**Appendix 2 Investigated population number of waterbirds in 2019-2021.**

| **No.** | **Scientific name** | **Common Name** | **2019** | **2020** | **2021** |
| --- | --- | --- | --- | --- | --- |
| 1 | *Coturnix japonica* | Japanese Quail | 　 | 3 | 3 |
| 2 | *Phasianus colchicus* | Common Pheasant | 18 | 32 | 24 |
| 3 | *Anser anser* | Greylag Goose | 　 | 　 | 8 |
| 4 | *Anser fabalis* | Taiga Bean Goose | 　 | 　 | 229 |
| 5 | *Anser albifrons* | Greater White-fronted Goose | 　 | 　 | 2 |
| 6 | *Cygnus columbianus* | Tundra Swan | 65 | 10 | 31 |
| 7 | *Tadorna tadorna* | Common Shelduck | 　 | 　 | 19 |
| 8 | *Tadorna ferruginea* | Ruddy Shelduck | 　 | 　 | 13 |
| 9 | *Aix galericulata* | Mandarin Duck | 　 | 　 | 3 |
| 10 | *Sibirionetta formosa* | Baikal Teal | 1227 | 374 | 1095 |
| 11 | *Spatula querquedula* | Garganey | 　 | 6 | 48 |
| 12 | *Spatula clypeata* | Northern Shoveler | 5 | 　 | 21 |
| 13 | *Mareca strepera* | Gadwall | 293 | 148 | 275 |
| 14 | *Mareca falcata* | Falcated Duck | 113 | 77 | 301 |
| 15 | *Mareca penelope* | Eurasian Wigeon | 　 | 16 | 121 |
| 16 | *Anas zonorhyncha* | Chinese Spot-billed Duck | 5305 | 2875 | 3996 |
| 17 | *Anas platyrhynchos* | Mallard | 3866 | 2425 | 3711 |
| 18 | *Anas acuta* | Northern Pintail | 243 | 193 | 290 |
| 19 | *Anas crecca* | Eurasian Teal | 628 | 253 | 1798 |
| 20 | *Netta rufina* | Red-crested Pochard | 　 | 　 | 2 |
| 21 | *Aythya ferina* | Common Pochard | 2 | 58 | 193 |
| 22 | *Aythya baeri* | Baer's Pochard | 11 | 40 | 10 |
| 23 | *Aythya nyroca* | Ferruginous Duck | 301 | 71 | 469 |
| 24 | *Aythya fuligula* | Tufted Duck | 24 | 　 | 161 |
| 25 | *Mergus merganser* | Goosander | 2 | 　 | 　 |
| 26 | *Apus pacificus* | Pacific Swift | 　 | 　 | 2 |
| 27 | *Eudynamys scolopaceus* | Western Koel | 　 | 　 | 5 |
| 28 | *Cuculus micropterus* | Indian Cuckoo | 　 | 5 | 2 |
| 29 | *Cuculus canorus* | Common Cuckoo | 　 | 19 | 31 |
| 30 | *Streptopelia orientalis* | Oriental Turtle-dove | 551 | 182 | 662 |
| 31 | *Streptopelia decaocto* | Eurasian Collared-dove | 　 | 　 | 16 |
| 32 | *Streptopelia tranquebarica* | Red Turtle-dove | 　 | 8 | 42 |
| 33 | *Spilopelia chinensis* | Eastern Spotted Dove | 58 | 55 | 214 |
| 34 | *Rallus indicus* | Eastern Water Rail | 　 | 　 | 3 |
| 35 | *Zapornia akool* | Brown Crake | 　 | 　 | 2 |
| 36 | *Amaurornis phoenicurus* | White-breasted Waterhen | 　 | 2 | 5 |
| 37 | *Gallinula chloropus* | Common Moorhen | 130 | 63 | 499 |
| 38 | *Fulica atra* | Common Coot | 570 | 5959 | 6398 |
| 39 | *Tachybaptus ruficollis* | Little Grebe | 126 | 275 | 92 |
| 40 | *Podiceps cristatus* | Great Crested Grebe | 81 | 34 | 79 |
| 41 | *Himantopus himantopus* | Black-winged Stilt | 　 | 63 | 90 |
| 42 | *Recurvirostra avosetta* | Pied Avocet | 　 | 　 | 3 |
| 43 | *Vanellus vanellus* | Northern Lapwing | 　 | 177 | 211 |
| 44 | *Vanellus cinereus* | Grey-headed Lapwing | 　 | 13 | 121 |
| 45 | *Pluvialis fulva* | Pacific Golden Plover | 　 | 　 | 3 |
| 46 | *Charadrius placidus* | Long-billed Plover | 　 | 　 | 26 |
| 47 | *Charadrius dubius* | Little Ringed Plover | 　 | 92 | 250 |
| 48 | *Charadrius alexandrinus* | Kentish Plover | 　 | 2 | 61 |
| 49 | *Hydrophasianus chirurgus* | Pheasant-tailed Jacana | 2 | 13 | 23 |
| 50 | *Numenius minutus* | Little Curlew | 　 | 　 | 3 |
| 51 | *Numenius arquata* | Eurasian Curlew | 2 | 　 | 　 |
| 52 | *Limosa limosa* | Black-tailed Godwit | 　 | 　 | 13 |
| 53 | *Calidris falcinellus* | Broad-billed Sandpiper | 　 | 　 | 13 |
| 54 | *Calidris acuminata* | Sharp-tailed Sandpiper | 　 | 　 | 14 |
| 55 | *Calidris ferruginea* | Curlew Sandpiper | 　 | 　 | 3 |
| 56 | *Calidris temminckii* | Temminck's Stint | 　 | 　 | 56 |
| 57 | *Calidris subminuta* | Long-toed Stint | 　 | 　 | 18 |
| 58 | *Calidris alpina* | Dunlin | 　 | 　 | 3 |
| 59 | *Gallinago stenura* | Pintail Snipe | 　 | 11 | 　 |
| 60 | *Gallinago gallinago* | Common Snipe | 10 | 26 | 61 |
| 61 | *Actitis hypoleucos* | Common Sandpiper | 　 | 19 | 5 |
| 62 | *Tringa ochropus* | Green Sandpiper | 34 | 6 | 10 |
| 63 | *Tringa totanus* | Common Redshank | 　 | 5 | 10 |
| 64 | *Tringa stagnatilis* | Marsh Sandpiper | 3 | 　 | 24 |
| 65 | *Tringa glareola* | Wood Sandpiper | 2 | 　 | 84 |
| 66 | *Tringa erythropus* | Spotted Redshank | 19 | 359 | 109 |
| 67 | *Tringa nebularia* | Common Greenshank | 145 | 　 | 71 |
| 68 | *Glareola maldivarum* | Oriental Pratincole | 　 | 5 | 13 |
| 69 | *Larus genei* | Slender-billed Gull | 2 | 　 | 　 |
| 70 | *Larus ridibundus* | Black-headed Gull | 　 | 32 | 675 |
| 71 | *Larus vegae* | Vega Gull | 　 | 　 | 34 |
| 72 | *Sterna hirundo* | Common Tern | 　 | 　 | 10 |
| 73 | *Chlidonias hybrida* | Whiskered Tern | 　 | 259 | 1190 |
| 74 | *Chlidonias leucopterus* | White-winged Tern | 　 | 　 | 2 |
| 75 | *Ciconia boyciana* | Oriental Stork | 　 | 　 | 6 |
| 76 | *Phalacrocorax carbo* | Great Cormorant | 　 | 185 | 167 |
| 77 | *Platalea leucorodia* | Eurasian Spoonbill | 　 | 　 | 21 |
| 78 | *Ixobrychus sinensis* | Yellow Bittern | 　 | 8 | 35 |
| 79 | *Ixobrychus cinnamomeus* | Cinnamon Bittern | 2 | 　 | 2 |
| 80 | *Ixobrychus flavicollis* | Black Bittern | 　 | 　 | 5 |
| 81 | *Nycticorax nycticorax* | Black-crowned Night-heron | 2 | 37 | 126 |
| 82 | *Butorides striata* | Green-backed Heron | 　 | 　 | 5 |
| 83 | *Ardeola bacchus* | Chinese Pond-heron | 3 | 35 | 87 |
| 84 | *Bubulcus ibis* | Cattle Egret | 6 | 26 | 296 |
| 85 | *Ardea cinerea* | Grey Heron | 26 | 11 | 29 |
| 86 | *Ardea purpurea* | Purple Heron | 2 | 　 | 11 |
| 87 | *Ardea alba* | Great White Egret | 132 | 3 | 198 |
| 88 | *Ardea intermedia* | Intermediate Egret | 40 | 97 | 179 |
| 89 | *Egretta garzetta* | Little Egret | 200 | 63 | 1055 |
| 90 | *Elanus caeruleus* | Black-winged Kite | 　 | 3 | 3 |
| 91 | *Accipiter gularis* | Japanese Sparrowhawk | 2 | 　 | 　 |
| 92 | *Accipiter nisus* | Eurasian Sparrowhawk | 　 | 　 | 2 |
| 93 | *Circus aeruginosus* | Western Marsh-harrier | 　 | 　 | 5 |
| 94 | *Circus spilonotus* | Eastern Marsh-harrier | 　 | 　 | 3 |
| 95 | *Circus cyaneus* | Hen Harrier | 2 | 2 | 3 |
| 96 | *Circus melanoleucos* | Pied Harrier | 　 | 2 | 　 |
| 97 | *Buteo japonicus* | Japanese Buzzard | 2 | 　 | 3 |
| 98 | *Upupa epops* | Common Hoopoe | 24 | 18 | 23 |
| 99 | *Eurystomus orientalis* | Oriental Dollarbird | 　 | 　 | 2 |
| 100 | *Alcedo atthis* | Common Kingfisher | 6 | 18 | 8 |
| 101 | *Picoides canicapillus* | Grey-capped Woodpecker | 2 | 2 | 10 |
| 102 | *Dendrocopos major* | Great Spotted Woodpecker | 6 | 2 | 8 |
| 103 | *Falco tinnunculus* | Common Kestrel | 　 | 　 | 2 |
| 104 | *Falco amurensis* | Amur Falcon | 　 | 　 | 11 |
| 105 | *Falco cherrug* | Saker Falcon | 　 | 2 | 　 |
| 106 | *Falco peregrinus* | Peregrine Falcon | 2 | 　 | 　 |
| 107 | *Lalage melaschistos* | Black-winged Cuckooshrike | 　 | 　 | 3 |
| 108 | *Lanius cristatus* | Brown Shrike | 2 | 2 | 64 |
| 109 | *Lanius schach* | Long-tailed Shrike | 45 | 37 | 40 |
| 110 | *Lanius sphenocercus* | Chinese Grey Shrike | 2 | 2 | 3 |
| 111 | *Oriolus chinensis* | Black-naped Oriole | 　 | 2 | 11 |
| 112 | *Dicrurus macrocercus* | Black Drongo | 　 | 48 | 132 |
| 113 | *Dicrurus leucophaeus* | Ashy Drongo | 　 | 　 | 2 |
| 114 | *Cyanopica cyanus* | Asian Azure-winged Magpie | 90 | 47 | 172 |
| 115 | *Pica serica* | Oriental Magpie | 412 | 311 | 270 |
| 116 | *Corvus dauuricus* | Daurian Jackdaw | 　 | 　 | 81 |
| 117 | *Corvus frugilegus* | Rook | 　 | 　 | 245 |
| 118 | *Corvus corone* | Carrion Crow | 5 | 196 | 322 |
| 119 | *Corvus macrorhynchos* | Large-billed Crow | 2 | 980 | 805 |
| 120 | *Parus minor* | Japanese Tit | 6 | 13 | 24 |
| 121 | *Remiz consobrinus* | Chinese Penduline-tit | 　 | 151 | 56 |
| 122 | *Alauda gulgula* | Oriental Skylark | 412 | 　 | 　 |
| 123 | *Alauda arvensis* | Eurasian Skylark | 185 | 100 | 93 |
| 124 | *Pycnonotus sinensis* | Light-vented Bulbul | 320 | 175 | 551 |
| 125 | *Riparia riparia* | Collared Sand Martin | 　 | 　 | 32 |
| 126 | *Hirundo rustica* | Barn Swallow | 101 | 26 | 773 |
| 127 | *Cecropis daurica* | Red-rumped Swallow | 　 | 　 | 114 |
| 128 | *Horornis diphone* | Japanese Bush-warbler | 　 | 2 | 　 |
| 129 | *Horornis canturians* | Korean Bush-warbler | 　 | 　 | 8 |
| 130 | *Horornis fortipes* | Brownish-flanked Bush-warbler | 　 | 　 | 2 |
| 131 | *Aegithalos glaucogularis* | Silver-throated Tit | 13 | 31 | 40 |
| 132 | *Phylloscopus inornatus* | Yellow-browed Warbler | 　 | 2 | 18 |
| 133 | *Phylloscopus proregulus* | Pallas's Leaf-warbler | 3 | 2 | 21 |
| 134 | *Phylloscopus fuscatus* | Dusky Warbler | 2 | 　 | 6 |
| 135 | *Phylloscopus coronatus* | Eastern Crowned Warbler | 　 | 　 | 2 |
| 136 | *Phylloscopus tenellipes* | Pale-legged Leaf-warbler | 　 | 　 | 2 |
| 137 | *Phylloscopus borealis* | Arctic Warbler | 　 | 　 | 8 |
| 138 | *Acrocephalus orientalis* | Oriental Reed-warbler | 　 | 37 | 5 |
| 139 | *Cisticola juncidis* | Zitting Cisticola | 　 | 　 | 13 |
| 140 | *Prinia inornata* | Plain Prinia | 11 | 13 | 37 |
| 141 | *Sinosuthora webbiana* | Vinous-throated Parrotbill | 145 | 192 | 520 |
| 142 | *Paradoxornis heudei* | Reed Parrotbill | 　 | 　 | 8 |
| 143 | *Zosterops simplex* | Swinhoe's White-eye | 　 | 　 | 56 |
| 144 | *Acridotheres cristatellus* | Crested Myna | 48 | 27 | 40 |
| 145 | *Spodiopsar sericeus* | Red-billed Starling | 　 | 6 | 81 |
| 146 | *Spodiopsar cineraceus* | White-cheeked Starling | 914 | 341 | 401 |
| 147 | *Gracupica nigricollis* | Black-collared Starling | 8 | 　 | 3 |
| 148 | *Zoothera aurea* | White's Thrush | 　 | 　 | 2 |
| 149 | *Turdus hortulorum* | Grey-backed Thrush | 2 | 　 | 3 |
| 150 | *Turdus mandarinus* | Chinese Blackbird | 153 | 66 | 143 |
| 151 | *Turdus pallidus* | Pale Thrush | 　 | 2 | 2 |
| 152 | *Turdus naumanni* | Naumann's Thrush | 　 | 　 | 3 |
| 153 | *Turdus eunomus* | Dusky Thrush | 　 | 63 | 118 |
| 154 | *Muscicapa griseisticta* | Grey-streaked Flycatcher | 　 | 　 | 2 |
| 155 | *Muscicapa sibirica* | Dark-sided Flycatcher | 　 | 　 | 2 |
| 156 | *Muscicapa dauurica* | Asian Brown Flycatcher | 　 | 　 | 6 |
| 157 | *Cyanecula svecica* | Bluethroat | 2 | 　 | 　 |
| 158 | *Tarsiger cyanurus* | Orange-flanked Bush-robin | 　 | 　 | 3 |
| 159 | *Ficedula mugimaki* | Mugimaki Flycatcher | 　 | 　 | 2 |
| 160 | *Phoenicurus auroreus* | Daurian Redstart | 48 | 39 | 55 |
| 161 | *Saxicola stejnegeri* | Stejneger's Stonechat | 　 | 　 | 3 |
| 162 | *Passer montanus* | Eurasian Tree Sparrow | 411 | 343 | 736 |
| 163 | *Lonchura striata* | White-rumped Munia | 　 | 2 | 　 |
| 164 | *Motacilla tschutschensis* | Eastern Yellow Wagtail | 10 | 　 | 13 |
| 165 | *Motacilla cinerea* | Grey Wagtail | 2 | 　 | 　 |
| 166 | *Motacilla alba* | White Wagtail | 32 | 32 | 58 |
| 167 | *Anthus richardi* | Richard's Pipit | 　 | 　 | 6 |
| 168 | *Anthus hodgsoni* | Olive-backed Pipit | 26 | 130 | 14 |
| 169 | *Anthus cervinus* | Red-throated Pipit | 　 | 　 | 2 |
| 170 | *Anthus rubescens* | Buff-bellied Pipit | 3 | 341 | 29 |
| 171 | *Anthus spinoletta* | Water Pipit | 6 | 55 | 16 |
| 172 | *Fringilla montifringilla* | Brambling | 4048 | 1325 | 417 |
| 173 | *Coccothraustes coccothraustes* | Hawfinch | 　 | 2 | 　 |
| 174 | *Eophona migratoria* | Chinese Grosbeak | 93 | 240 | 473 |
| 175 | *Chloris sinica* | Oriental Greenfinch | 66 | 　 | 3 |
| 176 | *Spinus spinus* | Eurasian Siskin | 　 | 50 | 24 |
| 177 | *Calcarius lapponicus* | Lapland Longspur | 3 | 　 | 16 |
| 178 | *Emberiza fucata* | Chestnut-eared Bunting | 8 | 2 | 2 |
| 179 | *Emberiza pusilla* | Little Bunting | 21 | 52 | 129 |
| 180 | *Emberiza chrysophrys* | Yellow-browed Bunting | 3 | 2 | 10 |
| 181 | *Emberiza rustica* | Rustic Bunting | 31 | 195 | 496 |
| 182 | *Emberiza elegans* | Yellow-throated Bunting | 　 | 10 | 34 |
| 183 | *Emberiza aureola* | Yellow-breasted Bunting | 　 | 　 | 2 |
| 184 | *Emberiza spodocephala* | Black-faced Bunting | 253 | 89 | 200 |
| 185 | *Emberiza pallasi* | Pallas's Bunting | 29 | 19 | 72 |
| 186 | *Emberiza yessoensis* | Ochre-rumped Bunting | 　 | 　 | 2 |
| **Total** | **22208** | **20581** | **34551** |