

Environmental Monitoring Report of Formosa II

Operation Phase (April to June 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: 2 orders, 3 families, and 5 species. Protected Species: Brown Shrike (III). Flying Altitude: All of recordings were below 10m. 	—
	Coastal Birds	<ol style="list-style-type: none"> Xihu National Wetland Periphery Coast 	<ol style="list-style-type: none"> Species Composition: A total of 10 orders, 21 families, 46 species and 3,912 individuals were recorded. Protected Species: 10 protected species were recorded, including Painted Snipe (II), Little Tern (II), Chinese Egret (II), Osprey (II), Black-Winged Kite (II), Crested Serpent Eagle (II), Peregrine Falcon (II), Taiwan Hwamei (II), Brown Shrike (III), and Chestnut Munia (III). 	—
	Analysis of Tern Migration Routes	Weather Radar Observation Data Analysis	The migration routes of Terns from May to October are analyzed annually and the analysis results will be presented in the third and fourth quarter monitoring reports respectively.	—
Cetacean Sighting		Wind farm and its Periphery	A total of 9 offshore surveys were conducted this quarter (April-June 2024). 1 pod of Indo-Pacific hump-backed dolphin was sighted on March 26.	—
Fishery Resource		3 Survey Lines in Wind Farm Area	<ol style="list-style-type: none"> Fish: 13 families, 16 species, and 66 individuals, with Spotted Catfish being the majority. Fish Egg: 8 families, 11 genera, and 1,111 eggs, with Vosmer's Butterflyfish being the dominant species. Fish Larva: 17 families, 19 genera, and 	—

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		212 individuals with Greater Amberjack being the most dominant species.	
Underwater Noise (including Cetacean Acoustic Survey)	5 stations within wind farm area	<p>1. Whistles: HM-1 detected a total of 5 whistles HM-2 detected a total of 8 whistles HM-3 did not detect any whistle HM-4 detected a total of 54 whistles HM-5 detected a total of 6 whistles</p> <p>2. Clicks: HM-1 did not detect any clicks HM-2 detected a total of 313 clicks HM-3 did not detect any click HM-4 detected a total of 31 clicks HM-5 did not detect any clicks</p>	—
Marine and Intertidal Ecology	10 stations within wind farm area	<p>1. Marine Ecology: Phytoplankton: 5 phylum, 81 genus, 180 species; Chlorophyll A is between 0.75-1.72 µg/L, Zooplankton: 12 phylum, 34 genre; Benthic Organism: 12 orders, 20 families, 25 species.</p> <p>2. Intertidal Ecology: Benthic organism: 4 orders, 5 families, and 5 species</p>	—
Underwater Photography	Same two wind turbine locations (D01 & D07) as in the pre-construction survey	<p>A total of 2 order, 5 families, and 6 species were recorded at D01.</p> <p>A total of 1 order, 9 families, and 12 species were recorded at D07.</p>	—
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	<p>1. Plantation: 88 families, 232 genera, and 322 species were recorded. 1 rare species were recorded, including Taiwan Incense Cedar. Both are artificially cultivated.</p> <p>2. Mammal: 3 families, 3 species, and 5 individuals of mammals were recorded. 1 order, 2 family, and 7 species of bats were recorded. No protected species were</p>	—

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		<p>recorded.</p> <p>3. Amphibian: 5 families, 7 species and 238 individuals were recorded. No protected species were recorded.</p> <p>4. Reptile: 5 families, 7 species, and 29 individuals were recorded. No protected species were recorded.</p> <p>5. Butterfly: 4 families, 10 subfamilies, 17 species and 443 individuals were recorded. No protected species were recorded.</p> <p>6. Bird: 20 families, 35 species, and 428 individuals were recorded. 3 protected species, including Sparrowhawk (II), Collared Scops Owl (II) and Painted Snipe (II) was recorded.</p>	
Aquatic Ecology	Planned important wetland in Zhunan	<p>1. Plantation: 15 families, 19 genera, and 21 species were recorded. 2 rare species were recorded, including Coastal Myoporum and Kandelia.</p> <p>2. Fish: 8 families, 13 species, and 595 individuals were recorded. No protected species were recorded.</p> <p>3. Crabs and Shrimps: 5 families, 9 species, and 325 individuals were recorded. No protected species were recorded.</p> <p>4. Conch: 5 families, 5 species, and 338 individuals were recorded. No protected species were recorded.</p> <p>5. Aquatic Insects (including Odonata): for Odonata, 3 families, 3 species, and 13 individuals were recorded; for aquatic insects, 4 orders, 4 families, and 66 individuals/m² 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 6 mg/L; COD is 25.3 mg/L, SS is 11.6 mg/L, ammonia nitrogen is 0.1 mg/L, ADMI is 30, fat is 3.9 mg/L, water temperature is 24.5 °C, NO3-N is 36.3 mg/L, TP is 2.12 mg/L, Dissolved Oxygen is 3.02 mg/L. All monitoring items meet the water quality standards for irrigation. 2. Planned Important Wetland in Zhunan: pH value is 7.6; BOD is 26.8 mg/L; COD is 111 mg/L, SS is 47 mg/L, ammonia nitrogen is 0.11 mg/L, ADMI is 35, fat is 6.8 mg/L, water temperature is 26.2 °C, NO3-N is 0.71 mg/L, TP is 0.06 mg/L, Dissolved Oxygen is 4.3 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: 13.97 (mG) (2) Electric Field: 1.24 (V/m) 2. Residential Area near Kaiyuan Road: (1) Magnetic Field: 11 (mG) (2) Electric Field: 8.11 (V/m)	—