

Information Sheet on Waterbird Network Sites (SIS)

*Categories approved by Second Meeting of the Partners Partnership for the East Asian-
Australasian Flyway Beijing, China 13-14 November 2007
Paper 3.13*

Part 1: Essential Information

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

Name: Nakdong Estuary Eco Center

Compiler: Won-ho Lee

Address: 1207-2, Hadan-Dong, Saha-gu, Busan Metropolitan City, South Korea

Telephone: 82-51-209-2051

FAX: 82-51-209-2099

E-mail: y2kbio@busan.go.kr

2. Date this sheet was completed:

5th August 2008

3. Country:

Republic of Korea

4. Name of the Flyway Network site:

Nakdong Estuary

5. Map of site included:

Yes

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

Latitude: 33°03' -13N,

Longitude: 128°48' -129' 00E

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

Average: 3 m

Maximum: 7 m

Minimum: 1 m

8. Area:

Total area of Site: 8,849 ha

9. General overview of the site:

The Nakdong estuary creates a unique landscape of the tideland at ebb tide and the estuary at high tide with various sandislands (Eulsuk-do, Daema-deung, Jangja-do, Baekhap-deung, Sinja-do, Mumyeong-do, Jinwu-do, etc.) and marshy grounds with the broad range for the ebb and flow of the tide. In addition, it plays a role as an important gate and destination for migratory birds since it is located at the southern part of the Korean peninsular. It is suitable as a winterization place for winter visitors and a breeding place for summer visitors since it is warm in winter and cool in summer. Like this, the Nakdong estuary is a world class treasure place of migratory birds as well as the largest one in the East because it has all of three elements of feed conditions, geographical conditions and climate conditions.

10. Justification of Flyway Site Network criteria

Refer to Annex I

a 2, a5, a6

11. Wetland Types:

E, F, H(Refer to Annex II)

12. Jurisdiction:

Busan Metropolitan City, Saha-gu, Sasang-gu, Gangseo-gu, Buk-gu

13. Management authority:

Busan Metropolitan City, Minister of Environment, Cultural Properties Administration,
Ministry of Land, Transport and Maritime Affairs

14. Bibliographical references:

Hong S. B., 2004. Regional Characteristics of Bird in Nakdong Estuary. Kor. J. Orni. 11(2): 55-70

Hahm K. H., 2003. A Bird Population and Species in Naktong-river estuary of Change in the duration last ten years(1988, 1903, 1998). Kor. J. Orni. 10(2):69-76.

Hong S. B. 2003. The avifauna of Nakdong Estuary . Kor. J. Orni. 10(1):51-63.

Won P. O. & Kim H. C., 1994. Ecology of Waterbirds on the Nakdong River Estuary , Korea . Kor. Orni.1(1):57-71.

Ryu J. R. & Kim J. S., 1984, A Survey on the Present Condition of Winter Birds in the estuary of Nakdong River. Kor. Forestry Society. 63(0):1-8

Ministry of Environment in, 99-2004. A census on winter birds. pp. 310 ~ 318.

Busan Metropolitan City, 2003-2008. NakTong estuary ecosystem monitoring.

Part 2: Optional

15. Physical features of the sites:

This area open to the Straits of Korea is made of thick earth and sand of average over 60m carried by Nakdong river(525km) through the geological age of over 10,000 years. A delta at the estuary consisting of big and small sandbanks is stretched toward Nakdong river with about 32km north and south, and 6-12km east and west.

16. Physical features of the catchment area:

Surface area: 8,849 ha

Average air temperature: 15.33 °C

Precipitation: 1,276 mm

17. Hydrological values:

Providing agricultural water to surrounding cultivated land

Adjusting water level: Control by opening the floodgate at the estuary and dredging earth and sand

18. General ecological features:

Plant: 324 species include unique aquatic plants

- *Phragmites communis*, *Carex kobomugi*, *Carex pumila*, *Scirpus triqueter*, *Cynodon dactylon*, *Lathyrus japonicus*, *Suaeda glauca*, *Rumex crispus* etc.

Fish: 38 species

- *Mugil cephalus*, *Konosirus punctatus*, *Lateolabrax japonicus*, *Trachurus japonicus* etc.

Mammal : 7 species

- *Hdropotes inermis argyropus*, *Nyctereutes procyonoides koreensis*, *Mustela sibirica* etc.

Reptile : 10 species

- *Eremias argus*, *Takydromus wolteri*, *Natrix tigrina lateralis*, *Elaphe rufodorsata* etc.

Amphibia : 7 species

- *Hyla arborea japonica*, *Rana nigromaculata*, *Rana catesbeiana* etc.

21. Social and cultural values:

Social values: The Nakdong estuary is located in Busan Metropolitan City, the second largest city in Korea, and can be easily accessed via various means of transportation including airplane, train and ship. Many people visit the Center in order to experience natural environment of the Nakdong estuary, and they learn many things about migratory birds, plant and the estuary environment.

Cultural importance: The Nakdong estuary is important as a migratory bird sanctuary by being designated as Natural Monument No. 179, and provides various things to see with the remains and relics of the prehistoric age that are well preserved.

22. Land tenure/ownership:

a) Marshy areas : Possessed by the nation and local governments

b) Surrounding areas : Possessed privately

23. Current land (including water) use:

- a) Marshy areas : Providing agricultural water, fishery, aquaculture

- b) Surrounding areas : Agriculture, manufacturing, residential area

25. Preservation measures under implementation

It has been protected as a migratory bird sanctuary by being designated as a cultural properties protection zone in 1966. It is also designated as a natural environment protection zone under the Law about Land Planning and Use, an ecological landscape protection zone under the Nature Conservation Law, and a marshy area protection zone under the Marshy Area Conservation Law.

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

The Nakdong Estuary Eco Center provides ecology education for local residents, students, etc., offers various information related with wetland, and conducts related studies.

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

※ Major Reference: Monitoring result from waterbird manager in the Nakdong Estuary Eco Centre

- It regularly supports 50,000 or more waterbirds (about 50,000 Ind.).
- It regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

Scientific name	Common name	Population		1% individual		Peak count	Year	Ratio(%)	
		world	route	world	route			world	route
<i>Phalacrocorax carbo</i>	Great Cormorant		50,000 ~ 60,000		550	1,919	2006		3.5
<i>Cygnus cygnus</i>	Whooper Swan	176,900		1769		3,413	2004-2005	1.9	
<i>Anser fabalis</i>	Bean Goose		70,000		700	3,767	2006		5.9
<i>Tadorna tadorna</i>	Common Shelduck	580,000		5800		8,224	2006	1.4	
<i>Anas falcata</i>	Falcated Teal	35,000		350		4,345	2004-2005	12.4	
<i>Anas platyrhynchos</i>	Mallard		1,500,000		15,000	27,606	2004-2005		1.8
<i>Aythya ferina</i>	Pochard		300000		3000	9,100	2004-2005		3.0
<i>Bucephala clangula</i>	Goldeneye		50,000 ~ 100,000		750	913	2004-2005		1.2
<i>Grus vipio</i>	White-naped Crane	6,500		65		205	2006	3.1	
<i>Charadrius alexandrinus</i>	Kentish Plover		100,000		1,000	1,768	2004-2005		1.8
<i>Numenius arquata</i>	Curlew		35,000		350	1,844	2004-2005		5.3
<i>Calidris alba</i>	Sanderling		22,000		220	902	2006		4.1
<i>Heteroscelus brevipes</i>	Gray-tailed Tattler	40,000		400		966	2004-2005	2.4	
<i>Xenus cinereus</i>	Terek Sandpiper		50,000		500	700	2006		1.8
<i>Larus argentatus</i>	Herring Gull		57,000 ~ 66,000		615	6,577	2004-2005		10.7
<i>Larus saundersi</i>	Saunders' Gull	7,100 ~ 9,600		83		238	2006	2.9	
<i>Sterna albifrons</i>	Little Tern	229,500		2295		5,207	2004-2005	2.3	

- It supports appreciable number of an endangered or vulnerable population of migratory waterbird.

Scientific name	Common name	Registered IUCN Red Data Book			Count	Year
		VU	EN	NT		
<i>Egretta eulophotes</i>	Chinese Egret	☉			6	2006
<i>Ciconia boyciana</i>	White Stork		☉		1	2006
<i>Platalea minor</i>	Black-faced Spoonbill		☉		3	2006
<i>Anser cygnoides</i>	Swan Goose		☉		48	2006
<i>Anas falcata</i>	Falcated Teal	☉			70	2006
<i>Haliaeetus albicilla</i>	White-tailed Sea Eagle			☉	5	2006
<i>Haliaeetus pelagicus</i>	Steller's Sea Eagle	☉			12	2006
<i>Aquila heliaca</i>	Imperial Eagle	☉			1	2006
<i>Falco peregrinus</i>	Peregrine Falcon			☉	20	2006
<i>Grus monacha</i>	Hooded Crane	☉			40	2006
<i>Grus vipio</i>	White-naped Crane	☉			205	2006
<i>Eurynorhynchus pygmeus</i>	Spoon-billed Sandpiper		☉		14	2006
<i>Larus relictus</i>	Relict Gull	☉			2	2006
<i>Larus saundersi</i>	Saunders' Gull	☉			402	2006
<i>Locustella pleskei</i>	Pleske's Grasshopper Warbler	☉			13	2006

■ Nakdong Estuary Map

