Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

Pyeongdume Wetland is located within Mudeungsan (Mt. Mudeung) National Park, Gwangju Metropolitan City. The national park was formed by volcanic activity twice in the Mesozoic Era and the upper basin is characterized by andesite geology, while the wetland area is underlain by granite bedrock. These geological features have benefited Pyeongdume Wetland by supplying clear water with consistent temperature to the wetland throughout the year. The national park also plays a role as a metapopulation by distributing clear water to, and contributing to biodiversity in, the Yeongsan River (one of the four major rivers in Korea) and the surrounding area.
Due to its important cultural, scenic, and ecological values, Mudeungsan National Park, including Pyeongdume Wetland, was designated as a UNESCO Global Geopark in 2018 and revalidated in 2023.

Pyeongdume Wetland is a typical marsh-type mountain wetland that has been naturally restored from being rice paddy wetlands in the past.

Pyeongdume wetland is known to harbor and sustain a total of 578 animal species, including two notable inspect species included in the Korean Red List of Threatened Species, Agrypnia pagetana and Helophorus auriculatus, and 8 amphibian species (out 27 in Korea); and a total of 208 plant species including species with rare geographical distribution such as Semiaquilegia adoxoides, Lysimachia barystachys, and Gynostemma pentaphyllum;

Pyeongdume Wetland provides habitat for Penthorum chinense and Rumex longifolius, which are rarely found in mountain wetlands endangered species such as Lutra lutra, Martes flavigula, Prionailurus bengalensis and Pitta nympha and species designated as natural monuments such as Aix galericulata, Otus sunia, and Ninox scutulata, together forming a biotic community rich in diversity.

Some of these are international endangered species, such as Lutra lutra (CITES appendix I), Prionailurus bengalensis (CITES appendix II), and Pitta nympha (IUCN Red List VU), CITES appendix I, have been observed in Pyeongdume Wetland every year. This is evidence that the wetland has maintained a stable ecosystem.

Pyeongdume Wetland is Korea's largest spawning area for Rana uenoi (over 40,000), which is a bioindicator species for detecting the ecological effects of climate change in Mudeungsan National Park.

32 taxa of wetland-dependent plant species grow in Pyeongdume Wetland, including Salix koriyanagi, Aster koraiensis, and Penthorum chinense, who require cold and clean water

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency: Nature and Ecology Policy Division, Nature Conservation Bureau, Ministry of Environment

Postal address: Government Complex-Sejong, 11, Doum 6-Ro, Sejong-si, 30103, Republic of Korea

National Ramsar Administrative Authority

Institution/agency: Nature and Ecology Policy Division, Nature Conservation Bureau, Ministry of Environment

Postal address: Government Complex-Sejong, 11, Doum 6-Ro, Sejong-si, 30103, Republic of Korea

2.1.2 - Period of collection of data and information used to compile the RIS

From year: 2013

To year: 2022

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish): Pyeongdume Wetland

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<1 file(s) uploaded>

Former maps: 0

Boundaries description

Pyeongdume Wetland is located within Mudeungsan National Park, which is a national protected area in Gwangju Metropolitan City. It is managed by the Mudeungsan National Park Office based on the Natural Park Act. From 2020, part of the wetland has been designated as a 'special protected area', a more strengthened protection policy within the national park, and is managed periodically and professionally.

The total area of the Pyeongdume Wetland is 22,600㎡, of which the special protected area is 13,846㎡. The rest area (8,754㎡) is a private land. As for the boundary of the Pyeongdume Wetland, the boundary designated as a special protection area was set as the core conservation area, and an additional boundary will be set for a buffer zone and a transition area within the private land. The length of the Pyeongdume Wetland is 425m wide and 420m long, and the shape is crescent-shaped, and the area around the wetland is surrounded by a mountain of 300m above sea level.

Waterways of the wetland start from the southeast and turn clockwise to flow east. The southern and western borders are the wetland's water sources, including parts of the mountain, and the northern border is the boundary point where stagnant water might flow out and turn the land dry. The eastern border was set further to include the wetland's extended boundary during the flood season, as there is no human-induced threat there.

2.2.2 - General location

a) In which large administrative region does the site lie? Gwangju Metropolitan City

b) What is the nearest town or population centre? Hwaam-Dong, Buk-gu, Gwangju Metropolitan City

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes ○ No ◉

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes ○ No ◉

2.2.4 - Area of the Site

Official area, in hectares (ha): 2.26

Area, in hectares (ha) as calculated from GIS boundaries: 2.24

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	Holarctic Region. Eastern Asiatic Region Palaearctic

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

<no data available>

☑ Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

Pyeongdume Wetland supports three international endangered species: Lutra lutra (CITES appendix I), Prionailurus bengalensis(CITES appendix II), and Pitta nympha(IUCN red list VU, CITES appendix I). Despite the continuing agricultural activities in areas adjacent to the wetland, the wetland still provides habitat for wildlife who usually stay very far from human activities, which is a very important fact from the perspective of conserving the local ecosystem. This is not only because of the location of the wetland being within the national park, but also because that there is no source of pollution in the upper basin and little ecological disturbance, leading to creation of heathy habitats.

In addition, three national protected species Martes flavigula (endangered level 2), Otus sunia(endangered level 2), and Aix galericulata (natural monument) and three species endemic to Korea (Hemerocallishakuunensis, Aster koraiensis, and Clematis trichotoma) are living in Pyeongdume Wetland.

There are 578 animal species surveyed in 2021 including five natural monuments (Otus sunia, Ninox scutulata, Aix galericulata, Lutra lutra, and Pitta nympha) and four endangered species (Lutra lutra, Martes flavigula, Prionailurus bengalensis, and Pitta nympha).

☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions

Optional text box to provide further information

Pyeongdume Wetland is home to eight species, or 40%, of the 20 amphibians identified in Korea. All of these amphibians lay eggs in the water, and the tadpoles live underwater until their metamorphosis, and afterward, they mainly live in grasslands and forests around wetlands.

Pyeongdume Wetland was formed in mountainous areas which is not a favorable geographical environment for water storage and use. Despite its small area due to these characteristics, the wetland serves a very important ecological function.

Pyeongdume Wetland is Mudeungsan National Park's largest spawning area for Rana uenoi, which hibernates underwater in winter and spawns early spring before other frog species. This requires a wetland and Pyeongdume Wetland is the only wetland nearby.

Arable land, such as paddy fields, could also be used as habitats for amphibians, if they provide safe spawning sites away from inevitable human interference. Pyeongdume Wetland plays a very important role as a habitat for amphibians, who need wetland areas such as puddles for spawning and breeding.

Just as amphibians generally play an important role in stabilizing the ecosystem and energy flow by being in the middle of the food chain within the local ecosystem, as a food source for their predators and as predators themselves to small organisms such as insects, Pyeongdume Wetland also directly and indirectly affects many animal and plant species' inhabitation.

As a habitat for amphibians who are indicators of ecosystem health, the wetland is an absolutely important wetland in the life cycle of amphibians because there is no habitat for them in the surrounding area that can replace the Pyeongdume Wetland.

3.2 - Plant species whose presence relates to the international importance of the site

<no data available>

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
Others																	
CHORDATA / AMPHIBIA	*Bufo gargarizans*	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criteria 4: the only wetland in the national park that provides a breeding site for the species
CHORDATA / AMPHIBIA	*Hynobius leechii*	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criteria 4: the only wetland in the national park that provides a breeding site for the species
CHORDATA / MAMMALIA	*Lutra lutra*	☑	☐	☐	☐	☐	☐	☐	☐				NT	☑	☐	Endangered species I	
CHORDATA / MAMMALIA	*Martes flavigula flavigula*	☑	☐	☐	☐	☐	☐	☐	☐				LC	☑	☐	Endangered species II	
CHORDATA / MAMMALIA	*Prionailurus bengalensis euptilurus*	☑	☐	☐	☐	☐	☐	☐	☐				LC	☑	☐	Endangered species II	
CHORDATA / AMPHIBIA	*Rana uenoi*	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	National Indicator Species for Climate Change	Criteria 4: the only wetland in the national park that provides a breeding site for the species
Birds																	
CHORDATA / AVES	*Aix galericulata*	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	natural monument	Wetlands provide stable food grounds for apex predators
CHORDATA / AVES	*Otus scops*	☑	☐	☐	☐	☐	☐	☐	☐				LC	☑	☐	natural monument	Wetlands provide stable food grounds for apex predators
CHORDATA / AVES	*Pitta nympha*	☑	☑	☐	☐	☐	☐	☐	☐				VU	☑	☐	natural monument	Wetlands provide stable food grounds for apex predators

1) Percentage of the total biogeographic population at the site

Lutra lutra, Prionailurus bengalensis and Pitta nympha hunt various lower predators in the wetland. In case of Lutra lutra, the fact that as there are only two taxonomic groups of fish within the biota of Pyeongdume Wetland forces them to widen their food choices. However, the stream 1 km from the boundary of the wetland passes through a village and flows along a national highway, which indicates high roadkill risk and therefore makes it a stressful environment for hunting. This gives Pyeongdume Wetland high regional importance for the local food chain, and therefore requires professional management to maintain abundant biodiversity and healthy ecosystem of the wetland as a way to support sustainable food chain despite the disadvantageous location, near the village and the highway. We plan to find ways to overcome this disadvantage by increasing ecological connectivity through the village and the highway.

3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

The water catchment area of Pyeongdume Wetland is 950,000㎡, which is not large compared to the entire wetland area. As for the surrounding vegetation, Pinus densiflora and Quercus acutissima form a forest on the ridge. The wetland has the characteristics of a general mountain wetland with Salix koreensis and Salix glandulosa as dominant tree species.

There is no pollutant source upstream of Pyeongdume Wetland, and clear water with consistent water temperature is supplied thanks to the characteristics of volcanic rock. Unlike most places, northern plants (such as Salix koriyanagi and southern plants (such as Aster koraiensis), and various plant species are densely distributed compared to other Ramsar sites in Korea (such as Yongeup of Mt. Daeam and Upo Wetland). Pyeongdume Wetland also supports the largest population of Rana uenoi among national parks in Korea by providing them with abundant food and sustainable habitat. These are the evidence that the long preserved uniqueness and naturality of Mt. Mudeung have played a role as a metapopulation that contribute to the rich biodiversity in southwest Korea.

Pyeongdume Wetland continuously produces and supply organic matters and water to International endangered species such as Lutra lutra, Prionailurus bengalensis, and Pitta nympha and national rare species such as Otus sunia, Martes flavigula and Aix galericulata, This demonstrates that the wetland has not only high primary productivity and heterogeneity, but also high resilience. Conservation of these ecological characteristics requires effective management with in-depth scientific knowledge and recognition at the international level.

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools	Pyeongdume	1	2	
Fresh water > Marshes on inorganic or peat soils >> Va: Montane wetlands	Pyeongdume	2	0.26	

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/LILIOPSIDA	*Hemerocallis hakuunensis*	a species endemic to the Korean Peninsula
TRACHEOPHYTA/MAGNOLIOPSIDA	*Penthorum chinense*	Floristics specific specific plant IV, species of interest
TRACHEOPHYTA/MAGNOLIOPSIDA	*Rumex longifolius*	Floristics specific specific plant IV

Invasive alien plant species

Phylum	Scientific name	Impacts
TRACHEOPHYTA/MAGNOLIOPSIDA	*Ambrosia polystachya*	Potential
TRACHEOPHYTA/MAGNOLIOPSIDA	*Humulus scandens*	Potential

Optional text box to provide further information

Ambrosia artemisiifolia and Humulus japonicus are very harmful plants that disturb the wetland's ecosystem. They are introduced irregularly through human activities and are currently distributed within an area of 30㎡ around Pyeongdume Wetland, near the road and the arable land.

Ambrosia artemisiifolia is highly reproductive and can reduce plant diversity by dominating grasslands including wetlands, and Humulus japonicus thrives densely on the edge of wetlands and releases certain chemicals that threatens the survival of other plants. Therefore, continuous and effective elimination of invasive alien plant species that exist even on a small scale nearby is required and we have been doing so periodically.

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
ARTHROPODA/INSECTA	*Actias gnoma*				endemic speices
ARTHROPODA/INSECTA	*Apis cerana*				endemic speices
ARTHROPODA/INSECTA	*Aquatica lateralis*				endemic speices
ARTHROPODA/INSECTA	*Bombyx mori*				endemic speices
ARTHROPODA/INSECTA	*Hydaticus grammicus*				endemic speices
ARTHROPODA/INSECTA	*Lucidina kotbandia*				endemic speices
ARTHROPODA/INSECTA	*Necrodes nigricornis*				endemic speices
ARTHROPODA/MALACOSTRACA	*Neocaridina denticulata denticulata*				endemic speices
ARTHROPODA/INSECTA	*Oxya sinuosa*				endemic speices
ARTHROPODA/INSECTA	*Pyrocoelia rufa*				endemic speices
ARTHROPODA/INSECTA	*Trichomachimus scutellaris*				endemic speices

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cfa: Humid subtropical (Mild with no dry season, hot summer)

According to AWS observations installed in the Pyeongdume Wetland over the past three years (2021.07.~2023.07), the average annual temperature is 11.7˚C, precipitation is 1,380 mm, relative humidity is 78.1%, and sunlight is 616,585 W/㎡.

Pyeongdume Wetland is located in the southwestern part of the Korean Peninsula, showing a cold and dry climate in winter and a high-temperature and humid climate in summer. In particular, due to the monsoon climate in eastern Eurasia, more than 60% of the annual average precipitation is concentrated in summer, indicating a storm and flood season rich in precipitation, while the dry season is shown from winter to spring, so the seasonal water balance is clear and the wetland ecological landscape is varied.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 250

a) Maximum elevation above sea level (in metres): 270

- Entire river basin ☐
- Upper part of river basin ☑
- Middle part of river basin ☐
- Lower part of river basin ☐
- More than one river basin ☐
- Not in river basin ☐
- Coastal ☐

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

Yeongsan River, 136.66 km in length and 3,371.4 ㎢ in total watershed area

4.4.3 - Soil

- Mineral ☑
- Organic ☐
- No available information ☐

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ○ No ◉

Please provide further information on the soil (optional)

In the past, the wetland was used as rice paddies, and the disturbance to the soil led to the loss of most of organic matters in the soil. After socioeconomic environmental changes, the rice paddies were left inactive for a while, but recently, with wetland conservation efforts such as its designation as a special national park protection area, the amount of organic matters has increased again.

4.4.4 - Water regime

Water permanence

Presence?	
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Water inputs from surface water	☑	No change
Water inputs from groundwater	☑	No change

Water destination

Presence?	
To downstream catchment	No change

Stability of water regime

Presence?	
Water levels largely stable	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology:

Pyeongdume Wetland stays submerged due to its high water table and abundant springs, or inflow of surface water, maintaining a stable hydrarch succession throughout the year.

Since the beginning of the wetland restoration project, the storage capacity inside the wetland has been increasing, and large and small puddles 0.2 to 1 meters deep throughout the site provide various habitat spaces.

(ECD) Connectivity of surface waters and of groundwater	The main source of Pyeongdume Wetland is groundwater, and the water stored within the wetland contributes to maintenance flow for the downstream

4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site ☐
- Significant accretion or deposition of sediments occurs on the site ☑
- Significant transportation of sediments occurs on or through the site ☐
- Sediment regime is highly variable, either seasonally or inter-annually ☐
- Sediment regime unknown ☐

Please provide further information on sediment (optional):

Ecological restoration work was carried out from August to October 2021 and September to November 2022 to enable the storage of organic matter produced within the wetland and the accumulation of nutrient salts introduced from the upstream. As a result, the area as well as the frequency and duration of inundation are increasing. We have also found that the leaching of organic matters accumulated in the soil has decreased.

(ECD) Water turbidity and colour	Turbidity of water is 10 to 30 NTU (2016.06.06)
(ECD) Water temperature	8.6~26.4°C (2016.04.09.~2016.10.10.)

4.4.6 - Water pH

- Acid (pH<5.5) ☐
- Circumneutral (pH: 5.5-7.4) ☑
- Alkaline (pH>7.4) ☐
- Unknown ☐

Please provide further information on pH (optional):

2023.03.13 pH 7.1

4.4.7 - Water salinity

- Fresh (<0.5 g/l) ☑
- Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☐
- Euhaline/Eusaline (30-40 g/l) ☐
- Hyperhaline/Hypersaline (>40 g/l) ☐
- Unknown ☐

Please provide further information on salinity (optional):

Located in the southwestern inland area of the Korean Peninsula, the water in the wetland is freshwater.

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic ☐
Mesotrophic ☑
Oligotrophic ☐
Dystrophic ☐
Unknown ☐

Please provide further information on dissolved or suspended nutrients (optional):

2023.03.13 TOC 1.6 mg/L

(ECD) Water conductivity: 2023.03.13 Conductivity 115. 3μS/cm

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ○ ii) significantly different ◉

Surrounding area has greater urbanisation or development ☐
Surrounding area has higher human population density ☐
Surrounding area has more intensive agricultural use ☐
Surrounding area has significantly different land cover or habitat types ☑

Please describe other ways in which the surrounding area is different:

Pyeongdume Wetland is in the shape of a crescent, and is surrounded by the mountain range of which peaks surrounding the wetland are of about 300m above sea level. As a result of harvesting fuel wood in the past, most of the mountains around Pyeongdume Wetland are tall and dominated by Pinus densiflora, so the distinction between the wetland landscape and the forest landscape is clear. In addition, between some areas of the wetland and the mountain are arable land, so traces of human activities such as horizontal topography and field crops are included in the natural landscape.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Fresh water	Water for irrigated agriculture	Low

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Erosion protection	Soil, sediment and nutrient retention	Medium
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	Medium
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	High
Scientific and educational	Educational activities and opportunities	High
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High

Within the site: 10000

Outside the site: 1400000

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ○ No ◉ Unknown ○

4.5.2 - Social and cultural values

i) the site provides 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) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☐

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☑

Description if applicable

A training program is in place for the local people to be civil scientists and participate in conservation activities in Pyeongdume Wetland. They coordinate with the local community including about 120 volunteers every year. They also contribute to education for the next generations via a fieldtrip program in collaboration with NGOs and schools in Gwangju city.

iv) 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 ☐

4.6 - Ecological processes

(ECD) Animal reproductive productivity	Pyeongdume Wetland is Mudeungsan National Park's largest spawning area for Rana uenoi in. Rana uenoi, which has the largest population among all species in the national park, hibernates underwater in winter and is the earliest among frogs to spawn in earl

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	☑	☑

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	☑	☐

Provide further information on the land tenure / ownership regime (optional):

- Wetland total area: 22,600㎡ (national land: 13,846㎡; private land: 8,754㎡)

The core area of the Pyeongdume Wetland (special protected area) is state owned land.

The Mudeungsan National Park Office, which manages Pyeongdume Wetland, buys portions of the private land every year, which is a limiting factor in wetland conservation activities, so that most part of Pyeongdume Wetland will be nationalized in the long run. In the meantime, conservation activities in the private land are carried out with the approval of land use

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:	Yeongsangang River Basin Environmental Office, Mudeungsan National Park Office, Gwangju Metropolitan City Hall, Buk-gu, Gwangju Metropolitan City Hall
Provide the name and/or title of the person or people with responsibility for the wetland:	Jae-gu Kang, Director of Mudeungsan National Park Office Yong-min Kim, Director of Resource Conservation Division, Mudeungsan National Park Office Da-jeong Kim, Manager of Mudeungsan National Park Office
Postal address:	5, Dongsan-gil 7beon-gil, Dong-gu, Gwangju, Republic of Korea
E-mail address:	k_dj1127@knps.or.kr

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Housing and urban areas	Low impact	Low impact	☐	☑

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Annual and perennial non-timber crops	Low impact	Low impact	☐	☑

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact	Low impact	☑	☑

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Agricultural and forestry effluents	Low impact	Low impact	☐	☑

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Storms and flooding	Low impact	Low impact	☐	☑

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
a special nature park reserve	Pyeongdume Wetland Special Reserve		partly
natural park law	Mudeungsan National Park		whole

5.2.3 - IUCN protected areas categories (2008)

Ia Strict Nature Reserve ☐

Ib Wilderness Area: protected area managed mainly for wilderness protection ☐

II National Park: protected area managed mainly for ecosystem protection and recreation ☐

III Natural Monument: protected area managed mainly for conservation of specific natural features ☑

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☐

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☐

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Catchment management initiatives/controls	Implemented
Faunal corridors/passage	Implemented

Species

Measures	Status
Control of invasive alien plants	Implemented
Threatened/rare species management programmes	Implemented

Human Activities

Measures	Status
Harvest controls/poaching enforcement	Implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes ○ No ◉

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ○ No ◉

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

• Educational facilities: Not set up yet but planned in the future
• Visitor facilities: Facilities such as comprehensive information boards, wooden decks, bird watching stations, and observation decks planned to be installed
• Educational or visitor programs: Various community cooperation programs being operated via Agreements to promote the value and importance of Pyeongdume Wetland including:
→ Gwangju Environmental Association's 'Walk Together' Pyeongdume Wetland Tour,
→ Gwangju Jeonnam Green Union's 'Pyeongdume Wetland Biodiversity Academy',
→ National Railroad Corporation Honam Headquarters' 'Support Eco-friendly Fertilizers for the Conservation of Pyeongdume Wetland',
→ 'Park Friends', a volunteer program for Mudeungsan National Park,
→ Gwangju City Corporation's 'Mudeungsan Purification Activities with New Employees'

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, the site has already been restored

Further information

Conservation and Management of Inland Wetlands in National Parks
https://www.knps.or.kr/front/portal/research/researchDtl.do?menuNo=7020067&refId=REFM00071
7&page=1&searchAllValue=%EC%8A%B5%EC%A7%80

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Animal community	Implemented
Plant community	Implemented
Birds	Implemented

• The basic survey of Pyeongdume Wetland consists of seven research fields (flora, vegetation, hydrogeology, birds, amphibians, benthic invertebrates, and terrestrial insects). After selecting experts in each field, the survey is conducted and cataloged at least twice a year at a time when species frequently appear. Data from the previous year is used to identify problems in managing the species to adjust the management methods. Sometimes, as part of the training program for citizen scientist, experts and citizen scientists work together to investigate species, aperiodically at specific times.

• Every year, motion detection cameras are installed at major animal activity sites to monitor and analyze mammal species with and collect data on their population, size, and frequency of appearance. This data is also used for determining health, and used as baseline data for research

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

• Mudeungsan National Park Natural Resources Survey (Korea National Park Research Institute, 2013)
• 1st Mudeungsan National Park Conservation and Management Plan (Mudeungsan National Park office, 2014)
• Mudeungsan National Park Park Resource Survey (Korea National Park Research Institute,2022)
• 2nd Mudeungsan National Park Conservation and Management Plan (Mudeungsan National Park office, 2022)
• Gwang-Seon Moun, Chul-Young Kim, Yeong-Jun Cho and Ha-Song Kim, 2017. A Study on the Flora and Vegetation of Pyeongdume wetland in the Mudeungsan National Park. Journal of National Park Research, Vol. 8, No. 2, pp. 106-120.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)
<no file available>

iii. a description of the site in a national or regional wetland inventory
<no file available>

iv. relevant Article 3.2 reports
<no file available>

v. site management plan
<no file available>

vi. other published literature
<no file available>

<no data available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

panoramic view of the Pyeongdume Wetland (*Mudeungsan National Park Office, 08-05-2023*)

close-range view of flat-head Pyeongdume wetland (*Mudeungsan National Park Office, 06-07-2022*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>