

Information Sheet on EAA Flyway Network Sites (SIS) – 2013 version

Available for download from <http://www.eaaflyway.net/the-flyway/flyway-site-network/>

Categories approved by Second Meeting of the Partners of the East Asian-Australasian Flyway Partnership in Beijing, China 13-14 November 2007 - Report (Minutes) Agenda Item 3.13

Notes for compilers:

1. The management body intending to nominate a site for inclusion in the East Asian - Australasian Flyway Site Network is requested to complete a Site Information Sheet. The Site Information Sheet will provide the basic information of the site and detail how the site meets the criteria for inclusion in the Flyway Site Network.
 2. The Site Information Sheet is based on the Ramsar Information Sheet. If the site proposed for the Flyway Site Network is an existing Ramsar site then the documentation process can be simplified.
 3. Once completed, the Site Information Sheet (and accompanying map(s)) should be submitted to the Flyway Partnership Secretariat. Compilers should provide an electronic (MS Word) copy of the Information Sheet and, where possible, digital versions (e.g. shapefile) of all maps.
-

1. Name and contact details of the compiler of this form:

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EAAF SITE CODE FOR OFFICE USE ONLY:

| | | | | | | |
|---|---|---|---|---|---|---|
| E | A | A | F | 0 | 4 | 6 |
|---|---|---|---|---|---|---|

2. Date this sheet was completed:

28/08/2014

3. Country:

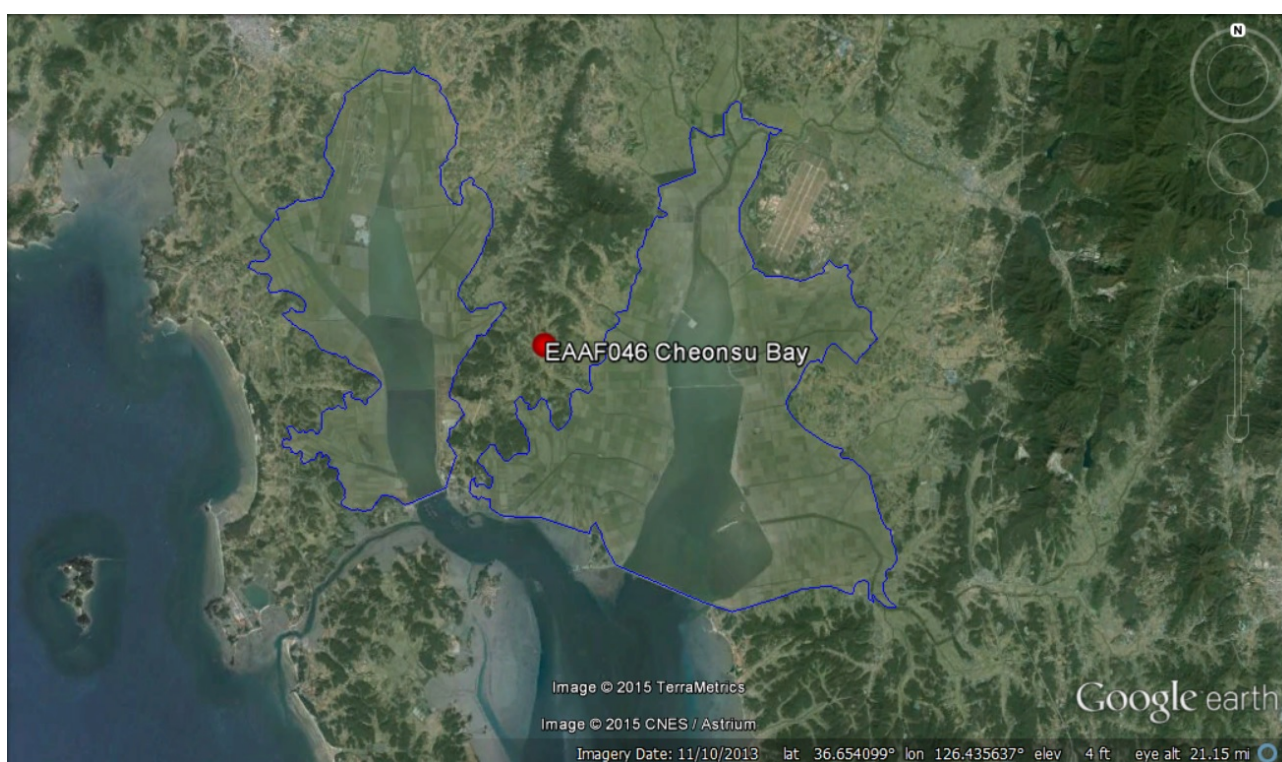
Republic of Korea

4. Name of the Flyway Network site:

Cheonsu Bay

5. Map of site:

The most up-to-date available and suitable map of the wetland should be appended to the SIS (only in digital format and shape file). The map must clearly show the boundary of the site. Please refer to the "Digitising Site Boundaries in Google Earth" file linked [here](#).



6. Geographical coordinates (latitude/longitude, in decimal degrees):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

Lat: 36.66667 Long: 126.40000

7. Elevation: (in metres: average and/or maximum & minimum)

0-10 m

8. Area:

The total area of the site, in hectares. If the areas of discrete site units are known, please also list each of these together with the names (or labels) used to identify and differentiate these units.

The total area is 15,409ha (A site: 9,626ha, B site: 5,783ha)

9. General overview of the site:

A brief (two sentences) summary of the site, mentioning principal physical and ecological functions, and its importance for migratory waterbirds.

The Cheonsu Bay has two lakes and rice paddies so the site provides food and habitat to 320 species.

10. Justification of Flyway Site Network criteria:

Please provide waterbird count information (with year of latest count) that demonstrates that the site meets the criteria of the Flyway Site Network (Annex 1). That is:

- it regularly supports > 20 000 migratory waterbirds; or,
- it regularly supports > 1 % of the individuals in a population of one species or subspecies of migratory waterbird; or,
- it supports appreciable numbers of an endangered or vulnerable population of migratory waterbird
- it is a “staging site” supporting > 5 000 waterbirds, or > 0.25% of a population stage at the site.

A listing of the populations of migratory waterbirds covered by the East Asian – Australasian Flyway Partnership and the 1% thresholds is attached (Annex 3).

The “staging site” criterion is particularly difficult to apply and application of this should be discussed with the Secretariat. Also note that some species have several populations that are very difficult to distinguish in the field.

7,150,000 birds

Important species (for numbers see appendix):

Limosa lapponica (Bar-tailed Godwit)

Limosa limosa (Black-tailed Godwit)

Tringa nebularia (Common Greenshank)

Charadrius alexandrinus (Kentish Plover)

Numenius phaeopus (Whimbrel)

Anas formosa (Baikal Teal)

Anas platyrhynchos (Mallard)

Anser fabalis (Bean Goose)

Unique species: Baikal Teal, Bean Goose

Rare and endangered species: Oriental White Stork, Hooded Crane, Eurasian Spoonbill and Black-faced Spoonbill, etc.

| English Name | Scientific Name | Current IUCN Red List |
|--------------|-----------------|-----------------------|
|--------------|-----------------|-----------------------|

| | | Category |
|-----------------------|--|-----------------|
| Baikal Teal | <i>Anas formosa</i> | LC |
| Bean Goose | <i>Taiga bean goose (Anser fabalis)</i> <i>Tundra bean goose (Anser serrirostris)</i> | LC |
| Oriental White Stork | <i>Ciconia boyciana</i> | EN |
| Hooded Crane | <i>Grus monacha</i> | VU |
| Eurasian Spoonbill | <i>Platalea leucorodia</i> | LC |
| Black-faced Spoonbill | <i>Platalea minor</i> | EN |

11. Wetland Types:

List the wetland types present (see Annex 2). List the wetland types in order of their area in the Flyway Network site, starting with the wetland type with the largest area.

Marine/Coastal wetlands: A, E, F, G, H, I, K

Human-made wetlands: 2, 3, 4, 6

12. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Ministry of Agriculture/Dept. of Environment, etc.

Seosan City (Environmental Ecology Division)

13. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland and the title and/or name and email address/phone number of the person or persons in this office with direct responsibility for managing the wetland.

Seosan City (Environmental Ecology Division)

14. Bibliographical references:

A list of key technical references relevant to the wetland, including management plans, major scientific reports, and bibliographies, if such exist. Please list Web site addresses dedicated to the site or which prominently feature the site, and include the date that the Web site was most recently updated. When a large body of published material is available about the site, only the most important references need be cited, with priority being given to recent literature containing extensive bibliographies.

Biodiversity wetland, management, project

Bird sanctuary monitoring

Operation of visitor centre (Seosan Birdland)

15. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Artificial lake and rice paddies

The mudflats in Cheonsu Bay had been reclaimed from 1975 to around 1995.

Water level fluctuates commonly.

16. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

Freshwater lake: 4,174ha

Climate type: four seasons

Rice paddies: 10,121ha

17. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

It makes water circulate between fresh water lake and sea.

18. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Flyway Network site, and the ecosystem services of the site and the benefits derived from them.

Main habitat: Haemi River, Ganwol lake, Bunam Lake, rice paddies, sand dunes

Vegetation: Reed and willow forest

Animals: Leopard Cat, Water Deer, Raccoon

19. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the SIS.*

(Please add here the species which do not come under sec no 14)

NA

20. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 10. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the SIS.*

(Please add here the species which do not come under sec no 14)

Unique species: Baikal Teal, Bean Goose

Rare and endangered species: Oriental White Stork, Hooded Crane, Eurasian Spoonbill and Black-faced Spoonbill

21. Social, economic and cultural values:

a) Describe if the site has any general social, economic and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

Farming area (rice)

Eco-tourism site (regional economy)

Bird festival

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? (Double-click the checkbox to check and choose “Checked” under “Default Value” from “Check Box Form Field Options” window)

If yes, tick the box and describe this importance under one or more of the following categories:

- I. Sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- II. Sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- III. Sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- IV. Sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

22. Land tenure/ownership:

a) Within the Flyway Network site:

Local farmers (rice paddies)

Korea farm village public corporation

b) In the surrounding area:

Local people

23. Current land (including water) use:

a) Within the Flyway Network site:

Rice paddies and fresh lake for agricultural use

b) In the surroundings/catchment:

Fishery and farming

24. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

a) Within the Flyway Network site:

The maintenance work of Cheonsu Bay (ex. waterway construction, dredging)

b) In the surrounding area:

missing

25. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Flyway Network site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

Wild animals and plants reserved zone

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate, see Annex 3):

Ia ; Ib ; II ; III ; IV ; V ; VI ; N/A

c) Does an officially approved management plan exist; and is it being implemented?:

If yes, is it being implemented?: If no, is one being planned?

Designation of Ramsar Sites

Invigoration of the Eco-tourism

d) Describe any other current management practices:

Creating habitat for birds

Building international network

26. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

27. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Bird sanctuary monitoring (twice a month since 2007)

28. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Operation of Visitor Centre (Seosan Birdland)

Forest trails, Bird watching, Museum Education

29. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Bird watching tour (4 days a week from Oct to Dec)

30. Threats

Which of the following threats is present historically – when the threat stopped but the effects are still there (H), currently (C) or potentially (P)?

| | Historically | Currently | Potentially |
|---|--------------------------|-------------------------------------|-------------------------------------|
| Residential and commercial development | | | |
| housing and urban areas | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| commercial and industrial areas | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| tourism and recreation areas | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Agriculture and aquaculture | | | |
| annual and perennial non-timber crops | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| wood and pulp plantations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| livestock farming and ranching | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| marine and freshwater aquaculture | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Energy production and mining | | | |
| oil and gas drilling | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| mining and quarrying | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| renewable energy | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Transportation and service corridors | | | |
| roads and railroads | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| utility and service lines | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| shipping lanes | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Information Sheet on EAA Flyway Network Sites

| | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|
| flight paths | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Biological resource use | | | |
| hunting and collecting terrestrial animals | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| gathering terrestrial plants | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| logging and wood harvesting | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| fishing and harvesting aquatic resources | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Human intrusions and disturbance | | | |
| recreational activities | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| war, civil unrest and military exercises | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| work and other activities | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Natural system modifications | | | |
| fire and fire suppression | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| dams and water management/use | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| other ecosystem modifications | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Invasive and other problematic species and genes | | | |
| invasive non-native/alien species | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| problematic native species | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| introduced genetic material | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Pollution | | | |
| household sewage and urban waste water | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| industrial and military effluents | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| agricultural and forestry effluents | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| garbage and solid waste | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| air-borne pollutants | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| excess energy | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Geological events | | | |
| volcanoes | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| earthquakes/tsunamis | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| avalanches/landslides | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Climate change and severe weather | | | |

Information Sheet on EAA Flyway Network Sites

| | | | |
|---------------------------------|--------------------------|-------------------------------------|-------------------------------------|
| habitat shifting and alteration | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| droughts | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| temperature extremes | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| storms and flooding | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Please write here any additional threats and comments/queries you have on the threats.

<List of Waterbirds in Cheonsu Bay A area>

| Scientific Name | 2010 total | 2013 total | Residence type |
|--------------------------|------------|------------|----------------|
| ORDER PODICIPEDIFORMES | | | |
| FAMILY PODICIPEDIDAE | | | |
| Podiceps ruficollis | 279 | 116 | Res |
| Podiceps nigricollis | 185 | 55 | WV |
| Podiceps cristatus | 2645 | 1497 | WV |
| ORDER PELECANIFORMES | | | |
| FAMILY HALAOROCORACIDAE | | | |
| Phalacrocorax carbo | 470 | 1159 | WV |
| ORDER CICONIFORMES | 33 | | |
| FAMILY ARDEIDAE | | | |
| Botaurus stellaris | 8 | 3 | WV |
| Ixobrychus sinensis | 21 | 12 | SV |
| Ixobrychus eurhythmus | 5 | 3 | SV |
| Nycticorax nycticorax | 750 | 322 | SV |
| Butorides striatus | 30 | 26 | SV |
| Bubulcus ibis | 998 | 456 | SV |
| Egretta alba alba | 276 | 638 | WV |
| Egretta alba modesta | 3190 | 2314 | SV |
| Egretta intermedia | 1058 | 457 | SV |
| Egretta garzetta | 982 | 485 | SV |
| Egretta eulophotes | 2 | | SV |
| Ardea cinerea | 2514 | 1671 | SV |
| FAMILY CICONIIDAE | | | |
| Ciconia ciconia | 24 | 18 | WV |
| Ciconia nigra | | 1 | WV |
| FAMILY THRESKIORNITHIDAE | | | |
| Platalea leucorodia | 451 | 158 | WV |
| Platalea minor | 8 | 10 | Res |
| ORDER ANSERIFORMES | | | |

Information Sheet on EAA Flyway Network Sites

| | | | |
|----------------------------|--------|--------|-----|
| FAMILY ANATIDAE | | | |
| <i>Branta canadensis</i> | | 1 | WV |
| <i>Anser albifrons</i> | 124310 | 130061 | WV |
| <i>Anser fabalis</i> | 280601 | 180609 | WV |
| <i>Anser caerulescens</i> | 4 | | WV |
| <i>Anser cygnoides</i> | 2 | | WV |
| <i>Cygnus olor</i> | | 2 | WV |
| <i>Cygnus cygnus</i> | 1145 | 1075 | WV |
| <i>Cygnus columbianus</i> | 1 | | |
| <i>Tadorna ferruginea</i> | 319 | 396 | WV |
| <i>Tadorna tadorna</i> | 1665 | 1698 | WV |
| <i>Aix galericulata</i> | 174 | 293 | Res |
| <i>Anas platyrhynchos</i> | 48714 | 19069 | WV |
| <i>Anas poecilorhyncha</i> | 32119 | 13150 | Res |
| <i>Anas crecca</i> | 11209 | 6826 | WV |
| <i>Anas formosa</i> | 303108 | 7536 | WV |
| <i>Anas falcata</i> | 6 | 14 | WV |
| <i>Anas strepera</i> | 581 | 513 | WV |
| <i>Anas penelope</i> | 277 | 258 | WV |
| <i>Anas acuta</i> | 2053 | 164 | WV |
| <i>Anas querquedula</i> | 63 | 30 | PM |
| <i>Anas clypeata</i> | 6536 | 5902 | WV |
| <i>Aythya ferina</i> | 186 | 541 | WV |
| <i>Aythya baeri</i> | 1 | | WV |
| <i>Aythya fuligula</i> | 289 | 436 | WV |
| <i>Aythya marila</i> | 10 | 38 | WV |
| <i>Bucephala clangula</i> | 165 | 133 | WV |
| <i>Mergus albellus</i> | 85 | 38 | WV |
| <i>Mergus serrator</i> | 4 | | |
| <i>Mergus merganser</i> | 2240 | 1064 | WV |
| ORDER GRUIFORMES | | | |
| FAMILY GRUIDAE | | | |
| <i>Grus grus</i> | 3 | 10 | WV |
| <i>Grus monacha</i> | 941 | 2948 | WV |
| <i>Grus vipio</i> | 1 | | WV |
| FAMILY RALLIDAE | | | |
| <i>Rallus aquaticus</i> | 3 | 1 | WV |
| <i>Gallinula chloropus</i> | 76 | 16 | SV |
| <i>Gallicrex cinerea</i> | 3 | 5 | SV |

Information Sheet on EAA Flyway Network Sites

| | | | |
|----------------------------------|------|------|-----|
| <i>Fulica atra</i> | 1993 | 792 | WV |
| ORDER CHARADRIIFORMES | | | |
| FAMILY ROSTRATULIDAE | | | |
| <i>Rostratula benghalensis</i> | | 2 | PM |
| FAMILY HAEMATOPODIDAE | | | |
| <i>Haematopus ostralegus</i> | 80 | 67 | Res |
| FAMILY CHARADRIIDAE | | | |
| <i>Charadrius dubius</i> | 55 | 58 | SV |
| <i>Charadrius placidus</i> | 1 | 12 | Res |
| <i>Charadrius alexandrinus</i> | 27 | 47 | PM |
| <i>Charadrius mongolus</i> | 11 | | |
| <i>Pluvialis dominica</i> | 24 | 15 | PM |
| <i>Pluvialis squatarola</i> | 29 | 6 | PM |
| <i>Microsarcops cinereus</i> | 1 | | |
| <i>Vanellus vanellus</i> | 478 | 107 | WV |
| FAMILY SCOLOPACIDAE | | | |
| <i>Calidris ruficollis</i> | 191 | 137 | PM |
| <i>Calidris minutilla</i> | 51 | 50 | Vag |
| <i>Calidris temminckii</i> | 1 | | PM |
| <i>Calidris acuminata</i> | 73 | 9 | PM |
| <i>Calidris alpina</i> | 1126 | 2775 | PM |
| <i>Calidris canutus</i> | | 1 | PM |
| <i>Calidris tenuirostris</i> | | 441 | PM |
| <i>Philomachus pugnax</i> | 3 | 2 | PM |
| <i>Tringa erythropus</i> | 16 | 8 | PM |
| <i>Tringa totanus</i> | 8 | 6 | PM |
| <i>Tringa stagnatilis</i> | 30 | 54 | PM |
| <i>Tringa nebularia</i> | 458 | 371 | PM |
| <i>Tringa ochropus</i> | 61 | 49 | PM |
| <i>Tringa glareola</i> | 1183 | 378 | PM |
| <i>Tringa hypoleucos</i> | 129 | 48 | SV |
| <i>Xenus cinereus</i> | 15 | 12 | PM |
| <i>Limosa limosa</i> | 632 | 289 | PM |
| <i>Limosa lapponica</i> | 3 | 20 | PM |
| <i>Numenius arquata</i> | 1 | | PM |
| <i>Numenius madagascariensis</i> | 104 | 58 | PM |
| <i>Numenius phaeopus</i> | 35 | 50 | PM |
| <i>Scolopax rusticola</i> | 2 | 1 | PM |
| <i>Gallinago gallinago</i> | 372 | 48 | PM |

Information Sheet on EAA Flyway Network Sites

| | | | |
|-------------------------|------|------|-----|
| Gallinago stenura | 22 | 2 | PM |
| FAMILY RECURVIROSTRIDAE | | | |
| Himantopus himantopus | 98 | 65 | PM |
| Recurvirostra avocetta | | 1 | PM |
| FAMILY PHALAROPODIDAE | | | |
| Phalaropus lobatus | 1 | 6 | PM |
| FAMILY LARIDAE | | | |
| Larus ridibundus | 6353 | 4883 | WV |
| Larus cachinnans | 602 | 560 | WV |
| Larus heuglini | 14 | 34 | WV |
| Larus canus | 7 | 2 | WV |
| Larus crassirostris | 2307 | 1186 | Res |
| Larus saundersi | 5 | | WV |
| Larus relictus | 1 | | Vag |
| Sterna leucoptera | 3 | | PM |
| Chlidonias hybridus | 3 | 6 | PM |
| Sterna albifrons | 1203 | 1428 | SV |

Notes) Res : Resident , WV : Winter Visitor, SV : Summer Visitor, PM : Passage Migrant, Vag : Vagrant

<List of Waterbirds in Cheonsu Bay B area>

| Scientific Name | 2010 Total | 2013 Total | Residence Type |
|--------------------------|------------|------------|----------------|
| ORDER PODICIPEDIFORMES | | | |
| FAMILY PODICIPEDIDAE | | | |
| Podiceps ruficollis | 122 | 41 | Res |
| Podiceps nigricollis | 25 | 101 | WV |
| Podiceps cristatus | 942 | 112 | WV |
| ORDER PELECANIFORMES | | | |
| FAMILY PHALACROCORACIDAE | | | |
| Phalacrocorax carbo | 77 | 424 | WV |
| ORDER CICONIFORMES | | | |
| FAMILY ARDEIDAE | | | |
| Botaurus stellaris | 1 | 1 | WV |
| Ixobrychus sinensis | 13 | 3 | SV |
| Ixobrychus eurhythmus | 1 | | SV |
| Nycticorax nycticorax | 332 | 204 | SV |
| Ardeola bacchus | 1 | | |
| Butorides striatus | 11 | 18 | SV |

Information Sheet on EAA Flyway Network Sites

| | | | |
|-----------------------------|-------|-------|-----|
| <i>Bubulcus ibis</i> | 147 | 385 | SV |
| <i>Egretta alba alba</i> | 134 | 334 | WV |
| <i>Egretta alba modesta</i> | 1551 | 753 | SV |
| <i>Egretta intermedia</i> | 194 | 679 | SV |
| <i>Egretta garzetta</i> | 320 | 151 | SV |
| <i>Ardea cinerea</i> | 761 | 683 | SV |
| <i>Ardea purpurea</i> | | 1 | PM |
| FAMILY CICONIIDAE | | | |
| <i>Ciconia ciconia</i> | 2 | 1 | WV |
| FAMILY THRESKIORNITHIDAE | | | |
| <i>Platalea leucorodia</i> | 33 | 38 | WV |
| <i>Platalea minor</i> | 1 | | Res |
| ORDER ANSERIFORMES | | | |
| FAMILY ANATIDAE | | | |
| <i>Anser albifrons</i> | 61976 | 32012 | WV |
| <i>Anser fabalis</i> | 98400 | 41004 | WV |
| <i>Cygnus cygnus</i> | 54 | 18 | WV |
| <i>Tadorna ferruginea</i> | 212 | 40 | WV |
| <i>Tadorna tadorna</i> | 64 | 27 | WV |
| <i>Aix galericulata</i> | 56 | 161 | Res |
| <i>Anas platyrhynchos</i> | 11993 | 9242 | WV |
| <i>Anas poecilorhyncha</i> | 12582 | 5238 | Res |
| <i>Anas crecca</i> | 3013 | 2845 | WV |
| <i>Anas formosa</i> | 51 | 10 | WV |
| <i>Anas falcata</i> | 2 | 9 | WV |
| <i>Anas strepera</i> | 275 | 148 | WV |
| <i>Anas penelope</i> | 35 | 15 | WV |
| <i>Anas acuta</i> | 1231 | 390 | WV |
| <i>Anas querquedula</i> | 11 | 16 | PM |
| <i>Anas clypeata</i> | 905 | 1852 | WV |
| <i>Aythya ferina</i> | 13 | 68 | WV |
| <i>Aythya fuligula</i> | 156 | 118 | WV |
| <i>Aythya marila</i> | 16 | | WV |
| <i>Bucephala clangula</i> | 80 | 155 | WV |
| <i>Mergus albellus</i> | 52 | 43 | WV |
| <i>Mergus serrator</i> | | 7 | WV |
| <i>Mergus merganser</i> | 1112 | 322 | WV |

Information Sheet on EAA Flyway Network Sites

| | | | |
|--------------------------------|-----|-----|-----|
| ORDER GRUIFORMES | | | |
| FAMILY GRUIDAE | | | |
| <i>Grus monacha</i> | | 1 | WV |
| FAMILY RALLIDAE | | | |
| <i>Porzana fusca</i> | 1 | | SV |
| <i>Gallinula chloropus</i> | 10 | 6 | SV |
| <i>Fulica atra</i> | 345 | 169 | WV |
| ORDER CHARADRIFORMES | | | |
| FAMILY CHARADRIIDAE | | | |
| <i>Charadrius dubius</i> | 14 | 19 | SV |
| <i>Charadrius placidus</i> | 4 | 4 | Res |
| <i>Charadrius alexandrinus</i> | 3 | | PM |
| <i>Microsarcops cinereus</i> | 1 | | PM |
| <i>Pluvialis dominica</i> | | 1 | PM |
| <i>Vanellus vanellus</i> | 54 | 15 | WV |
| FAMILY SCOLOPACIDAE | | | |
| <i>Calidris ruficollis</i> | 3 | 1 | PM |
| <i>Calidris minutilla</i> | 6 | 1 | Vag |
| <i>Calidris temminckii</i> | 22 | 1 | PM |
| <i>Calidris acuminata</i> | | 15 | PM |
| <i>Calidris alpina</i> | | 15 | PM |
| <i>Tringa erythropus</i> | 34 | 7 | PM |
| <i>Tringa stagnatilis</i> | 53 | 12 | PM |
| <i>Tringa nebularia</i> | 213 | 68 | PM |
| <i>Tringa ochropus</i> | 20 | 20 | PM |
| <i>Tringa glareola</i> | 86 | 109 | PM |
| <i>Tringa hypoleucos</i> | 23 | 15 | SV |
| <i>Xenus cinereus</i> | 5 | 2 | PM |
| <i>Limosa limosa</i> | 30 | 2 | PM |
| <i>Limosa lapponica</i> | 15 | | PM |
| <i>Numenius phaeopus</i> | 55 | 4 | PM |
| <i>Gallinago gallinago</i> | 87 | 36 | PM |
| <i>Gallinago stenura</i> | 2 | 3 | PM |
| FAMILY RECURVIROSTRIDAE | | | |
| <i>Himantopus himantopus</i> | 48 | 17 | PM |
| FAMILY GLAREOLIDAE | | | |
| <i>Glareola maldivarum</i> | | 2 | PM |

| | | | |
|---------------------|-----|------|-----|
| FAMILY LARIDAE | | | |
| Larus ridibundus | 836 | 274 | WV |
| Larus cachinnans | 261 | 103 | WV |
| Larus heuglini | | 1 | WV |
| Larus crassirostris | 434 | 1637 | Res |
| Larus saundersi | 1 | | WV |
| Sterna leucoptera | | 5 | PM |
| Sterna albifrons | 37 | 5 | SV |

Notes) Res : Resident , WV : Winter Visitor, SV : Summer Visitor, PM : Passage Migrant, Vag : Vagrant

Annex 1: Criteria for the inclusion of sites in the Flyway Site Network

(From the Partnership Text)

To be considered for inclusion in the Flyway Site Network, this Partnership adopts the following criteria:

- a. Convention on Wetlands (Ramsar, Iran, 1971) criteria for internationally important sites for migratory waterbirds. That is:
 - Criterion 2: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.
 - Criterion 5: A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.
 - Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.
- b. The staging criteria as applied under the Asia - Pacific Migratory Waterbird Conservation Strategy. That is:
 - i. A staging site should be considered internationally important if it regularly supports 0.25% of individuals in a population of one species or subspecies of waterbirds on migration.
 - ii. A staging site should be considered internationally important if it regularly supports 5,000 or more waterbirds at one time during migration.
- c. Under exceptional circumstances a site can be nominated if it supports migratory waterbirds at a level or stage of their life cycle important to the maintenance of flyway populations. Justification of such nominations will be considered by the Partnership on a case by case basis.

Annex 2: Ramsar Classification System for Wetland Type

The codes are based upon the Ramsar Classification System for Wetland Type as approved by Recommendation 4.7 and amended by Resolutions VI.5 and VII.11 of the Conference of the Contracting Parties. The categories listed herein are intended to provide only a very broad framework to aid rapid identification of the main wetland habitats represented at each site.

To assist in identification of the correct Wetland Types to list in section 19 of the RIS, the Secretariat has provided below tabulations for Marine/Coastal Wetlands and Inland Wetlands of some of the characteristics of each Wetland Type.

Marine/Coastal Wetlands

- A -- **Permanent shallow marine waters** in most cases less than six metres deep at low tide; includes sea bays and straits.
- B -- **Marine subtidal aquatic beds**; includes kelp beds, sea-grass beds, tropical marine meadows.
- C -- **Coral reefs.**
- D -- **Rocky marine shores**; includes rocky offshore islands, sea cliffs.
- E -- **Sand, shingle or pebble shores**; includes sand bars, spits and sandy islets; includes dune systems and humid dune slacks.
- F -- **Estuarine waters**; permanent water of estuaries and estuarine systems of deltas.
- G -- **Intertidal mud, sand or salt flats.**
- H -- **Intertidal marshes**; includes salt marshes, salt meadows, saltings, raised salt marshes; includes tidal brackish and freshwater marshes.
- I -- **Intertidal forested wetlands**; includes mangrove swamps, nipah swamps and tidal freshwater swamp forests.
- J -- **Coastal brackish/saline lagoons**; brackish to saline lagoons with at least one relatively narrow connection to the sea.
- K -- **Coastal freshwater lagoons**; includes freshwater delta lagoons.
- Zk(a) – **Karst and other subterranean hydrological systems**, marine/coastal

Inland Wetlands

- L -- **Permanent inland deltas.**
- M -- **Permanent rivers/streams/creeks**; includes waterfalls.
- N -- **Seasonal/intermittent/irregular rivers/streams/creeks.**
- O -- **Permanent freshwater lakes** (over 8 ha); includes large oxbow lakes.
- P -- **Seasonal/intermittent freshwater lakes** (over 8 ha); includes floodplain lakes.
- Q -- **Permanent saline/brackish/alkaline lakes.**
- R -- **Seasonal/intermittent saline/brackish/alkaline lakes and flats.**

- Sp -- **Permanent saline/brackish/alkaline marshes/pools.**
- Ss -- **Seasonal/intermittent saline/brackish/alkaline marshes/pools.**
- Tp -- **Permanent freshwater marshes/pools;** ponds (below 8 ha), marshes and swamps on inorganic soils; with emergent vegetation water-logged for at least most of the growing season.
- Ts -- **Seasonal/intermittent freshwater marshes/pools on inorganic soils;** includes sloughs, potholes, seasonally flooded meadows, sedge marshes.
- U -- **Non-forested peatlands;** includes shrub or open bogs, swamps, fens.
- Va -- **Alpine wetlands;** includes alpine meadows, temporary waters from snowmelt.
- Vt -- **Tundra wetlands;** includes tundra pools, temporary waters from snowmelt.
- W -- **Shrub-dominated wetlands;** shrub swamps, shrub-dominated freshwater marshes, shrub carr, alder thicket on inorganic soils.
- Xf -- **Freshwater, tree-dominated wetlands;** includes freshwater swamp forests, seasonally flooded forests, wooded swamps on inorganic soils.
- Xp -- **Forested peatlands;** peatswamp forests.
- Y -- **Freshwater springs; oases.**
- Zg -- **Geothermal wetlands**
- Zk(b) – **Karst and other subterranean hydrological systems, inland**

Note: “**floodplain**” is a broad term used to refer to one or more wetland types, which may include examples from the R, Ss, Ts, W, Xf, Xp, or other wetland types. Some examples of floodplain wetlands are seasonally inundated grassland (including natural wet meadows), shrublands, woodlands and forests. Floodplain wetlands are not listed as a specific wetland type herein.

Human-made wetlands

- 1 -- **Aquaculture** (e.g., fish/shrimp) **ponds**
- 2 -- **Ponds;** includes farm ponds, stock ponds, small tanks; (generally below 8 ha).
- 3 -- **Irrigated land;** includes irrigation channels and rice fields.
- 4 -- **Seasonally flooded agricultural land** (including intensively managed or grazed wet meadow or pasture).
- 5 -- **Salt exploitation sites;** salt pans, salines, etc.
- 6 -- **Water storage areas;** reservoirs/barrages/dams/impoundments (generally over 8 ha).
- 7 -- **Excavations;** gravel/brick/clay pits; borrow pits, mining pools.
- 8 -- **Wastewater treatment areas;** sewage farms, settling ponds, oxidation basins, etc.
- 9 -- **Canals and drainage channels, ditches.**
- Zk(c) -- **Karst and other subterranean hydrological systems, human-made**

Annex 3: IUCN Protected Areas Categories System

IUCN protected area management categories classify protected areas according to their management objectives. The categories are recognised by international bodies such as the United Nations and by many national governments as the global standard for defining and recording protected areas and as such are increasingly being incorporated into government legislation.

Ia Strict Nature Reserve

Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphical features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values.

Ib Wilderness Area

Category Ib protected areas are usually large unmodified or slightly modified areas, retaining their natural character and influence without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.

II National Park

Category II protected areas are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible, spiritual, scientific, educational, recreational, and visitor opportunities.

III Natural Monument or Feature

Category III protected areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value.

IV Habitat/Species Management Area

Category IV protected areas aim to protect particular species or habitats and management reflects this priority. Many Category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.

V Protected Landscape/ Seascape

A protected area where the interaction of people and nature over time has produced an area of distinct character with significant, ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

VI Protected area with sustainable use of natural resources

Information Sheet on EAA Flyway Network Sites

Category VI protected areas conserve ecosystems and habitats together with associated cultural values and traditional natural resource management systems.