: Phytoplankton: 4 phylum, 65 genus, 116 species, with Skeletonema costatum being the dominant species; Zooplankton: 10 phylum, 31 genre, with Calanoida being the dominant species; Benthic Organism: 11 orders, 25 families, 29 species, with Whiskered velvet shrimp being the dominant species. 2. Intertidal Ecology: Benthic organism: 5 orders, 8 families, and 9 species, with Scopimera bitympana being the dominant species. 	—
Underwater Photography		Same two wind turbine locations (D01 & D07) as in the pre-construction survey	<p>A total of 1 order, 9 families, and 17 species were recorded at D01.</p> <p>A total of 2 order, 10 families, and 15 species were recorded at D07.</p>	—

Monitoring Item	Monitoring Site	Monitoring Result Summary	Measures & Effects
Fishery Economy	Miaoli County	The Fisheries Agency, MOA plans to announce the Fisheries Statistical Yearbook 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	<ol style="list-style-type: none"> 1. Plantation: 84 families, 242 genera, and 305 species were recorded. 6 rare species were recorded, including Podocarpus Costalis (CR), Fukugi Tree (EN), Taiwan Incense Cedar (VU), Seremban (VU), Black Ebony (VU) and Powder-puff Tree (VU). All are artificially cultivated. 2. Mammal: 3 families, 3 species, and 5 individuals of mammals were recorded. 1 order, 2 families, and 7 species of bats were recorded. No protected species were recorded. 3. Amphibian: 5 families, 6 species and 70 individuals were recorded. No protected species were recorded. 4. Reptile: 4 families, 5 species, and 25 individuals were recorded. No protected species were recorded. 5. Butterfly: 5 families, 11 subfamilies, 34 species and 172 individuals were recorded. No protected species were recorded. 6. Bird: 19 families, 32 species, and 426 individuals were recorded. 5 protected species, including Painted Snipe (II), Little Tern (II), Black-winged Kite (II), Collared Scops Owl (II), and Taiwan hwamei (II), were recorded. 	—
Aquatic Ecology	Planned important wetland in Zhunan	<ol style="list-style-type: none"> 1. Plantation: 12 families, 14 genera, and 16 species were recorded. No rare species were recorded. 2. Fish: 8 families, 15 species, and 748 individuals were recorded. No protected species were recorded. 3. Crabs and Shrimps: 5 families, 11 species, and 282 individuals were 	—

Monitoring Item	Monitoring Site	Monitoring Result Summary	Measures & Effects
		<p>recorded. No protected species were recorded.</p> <p>4. Conch: 5 families, 5 species, and 599 individuals were recorded. No protected species were recorded.</p> <p>5. Aquatic Insects: 4 families, 1 subfamily, 11 species, and 90 individuals were recorded. No protected species were recorded.</p> <p>6. Odonata, 4 families, 1 subfamily 11 species, 147 individuals were recorded. No protected species were recorded.</p>	

Monitoring Item	Monitoring Site	Monitoring Result Summary	Measures & Effects
Groundwater Quality	1. Substation 2. 2. Planned Important Wetland in Zhunan	1. Substation: pH value is 7.7; BOD is 4.5 mg/L; COD is 20.1 mg/L, SS is 6.4 mg/L, ammonia nitrogen is 0.03 mg/L, ADMI is 75, fat is 3.8 mg/L, water temperature is 29.8 °C, NO ₃ -N is 44.8 mg/L, TP is 1.33 mg/L, Dissolved Oxygen is 4.86 mg/L. All monitoring items meet the water quality standards for irrigation. 2. Planned Important Wetland in Zhunan: pH value is 8.2; BOD is 28.5 mg/L; COD is 113 mg/L, SS is 60.5 mg/L, ammonia nitrogen is 0.01 mg/L, ADMI is 37, fat is 5.1 mg/L, water temperature is 28.2 °C, NO ₃ -N is 0.71 mg/L, TP is 0.209 mg/L, Dissolved Oxygen is 7.9 mg/L. Except for BOD exceeding the class IV water body quality standard and the water quality standards for irrigation, all other monitoring items meet the class IV water body quality standard.	BOD value measured in EIA and DA phases are also higher than class IV water body quality standard (referring to Protection Project of National Important Wetlands: https://wetland-tw.tcd.gov.tw/). It is inferred that the value is affected by organic pollutants in water from agriculture, water cultural, household and industry discharged into the wetland, which belongs to background value and is not caused by the construction of the Project. Monitoring will be continued to clarify the changes.
Electromagnetic Field	1. Substation 2. Residential Area near Kaiyuan Road	1. Substation: (1) Magnetic Field: 1.68 (mG) (2) Electric Field: 15.78 (V/m) 2. Residential Area near Kaiyuan Road: (1) Magnetic Field: 1.68 (mG) (2) Electric Field: 10.16 (V/m)	—