

## ELECTRONIC SUPPLEMENTARY MATERIALS

**ESM 1.** Index of Ornithological Value (IVO) calculated using the formula proposed by Massa and Canale 2008.

$$IVO = \sum(SPECn \times Wspec) + (specie\ annex\ I\ dir\ 2009/147/CE \times 1) + (European\ IUCN\ redlist\ category \times Wcategory) * 100^{-1}$$

*SPECn* represents the categories of SPEC species (BirdLife International, 2017) weighted by 1 for SPEC1, 0.75 for SPEC2, 0.50 for SPEC3 and 0.25 for noSPEC. Weights for the European IUCN red list are as followed: regional extinct (EX) = 1; critically endangered (CR) = 0.80; endangered (EN)= 0.60; vulnerable (VU)= 0.40; near threatened (NT)= 0.20; least concern (LC) = 0.10. Categories data deficient (DD) and not evaluated (NA) were not considered for analysis.

**ESM 2.** Long term trend classification of avian guilds in 2005-2019 recorded in wetlands within the Mirandola plain (Italy). The slope represents an estimate of the trendline with the respective standard error (Slope SE) and the upper (UCI) and lower confidence intervals (LCI).

<b>Guild</b>	<b>Slope</b>	<b>Slope SE</b>	<b>UCI</b>	<b>LCI</b>	<b>Trend classification</b>
Gulls & Terns	1.01	0.0204	1.05	0.97	STABLE
Large wading birds	1.10	0.0184	1.13	1.06	STRONG INCREASE
Shorebirds	0.97	0.0127	0.99	0.94	MODERATE DECLINE
Rails & Cranes	0.97	0.0206	1.01	0.93	UNCERTAIN
Raptors	1.18	0.0170	1.22	1.15	STRONG INCREASE
Grebes & Divers	0.99	0.0250	1.04	0.95	UNCERTAIN
Swans & Geese	1.16	0.0277	1.21	1.11	STRONG INCREASE
Cormorants	1.10	0.0204	1.15	1.07	STRONG INCREASE
Ducks	1.03	0.0148	1.05	0.99	UNCERTAIN

**ESM 3.** Long term trend classification of dominant species (top) and species of conservation interest (below) in 2005-2019, recorded in wetlands within the Mirandola plain (Italy). The slope represents an estimate of the trendline with the respective standard error (Slope SE) and the upper (UCI) and lower confidence intervals (LCI). The IVO is the index of Ornithological Value used to select the species of conservation concern, while  $p_i$  refers to the species frequency used to identify dominant species in the dataset.

<b>Dominant species</b>	<b><math>p_i</math></b>	<b>Slope</b>	<b>Slope SE</b>	<b>UCI</b>	<b>LCI</b>	<b>Trend classification</b>
<i>Anas platyrhynchos</i>	0.31	0.99	0.0087	1.01	0.97	STABLE
<i>Anas crecca</i>	0.11	1.03	0.0109	1.05	1.01	MODERATE INCREASE
<i>Fulica atra</i>	0.06	0.97	0.1010	1.16	0.78	UNCERTAIN
<i>Vanellus vanellus</i>	0.13	0.96	0.0143	0.99	0.93	MODERATE DECLINE
<i>Larus ridibundus</i>	0.06	1.00	0.0201	1.04	0.96	STABLE
<b>Species of conservation interest</b>	<b>IVO</b>	<b>Slope</b>	<b>Slope SE</b>	<b>UCI</b>	<b>LCI</b>	<b>Trend classification</b>
<i>Aythya nyroca</i>	2.10	1.06	0.0591	1.18	0.95	UNCERTAIN
<i>Circus cyaneus</i>	1.70	1.13	0.0183	1.17	1.10	STRONG INCREASE
<i>Falco vespertinus</i>	2.20	1.21	0.0880	1.38	1.04	MODERATE INCREASE
<i>Calidris pugnax</i>	1.85	0.92	0.0276	0.97	0.87	MODERATE DECLINE