"World Exposition 2025: Draft Environmental Impact Statement from Citizen's Perspective (Biodiversity) [Summary]

Public Interest Incorporated Association, Nature Conservation Society of Osaka / Workshop for Sustainable Community

In addition to releasing the "Document on Primary Environmental Impact Consideration and Scoping Documents by Citizens" (August 2019), we have conducted field surveys over the past two years and published the "Yumeshima Living Things Photo Album," a record of these surveys. Through this survey, we found that (1) reaffirming the value of Yumeshima as a "biodiversity hotspot", (2) the habitats of these creatures are being threatened daily by landfill work, and (3) Development of the Expo site could cause irreparable damage to the biodiversity. Particularly urgent needs for conservation measures are as follows.

Table 1. Important species in Yumeshima and the impacts by Expo.

Scientific name	Red list category				Impact		Appendix
	IUCN	MOE	Osaka	Habitat	Reclamation	Building facilities	•
Birds							
Tadorna tadorna		VU		Tidal flat	✓	✓	>100 individuals
Anas falcata	NT			Pond	✓	✓	
Aythya ferina	VU			Pond	✓	✓	>5000 individuals (Ramsar site criterion 6)]
Egretta intermedia		NT		Marsh	✓	✓	- 71
Vanellus vanellus			NT	Marsh	✓	✓	
Vanellus cinereus			NT	Short grassland		✓	
Pluvialis squatarola			VU	Tidal flat/Marsh	✓	✓	
Charadrius dubius			NT	Marsh/Gravel land		✓	Breeding
Charadrius alexandrinus		VU	VU	Marsh/Gravel land		✓	Breeding
Charadrius mongolus			VU	Tidal flat/Marsh	✓	✓	
Himantopus himantopus		VU		Tidal flat/Marsh	✓	✓	Breeding
Gallinago gallinago			NT	Marsh/Paddy	✓	✓	
Limosa limosa			NT	Tidal flat/Marsh	✓	✓	
Limosa lapponica	NT	VU	VU	Tidal flat/Marsh	✓	✓	
Numenius phaeopus			NT	Tidal flat/River	✓	✓	
Tringa erythropus		VU	VU	Tidal flat/Marsh	✓	✓	
Numenius madagascariensis	EN	VU	NT	Tidal flat/Marsh	✓	✓	
Tringa totanus		NT	NT	Tidal flat/Marsh	✓	✓	
Tringa nebularia			VU	Tidal flat/Marsh	✓	✓	
Tringa glareola			VU	Tidal flat/Marsh	✓	✓	
Heteroscelus brevipes			NT	Tidal flat/Marsh	✓	✓	
Xenus cinereus			VU	Tidal flat/Marsh	✓	✓	
Actitis hypoleucos			NT	Tidal flat/River	✓	✓	
Calidris ruficollis			NT	Tidal flat/Marsh	✓	✓	
Calidris alpina		NT		Tidal flat/Coast	✓	✓	
Larus saundersi	VU	VU	NT	Tidal flat/Coast	✓	✓	
Sterna albifrons		VU	CR+E N	Graval lan		✓	Breeding
Pandion haliaetus		NT		Coast/Lake	✓	✓	

Circus spilonotus	EN	CR+E N	Reed bed		✓	
Falco peregrinus	VU		Cliff		✓	
Alauda arvensis		NT	Short grassland		✓	Likely breeding
Cisticola juncidis		NT	Tall grassland		✓	Likely breeding
Plants						
Potamogeton panormitanus	VU		Pond	✓	✓	
Hibiscus hamabo		EX	Coast/Lake		✓	
Potamogeton pectinatus	NT		Pond/Stream	✓	✓	Second discovery in Osaka
Ruppia maritima		EX	Brackish water	✓	✓	
Cladium chinense		VU	Coast		✓	Natural monument in some cities
Calystegia soldanella			Sands		✓	Conservation importance in Osaka
Lysimachia mauritiana			Coast		✓	
Tetragonia tetragonioides			Sands		✓	Conservation importance in Osaka
Aster tripolium	NT		Brackish marsh		✓	
Setaria viridis			Coast		✓	Red list in some prefectures

In addition, a wide variety of other organisms were observed. The conservation of these organisms is essential for the natural regeneration of Osaka Bay.

Biodiversity is the foundation of the SDGs, and all parties involved need to work together to make the Expo a place where "Designing Future Society for Our Lives" including these organisms in order to achieve the basic objective of the Expo: a society that achieves the SDGs.

We make the following recommendations on how the Expo should be planned.

- (1) Avoidance: Cancel the event on Yumeshima and consider a less environmentally damaging location and method of holding the event (e.g., setting up an online venue). 1) Avoidance (2) Suspend the reclamation work and prioritize conservation measures.
- (2) Downsizing and relocation in Yumeshima: If (1) is impossible to achieve the above, the venue should be reduced in size and relocated to an IR site that has not yet been commercialized.
- (3) Do not take easy compensatory measures: Secure alternative sites and transplantation should be carefully considered based on scientific evidence. If, instead of (1), the Expo is to be held on Yumeshima in accordance with (2) and (3), an environmentally conscious plan for withdrawal and natural regeneration after the end of the event, and a target for securing biodiversity by 2030 should be formulated and monitored.

We are ready to cooperate with you in organizing a "Nature-friendly World Exposition" by providing research data, participating in the consideration of alternatives, and collaborating in monitoring.