

**Environmental Monitoring Report of Formosa II**  
**Operation Phase (October to December 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"> <li>1. Species Composition: 3 orders, 3 families, and 4 species.</li> <li>2. Protected Species: No endemic or protected species were recorded this season.</li> <li>3. Flying Altitude: All of the recordings were below 10 m.</li> </ol>	—
	Coastal Birds	<ol style="list-style-type: none"> <li>1. Xihu National Wetland</li> <li>2. Periphery Coast</li> </ol>	<ol style="list-style-type: none"> <li>1. Species Composition: A total of 8 orders, 18 families, 52 species, and 5,685 individuals were recorded.</li> <li>2. Protected Species: 10 protected species were recorded, including Black-faced Spoonbill (I), Painted Snipe (II), Little Tern (II), Greater Crested Tern (II), Osprey (II), Black-Winged Kite (II), Crested Goshawk (II), Eastern Buzzard(II), Taiwan Hwamei (II), and Brown Shrike (III).</li> </ol>	—
	Analysis of Tern Migration Routes	Weather Radar Observation Data Analysis	Observations from the Nantun precipitation radar show that approximately 3,252 birds passed through the wind farm area in August 2024, a number similar to that recorded in the same period in 2023. In September 2024, around 6,579 birds passed through the wind farm area, which is lower than the number recorded in September 2023.	—
	Long-term Bird Monitoring System	Wind Farm Area	Long-term bird monitoring is conducted 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	A total of 3 offshore surveys were	—

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	Periphery	conducted this quarter (October-December 2024). No cetaceans were sighted this quarter.	
Fishery Resource	3 Survey Lines in Wind Farm Area	<ol style="list-style-type: none"> <li>1. Fish: 12 families, 16 species, and 143 individuals, with Big-head Pennah Croaker being the majority.</li> <li>2. Fish Egg: 8 families, 9 genera, and 880 eggs, with Thornfish being the dominant species.</li> <li>3. Fish Larva: 2 families, 3 genera, and 22 individuals with Thornfish being the most dominant species.</li> </ol>	—
Underwater Noise (including Cetacean Acoustic Survey)	5 stations within the wind farm area	<ol style="list-style-type: none"> <li>1. Whistles: No whistles were detected this quarter.</li> <li>2. Clicks: No clicks were detected this quarter.</li> </ol>	—
Marine and Intertidal Ecology	10 stations within the wind farm area	<ol style="list-style-type: none"> <li>1. Marine Ecology: Phytoplankton: 5 phyla, 97 genera, 181 species, with Thalassiosira genera being the dominant species; Zooplankton: 12 phyla, 29 genres, with Calanoida being the dominant species; Benthic Organism: 12 orders, 20 families, 22 species, with Eucrassatella nana being the dominant species.</li> <li>2. Intertidal Ecology: Benthic organism: 8 orders, 12 families, and 14 species, with Scopimera bitympana being the dominant species.</li> </ol>	—
Underwater Photography	Same two wind turbine locations (D01 & D07) as in the pre-construction survey	<p>A total of 1 order, 1 family, and 1 species were recorded at D01.</p> <p>A total of 1 order, 4 families, and 4 species were recorded at D07.</p>	—
Fishery Economy	Miaoli County	In the 2023 Fisheries Economic Survey, the total fish catch was approximately 952 metric tons, with a production value of about NT\$156,565,000. The fishing	

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		household population stood at 9,574, and the total number of fisheries personnel was 9,574. There were approximately 180 powered fishing vessels (including rafts and sampans). Key fishing activities included gill netting, set netting, pole and lines boote, pound netting, Taiwanese beach seining, stone weir fishing, and longline fishing.	
Terrestrial Ecology	Planned important wetland in Zhunan	<ol style="list-style-type: none"> <li>1. Plantation: 84 families, 243 genera, and 308 species were recorded. 6 rare species were recorded, including Podocarpus Costalis (CR), Fukugi Tree (EN), Taiwan Incense Cedar (VU), Seremban (VU), Ivorywood (VU) and Small-leaved Barringtonia (VU). All are artificially cultivated.</li> <li>2. Mammal: 3 families, 4 species, and 6 individuals of mammals were recorded. 1 order, 3 families, and 8 species of bats were recorded. No protected species were recorded.</li> <li>3. Amphibian: 4 families, 4 species, and 7 individuals were recorded. No protected species were recorded.</li> <li>4. Reptiles: 4 families, 5 species, and 25 individuals were recorded. No protected species were recorded.</li> <li>5. Butterfly: 5 families, 11 subfamilies, 24 species, and 94 individuals were recorded. No protected species were recorded.</li> <li>6. Bird: 23 families, 36 species, and 498 individuals were recorded. 4 protected species, including Painted Snipe (II), Little Tern (II), Black-winged Kite (II), Osprey (II), and Brown Shrike (II), were recorded.</li> </ol>	—
Aquatic Ecology	Planned important wetland in Zhunan	1. Plantation: 12 families, 17 genera, and 19 species were recorded. No rare species	—

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		<p>were recorded.</p> <p>2. Fish: 8 families, 15 species, and 1,948 individuals were recorded. No protected species were recorded.</p> <p>3. Crabs and Shrimps: 5 families, 11 species, and 809 individuals were recorded. No protected species were recorded.</p> <p>4. Conch: 5 families, 5 species, and 867 individuals were recorded. No protected species were recorded.</p> <p>5. Aquatic Insects: 2 families, 1 subfamily, 2 species, and 4 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>	

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Groundwater Quality	1. Substation 2. 2. Planned Important Wetland in Zhunan	1. Substation: pH value is 7.6; BOD is 0.9 mg/L; COD is 3.6 mg/L, SS is 1.6 mg/L, ammonia nitrogen is 0.03 mg/L, ADMI is N.D, fat is 0.6 mg/L, water temperature is 23.6 °C, NO3-N is 0.65 mg/L, TP is 0.074 mg/L, Dissolved Oxygen is 3.7 mg/L. 2. Planned Important Wetland in Zhunan: pH value is 8.1; BOD is 47.2 mg/L; COD is 174 mg/L, SS is 75 mg/L, ammonia nitrogen is 0.11 mg/L, ADMI is 40, fat is 6.1 mg/L, water temperature is 28.2 °C, NO3-N is 0.04 mg/L, TP is 0.256 mg/L, Dissolved Oxygen is 7.8 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 values measured in EIA and DA phases are also higher than class IV water body quality standards (referring to Protection Project of National Important Wetlands: <a href="https://wetland-tw.tcd.gov.tw/">https://wetland-tw.tcd.gov.tw/</a> ). It is inferred that the value is affected by organic pollutants in water from agriculture, water culture, 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: 12.1 (mG) (2) Electric Field: 25.11 (V/m) 2. Residential Area near Kaiyuan Road: (1) Magnetic Field: 11.26 (mG) (2) Electric Field: 6.964 (V/m)	—