

# **Identification of Critical Habitats**

## **UNDP/GEF Yellow Sea Large Marine Ecosystem Project**

Habitat Classification and Selection of Representative  
Habitats in the West Coast of Korea

UNDP/GEF Report :  
May 2008

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West Coast of Korea

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**UNDP/GEF**

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# Habitat Classification and Selection of Representative Habitats in the West Coast of Korea

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## **Abstract**

Intertidal and subtidal area of the west coast of Korea was classified into 10 Ramsar categories by regions. Each habitat was described with physical conditions, geographical scales, human activities, pollution sources, species diversity and management plan etc. The study area covers from Ganghwa Island in north and Jeju Island in south. Coastal area in North Korea was excluded for the classification due to the lack of information and limitation on public access. The whole area in the west coast was divided into ten regions and each habitat type was described at each region. Of those habitats 10 representative habitats for each category were selected with the selection criteria of physical conditions of the habitats and species diversity, geographical scales, conservation status of nature, pollution status, ecological functions, possibility of future conservation, management plans, economical importance, and existing studies etc. representative habitats are Han River Estuary, Garolim Bay, Southern Tidal Flat in Ganghwa Island, Sinduri Sand Dune, Kongdol Pebble Shore in Baekryoung Island, Dumunjin sea-grass bed in Baekryoung Island, Daechon Sand Beach, Han River Wetland forest, Munseom Coral Reef in Jeju Island, Shihwa Lake as salt lagoon. The most diverse habitat type was mud tidal flats, and only one wetland forest was located in the Han River estuary. Coral reefs were found at the southern part of Korean peninsula, usually in Jeonnam Province and Jeju Island. One salt lagoon was in artificial Lake Shihwa. Most of estuaries were blocked by dyke construction for flooding control and agricultural land use. Only one estuary (Han River) was as natural conditions without dyke. In addition, pebble beaches, sand dune, rocky shores and aquatic sea grass bed were rare. Those of management actions were six wetland protection areas, two ecosystem protection areas, and some natural monuments in the west coast of Korea.

## **Introduction**

The west coast of South Korea is the eastern marginal area of the Yellow Sea and covers from Ganghwa Island in north and Jeju Island in south. The coasts have diverse habitats due to the meandering coastlines and the many islands scattered around the shallow sea. Intertidal flat is the most significant coastal habitat. The tidal flat in the west coast of Korea consists of several different types such as mudflat with salt marsh, sand flat with gravel beach, sand dune or eelgrass bed, and mixed flat. These flats support important food resources and an ecological niche for diverse organisms, and provide feeding, wintering, and summering grounds for migratory birds. The shallow coastal areas, encompassing more than 1,000 islands, also show high productivity and provide good nursery and fishing grounds.

In this study habitat types are classified into 10 categories based on the Ramsar Classification. Major habitat types are bays, estuaries, tidal mud flats, aquatic seaweed bed, coral reefs, salt marshes, and wetland forest etc. The largest habitat type in the west coast of Korea is mud tidal flats covering all the tidal area in the coast. Total area of the tidal mud flats in the west coast is 2,107 square kilometers representing 83% of total tidal flats in Korean peninsula. Of those 36% is in the area of Gyeonggi Province and Incheon City and 40% in Jeonnam Province. However, 20% of the mud tidal flat in the west coast has been reclaimed during last decades and 50% of them disappeared as total. Most reclaimed area is used for agricultural, industrial and residential purpose. Recently, Korean government designated 8 sites as “Wetland Protection Area” in Muan, Jindo, Suncheon bay, Boseong, Ongjin-Jangbong, Julpo, Gochang, and Seocheon mud flats and the sites cover 173 square kilometers as total area.

In addition to the land reclamation, industrial pollution, agricultural runoff, and domestic sewage contaminate coastal waters and habitats. Sand dredging is also major concern in habitat degradation in the west coast.

## **Materials and methods**

All the information in this report is from existing studies and internet searches. Some of the major habitats were visited to identify the habitat conditions such as Han River estuary and Garolim bay. Most of them are from national reports related to the marine environment in the west coast of Korea. Major programs related to habitat classification are tidal flat survey program, national water and sediment quality monitoring program by MIFAFF (Ministry for Food, Agriculture, Forestry and Fisheries) and MLTM (Ministry of Land, Transport and Maritime Affairs), and other environmental impact assessment reports. Reference lists were provided below every category. Habitat types were classified based on the Ramsar Classification and by regions in the west coast. Major cities and provinces are Incheon City,

Gyeonggi Province, Chungnam Province, Jeonbuk Province, Jeonnam Province and Jeju Province (island) from the north to south in the west coast. Northern area of west coast in North Korea was not included in this study due to the lack of information and limitation on public accessibility.

The habitat types are as follows;

1. Permanent shallow marine waters : major bays in the west coast
2. Marine subtidal aquatic beds : sea-grass and algal beds in intertidal and subtidal area
3. Coral reefs : corals in subtidal area (very rare in west coast of Korea)
4. Rocky marine shores : bedrocks, stones or boulders in intertidal and subtidal area, and cliff in splash zone, Beaches are excluded in this category
5. Sand, shingle or pebble shore : sand and pebble beaches, and sand dunes
6. Estuarine waters: estuaries of major rivers. All the estuaries of major rivers are in this category regardless of dyke construction
7. Intertidal mud, sand or salt flats : mud flats in the intertidal area
8. Intertidal marshes : intertidal area with vegetations
9. Intertidal forested wetlands : intertidal area with forest (very rare in the west coast)
10. Coastal brackish/saline lagoons : no natural lagoons in the west coast. All the artificial freshwater and saltwater lakes separated from the sea by dam are in this category

In addition to the above habitat types in the west coast of Korea were classified into five regions;

1. Seoul–Incheon-Gyeonggi Province : northern part of west coast including capital city (Seoul), Incheon metropolitan city and Gyeonggi Province, Major islands, cities and counties are Baekryoung Isl., Ganghwa Isl. Gimpo, Ansan, Namyang, and Whaseong City etc
2. Chungnam Province : South of Gyeonggi Province including Asan, Taejeon, Daejeon, Hongseon, and Seocheon etc
3. Jeonbuk Province : Gunsan, Buan, Julpo, and Gochang etc
4. Jeonnam Province : Muan, Haenam, Jindo Isl., and Hongdo Isl. etc
5. Jeju Province : Jeju island

All the unit habitats were described with physical conditions, major species, pollution sources and management plans etc. Of those habitats within same category we selected 10 representative habitat based on the following criteria;

1. physical conditions
2. species diversity
3. endangered or threatened species
4. habitat diversity

5. habitat size
6. conservation status
7. degree of pollution
8. future plans for development
9. management and conservation plans
10. economical importance
11. existing studies

Among the 10 representative habitats, we selected three demonstration sites, which are the most important habitats to maintain the biodiversity in the west coast of Korea. We scored the each classification category above from 0 to 10 scales and summed to have total scores for each representative habitat. Of those three the highest scored habitats were selected as demonstration sites. One of the three sites will be first selected for the demonstration activity later.

## Results

### 1. Classification of habitats in the west coast of Korea

Based on the Ramsar Classification 10 habitat types were classified into 10 regions. Each type was described with physical conditions, species diversity, human activities, and management plans provided with pictures. Some of habitats were overlapped each other.

#### A. Permanent shallow marine waters

In most cases less than six meters deep at low tide; includes sea bays and straits

Definition: Near shore coastal environment. Typically less than 6 m deep at low tide, includes sea bays, straits. Influenced by freshwater inputs to the sea.

Province	Site name	Location	Area (ha)	Characteristics
Seoul, Incheon, Gyeonggi Province	Gyeonggi bay	Han river Estuary ~ Shihwa Lake	400,000	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Covered from Han River estuary in North, Incheon coastal area in East, lots of islands in West and Shihwa Lake in South</li> <li>- Mouth of Han River Estuary in the North</li> <li>- About 25 islands</li> <li>- Less than 20 m in most area</li> <li>- Well developed mud tidal flats in the North and East</li> <li>- Shihwa Dinosaur Fossil Region</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Incheon International Airport and Harbor</li> <li>- Industrial complex</li> <li>- Shihwa Tide Embankment</li> <li>- Yeongheung Thermoelectric Power Plant</li> <li>- Reclamation (Songdo new town, Gimpo plain)</li> <li>- Gimpo Landfill area for waste reclamation</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>- Fisheries and Tourism</li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Han River</li> <li>- Costal residential area</li> <li>- Farmland</li> <li>- Excrement treatment (4 places)</li> <li>- Industrial wastes (12 places)</li> <li>- Sewage treatment plant (1place)</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), seagrass (<i>Zostera marina</i>), reed</li> <li>- Fish : mullet, sea bream, Spanish mackerel</li> <li>- Birds : black-faced spoonbill, gull</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List <ul style="list-style-type: none"> <li>: white-naped crane, black-faced spoonbill, hawk, Chinese egret, swan goose, brent goose, Baer's pochard, osprey, Saunder's gull, far eastern curlew</li> </ul> </li> <li>- Natural monument by the Cultural Heritage Administration (CHA) <ul style="list-style-type: none"> <li>: Ganghwa Tidal Flat, Baekryeong Island, Chinese egret, black-faced spoonbill, oystercatcher, white-naped crane, Steller's sea-eagle, kestrel, Chinese sparrow hawk, Bewick's swan, hawk, Han river Estuary (white-naped crane habitat)</li> </ul> </li> <li>- Endangered species by Ministry of Environment (MOE) <ul style="list-style-type: none"> <li>: black-faced spoonbill, hawk, oystercatcher, white-naped crane, Bewick's swan</li> </ul> </li> <li>- Protected species by MOE <ul style="list-style-type: none"> <li>: hen harrier, long-billed ringed plover</li> </ul> </li> <li>- Specific species (species had Preserve value) by MOE <ul style="list-style-type: none"> <li>: Chinese sparrow hawk, kestrel</li> </ul> </li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Special Management Area by the Ministry of Maritime Affairs and Fisheries (MOMAF) covered Shihwa Lake and Incheon Coastal Area due to the deterioration of environmental quality</li> <li>- Ecosystem Conservation Area by MOE covered Deokjeok Island and around Deokjeok Island Water</li> <li>- Wetland Protection Area by MOMAF covered Ongjin and Jangbong Island Tidal flat</li> <li>- Wetland Protection Area by MOE covered Han River</li> <li>- Ecological Park by Incheon city covered Sorae Tidal Flat</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : shrimp and shellfish</li> </ul> </li> </ul>
Chungcheong nam Province	Namyang bay~Asan bay	Pyeongtaek City ~ Asan city ~ Dangjin County	7,316	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Covered from South of Pyeongtaek city, North of Asan and North of Dangjin county</li> <li>- Less than 20m in most area</li> <li>- Well developed mud tidal flats in the Northeast</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Dangjin and Pyeongtaek Harbor</li> <li>- Pyeongtaek Thermoelectric Power Plant</li> <li>- Industrial complex</li> <li>- Tide embankment (Hwaong , Asan, Sapgyo)</li> <li>- Artificial lake (Hwaong , Asan, Sapgyo)</li> <li>- Anseoung, Yedang, Ugang and Sinheung plain</li> <li>- Saltpan</li> <li>- Fisheries</li> <li>- Tourism</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Anseung and Sapgyo stream</li> <li>- Costal residential area</li> <li>- Farmland</li> <li>- Industrial wastes (1 place)</li> </ul> </li> </ul>



				<ul style="list-style-type: none"> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> <li>- Plants : reed, <i>Suaeda japonica</i> (칠면초)</li> <li>- Fish (75 spp.) : flathead mullet, sting fish, dace</li> <li>- Birds (33 spp.) : gull, eastern curlew</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : hawk, swan goose, eastern black-tailed godwit, Saunder's gull, far eastern curlew</li> <li>- Natural monument by CHA : kestrel, whooper swan, white-tailed sea eagle</li> <li>- Endangered species by MOE : white-tailed sea eagle</li> <li>- Protected species by MOE : eastern curlew, bean goose, whooper swan, goshawk, common buzzard, hen harrier</li> <li>- Specific species by MOE (29 spp.) : kestrel, great spotted woodpecker, great crested grebe</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : shrimp and oyster</li> </ul> </li> </ul>
Garolim-bay	Seosan City ~ Taean County	11,200	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Covered from North of Seosan city and North of Taean county</li> <li>- Less than 6 m in most area</li> <li>- Well developed mud tidal flats</li> <li>- Best marine environmental quality in the west coasts due to the no major stream</li> <li>- Well developed marsh area by salt plants</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Saltpan</li> <li>- Taean Thermal Power Plant</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Coastal residential area</li> <li>- Farmland</li> <li>- Excrement treatment (1 place)</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos (134 spp.) : polychaetes, arthropod, barnacle, shortneck clam, oyster, snail</li> <li>- Plants: Reed, <i>Suaeda japonica</i> (칠면초), Chinese Lawngrass</li> <li>- Fish (75 spp.) : flathead mullet, sea bass</li> <li>- Birds (33 spp.) : gull, kestrel, whooper swan, Bewick's swan</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument (CHA) : hawk, kestrel, whooper swan, Bewick's swan</li> <li>- Endangered species by MOE : hawk</li> <li>- Protected species by MOE : pied harrier, bean goose, whooper swan, Bewick's swan, goshawk, common buzzard, merlin</li> <li>- Specific species by MOE : kestrel</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : laver and oyster</li> </ul> </li> </ul>	
Chunsu-bay	Anmyeon-eup, Taean County	13,704	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Covered from South of Taean county and North of Hongseong county</li> <li>- Less than 20m in most area</li> <li>- Well developed mud tidal flats in South</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tide embankment (Ganwol, Buman) in head of the bay</li> </ul> </li> </ul>	

				<ul style="list-style-type: none"> <li>- Ocheon Harbor</li> <li>- Tideland</li> <li>- Fisheries and aquaculture</li> <li>- Tourism</li> <li>- Saltpan</li> <li>- Thermal power plant (Boryoung)</li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Costal residential area</li> <li>- Farmland, cage aquaculture</li> <li>- Excrement treatment (1 place)</li> <li>- Sewage treatment plant (1place)</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos (134 spp.) : polychaetes, arthropod, barnacle, egg cockle</li> <li>- Plants : <i>Carex kobomugi</i> (통보리사초), reed</li> <li>- Fish (75 spp.) : bass, sea bream, croaker, mullet</li> <li>- Birds (265 spp.) : Eurasian bittern, spoonbill, white stork, hooded crane</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List <ul style="list-style-type: none"> <li>: spoonbill, white stork, hooded crane, falcon, Saunder's gull</li> </ul> </li> <li>- Natural monument by CHA (24 spp.) <ul style="list-style-type: none"> <li>: white stork, Steller's sea-eagle, falcon, hooded crane, whooper swan, white-tailed sea eagle</li> </ul> </li> <li>- Endangered species by MOE <ul style="list-style-type: none"> <li>: white-tailed sea eagle, Steller's sea-eagle, golden eagle, hawk, white stork, spoonbill</li> </ul> </li> <li>- Protected species by MOE <ul style="list-style-type: none"> <li>: Eurasian bittern, whooper swan, bean goose, goshawk, upland buzzard, common buzzard, hen harrier, Saunders's gull</li> </ul> </li> <li>- Specific species by MOE <ul style="list-style-type: none"> <li>: kestrel, great crested grebe, Japanese reed bunting</li> </ul> </li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Fisheries Resources Protection Area by MOMAF covered Chunsu-bay</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : laver and oyster, cage culture for fish</li> </ul> </li> </ul>
Jeollabuk Province	Gomso-bay	Gochang County	7,500	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Covered from South of Buan county and North of Gochang county</li> <li>- Less than 8m in most area</li> <li>- Well developed mud tidal flats in South</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries</li> <li>- Tourism</li> <li>- Saltpan (Samyang, Gomso)</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Costal residential area</li> <li>- Farmland</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos (44 spp.) : gastropoda, oyster, ark shell, barnacle</li> <li>- Salt marsh plants (10spp.) <ul style="list-style-type: none"> <li>: <i>Suaeda japonica</i> (칠면초), <i>Suaeda maritime</i> (해홍나물), <i>Suaeda asparagoides</i> (나문재), <i>Phragmites communis</i> (갈대)</li> </ul> </li> <li>- Fish : yellow corvina, croaker</li> <li>- Birds (44 spp.) : common heron, egret, black-tailed gull</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List <ul style="list-style-type: none"> <li>: estern black-tailed godwit</li> </ul> </li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOMAF covered tidal flat of Buan and Julpo bay</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : shellfish</li> </ul> </li> </ul>

Jeollanam Province	Hampyeong-bay	Hampyeong County	34,410	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Covered from West of Hampyeong county and North of Muan county</li> <li>- Less than 10m in most area</li> <li>- Well developed mud tidal flats in South and North</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Saltpan (Singang)</li> <li>- Fisheries and tourism</li> <li>- Tideland</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Coastal residential area</li> <li>- Farmland</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos (171 spp.) : shortneck clam, polychaetes, arthropod, barnacle</li> <li>- Plants : Chilmyeoncho, Chinese Lawngress, Reed</li> <li>- Fish (25 spp.) : flathead mullet, brown croaker</li> <li>- Birds (28 spp.) : great crested grebe, black-tailed gull, herring gull</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument (CHA) : <i>Pinus thunbergii</i> (곰솔)</li> <li>- Specific species by MOE : great crested grebe</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Fisheries Resources Protection Area by MOMAF covered Hampyeong-bay</li> <li>- Environment Conservation Area by MOMAF covered Hampyeong-bay</li> <li>- Wetland Protection Area by MOMAF covered Muan Tidal Flat</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : fish and laver and shellfish</li> </ul> </li> </ul>
	Tando-bay	Muan County		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Covered from Muan county in Northwest</li> <li>- Less than 20m in most area</li> <li>- Well developed mud tidal flats</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries</li> <li>- Tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos (171 spp.) : polychaetes, arthropod, barnacle</li> <li>- Plants : Sea blite, Chinese lawngress, marshfire glasswort</li> <li>- Fish (25 spp.) : yellow corvina, brown croaker</li> <li>- Birds (28 spp.) : great crested grebe, green-winged teal, brown-eared bulbul</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Protected species by MOE : whooper swan, Bewick's swan, hen harrier</li> <li>- Specific species by MOE : great crested grebe</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : shellfish</li> </ul> </li> </ul>
Jeju Province	-	-	-	none

## B. Marine subtidal aquatic beds

includes kelp beds, sea-grass beds, tropical marine meadows.

Definition : Those subtidal marine ecosystems within wetlands and deepwater habitats dominated by plants that grow primarily on or below the surface of the water for most of the growing season in most years (Definition

Source: Classification of Wetlands and Deepwater Habitats of the United States).

Province	Site name	Location	Seagrass bed Area (m × m)	Characteristics
Seoul, Incheon, Gyeonggi Province	Dumunjin	Gaeul -ri, Baekryeong-myeon, Ongjin County, Incheon	30×40 (Z.ca) 60×70 (Z.ma)	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Island and well developed sea cliff</li> <li>- Less than 1 m depth, muddy sand</li> <li>- Near North Korea</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, sea cucumber, abalone, <i>Siphonaria rucuana</i> (꼬마고랑따개비), <i>Mitrella bicincta</i> (보리무럭)</li> <li>- Plants : seagrass (<i>Zostera caespitosa</i> (Z.ca), <i>Zostera marina</i> (Z.ma))</li> <li>- Fish : sea bass, sting fish, Spotty belly greenling, Japanese anchovy</li> <li>- Birds : gull</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Natural monument by CHA : Baekryeong Island, Harbor seal, Kongdol (pebble) beach</li> </ul> </li> <li>• Management plan               <ul style="list-style-type: none"> <li>- Place of scenic beauty by CHA : Dumunjin</li> </ul> </li> </ul>
	Seungbong Island	Jawol-myeon, Ongjin County, Incheon	250×150 (Z.ja) 200×250 (Z.ma)	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Island, sand beaches</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, snail</li> <li>- Plants : sea lettuce, green hair algae, seagrass (<i>Zostera japonica</i> (Z.ja), Z.ma)</li> <li>- Fish : sting fish, spotty belly greenling, flatfish, finespotted flounder</li> <li>- Birds : gull, oystercatcher</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Natural monument by CHA : oystercatcher</li> </ul> </li> <li>• Management plan               <ul style="list-style-type: none"> <li>- Ecosystem Conservation Area by MOE covered Deokjeok Island and around Deokjeok Island Water</li> </ul> </li> </ul>
	Sojjak Island	Ijak-ri, Ongjin County, Incheon	200×80 (Z.ja) 150×180 (Z.ma)	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Island, sand beaches</li> <li>- Intertidal zone, sand</li> <li>- Sea cliff in North and tideland in South and East</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, snail, shortnek clam</li> <li>- Plants : seagrass (Z.ja, Z.ma)</li> <li>- Fish : sting fish, Spotty belly greenling, flatfish, finespotted flounder</li> <li>- Birds : gull, oystercatcher</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA <ul style="list-style-type: none"> <li>: Choseniana Hackberry</li> </ul> </li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Ecosystem Conservation Area by MOE covered Deokjeok Island and around Deokjeok Island Water</li> </ul> </li> </ul>
	Jawol Island	Jawol-myeon, Ongjin County, Incheon	100×50 ( <i>Z.ja</i> ) 300×100 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Intertidal zone, sand</li> <li>- Sand beach in South</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, snail, shortnek clam</li> <li>- Plants : green algae, seagrass (<i>Z.ja</i>, <i>Z.ma</i>), <i>Quercus acutissima</i> (상수리나무), <i>Quercus mongolica</i> (신갈나무)</li> <li>- Fish : yellow croaker, brown croaker</li> <li>- Bird : gull</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Chungcheong nam Province	Oji-ri	Oji-ri, Seosan City	40×40 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Tidal pool, sand</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, snail, shortnek clam</li> <li>- Plants : green algae, seagrass (<i>Z.ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Hakampo	Hakampo, Taean County	20×30 ( <i>P. iw</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> <li>- Less than 1 m depth, subtidal bedrock</li> <li>- Famous beach</li> </ul> </li> <li>• Human Activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> <li>- Taean Thermal Power Plant</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, snail, shortnek clam</li> <li>- Plants : green algae, seagrass (<i>Phyllospadix iwatensis</i> (<i>P. iw</i>))</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
	Uihang-ri	Uihang-ri, Taean County	50×50 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> <li>- Tidal pool, sand</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, snail, shortnek clam</li> <li>- Plants : green algae, seagrass (<i>Z.ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
	Tongae-port	Pado-ri, Taean County	30×40 ( <i>P. iw</i> ) 60×70 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> <li>- Tidal pool, sand</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Port and fisheries</li> </ul> </li> <li>• Major species</li> </ul>

				<ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, snail, shortneck clam</li> <li>- Plants : moss algae, green hair algae, horneri, diraricatum, sea mustard, seagrass (<i>P. iw</i>, <i>Z.ma</i>)</li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
	Sapsi Island	Sapsido-ri, Ocheon-myeon, Boryeong City	150×80 ( <i>Z.ca</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Taean peninsula</li> <li>- Well developed sand dune</li> <li>- Less than 1 m depth, sand</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, abalone, oyster</li> <li>- Plants : laver, seagrass (<i>Z.ca</i>)</li> <li>- Salt marsh plants (28 spp.) <ul style="list-style-type: none"> <li>: <i>Elymus mollis</i> (갯그렁), <i>Calystegia soldanella</i> (갯메꽃), <i>Ixeris repens</i> (갯썩바귀), <i>Carex kobomugi</i> (통보리사초), <i>Carex pumila</i> (좁보리사초), <i>Vitex rotundifolia</i> (순비기나무), <i>Lathyrus japonica</i> (갯완두)</li> </ul> </li> <li>- Fish : anchovy, Spanish mackerel</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Jeollabuk Province	Seonyu Island	Seonyudo-ri, Okdo-myeon, Gunsan City	300×80 ( <i>Z.ja</i> ) 100×250 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Island in front of Seamangeum</li> <li>- Well developed mud tidal flats in the East</li> <li>- Muddy sand</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Seamangeum Tide Embankment</li> <li>- Industrial complex</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, shortneck clam, <i>Pupa strigosa Strigosa</i> (비자고둥)</li> <li>- Plants : laver, reed, seagrass (<i>Z.ja</i>, <i>Z.ma</i>)</li> <li>- Salt marsh plants (28 spp.) <ul style="list-style-type: none"> <li>: <i>Carex kobomugi</i> (통보리사초), <i>Carex pumila</i> (좁보리사초), <i>Glehnia littoralis</i> (갯방풍), <i>Messerschmidia sibirica</i> (모래지치), <i>Ixeris repens</i> (갯썩바귀), <i>Salsola komarovi</i> (수송나물), <i>Elymus mollis</i> (갯그렁), <i>Calystegia soldanella</i> (갯메꽃), <i>Zoysia sinica</i> (갯잔디), <i>Vitex rotundifolia</i> (순비기나무), <i>Suaeda japonica</i> (칠면초), <i>Suaeda maritime</i> (해홍나물), <i>Plantago major for. Yezomaritima</i> (갯질경), <i>Phragmites communis</i> (갈대), <i>Carex scabrifolia</i> (천일사초)</li> </ul> </li> <li>- Fish : anchovy, yellow corvina</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
		EOcheong	EOcheongdo-ri, Okdo-myeon, Gunsan City	60×50 ( <i>Z.ma</i> )

				<ul style="list-style-type: none"> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Jangja Island	Jangjado-ri, Okdo-myeon, Gunsan City	40×60 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Less than 1 m in habitat, muddy sand</li> <li>- Well developed sea cliff in East and South</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod</li> <li>- Plants : seagrass (<i>Z.ma</i>)</li> <li>- Fish : yellow corvine</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Beolgeum Island	Jin-ri, Wido-myeon, Buan County	50×150 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Less than 1 m depth, muddy sand</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, oyster</li> <li>- Plant : seagrass (<i>Z.ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Jeollanam Province	Banwol Island	Palgeum-myeon, Sinan County	80×100 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical position and Nature <ul style="list-style-type: none"> <li>- Less than 1 m depth, muddy</li> <li>- Well developed tideland in East</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, oyster</li> <li>- Plants : laver, seagrass (<i>Z.ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> </ul> </li> </ul>
	Jukrim	Jungnim-ri, Imhoe-myeon, Jindo County	800×300 ( <i>Z.cau</i> ) 100×350 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Jindo Island</li> <li>- Less than 1 m depth, muddy sand</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Port</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, barnacle, shellfish, oyster</li> <li>- Plants : green laver, <i>Suaeda japonica</i> (칠면초), seagrass (<i>Zostera caulescence</i> (<i>Z.cau</i>), <i>Z.ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> </ul> </li> </ul>
	Heonbok-dong	Hunbok-dong, Jungnim-ri, Imhoe-myeon, Jindo County	200×200 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Jindo Island</li> <li>- Less than 1 m depth, muddy sand</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, mollusca</li> <li>- Plant : seagrass (<i>Z.ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> </ul> </li> </ul>

Jeju Province	Seongsan	Seongsan-ri, Seongsan-eup, Namjeju County	200×100 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- East in Jeju Island</li> <li>- Less than 20m in habitat, sand</li> <li>- Extinct volcano</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Harbor</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, mollusca</li> <li>- Plants : green algae, seagrass (<i>Z.ma</i>)</li> <li>- Birds : little grebe, tree sparrow, oriental greenfinch</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : black-faced spoonbill</li> <li>- Natural monument by CHA : black-faced spoonbill</li> <li>- Endangered species by MOE : black-faced spoonbill</li> <li>- Protected Species by MOE : brent goose, whooper swan, osprey</li> <li>- Specific species by MOE : black-throated diver</li> </ul> </li> <li>• Management area <ul style="list-style-type: none"> <li>- World Natural Heritage by UNESCO</li> </ul> </li> </ul>
	Hado-ri	Hado-ri, Gujwa-eup, Bukjeju County	300×300 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- East of Jeju province</li> <li>- Less than 2 m in habitat, sand</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, Mollusca</li> <li>- Plants : algae, seagrass (<i>Z.ma</i>)</li> <li>- Birds : little grebe, cormorant, gray heron</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : poison bulb habitat</li> <li>- Protected species by MOE : pelagic cormorant, osprey</li> </ul> </li> <li>• Management area <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Hamdeok-ri	Hamdeok-ri, Jocheon-eup, Bukjeju County	200×100 ( <i>Z.ma</i> )	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North of Jeju province</li> <li>- Less than 2 m depth, sand</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, mollusca</li> <li>- Plants : algae, seagrass (<i>Z.ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Protected species by MOE : pelagic cormorant, osprey</li> <li>- Specific species by MOE : great crested grebe, eastern reef heron, mandarin duck</li> </ul> </li> <li>• Management area <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>



### C. Coral reefs

Definition : ridge of coral in ocean: an ocean reef composed of the skeletons of living coral, together with minerals and organic matter

Province	Site name	Location	Area (m <sup>2</sup> )	Characteristics
Seoul, Incheon, Gyeonggi Province	-	-	-	None
Chungcheong nam Province	-	-	-	None
Jeollabuk Province	-	-	-	None
Jeollanam Province	Hong Island	Hongdo-ri, Heuksan-myeon, Sinan County	coastline 20.8 km	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- West south island of Mokpo City</li> <li>- Less than 70 m in most area</li> <li>- Well developed sea cliff, sea cave, sea arch and sea stack</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos (117 spp.): abalone</li> <li>- Plants (545 spp.) : laver, Sea-lattuce</li> <li>- Fish (233 spp.) : sting fish, common conger, sea bass</li> <li>- Birds : Indian pratincole, black-winged stilt</li> <li>- Corals : sea fan, <i>Antipathes lata</i> (긴가지해송)</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List                   <ul style="list-style-type: none"> <li>: black-faced spoonbill</li> </ul> </li> <li>- Natural monument by CHA (12 spp.)                   <ul style="list-style-type: none"> <li>: black-faced spoonbill, Hong Island, Japanese (black) wood pigeon, white-tailed sea eagle, goshawk, Chinese sparrow hawk, sparrow hawk</li> </ul> </li> <li>- Endangered species by MOE (14 spp.)                   <ul style="list-style-type: none"> <li>: black-faced spoonbill, white-tailed sea eagle, hawk, schrenck's little bittern, bean goose, Japanese (black) wood pigeon</li> </ul> </li> <li>- Specific species by MOE (birds : 39 spp. and plants : 70spp.)                   <ul style="list-style-type: none"> <li>: red-throated diver, pelagic cormorant, common cuckoo, <i>Quercus acuta</i> (붉가시나무), <i>Machilus thunbergii</i> (후박나무), <i>Tilia amurensis</i> (피나무)</li> </ul> </li> </ul> </li> <li>• Management plan               <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> </ul> </li> </ul>
Jeju Province	Sasu Island	Chuja-myeon, jeju City		<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- North island of Jeju Province</li> <li>- Less than 10 m in most area</li> <li>- Well developed sea cliff</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Plants: camellia, silver magnolia</li> <li>- Birds : streaked shearwater, Japanese wood pigeon</li> <li>- Corals : <i>Antipathes lata</i> (긴가지해송)</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Natural monument by CHA                   <ul style="list-style-type: none"> <li>: breeding place of Japanese wood pigeon and streaked shearwater</li> </ul> </li> </ul> </li> <li>• Management plan               <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>

	Moseulpo	Daejeong-eup, Seogwipo City		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South of Jeju Province</li> <li>- Less than 30m in most area</li> <li>- Well developed sea cliff</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Port</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Plants : <i>Ecklonia cava</i> (감태)</li> <li>- Corals : sea pan, staghorn coral, black coral</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : black coral</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Gapa Island	Gapa-ri, Daejeong-eup, Namjeju County	900,000	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South island of Jeju Province</li> <li>- South from Moseulpo port</li> <li>- Less than 10 m in most area</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Fish : striped beakperch, red seabream, black porgy, opaleye, kelp grouper</li> <li>- Corals : <i>Antipathes lata</i> (긴가지해송), <i>Antipathes japonica</i> (해송)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Munseom	Seogwi-dong, Seogwipo City	96.8	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South island of Jeju Province</li> <li>- Less than 40m in most area</li> <li>- Well developed pillar-shaped joint, marine plateau</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : snail species, barnacle, sea mussel</li> <li>- Plants : gulfweed, laver</li> <li>- Coral (62 spp.) : staghorn coral</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : Munseom</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Ecological conservation Area by MOMAF</li> </ul> </li> </ul>
	Seopseom	Bomok-dong, Seogwipo City	142	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South island of Jeju Province</li> <li>- Less than 40m in most area</li> <li>- Well developed pillar-shaped joint, marine plateau</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: snail, barnacle, sea mussel</li> <li>- Plants : gulfweed, laver</li> <li>- Corals (46 spp.) : <i>Dendronephthya suensoni</i> (검붉은수지맨드라미), <i>Alveopora japonica</i> (거품돌산호)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : Seopseom</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Ecological Conservation Area by MOMAF</li> </ul> </li> </ul>
	Beomseom	Beophwan-dong,	84.3	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South island of Jeju Province</li> </ul> </li> </ul>

	Seogwipo City		<ul style="list-style-type: none"> <li>- Less than 40m in most area</li> <li>- Well developed pillar-shaped joint, marine plateau</li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : barnacle, sea mussel, oyster</li> <li>- Plants : gulfweed, laver <i>Ecklonia cava</i> (감태), reed</li> <li>- Corals (45 spp.) : <i>Alveopora japonica</i> (거품돌산호), staghorn coral</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : Beomseom</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Ecological Conservation Area by MOMAF</li> </ul> </li> </ul>
Geomeu nyeo	Bomok-dong, Seogwipo City		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South of Jeju Province</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Corals (33 spp.) : <i>Antipathes lata</i> (긴가지해송)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Gigwi Island	Wimi-ri, Namwon-eup, Namjeju County	87,273	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South island of Jeju Province</li> <li>- Less than 40m in most area</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : snail species, sea mussel, Barnacle</li> <li>- Plants : gulfweed, laver, reed</li> <li>- Corals : <i>Alveopora japonica</i> (거품돌산호), sea pan, black coral</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : black coral, Gigwi Island</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>

**D. Rocky marine shores;**  
includes rocky offshore islands, sea cliffs.

Definition: Those marine ecosystems within wetland environments characterized by bedrock, stones, or boulders that singly or in combination have an areal cover of 75% or more and an areal coverage of vegetation of less than 30%. (Definition Source: Classification of Wetlands and Deepwater Habitats of the United States)

Province	Site name	Location	Area (km <sup>2</sup> )	Characteristics
Seoul, Incheon, Gyeonggi Province	Baekryeong Island	Baekryeong-myeon, Ongjin County, Incheon	4.5 km <sup>2</sup>	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Island located near North Korea</li> <li>- Less than 20 m in most area</li> <li>- Rocky offshore islands</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, sea cucumber, abalone, <i>Siphonaria rucuana</i> (꼬마고랑따개비), <i>Mitrella bicincta</i> (보리무럭)</li> <li>- Plants : seagrass (<i>Z.ca</i>, <i>Z.ma</i>)</li> <li>- Fish : sea bass, sting fish, spotty belly greenling, anchovy</li> <li>- Bird : gull</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Natural monument by CHA : Baekryeong Island, Harbor seal, Kongdol (pebble) beach</li> </ul> </li> <li>• Management plan               <ul style="list-style-type: none"> <li>- Place of scenic beauty by CHA : Dumunjin</li> </ul> </li> </ul>
	Jakyak Island	Manseok-dong, Dong-gu, Incheon	1.2	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Less than 5m in most area</li> <li>- Rocky offshore islands</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos : arthropod, snail, shortnek clam</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan               <ul style="list-style-type: none"> <li>- Ecosystem Conservation Area by MOE covered Deokjeok Island and around Deokjeok Island Water</li> </ul> </li> </ul>
	Jawol Island	Jawol-myeon, Ongjin County, Incheon	20.4	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- West island of Incheon harbor</li> <li>- Less than 5 m in most area</li> <li>- Rocky offshore islands</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos: arthropod, snail, shortnek clam</li> <li>- Fish : yellow croaker, brown croaker</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan               <ul style="list-style-type: none"> <li>- Ecosystem Conservation Area by MOE covered Deokjeok Island and around Deokjeok Island Water</li> </ul> </li> </ul>
Chungcheongnam Province	Dokgwan-ri, Mandae, Maese	Daesan-eup, Seosan City ~Wonbuk-myeon, Taean County	6.75	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- North part of Seosan city</li> <li>- Less than 5 m in most area</li> <li>- Sea cliff and sea stack</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
	Uihyang-ri	Sowon-myeon, Taean County	2.5	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part in Taean peninsula</li> <li>- Less than 5m in most area</li> <li>- Sea cliff</li> <li>• Human activities</li> <li>- Fisheries and tourism</li> <li>• Major species</li> <li>- Benthos : arthropod, snail, shortnek clam</li> <li>- Plants : green algae, seagrass (<i>Z.ma</i>)</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
	Cheonri-po	Chunri-po bathing place north, Sowon-myeon, Taean County	1.5	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part in Taean peninsula</li> <li>- Less than 5 m in most area</li> <li>- Sea cliff</li> <li>• Human activity</li> <li>- Fisheries and tourism</li> <li>• Major species</li> <li>- Benthos : arthropod, snail, shortnek clam</li> <li>- Plant : green algae</li> <li>- Birds : <i>Parus majo</i> (박새), <i>Hypsipetes amaurotis</i> (직박구리), <i>Paradoxornis webbiana</i> (붉은머리오목눈이), <i>Streptopelis orientalis</i> (멧비둘기)</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
	Manri-po	Mohang-ri, Taean County	2.5	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part in Taean peninsula</li> <li>- Less than 5m in most area</li> <li>- Sea cliff</li> <li>• Human activity</li> <li>- Fisheries and tourism</li> <li>- Port</li> <li>• Major species</li> <li>- Benthos : arthropod, snail, shortnek clam, oyster, starfish</li> <li>- Plant : green algae</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
	Mohang port	Mohang-ri, Taean County	3	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part in Taean peninsula</li> <li>- Sea cliff</li> <li>• Human activity</li> <li>- Fisheries and tourism</li> <li>- Port</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
	Pado-ri	Pado-ri, Taean County	5	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part in Taean peninsula</li> <li>- Sea cliff</li> <li>• Human activity</li> <li>- Fisheries and tourism</li> <li>- Port</li> </ul>

				<ul style="list-style-type: none"> <li>• Major species <ul style="list-style-type: none"> <li>- Plants : moss algae, green hair algae, horneri, diraricatum, sea mustard, seagrass (<i>P. iw</i>, <i>Z.ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taeanhaean National Park by MOE</li> </ul> </li> </ul>
Jeollabuk Province	Daehang-ri	Daehang-ri, Byeonsan-myeon, Buan County	2.5	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Byeonsan peninsula</li> <li>- Sea cliff</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Management species <ul style="list-style-type: none"> <li>- Natural monument by CHA : <i>Ilex cornuta</i> (깽깽나무)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Byeonsan Marine National Park by MOE</li> </ul> </li> </ul>
	Chaeseokkang	Gyeokpo-ri, Byeonsan-myeon, Buan County	0.12 km <sup>2</sup>	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Byeonsan peninsula</li> <li>- Sea cliff</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : <i>Machilus thunbergii</i> (후박나무)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Byeonsan Marine National Park by MOE</li> </ul> </li> </ul>
Jeollanam Province	Seongsan-ri	Seongsan-ri, Hongnong-eup, Yeonggwang County	2.5	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North island of Yeonggwang county</li> <li>- Sea cliff</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : Chinese egret</li> <li>- Natural monument by CHA : Chinese egret, habitat of black-tailed gull</li> <li>- Endangered species by MOE : Chinese egret</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>-None</li> </ul> </li> </ul>
	Anma Island	Nagwol-myeon, Yeonggwang County	37	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West island of Yeonggwang county</li> <li>- Less than 10 m in most area</li> <li>- Rocky offshore islands</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : arthropod, gastropod</li> <li>- Plants : laver, sea mustard, agar</li> <li>- Fish : yellow corvina, anchovy, cutlass fish, chub mackerel</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Songi Island	Nagwol-myeon, Yeonggwang County	15	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West island of Yeonggwang county</li> <li>- Less than 5 m in most area</li> <li>- Rocky offshore islands</li> </ul> </li> <li>• Human activities</li> </ul>

				<ul style="list-style-type: none"> <li>- Fisheries and tourism</li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : arthropod, gastropod</li> <li>- Plants : sea mustard</li> <li>- Fishes : yellow croaker, chub mackerel</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : Chinese egret</li> <li>- Natural monument by CHA : Chinese egret, European otter</li> <li>- Endangered species by MOE : Chinese egret</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Bigeum Island	Bigeum-myeon, Sinan County	132	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West island of Mokpo city</li> <li>- Less than 30 m in most area</li> <li>- Rocky offshore islands</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : arthropod, barnacle, shellfish, oyster, sea slug, anemone</li> <li>- Plants : seagrass (<i>Z.ma</i>), <i>Suaeda japonica</i> (칠면초)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : Bigeumdo (seabird breeding place)</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> </ul> </li> </ul>
	Hong Island	Hongdo-ri, Heuksan-myeon, Sinan County	20.8	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West south island of Mokpo port</li> <li>- Less than 70m in most area</li> <li>- Well developed sea cliff, sea cave, sea arch and sea stack</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos (117 spp.) : abalone</li> <li>- Plants (545spp.) : laver, sea-lattuce</li> <li>- Fish (233 spp.) : sting fish, common conger, sea bass</li> <li>- Birds : Indian pratincole, black-winged stilt</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : black-faced spoonbill</li> <li>- Natural monument by CHA (12 spp.) : black-faced spoonbill, Hong Island, Japanese (black) wood pigeon, white-tailed sea eagle, goshawk, Chinese sparrow hawk, sparrow hawk</li> <li>- Endangered species by MOE (14 spp.) : black-faced spoonbill, white-tailed sea eagle, hawk, schrenck's little bittern, bean goose, Japanese (black) wood pigeon</li> <li>- Specific species by MOE (39 birds spp. and 70 plants spp.) : red-throated diver, pelagic cormorant, common cuckoo, <i>Quercus acuta</i> (불가시나무), <i>Machilus thunbergii</i> (후박나무), <i>Tilia amurensis</i> (피나무)</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> </ul> </li> </ul>
Jeju Province	Jeju Island	Jeju Island	229.7	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South island of the Korean Peninsula</li> <li>- Less than 40m in most area</li> <li>- Well developed rocky offshore islands</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : black-faced spoonbill, brent goose, osprey, Eurasian spoonbill</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>- Natural monument by CHA <ul style="list-style-type: none"> <li>: Munseom (coral reef), Seopseom (coral reef), Beomseom (coral reef), poison bulb , black-faced spoonbill</li> </ul> </li> <li>- Endangered species by MOE <ul style="list-style-type: none"> <li>: black-faced spoonbill</li> </ul> </li> <li>- Protected species by MOE <ul style="list-style-type: none"> <li>: brent goose, whooper swan, pelagic cormorant, osprey</li> </ul> </li> <li>- Specific species by MOE <ul style="list-style-type: none"> <li>: great crested grebe, eastern reef heron, mandarin duck</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- World Natural Heritage by UNESCO</li> </ul> </li> </ul>
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## E. Sand, shingle or pebble shores;

includes sand bars, spits and sandy islets; includes dune systems and humid dune slacks.

Definition : Those intertidal marine ecosystems within wetland habitats with three characteristics: (1) unconsolidated substrates with less than 75% areal coverage of stones, boulders, and bedrock; (2) less than 30% areal cover of vegetation other than pioneering plants; and (3) any of the following water regimes: irregularly flooded, seasonally flooded, temporarily flooded, intermittently flooded, saturated, or artificially flooded.  
(Definition Source: Classification of Wetland and Deepwater Habitats in the United States)

### 1. Pebble shores

Province	Site name	Location	Area (km <sup>2</sup> )	Characteristics
Seoul, Incheon, Gyeonggi Province	Kongdol beach	Baekryeong Island, Baekryeong-myeon, Ongjin County, Incheon	0.024	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Less than 1 m depth</li> <li>- Island located near North Korea</li> <li>- Well developed sea cliff</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Fisheries and tourism</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, sea cucumber, abalone, <i>Siphonaria rucuana</i> (꼬마고랑따개비), <i>Mitrella bicincta</i> (보리무럭)</li> <li>- Plants : seagrass (<i>Z.ca</i>, <i>Z.ma</i>)</li> <li>- Fish : sea bass, sting fish, spotty belly greenling, Japanese anchovy</li> <li>- Bird : gull</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Natural monument by CHA : Baekryeong Island, Harbor seal, Kongdol (pebble) beach</li> </ul> </li> <li>• Management plan               <ul style="list-style-type: none"> <li>- Place of scenic beauty by CHA : Dumunjin</li> </ul> </li> </ul>
	Yeongheung Island	Yeongheung-myeon, Ongjin County, Incheon	23.46	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- West island of Shihwa Lake</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Yeongheung Thermoelectric Power Plant</li> <li>- Yeongheung Bridge</li> <li>- Tourism and port</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, oyster, spiny turban shell</li> <li>- Plants : <i>Quercus acutissima</i> (상수리 나무), moss algae, green hair algae, horneri</li> <li>- Fish : sting fish, potty belly greenling, flatfish</li> <li>- Birds : gull</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan               <ul style="list-style-type: none"> <li>- Ecosystem Conservation Area by MOE covered Deokjeok Island and around Deokjeok Island Water</li> </ul> </li> </ul>
Chungcheong nam Province	Gaudio-ri	Gaudio-ri, Geunheung-myeon, Taean County	2.19	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- West island of Taean county</li> <li>- Sea cliff in North</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, oyster, abalone, sea cucumber</li> <li>- Plants : sea mustard, <i>Quercus acutissima</i> (상수리 나무)</li> <li>- Fish : yellow croaker, Anchovy, Japanese Spanish mackerel, sting fish</li> <li>- Bird : gull</li> </ul> </li> <li>• Protected or endangered species</li> </ul>

				<ul style="list-style-type: none"> <li>- Natural monument by CHA</li> <li>: Habitat of <i>Koelreuteria paniculata</i> (모감주 나무) Community</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
	Bangpo beach	Seungeon-ri, Anmyeon-eup, Taean County	0.14	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Taean peninsula</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- Natural monument by CHA</li> <li>: Habitat of <i>Koelreuteria paniculata</i> (모감주 나무) Community</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
Jeollabuk Province	Seonyu Island	Seonyudo-ri, Okdo-myeon, Gunsan City	2.13	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Island in front of Seamangeum</li> <li>- Well development mud tidal flats in the East</li> <li>• Human activities</li> <li>- Seamangeum tide embankment</li> <li>- Industrial complex</li> <li>- Fisheries and tourism</li> <li>• Pollution sources</li> <li>- Farmland</li> <li>- Industrial wastes</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, shortnek clam</li> <li>- Plants : laver, sea blite, reed, seagrass (<i>Z.ja</i>, <i>Z.ma</i>)</li> <li>- Fish : anchovy, yellow corvine</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
Jeollanam Province	Hong Island	Hongdo-ri, Heuksan-myeon, Sinan County	6.47	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West south island of Mokpo port</li> <li>- Less than 70m in most area</li> <li>- Pebble shores with sea cliff, sea cave, sea arch and sea stack</li> <li>• Human activities</li> <li>- Fisheries and tourism</li> <li>• Major species</li> <li>- Benthos (117 spp.) : abalone</li> <li>- Plants (545 spp.) : laver, sea-lattuce</li> <li>- Fish (233 spp.) : sting fish, common conger, sea bass</li> <li>- Bird : Indian pratincole, black-winged stilt</li> <li>• Protected or endangered species</li> <li>- Threatened species of the IUCN Red List</li> <li>: black-faced spoonbill</li> <li>- Natural monument by CHA (12 spp.)</li> <li>: black-faced spoonbill, Hong isl., Japanese (black) wood pigeon, white-tailed sea eagle, goshawk, Chinese sparrow hawk, sparrow hawk</li> <li>- Endangered species by MOE (14 spp.)</li> <li>: black-faced spoonbill, white-tailed sea eagle, hawk, schrenck's little bittern, bean goose, Japanese (black) wood pigeon</li> <li>- Specific Species by MOE (39 birds spp. and 70 plants spp.)</li> <li>: red-throated diver, pelagic cormorant, common cuckoo, <i>Quercus acuta</i> (붉가시나무), <i>Machilus thunbergii</i> (후박나무), <i>Tilia amurensis</i> (피나무)</li> <li>• Management plan</li> <li>- Dadohae Marine National Park by MOE</li> </ul>
Jeju Province	-	-	-	None

**Sand shore**

Province	Site name	Location	Area (ha)	Characteristics
Seoul, Incheon, Gyeonggi Province	Dongmak beach	Dongmak-ri, Hwado-myeon, Ganghwa County, Incheon	0.2	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Well developed mud tidal flats in the South Ganghwa Island</li> </ul> </li> <li>• Human activity                             <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> <li>- Agriculture</li> </ul> </li> <li>• Major species                             <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> <li>- Salt marsh plants (13 spp.)                                     <ul style="list-style-type: none"> <li>: <i>Suaeda japonica</i> (칠면초), <i>Triglochin maritimum</i> (지채), <i>Carex scabrifolia</i> (천일사초), <i>Phragmites communis</i> (갈대)</li> </ul> </li> <li>- Fish : gizzard shad</li> <li>- Birds : snipe, Kentish plover, blackfaced spoonbill, gull</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List                                     <ul style="list-style-type: none"> <li>: blackfaced spoonbill, Far eastern curlew, Red-crowned crane</li> </ul> </li> <li>- Natural monument by CHA                                     <ul style="list-style-type: none"> <li>: Ganghwa Tidal Flat and blackfaced spoonbill</li> </ul> </li> <li>- Endangered species by MOE                                     <ul style="list-style-type: none"> <li>: blackfaced spoonbill</li> </ul> </li> <li>- Protected species by MOE                                     <ul style="list-style-type: none"> <li>: Kentish plover</li> </ul> </li> </ul> </li> <li>• Management plan                             <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOMAF covered Ongjin and Jangbong Island Tidal Flat</li> </ul> </li> </ul>
	Meanmeoru beach	Maeum-ri, Samsan-myeon, Ganghwa County, Incheon	Sealine 1km	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Well developed mud tidal flats in the South Ganghwa Island</li> </ul> </li> <li>• Human activity                             <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species                             <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed</li> <li>- Fish : gizzard shad</li> <li>- Birds : snipe, gull</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan                             <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOMAF covered Ongjin and Jangbong Island Tidal Flat</li> </ul> </li> </ul>
	Eulwangri beach	Eulwang-dong, Jung-gu, Incheon	14	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Yeongjong Island</li> </ul> </li> <li>• Human activities                             <ul style="list-style-type: none"> <li>- Incheon International Airport</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species                             <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed</li> <li>- Fish : gizzard shad, sting fish, spotty belly greenling, silver pomfret, elongate ilisha</li> <li>- Birds : carrion crow, mallard, gull</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- Protected species by MOE                                     <ul style="list-style-type: none"> <li>: bean goose</li> </ul> </li> <li>- Specific species by MOE                                     <ul style="list-style-type: none"> <li>: merlin</li> </ul> </li> </ul> </li> <li>• Management plan</li> </ul>

				- None
Chungcheongnam Province	Deananjido beach	Nanjido-ri, Seongmunmyeon, Dangjin County	508	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Front of Dea-ho Lake</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Dea-ho Tide Embankment</li> <li>- Industrial complex</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Farmland</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortnek clam, oyster</li> <li>- Fish : sting fish, spotty belly greenling</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Hakampo beach	Wonbukmyeon, Taean County	40	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Taean Thermal Power Plant</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, gastropoda, shortnek clam</li> <li>- Plants : green algae, seagrass (<i>P. iw</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
	Sindu-ri beach	Sindu-ri, Wonbukmyeon, Taean County	60	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> <li>- Sand beach with dune</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortnek clam, oyster</li> <li>- Plants : sweetbrier, sea bindweed, <i>Carex kobomugi</i> (통보리사초)</li> <li>- Fish : gizzard shad, javeline gob</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : Shinduri dune</li> <li>- Endangered species by MOE : Korean golden frog, narrow-mouth frog, Korean tiger lizard</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Ramsar Wetland covered Duung Wetland</li> <li>- Wetland Protection Area by MOE covered Duung Wetland</li> <li>- Ecological Conservation Area by MOE covered Shinduri Dune</li> <li>- Taean Marine National Park by MOE</li> <li>- Military Zone</li> </ul> </li> </ul>
	Uihang beach	Uihang-ri, Sowonmyeon, Taean County	37.5	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> <li>- Sand beach</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, shortnek clam, gastropoda</li> <li>- Plants : green algae, seagrass (<i>Z.ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>

Cheonripo beach, Manripo beach, Eoeundol beach and Padori beach	Uihang-ri ~ Mohang-ri~ Pado-ri Sowon-myeon, Taean County	90	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> <li>- Sand beach</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Plants : moss algae, green hair algae, horneri, diraricatum, sea mustard, seagrass (<i>P. iw</i>, <i>Z.ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> <li>- Cheonripo Arboretum</li> </ul> </li> </ul>
Yeonpo beach	Geunheung-myeon, Taean County	32	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> <li>- Sand beach</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, shortnek clam, gastropoda</li> <li>- Plants : green algae, seagrass (<i>Z.ma</i>)</li> <li>- Fish : sting fish, common conger, <i>Urechis unicinctus</i> (개불)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Mongsanpo beach	Sinjang-ri, Nam-myeon, Taean County	75	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Sand beach with dune</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : black-tailed gull in Lan isl.</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Cheongpo dea beach, Baeksajang beach	Nam-myeon ~Changgi-ri, Anmyeon-eup, Taean County	86	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Sand beach</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taeanhaean National Park by MOE</li> </ul> </li> </ul>
Sambongsu beach	Changgi-ri, Anmyeon-eup, Taean County	114	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Sand beach</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, shortnek clam, gastropoda, sea anemone, golden cuttlefish</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Batke beach, Anmyeon beach	Jeongdang-ri, Anmyeon - eup, Taean County	113	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Sand beach</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>

Bangpo beach	Seungeon-ri, Anmyeon-eup, Taean County	75	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Sand beach</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortnek clam, oyster</li> <li>- Fish : common conger, sting fish, chub mackerel</li> <li>- Bird : duck</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : <i>Koelreuteria paniculata</i> (모감주나무) Community</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Jangsampo beach Saetbyeol beach Jangkok beach Baramarae beach	Jangkok-ri~Sinya-ri, Anmyeon-eup~Gonam-myeon, Taean County	192.5	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Sand beach</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortnek clam, oyster</li> <li>- Plant : algae</li> <li>- Fish : common conger</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Wonsando beach	Wonsando-ri, Ocheon-myeon, Boryeong City	12	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Sand beach with sea cliff in North</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Industrial complex</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution source <ul style="list-style-type: none"> <li>- Industrial wastes</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortnek clam, oyster</li> <li>- Plant : algae</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Daecheon beach	Sinheuk-dong, Boryeong City	35	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Boryeong city</li> <li>- Beach is shell beach</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortnek clam, oyster</li> <li>- Plant : algae</li> <li>- Fish : sea bream, sea bass, sting fish, spotty belly greenling</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Yongdu beach	Yongdumaeul Woljeon-ri, Nampo-myeon, Boryeong City	Sealine 1km	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Boryeong city</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortnek clam, oyster, <i>Mytilus coruscus</i> (홍합)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>• Management plan</li> <li>- None</li> </ul>
	Muchangpo beach	Ungcheon-eup, Boryeong City	7.5	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Island located near Seokdae island</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, barnacle, sea cucumber</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Chunjangdae beach	Dodun-ri, Seo-myeon, Seocheon County	40	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Island located near Busa Tide Embankment</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, barnacle, oyster</li> <li>- Fish : flatfish</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
Jeollabuk Province	Seonyudo beach	Okdo-myeon, Gunsan City		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Island located in front of Seamangeum</li> <li>- Well development mud tidal flats in the East</li> <li>- Sediment type is muddy sand</li> <li>- Well developed sandbar and tideland</li> <li>• Human activities</li> <li>- Seamangeum Tide Embankment</li> <li>- Industrial complex</li> <li>- Tourism and fisheries</li> <li>• Pollution sources</li> <li>- Industrial wastes</li> <li>- Farmland</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, shortnek clam, <i>Pupa strigosa strigosa</i> (비자고둥)</li> <li>- Plants : laver, sea blite, reed, seagrass (<i>Z.ja</i>, <i>Z.ma</i>)</li> <li>- Fish : anchovy, yellow corvine</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Byeonsan beach	Byeonsan-myeon, Buan County		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Byeonsan peninsula</li> <li>- South part of Seamangeum</li> <li>- Muddy sand beach</li> <li>- Well developed mud tidal flats in the East</li> <li>• Human activities</li> <li>- Seamangeum Tide Embankment</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Byeonsan Marine National Park by MOE</li> </ul>
	Gyeokpo beach	Gyeokpo-ri, Byeonsan-myeon, Buan County	Sealine 0.5km	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Byeonsan peninsula</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> </ul>

				<ul style="list-style-type: none"> <li>- Jeollabuk Province Memorial by Jeollabuk Province covered</li> <li>  Chaeseokgang and Jeokbyeokgang</li> <li>- Byeonsan Marine National Park by MOE</li> </ul>
	Sangrok beach	Docheong-ri, Byeonsan-myeon, Buan County		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Buan county</li> <li>- Located near Surok waterfall</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Plant : <i>Pinus thunbergii</i> (해송)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Mohang beach	Docheong-ri, Byeonsan-myeon, Buan County		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Byeonsan peninsula</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA</li> <li>  :<i>Ilex cornuta</i> (호랑가시나무)</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Byeonsan Marine National Park by MOE</li> </ul> </li> </ul>
	Gosapo beach	Unsan-ri, Byeonsan-myeon, Buan County		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Byeonsan peninsula</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, sea cucumber</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Wido beach	Jin-ri, Wido-myeon, Buan County	14.6	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West island of Byeonsan peninsula</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, mollusk</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Jeollanam Province	Gusipo beach	Jaryong-ri, Sangha-myeon, Gochang County		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Gochang county</li> <li>- Natural cave</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Anack beach	Wolcheon-ri, Sonbul-myeon, Hampyeong County	1.4	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Northwest part of Hampyeong county</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, mollusk</li> <li>- Plants : reed, <i>Suaeda japonica</i> (칠면초)</li> <li>- Fish : flathead mullet</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plans</li> </ul>



				<ul style="list-style-type: none"> <li>- Environment Conservation Area by MOMAF covered Hampyeong Bay</li> <li>- Fisheries Resources Protection Area by MOMAF covered Yeonggwang Tidal Flat</li> </ul>
	Dolmeori beach	Seokseong-ri, Hampyeong-eup, Hampyeong County	7	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Northwest part of Hampyeong county</li> <li>- Located near Daedong reservoir</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, mollusk</li> <li>- Plants : reed, 칠면초 (<i>Suaeda japonica</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Environment Conservation Area by MOMAF covered Hampyeong Bay</li> <li>- Fisheries Resources Protection Area by MOMAF covered Yeonggwang Tidal Flat</li> </ul> </li> </ul>
	Seomang beach	Imhoe-myeon, Jindo County		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Jindo county</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Gwanmaedo beach	Gwanmae-ri, Jodo-myeon, Jindo County	3,894	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Southwest part of Jindo Island</li> <li>- Well developed sea cliff and Nature cave</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, mollusk, oyster</li> <li>- Plants : <i>Laminaria</i> (다시마), green laver</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> </ul> </li> </ul>
Jeju Province	Iho beach	Iho 2-dong Jeju City	3.75	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Jeju Province</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Fish : <i>Sillago sihama</i> (모살치)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Hyeopjae beach	Hyupjae-ri, Hallim-eup, Jeju City	1.2	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Jeju Province</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, mollusk</li> <li>- Plant : green laver</li> <li>- Macrobenthos (34 spp.), mollusks (25 spp.), Arthropoda (6 spp.), fish (3 spp.)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Jungmun beach	Saekdal-dong, Seogwipo	24	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Jeju Province</li> </ul> </li> </ul>

		City		<ul style="list-style-type: none"> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Pyoseon beach	Pyoseon-ri, Pyoseon-myeon, Seogwipo City	25.1	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Southeast part of Jeju Province</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Hwasun beach	Hwasun-ri, Andeok-myeon, Seogwipo City	2	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Jeju Province</li> <li>- Black sand beach</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Sinyang beach	Seongsan-eup, Seogwipo City	24	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Jeju Province</li> <li>- Black sand beach</li> <li>- Near Seopjikoji</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, mollusk</li> <li>- Plant : green laver</li> <li>- Macrobenthos (34 spp.), mollusks (25 spp.), fish (3 spp.), benthos (31 spp.), arthropoda (12 spp.)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Hamdeok beach	Hamdeok-ri, Jocheon-eup, Jeju City	10.8	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- East part of Jeju Province</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Plant : seagrass (<i>Z. ma</i>)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>

Dune

Province	Site name	Location	Area (m×m)	Characteristics
Seoul, Incheon, Gyeonggi Province	Dongmak	Dongmak-ri, Ganghwa County, Incheon	100×10	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Well developed mud tidal flats in the South Ganghwa island</li> </ul> </li> <li>• Human activity                             <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> <li>- Agriculture</li> </ul> </li> <li>• Major species                             <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> <li>- Salt marsh plants (13 spp.)                                     <ul style="list-style-type: none"> <li>: <i>Suaeda japonica</i> (칠면초), <i>Triglochin maritimum</i> (지채), <i>Carex scabrifolia</i> (천일사초), <i>Phragmites communis</i> (갈대)</li> </ul> </li> <li>- Fish : gizzard shad</li> <li>- Birds : snipe, Kentish plover, blackfaced spoonbill, gull</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List                                     <ul style="list-style-type: none"> <li>: blackfaced spoonbill</li> </ul> </li> <li>- Natural monument by CHA                                     <ul style="list-style-type: none"> <li>: Ganghwa Tidal Flat and blackfaced spoonbill, far eastern curlew</li> </ul> </li> <li>- Endangered species by MOE                                     <ul style="list-style-type: none"> <li>: blackfaced spoonbill</li> </ul> </li> <li>- Protected species by MOE                                     <ul style="list-style-type: none"> <li>: Kentish plover</li> </ul> </li> </ul> </li> <li>• Management plan                             <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOE covered Ongjin and Jangbong Island Tidal Flat</li> </ul> </li> </ul>
	Bangameori (1), Bangameori (2)	Bangamori, Daebudo, Ansan City, Gyeonggi Province	1,000×20 (1) 700×30 (2)	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Shihwa Dinosaur Fossil Region</li> <li>- Located near Shihwa Lake</li> </ul> </li> <li>• Human activities                             <ul style="list-style-type: none"> <li>- Shihwa Tide Embankment</li> <li>- Port</li> <li>- Tourism and fisheries</li> <li>- Tidal power plant</li> <li>- Industrial complex</li> </ul> </li> <li>• Pollution sources                             <ul style="list-style-type: none"> <li>- Coastal residential area</li> <li>- Industrial wastes</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plans                             <ul style="list-style-type: none"> <li>- Marine Environmental Research Site by MOMAF</li> <li>- Special Management Area by MOMAF covered Shihwa Lake and Incheon Coastal Area</li> </ul> </li> </ul>
	Gubong	Gubongdo, Ansan City, Gyeonggi Province	200×150	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Sea cliff and sand bar</li> </ul> </li> <li>• Human activities                             <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution sources                             <ul style="list-style-type: none"> <li>- Shihwa Lake</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plans                             <ul style="list-style-type: none"> <li>- Marine Environmental Research Site by MOMAF</li> </ul> </li> </ul>
Chungcheong	Samok, Hakampo	Samok, Iwon-myeon and Banggal-ri, Wonbuk-	300×50 1,000×600	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> <li>- Famous beach</li> </ul> </li> <li>• Human activities</li> </ul>

nam Province		myeon, Taeon County		<ul style="list-style-type: none"> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taeanhaean National Park by MOE</li> </ul>
	Gurepo	Hwangchon-ri, Wonbuk-myeon, Taeon County	1,000×700	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Taeon peninsula</li> <li>- Dune is excellent (by MOE)</li> <li>• Major species</li> <li>- Plants : <i>Vitex rotundifolia</i> (순비기나무), <i>Carex pumila</i> (좁보리사초)</li> <li>- Amphibia : narrow-mouth frog, tree frog</li> <li>- Reptiles : Korean tiger lizard, <i>Natrix tigrina lateralis</i> (유혈목이)</li> <li>- Birds : common cuckoo, Chinese oriole</li> <li>- Mammals : mole, Korean squirrel, Chinese water deer</li> <li>- Plants (100 spp.), insects (77 spp.), amphibia (7 spp.), reptiles (5 spp.), birds (39 spp.), mammalia (10spp.)</li> <li>• Protected or endangered species</li> <li>- Natural monument by CHA : Chinese sparrow hawk</li> <li>- Endangered species by MOE : common buzzard, Korean tiger lizard</li> <li>- Specific species by MOE (5 spp.) : common cuckoo, black-capped kingfisher, Chinese oriole</li> <li>• Management plan</li> <li>- Taeon Marine National Park by MOE</li> </ul>
	Sindu	Sindu-ri, Wonbuk-myeon, Taeon County	3,000×1,000	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Taeon peninsula</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, barnacle, shortnek clam, oyster</li> <li>- Plants : sweetbrier, sea bindweed, <i>Carex kobomugi</i> (통보리사초)</li> <li>- Fish : gizzard shad, javeline gob</li> <li>• Protected or endangered species</li> <li>- Natural monument by CHA : Shinduri Dune</li> <li>- Endangered species by MOE : Korean golden frog, narrow-mouth frog, Korean tiger lizard</li> <li>• Management plans</li> <li>- Ramsar Wetland covered Duung Wetland</li> <li>- Wetland Protection Area by MOE covered Duung Wetland</li> <li>- Ecological Conservation Area by MOE covered Shinduri Dune</li> <li>- Taeon Marine National Park by MOE</li> <li>- Military Zone</li> </ul>
	Sipripo	Uihang-ri, Sowon-myeon, Taeon County	300×60	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Taeon peninsula</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Management plan</li> <li>- Taeon Marine National Park by MOE</li> </ul>
	Cheonripo (1) Cheonripo (2)	Mohang-ri, Sowon-myeon, Taeon County	250×200 500×500	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Taeon peninsula</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Benthos: polychaetes, arthropod, gastropoda, shortnek clam</li> <li>- Plant : green algae</li> <li>- Birds : great tit, brown-eared bulbul, parrot bill, rufous turtle dove</li> <li>• Protected or endangered species</li> </ul>

				<ul style="list-style-type: none"> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
Manripo	Mohang-ri, Sowon- myeon, Taean County	1,500×800		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Taean peninsula</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, gastropoda, oyster, starfish</li> <li>- Plant : green algae</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
Mohang	Mohang-ri, Sowon- myeon, Taean County	1,000×400		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Taean peninsula</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
Dojang, Yeonpo, Whanggol	Dohwang-ri, Geunheung- myeon, Taean County	500×100, 600×150, 800×200		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Taean county</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
Haenaji	Namsan-ri, Nam-myeon, Taean County	1,000×100		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Taean peninsula</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
Mongsanp o and Mongsanp o	Mongsan-ri, Nam-myeon, Taean County	500×50 2,100×250		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Taean peninsula</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
Cheongpo dae	Woncheong-ri, Nam-myeon, Taean County	2,500×400		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Taean peninsula</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Taean Marine National Park by MOE</li> </ul>
Woncheon g	Woncheong-ri, Nam-myeon, Taean County	1,800×750		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Taean peninsula</li> <li>- Dune is excellent (by MOE)-</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Plants : sea arrow grass, reed, <i>Elymus mollis</i> (갯그렁)</li> <li>- Insects : <i>Tetrix japonica</i> (모메뚜기), <i>Hagenomyia micans</i> (명주잠자리)</li> <li>- Fish : crusian carp, <i>Oryzias sinensis</i> (대륙송사리)</li> <li>- Amphibia : black-spotted pond frog, tree frog</li> </ul>

				<ul style="list-style-type: none"> <li>- Reptiles : mamushi</li> <li>- Bird s: common cuckoo, Chinese oriole</li> <li>- Mammals : mole, Korean squirrel, Chinese water deer</li> <li>- Plants (171 spp.), insects (100 spp.), macrobenthos (35 spp.), fish (12 spp.), amphibia (6 spp.), reptiles (6 spp.), birds (86 spp.)</li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA (7 spp.) <ul style="list-style-type: none"> <li>: Chinese egret, Chinese sparrow hawk</li> </ul> </li> <li>- Endangered species by MOE <ul style="list-style-type: none"> <li>: Chinese egret</li> </ul> </li> <li>- Protected species by MOE (4 spp.) <ul style="list-style-type: none"> <li>: Japanese lesser sparrow hawk, oystercatcher</li> </ul> </li> <li>- Specific species by MOE (15 spp.) <ul style="list-style-type: none"> <li>: common cuckoo, black-capped kingfisher, Chinese oriole</li> </ul> </li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Sineun-ri and Whayang salt pan	Sinon-ri, Nam-myeon, Taean County	2,000×150 and 700×80		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Backsajang	Changgi-ri, Anmyeon-eup, Taean County	1,500×400		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Sambong	Changgi-ri, Anmyeon-eup, Taean County	230×250		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Dune is excellent (by MOE)</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : golden cuttlefish</li> <li>- Plants : <i>Salsola collina</i> (솔장다리), <i>Calystegia soldanella</i> (갯메꽃), <i>Elymus mollis</i> (갯그렁)</li> <li>- Insects : ladybugs, <i>Acrida cinerea</i> (방아깨비)</li> <li>- Fish : crusian carp, <i>Oryzias sinensis</i> (대륙송사리)</li> <li>- Amphibia : Black-spotted pond frog Black-spotted pond frog, tree frog</li> <li>- Reptile : mamushi</li> <li>- Birds : tree sparrow, black-tailed gull</li> <li>- Mammal : mole, Korean squirrel, Chinese water deer</li> <li>- Plants (215 spp.), insects (182 spp.), amphibia (8 spp.), reptiles (5 spp.), birds (401 spp.), mammals (12 spp.)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Specific species by MOE (4 spp.) <ul style="list-style-type: none"> <li>: kestrel, common cuckoo</li> </ul> </li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Anmyeon	Changgi-ri, Anmyeon-eup, Taean County	1,200×250		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>

Seungaun, Kkotji	Seungeon-ri, Anmyeon-eup, Taean County	1,500×100 and 2,000×500	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Jungjang	Jungjang-ri, Anmyeon-eup, Taean County	1,500×300	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Saetbyul, Hangaegae	Sinya-ri, Anmyeon-eup, Taean County	800×30, 500×200	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Yeolmok, Jangsampo, Baramarae	Janggok-ri, Gonammyeon, Taean County	1,200×300, 500×20, 500×50	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Gatbawi	Sinmokdong, Nampo-myeon, Boryeong City	500×250	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Boryeong city</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> <li>- Nampo Tide Embankment</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Wolgeon	Wolgeon-ri, Ungcheon-eup, Boryeong City	500×200	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South Part of Boryeong city</li> <li>- Sandy beach and sea cliff</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
Doksan	Doksan-ri, Ungcheon-eup, Boryeong City	700×20	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Boryeong city</li> <li>- Sandy beach and sea cliff</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Chunjangdae	Dodun-ri, Seo-myeon, Seocheon County	1,000×250	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Seocheon county</li> <li>- Sandy beach and sea cliff</li> </ul> </li> <li>• Human activities</li> </ul>

				<ul style="list-style-type: none"> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
Sinhap	Sinhap-ri, Seo-myeon, Seocheon County	3,000×500		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Seocheon county</li> <li>- Dune is excellent (by MOE)</li> <li>• Major species</li> <li>- Plant : spindle tree</li> <li>- Salt marsh plants (27spp.) : <i>Elymus mollis</i> (갯그렁), <i>Carex kobomugi</i> (통보리사초), <i>Vitex rotundifolia</i> (순비기나무), <i>Ixeris repens</i> (갯씀바귀), <i>Calystegia soldanella</i> (갯메꽃), <i>Glehnia littoralis</i> (갯방풍), <i>Carex pumila</i> (좁보리사초)</li> <li>- Insects : ant lion, beetle</li> <li>- Fish : crucian carp, minnow</li> <li>- Amphibia : leopard frog</li> <li>- Reptile : <i>Eremias argus</i> (표범장지뱀)</li> <li>- Birds : Chinese egret, snipe</li> <li>- Mammals : mole, elk</li> <li>- Plants (194spp.), insects (61 spp.), amphibia and reptiles (61 spp.), birds (49 spp.), mammals (12 spp.)</li> <li>• Protected or endangered species</li> <li>- Natural monument by CHA (7 spp.) : Chinese egret</li> <li>- Endangered species by MOE (4 spp.) : Chinese egret, <i>Eremias argus</i> (표범장지뱀)</li> <li>• Management plan</li> <li>- Wetland Protection Area by MOMAF covered Seocheon Tidal Flat</li> </ul>
Seon Island	Seondo-ri, Biin-myeon, Seocheon County	1,500×30		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Seocheon county</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
Jangpo	Jangpo-ri, Biin-myeon, Seocheon County	750×200		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Seocheon county</li> <li>- Sand dune</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
Dasa	Dasa-ri, Biin-myeon, Seocheon County	1,000×200		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Seocheon county</li> <li>- Sand dune</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
Juksan	Juksan-ri, Maseo-myeon,	1,800×250		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Seocheon county</li> <li>- Sea cliff and dune</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> </ul>



		Seocheon County		<ul style="list-style-type: none"> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Oknam	Oknam-ri, Maseo- myeon, Seocheon County	1,000×75	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Seocheon county</li> <li>- Dune and mud tidal flats</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Songrim	Songrim-ri, Janghang-eup, Seocheon County	1,400×150	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Seocheon county</li> <li>- Sea cliff and dune</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Jeollabuk Province	Jangsin	Jangsin-ri, Hwaseo- myeon, Buan County	2,800×50	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Byeonsan peninsula</li> <li>- Sea cliff and dune</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Byeonsan Marine National Park by MOE</li> </ul> </li> </ul>
	Byeonsan	Jiseo-ri, Byeonsan- myeon, Buan County	250×70	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Byeonsan peninsula</li> <li>- Sea cliff and dune</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Byeonsan Marine National Park by MOE</li> </ul> </li> </ul>
	Gosapo	Unsan-ri, Byeonsan- myeon, Buan County	1,200×150	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Byeonsan peninsula</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Byeonsan Marine National Park by MOE</li> </ul> </li> </ul>
	Mohang	Docheong-ri, Byeonsan- myeon, Buan County	100×50	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Byeonsan peninsula</li> <li>- Sea cliff and dune</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Byeonsan Marine National Park by MOE</li> </ul> </li> </ul>
	Dongho	Dongho-ri, Haeri-myeon, Gochang County	1,600×40	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Sea cliff and dune</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species</li> </ul>

				<ul style="list-style-type: none"> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Gwangseung	Gwangseung-ri, Haerimyeon, Gochang County	2,200×100	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Gochang county</li> <li>- Sea cliff and dune</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Myeongsasipri	Yongjeong-ri, Jangho-ri, Sanghamyeon, Gochang County	3,800×300	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Gochang county</li> <li>- Dune is excellent (by MOE)</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Plants : <i>Koelreuteria paniculata</i> (모감주나무), <i>Rosa rugosa</i> (해당화)</li> <li>- Insect : acrididae</li> <li>- Fish : crusian carp, <i>Oryzias sinensis</i> (대륙송사리)</li> <li>- Amphibia : black-spotted pond frog</li> <li>- Reptile : <i>Eremias argus</i> (표범장지뱀)</li> <li>- Bird : parrot bill</li> <li>- Mammal : small-eared cat</li> <li>- Plants (70spp.), insects (9spp.), amphibia (5 spp.), reptiles (3 spp.), birds (83 spp.), and mammals (10 spp.)</li> <li>• Protected or endangered species</li> <li>- Endangered species by MOE : small-eared cat</li> <li>• Management plan</li> <li>- None</li> </ul>
	Gusipo	Jaryong-ri, Sanghamyeon, Gochang County	1,200×250	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Gochang county</li> <li>- Sea cliff, sand dune and mud tidal flats</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
Jeollanam Province	Songseok	Songseok-ri, Haeje-myeon, Muan County	1,500×70	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Muan county</li> <li>- Sea cliff and dune</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Doeksan	Doeksan-ri, Haeje-myeon, Muan County	900×50	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Muan county</li> <li>- Sea cliff and dune</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Holtong	Masan-ri, Hyeongyeong-myeon, Muan	500×120	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Muan county</li> <li>- Sea cliff and dune</li> </ul>

		County		<ul style="list-style-type: none"> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Songhyeon, Jogeu mnaru	Songhyeon-ri, Mangun- myeon, Muan County	2,000×100 , 300×100	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Muan county</li> <li>- Sea cliff and dune</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Ui Island	Uido, Docho- myeon, Sinan County		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Southwest island of Mokpo city</li> <li>- Sea cliff in West and dune in North</li> <li>- Dune is excellent (by MOE)</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Insect : ant lion</li> <li>- Salt marsh plants (24spp.)</li> <li>: <i>Zoysia sinica</i> (갯잔디), <i>Zoysia macrostachya</i> (왕잔디), <i>Ischaemum antheophoroides</i> (갯쇠보리), <i>Carex kobomugi</i> (통보리사초), <i>Vitex rotundifolia</i> (순비기나무), <i>Calystegia</i> <i>soldanella</i> (갯메꽃)</li> <li>- Amphibia : frog</li> <li>- Reptile : snake</li> <li>- Bird : hawk</li> <li>- Plants (158spp.), insects (115spp.), amphibia (3 spp.), reptiles (10 spp.), birds (64 spp.)</li> <li>• Protected or endangered species</li> <li>- Threatened species of the IUCN Red List</li> <li>: hawk</li> <li>- Natural monument by CHA</li> <li>: hawk</li> <li>- Endangered species by MOE (7 spp.)</li> <li>: big snake, turtle, hawk</li> <li>• Management plan</li> <li>- None</li> </ul>
	Gagye	Gagye-ri,, Uisin-myeon, Jindo County	1,600×250	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Jindo county</li> <li>- Sea cliff, sand beach and mud tidal flats</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Mosa	Mosa-ri, Gonam- myeon, Jindo County	950×150	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Sea cliff and sand dune</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> </ul>
Jeju Province	Iho	Ihoil-dong, Jeju City	300×150	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Jeju Province</li> <li>- Sea cliff and sand beach</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> </ul>

				- None
Gwakgi	Hadong, Gwakji-ri, Bukjeju County	700×250		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Jeju Province</li> <li>- Sea cliff and sand beach</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Hyeopjae	Hyupjae-ri, Hallim-eup, Bukjeju-eup	700×250		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Jeju Province</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Plants : <i>Vitex rotundifolia</i> (순비기나무), <i>Calystegia soldanella</i> (갯메꽃)</li> <li>- Insect : coleoptera</li> <li>- Amphibia : tree frog</li> <li>- Reptiles : cat snake, mamushi</li> <li>- Bird s: scolopacidae, tree sparrow</li> <li>- Mammals : <i>Mustela sibirica coreana</i> (족제비), <i>rattus norvegicus</i></li> <li>- Plants (222spp.), insects (73spp.), amphibia (1 spp.), reptiles (3spp.), birds (44 spp.), mammals (3 spp.)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Endangered species by MOE (7 spp.) <ul style="list-style-type: none"> <li>: osprey, long-billed ringed plover</li> </ul> </li> <li>- Specific species by MOE (4 spp.) <ul style="list-style-type: none"> <li>: eastern reef heron, kestrel</li> </ul> </li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Hamo	Hamo-ri, Daejeong-eup, Namjeju County	900×150		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Jeju Province</li> <li>- Sea cliff and sand beach</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Sagye	Sagye-ri, Daejeong-eup, Namjeju County	1,700× 1,300		<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Jeju Province</li> <li>- Dune is excellent (by MOE)</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Plants : <i>eremochloa ophiuroides</i> (Munro) hack (외대쇠치기아재비)</li> <li>- Insect : coleoptera</li> <li>- Amphibia : tree frog</li> <li>- Reptiles : cat snake, <i>Takydromus wolteri</i> (줄장지뱀)</li> <li>- Birds : <i>Hypsipetes amaurotis</i> (직박구리), tree sparrow</li> <li>- Mammals : <i>Mustela sibirica coreana</i> (족제비), <i>rattus norvegicus</i></li> <li>- Plants (236spp.), insects (66spp.), amphibia (1 spp.), reptiles (2spp.), birds (52 spp.), mammals (3 spp.)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA <ul style="list-style-type: none"> <li>: Chinese egret</li> </ul> </li> <li>- Endangered species by MOE (7 spp.) <ul style="list-style-type: none"> <li>: Chinese egret, osprey, black kite</li> </ul> </li> <li>- Specific species by MOE (4 spp.)</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>: eastern reef heron, kestrel</li> <li>• Management plan</li> <li>- None</li> </ul>
	Pyoseon	Pyoseon-ri, Pyoseon- myeon, Namjeju County	600×100	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Jeju Province</li> <li>- Well development sand beach</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Seopjikoji	Sinyang-ri, Seongsan-eup, Namjeju County	800×1,000	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Jeju Province</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Organisms 356 spp.</li> <li>• Protected or endangered species</li> <li>- Endangered species by MOE (1spp.)</li> <li>• Management plan</li> <li>- None</li> </ul>
	Sinyang	Sinyang-ri, Seongsan-eup, Namjeju County	2,300×150	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Jeju Province</li> <li>- Sea cliff and sand beach</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Hado-ri	Hado-ri, Gujwa-eup, Bukjeju County	500×50	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- East part of Jeju Province</li> <li>- Sea cliff and sand beach</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Pyeongda e	Pyeongdae-ri, Gujwa-eup, Bukjeju County	500×400	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Jeju Province</li> <li>- Sea cliff and sand beach</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Geummeo ng	Woljeong-ri, Geummyeong, Gujwa-eup, Bukjeju County	3,000×800	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Jeju Province</li> <li>- Sea cliff</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Hamduk	Hamduk, Jocheon-eup, Bukjeju County	700×150	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- East part of Jeju Province</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> </ul>

				<ul style="list-style-type: none"><li>- None</li><li>• Management plan</li><li>- None</li></ul>
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## F. Estuarine waters;

Permanent water of estuaries and estuarine systems of deltas.

Definition :An estuary is a semi-enclosed coastal body of water with one or more rivers or streams flowing into it, and with a free connection to the open sea

Province	Site name	Location	Area (km <sup>2</sup> )	Characteristics
Seoul, Incheon, Gyeonggi Province	Han River	Gangwon, Chungbuk, Gyeonggi Province, Seoul	26,218	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Major drainage basin of Seoul city, Gimpo city and Goyang city</li> <li>- Flow through capital city of Korea</li> <li>- Well developed mud tidal flats and estuary</li> <li>- Basin length : 481 km</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Industrial complex, residential area</li> <li>- Gimpo plain</li> <li>- Bridge : 21</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution sources               <ul style="list-style-type: none"> <li>- Anyang, Jungryang and Gokreung stream</li> <li>- Costal residential area</li> <li>- Farmland</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Plants (868spp.), birds (35spp.), fish (97spp.), insects (468spp.), invertebrates (123spp.)</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List                   <ul style="list-style-type: none"> <li>: white-naped crane, Chinese egret, blackfaced spoonbill, hawk, swan goose, Saunder's gull</li> </ul> </li> <li>- Natural monument by CHA                   <ul style="list-style-type: none"> <li>: white-naped crane, Chinese egret, blackfaced spoonbill,</li> </ul> </li> <li>- Endangered species MOE (26 spp.)                   <ul style="list-style-type: none"> <li>: hawk, blackfaced spoonbill</li> </ul> </li> <li>- Protected species by MOE                   <ul style="list-style-type: none"> <li>: hen harrier, Kentish plover</li> </ul> </li> <li>- Specific species by MOE                   <ul style="list-style-type: none"> <li>: Chinese sparrow hawk</li> </ul> </li> </ul> </li> <li>• Management plan               <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOE covered Han River</li> </ul> </li> </ul>
	Anseoung Stream	South Yongin City~Anseoung City ~ Pyeongtaek City, Gyeonggi Province	1,699	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Major drainage basin of Yongin city, Anseoung city and Pyeongtaek city</li> <li>- Basin length : 76 km</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Industrial complex</li> <li>- Danggin and Pyeongtaek Harbor</li> <li>- Pyeongtaek Thermoelectric Power Plant</li> <li>- Asan Tide Embankment</li> <li>- Anseoung plain</li> <li>- Saltpan</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution sources               <ul style="list-style-type: none"> <li>- Costal residential area</li> <li>- Farmland</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, oyster, shortneck clam</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed</li> <li>- Fish (75 spp.) : mullet, rockfish</li> <li>- Bird (33 spp.) : gull, eastern curlew</li> <li>- Plankton : 64 spp.</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>: hawk, swan goose, Saunder's gull, far eastern curlew</li> <li>- Natural monument by CHA</li> <li>: kestrel, whooper swan, white-tailed sea eagle</li> <li>- Endangered species by MOE</li> <li>: hawk, white-tailed sea eagle</li> <li>- Protected species by MOE</li> <li>: Eastern curlew, bean goose, whooper swan, goshawk, common buzzard, hen harrier</li> <li>- Specific species by MOE (7 spp.)</li> <li>: kestrel, great spotted woodpecker, great crested grebe</li> <li>• Management plan</li> <li>- None</li> </ul>
Chungcheongnam Province	Sapgyo Stream	Janggok-myeon, Hongseong County	1,611	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Major drainage basin of Hongseung county and Yesna county</li> <li>- Basin length : 58.6 km</li> <li>• Human activities</li> <li>- Industrial complex</li> <li>- Danggin and Pyeongtaek Harbor</li> <li>- Sapgyo Tide Embankment</li> <li>- Anseoung plain</li> <li>- Saltpan</li> <li>- Tourism and fisheries</li> <li>• Pollution sources</li> <li>- Muhan and Gokgyo stream</li> <li>- Costal residential area</li> <li>- Farmland</li> <li>- Industrial wastes</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, barnacle, oyster, shortneck clam</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed</li> <li>- Fish (75 spp.) : mullet, rockfish</li> <li>- Birds (33 spp.) : gull, eastern curlew</li> <li>- Plankton : 64 spp.</li> <li>• Protected or endangered species</li> <li>- Threatened species of the IUCN Red List</li> <li>: hawk, swan goose, Saunder's gull</li> <li>- Natural monument by CHA</li> <li>: kestrel, whooper swan, white-tailed sea eagle</li> <li>- Endangered species by MOE</li> <li>: hawk, white-tailed sea eagle</li> <li>- Protected species by MOE</li> <li>: eastern curlew, bean goose, whooper swan, goshawk, common buzzard, hen harrier</li> <li>- Specific species by MOE (7 spp.)</li> <li>: kestrel, great spotted woodpecker, great crested grebe</li> <li>• Management plan</li> <li>- Fisheries Resources Protection Area by MOMAF</li> </ul>
	Geum River	Jangsu county ~Geunsan bay	9,810	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Major drainage basin of Gunsan city and Seocheon county</li> <li>- Basin length : 394.79 km</li> <li>• Human activities</li> <li>- Industrial complex (Janghang)</li> <li>- Janghang and Geunsan Harbor</li> <li>- Geum River Estuarine Tide Embankment</li> <li>- Jeonbuk and Hoseo plain</li> <li>- Tourism and fisheries</li> <li>• Pollution sources</li> <li>- Boseung and Miho River</li> <li>- Farmland</li> <li>- Excrement treatment (2 place)</li> <li>- Industrial wastes (2 place)</li> <li>• Major species</li> <li>- Plants (44spp.), animals (10spp.), amphibia (7spp.), reptiles (5 spp.), birds (35 spp.), fish (54spp.)</li> <li>• Protected or endangered species</li> </ul>



				<ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : hawk, tundra swan, Saunder's gull</li> <li>- Natural monument by CHA : 7 spp.</li> <li>- Endangered species by MOE : 6 spp.</li> <li>- Protected species by MOE : 4 spp.</li> <li>• Management plan</li> <li>- Ecosystem Conservation Area by MOE covered Sohwang Dune</li> </ul>
Jeollabuk Province	Mangyeong River	Gimje City ~ Iksan City, Jeonju City	1,527	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Major drainage basin of Gimje city, Iksan city and Jeonju city</li> <li>- Well developed mud tidal flats and estuary</li> <li>- Sediment type is muddy sand</li> <li>- Basin length : 80.86 km</li> <li>• Human activities</li> <li>- Industrial complex</li> <li>- Seamangeum Tide Embankment</li> <li>- Geunsan Harbor</li> <li>- Alluvial plain</li> <li>- Tourism and fisheries</li> <li>• Pollution sources</li> <li>- Jinju stream</li> <li>- Farmland</li> <li>- Industrial wastes</li> <li>• Major species</li> <li>- Benthos: polychaetes, arthropod, oyster, barnacle</li> <li>- Phytoplankton (195 spp.), macrobentic fauna (416 taxa), maga benthos (137 spp.)</li> <li>• Protected or endangered species</li> <li>- Threatened species of the IUCN Red List : Saunder's gull</li> <li>- Specific species by MOE : 56 spp.</li> <li>• Management plan</li> <li>- None</li> </ul>
	Dongjin River	Jeongeup City ~ Gimje City, Buan County	1,129	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Major drainage basin of Jeongeup city, Gimje city and Buan county</li> <li>- Well developed mud tidal flats and estuary</li> <li>- Sediment type is muddy sand</li> <li>- Basin length : 44.7 km</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Pollution sources</li> <li>- Farmland</li> <li>• Major species</li> <li>- Plants (17spp.), birds (23spp.), invertebrates (64spp.)</li> <li>• Protected or endangered species</li> <li>- Natural monument by CHA : 1 spp.</li> <li>- Endangered species by MOE : 6 spp.</li> <li>- Protected species by MOE : 1 spp.</li> <li>- Specific species by MOE : 47 spp.</li> <li>• Management plan</li> <li>- Wetland Protection Area by MOMAF covered Julpomam Tidal Flat</li> </ul>
Jeollanam Province	Yeongsan River	Damyang County	3,455	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Major drainage basin of Damyang county, Gwangju city, Naju city and Yeongam county</li> <li>- Well developed mud tidal flats and estuary</li> <li>- Basin length : 115.5 km</li> <li>• Human activities</li> <li>- Deabul National Industrial complex</li> <li>- Yeongsan River Estuarine Tide Embankment</li> <li>- Tourism and fisheries</li> <li>• Pollution sources</li> <li>- Gwangju, Jiseok, Gomakwon and Hampyeong Stream</li> <li>- Whangryong River</li> <li>- Farmland</li> <li>- Excrement treatment (2 place)</li> <li>- Industrial wastes (2 place)</li> </ul>

				<ul style="list-style-type: none"> <li>• Major species <ul style="list-style-type: none"> <li>- Birds : 36 spp.</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : 3 spp.</li> <li>- Protected species by MOE : 4 spp.</li> <li>- Specific species by MOE : 1 spp.</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Fisheries Resources Protection Area by MOMAF</li> </ul> </li> </ul>
Jeju Province	-	-	-	None

## G. Intertidal mud, sand or salt flats

Definition : The unconsolidated particles smaller than stones are predominantly silt and clay.

Province	Site name	Location	Area (km <sup>2</sup> )	Characteristics
Seoul, Incheon, Gyeonggi Province	Baekryeong Island	Baekryeong -myeon, Ongjin County, Incheon	46.35	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Less than 10 m depth, muddy sand</li> </ul> </li> <li>• Human activities                             <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species                             <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, sea cucumber, abalone, <i>Siphonaria rucuana</i> (꼬마고랑따개비), <i>Mitrella bicincta</i> (보리무럭)</li> <li>- Plants : seagrass (<i>Z.ca</i>, <i>Z.ma</i>)</li> <li>- Fish : sea bass, sting fish, Spotty belly greenling, Japanese anchovy</li> <li>- Birds : gull</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- Natural monument by CHA : Baekryeong Island, Harbor seal, Kongdol beach</li> </ul> </li> <li>• Management plan                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Yeonpyeong Island	Yeonpyeong-myeon, Ongjin County, Incheon	7.29	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Island located near North Korea</li> </ul> </li> <li>• Major species                             <ul style="list-style-type: none"> <li>- Benthos: polychaetes, <i>Hemigrapsus sanguineus</i> (무늬발게), brittle star, <i>Asterias amurensis</i> (아무르불가사리), <i>Tristichotrochus koma</i> (방석고둥), <i>Omphalius rusticus</i> (보말고둥), <i>Monodonta labio</i> (올타리고둥), <i>Cerithideopsisilla djadjariensis</i> (갯비틀이고둥), <i>Anthosiphonaria Sirius</i> (고랑따개비), scallop, Oyster, Ulvaceae</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Gyodong Island	Gyodong-myeon, Ganghwa County, Incheon	47.16	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Rocky and mud tidal flats island</li> </ul> </li> <li>• Human activities                             <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Jumon, Seogwondo, Bouldum	Samsan-myeon, Ganghwa County, Incheon	58.75	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Sea cliff and mud tidal flats</li> </ul> </li> <li>• Human activities                             <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Seokmo Island	Samsan-myeon, Ganghwa County, Incheon	45.63	<ul style="list-style-type: none"> <li>• Geographical scales and environment                             <ul style="list-style-type: none"> <li>- Island located near Ganghwa Island and North Korea</li> </ul> </li> <li>• Human activities                             <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species                             <ul style="list-style-type: none"> <li>- Salt plants : <i>Suaeda japonica</i> (칠면초), <i>Zoysia sinica</i> (갯잔디), reed</li> </ul> </li> <li>• Protected or endangered species                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan                             <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>

	Ganghwa Island	Ganghwa County, Incheon	305.35	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Well developed mud tidal flats in the South Ganghwa Island</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> <li>- Salt marsh plants (13spp.) <ul style="list-style-type: none"> <li>: <i>Suaeda japonica</i> (칠면초), <i>Triglochin maritimum</i> (지채), <i>Carex scabrifolia</i> (천일사초), <i>Phragmites communis</i> (갈대)</li> </ul> </li> <li>- Fish : gizzard shad</li> <li>- Birds : snipe, Kentish plover, blackfaced spoonbill, gull</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List <ul style="list-style-type: none"> <li>: blackfaced spoonbill, far eastern curlew, red-crowned crane</li> </ul> </li> <li>- Natural monument by CHA <ul style="list-style-type: none"> <li>: Ganghwa Tidal Flat and blackfaced spoonbill</li> </ul> </li> <li>- Endangered species by MOE <ul style="list-style-type: none"> <li>: blackfaced spoonbill</li> </ul> </li> <li>- Protected species by MOE <ul style="list-style-type: none"> <li>: Kentish plover</li> </ul> </li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOMAF covered Ongjin and Jangbong Island Tidal Flat</li> </ul> </li> </ul>
	Yeongjoning, Yongyu, Muui Island	Jung-gu, Incheon	96.14	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West island of Incheon city</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Incheon International Airport</li> <li>- Harbor</li> <li>- Industrial complex</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Coastal residential area</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, oyster, spiny turban shell, sea anemone</li> <li>- Plant : <i>Quercus acutissima</i> (상수리 나무)</li> <li>- Fish : sting fish, Spotty belly greenling, flatfish</li> <li>- Bird : gull</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Special Management Area by MOMAF covered Shihwa Lake and Incheon Coastal Area</li> </ul> </li> </ul>
	Incheon, Siheung	Namdong-gu, Yeonsu-gu, Incheon	45.14	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West and south of Incheon city</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Harbor</li> <li>- Shihwa Lake</li> <li>- Shihwa Tide Embankment</li> <li>- Industrial complex</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Shihwa lake</li> <li>- Coastal residential area</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, oyster</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed, <i>Artemisia princeps var. orientalis</i> (쭈)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Special Management Area by MOMAF covered Shihwa Lake and</li> </ul> </li> </ul>

				<p>Incheon Coastal Area - Ecological Park by Incheon city covered Sorae Tide Flat</p>
The Deokjeok Island	Deokjeok-myeon, Ongjin County, Incheon	35.96	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West island of Ansan city</li> <li>- Sand flat</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, polychaetes, arthropod, oyster, bamboo- shoot turris</li> <li>- Plants : moss algae, green hair algae, horneri</li> <li>- Fish : sting fish, spotty belly greenling, flatfish, finespotted flounder</li> <li>- Birds : gull, oystercatcher</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : oystercatcher</li> <li>- Endangered species by MOE : oystercatcher</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>	
Baekaseongap Island	Deokjeok-myeon, Ongjin County, Incheon	52.09	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West island of Ansan city</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>	
Daeijak Island	Jawol-myeon, Ongjin County, Incheon	16.13	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West island of Ansan city</li> <li>- Sand flat</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, gastropoda, shortnek clam, oyster</li> <li>- Plants : seagrass (<i>Z.ja</i>, <i>Z.ma</i>)</li> <li>- Fish : sting fish, Spotty belly greenling, flatfish, finespotted flounder</li> <li>- Birds : gull, oystercatcher</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : choseniiana hackberry, oystercatcher</li> <li>- Endangered species by MOE : oystercatcher</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Ecosystem Conservation Area by MOMAF covered Deokjeok Island and around Deokjeok Island Water</li> </ul> </li> </ul>	
Yeongheung Island and Daebu Island	Yeongheung-myeon, Ongjin County, Incheon	66.82	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West island of Ansan city</li> <li>- Shihwa Dinosaur Fossil Region</li> <li>- Sand flat with dune</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Harbor</li> <li>- Yeongheung Bridge</li> <li>- Shihwa Lake</li> <li>- Shihwa Tide Embankment</li> <li>- Industrial complex</li> <li>- Yeongheung Thermoelectric Power Plant</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Shihwa lake</li> <li>- Coastal residential area</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, polychaetes, arthropod, oyster</li> </ul> </li> </ul>	

				<ul style="list-style-type: none"> <li>- Plants : green laver, arctic daisy, moss algae, green hair algae, horneri</li> <li>- Salt marsh plants (22 spp.) : <i>Carex pumila</i> (좁보리사초), <i>Vitex rotundifolia</i> (순비기나무), sweetbrier, <i>Ixeris repens</i> (갯씀바귀), <i>Messerschmidia sibirica</i> (모래지치), <i>Phragmites communis</i> (갈대), <i>Triglochin maritimum</i> (지채), <i>Carex scabrifolia</i> (천일사초)</li> <li>- Fish : mullet</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- Special Management Area by MOMAF covered Shihwa Lake and Incheon Coastal Area</li> </ul>
Hwaseong	Seosin-myeon, Hwaseong City, Gyeonggi Province	267.79		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Sand flat</li> <li>• Human activities</li> <li>- Harbor</li> <li>- Hwaong lake</li> <li>- Industrial complex</li> <li>• Pollution sources</li> <li>- Hwaong lake</li> <li>- Costal residential area</li> <li>- Industrial wastes</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, polychaetes, arthropod, oyster</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed</li> <li>- Fish : flathead mullet</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
Pyeongtaek	Hyeondeok-myeon and Poseung-myeon, Pyeongtaek City, Gyeonggi Province	100.53		<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West of Pyeongtaek city</li> <li>• Human activities</li> <li>- Industrial complex</li> <li>- Pyeongtaek Thermoelectric Power Plant</li> <li>- Dangjin and Pyeongtaek Harbor</li> <li>- Tide Embankment (Asan, Sapgyo)</li> <li>- Anseoung saltpan</li> <li>- Tourism and fisheries</li> <li>• Pollution sources</li> <li>- Anseung stream</li> <li>- Costal residential area</li> <li>- Farmland</li> <li>- Industrial wastes</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, barnacle, shortnek clam, oyster</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed, Chinese Lawngrass</li> <li>- Fish : flathead mullet, sting fish</li> <li>- Birds : gull, eastern curlew</li> <li>- Birds (33 spp.), invertebrates (30 spp.)</li> <li>• Protected or endangered species</li> <li>- Threatened species of the IUCN Red List : hawk</li> <li>- Natural monument by CHA : kestrel, whooper swan, white-tailed sea eagle</li> <li>- Endangered species by MOE : white-tailed sea eagle</li> <li>- Protected species by MOE : eastern curlew, bean goose, whooper swan, goshawk, common buzzard, hen harrier</li> <li>- Specific species by MOE (5 spp.) : kestrel, great spotted woodpecker, great crested grebe</li> <li>• Management plan</li> <li>- None</li> </ul>

Chungcheongnam Province	Asan bay	Asan City	171.12	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Covered from South of Pyeongtaek city , North of Asan city and North of Dangjin gun</li> <li>- Less than 20m in most area</li> <li>- Well developed mud tidal flats in the Northeast</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Industrial complex</li> <li>- Dangjin and Pyeongtaek Harbor</li> <li>- Tide embankment (Asan, Sapgyo)</li> <li>- Anseoung plain</li> <li>- Saltpan</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Anseung and Sapgyo stream</li> <li>- Costal residential area</li> <li>- Farmland</li> <li>- Industrial wastes (1 place)</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> <li>- Plants : reed, <i>Suaeda japonica</i> (칠면초)</li> <li>- Fish (75 spp.) : flathead mullet, sting fish, dace</li> <li>- Birds (33 spp.) : gull, eastern curlew</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : hawk</li> <li>- Natural monument by CHA : kestrel, whooper swan, white-tailed sea eagle</li> <li>- Endangered species by MOE : white-tailed sea eagle</li> <li>- Protected species by MOE : eastern curlew, bean goose, whooper swan, goshawk, common buzzard, hen harrier</li> <li>- Specific species by MOE (29 spp.) : kestrel, great spotted woodpecker, great crested grebe</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : shrimp and oyster</li> </ul> </li> </ul>
	Seosan	Seosan City	300.55	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Sea cliff and mud tidal flats</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Garolim bay	Iwon-myeon, Taean County	415.98	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Covered from North of Seosan city and North of Taean county</li> <li>- Less than 6 m in most area</li> <li>- Well developed mud tidal flats in inside</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Saltpan</li> <li>- Taean Thermal Power Plant</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Costal residential area</li> <li>- Farmland</li> <li>- Excrement treatment (1 place)</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos (134 spp.) : polychaetes, arthropod, barnacle, shortnek clam, oyster, snail</li> <li>- Plants : Reed, <i>Suaeda japonica</i> (칠면초), Chinese Lawngrass</li> <li>- Fish (75 spp.) : flathead mullet, sea bass</li> <li>- Birds (33 spp.) : gull, kestrel, whooper swan, Bewick's swan</li> </ul> </li> <li>• Protected or endangered species</li> </ul>

				<ul style="list-style-type: none"> <li>- Natural monument (CHA) <ul style="list-style-type: none"> <li>: hawk, kestrel, whooper swan, Bewick's swan</li> </ul> </li> <li>- Endangered species by MOE <ul style="list-style-type: none"> <li>: hawk</li> </ul> </li> <li>- Protected species by MOE <ul style="list-style-type: none"> <li>: pied harrier, bean goose, whooper swan, Bewick's swan, goshawk, common buzzard, merlin</li> </ul> </li> <li>- Specific species by MOE <ul style="list-style-type: none"> <li>: kestrel</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : laver and oyster</li> </ul> </li> </ul>
Wonbuk	Wonbuk-myeon, Taean County	184.21	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> <li>- Shinduri Dune</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> <li>- Plants : sweetbrier, sea bindweed, <i>Carex kobomugi</i> (퉁보리사초)</li> <li>- Fish : gizzard shad, javeline gob</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA <ul style="list-style-type: none"> <li>: Shinduri Dune</li> </ul> </li> <li>- Endangered species by MOE <ul style="list-style-type: none"> <li>: Korean golden frog, narrow-mouth frog, Korean tiger lizard</li> </ul> </li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Ramsar Wetland covered Duung Wetland</li> <li>- Wetland Protection Area by MOE covered Duung Wetland</li> <li>- Ecological Conservation Area by MOE covered Shinduri Dune</li> <li>- Taean Marine National Park by MOE</li> <li>- Military Zone</li> </ul> </li> </ul>	
Geunheung ~Nammyeon	Geunheung-myeon, Taean County	270.72	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Well developed sand beach</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>	
Anmyeon	Gonam-myeon, Taean County	242.96	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Well developed sand beach</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>	
Ocheon	Ocheon-myeon, Boryeong City	223.03	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Boryeong city</li> <li>- Sea cliff and mud tidal flats</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> <li>- Boryeong Tide Embankment</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>	
Wonsando	Wonsando-ri, Ocheon-myeon, Boryeong	50.40	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Boryeong city</li> <li>- Rocky and mud tidal flats island</li> </ul> </li> <li>• Human activity <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> </ul>	



		City		<ul style="list-style-type: none"> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Ungcheon	Ungcheon-eup, Nampo-myeon, Boryeong City	199.66	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Boryeong city</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>- Nampo Tide Embankment</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Biin, Janghang	Biin-myeon, Seocheon County	139.95	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Seocheon county</li> <li>- Sea cliff and mud tidal flats</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
Jeollabuk Province	Gunsan	Bieungdong-dong, Gunsan City	18.58	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West island of Gunsan city</li> <li>- Well developed mud tidal flats and estuary</li> <li>• Human activities</li> <li>- Seamangeum Tide Embankment</li> <li>- Geunsan Harbor</li> <li>- Tourism and fisheries</li> <li>- Reclaimed land</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Byeonsan	Byeonsan-myeon, Buan County	85.20	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Southwest part of Buan county</li> <li>- Sea cliff and mud tidal flats</li> <li>• Human activity</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, barnacle, oyster</li> <li>- Plant : reed</li> <li>• Protected or endangered species</li> <li>- Natural monument by CHA</li> <li style="padding-left: 20px;">: <i>Ilex cornuta</i> (쌍쌍나무), <i>Machilus thunbergii</i> (후박나무)</li> <li>• Management plan</li> <li>- Byeonsan Marine National Park by MOE</li> </ul>
	Seamangeum		357.65	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Developed for supplying agriculture water, making farmland and international trading port</li> <li>- Well developed mud tidal flats Estuary</li> <li>- Sediment type is muddy sand</li> <li>• Human activities</li> <li>- Industrial complex</li> <li>- Seamangeum Tide Embankment</li> <li>- Geunsan Harbor</li> <li>- Alluvial plain</li> <li>- Tourism and fisheries</li> <li>• Pollution sources</li> <li>- Mangyeong River</li> <li>- Farmland</li> <li>- Industrial wastes</li> <li>• Major species</li> <li>- Benthos: polychaetes, arthropod, oyster, barnacle</li> </ul>

				<ul style="list-style-type: none"> <li>- Phytoplankton (195 spp.), macrobenthic fauna (416 taxa), mega benthos (137 spp.)</li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Specific species by MOE : 56 spp.</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Wi Island	Byeonsan-myeon, Buan County	14.27	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Southwest part of Buan county</li> <li>- Sea cliff and mud tidal flats</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, oyster, mollusca, shellfish, barnacle, <i>Gyroscale perplexa</i> (실패고둥)</li> <li>- Plants : green algae, reed</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Gomso bay	Buan County, Gochang County	302.71	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Covered from South of Buan county and North of Gochang county</li> <li>- Less than 8m in most area</li> <li>- Well developed mud tidal flats in South</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Saltpan (Samyang, Gomso)</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Coastal residential area</li> <li>- Farmland</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos (44 spp.) : gastropoda, oyster, ark shell, barnacle</li> <li>- Salt marsh plants (10 spp.) : <i>Suaeda japonica</i> (칠면초), <i>Suaeda maritime</i> (해홍나물), <i>Suaeda asparagoides</i> (나문재), <i>Phragmites communis</i> (갈대)</li> <li>- Fish : yellow corvina, croaker</li> <li>- Birds (44 spp.) : common heron, egret, black-tailed gull</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : Eastern black-tailed godwit</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOMAF covered tidal flat of Julpo bay</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : shellfish</li> </ul> </li> </ul>
Jeollanam Province	Beobseoungpo	Beobseoung-myeom, Yeonggwang County	151.68	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Yeonggwang county</li> <li>- Mud tidal flats and sea cliff</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Beobseoungpo Harbor</li> <li>- Tourism and fisheries</li> <li>- Reclaimed land</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Imja Island, Saok Island	Imja-myeon, Sinan County	47.15	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Sinan county</li> <li>- Well developed mud tidal flats</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : <i>Solen strictus</i> (맛조개), shellfish, gastropods, crab</li> <li>- Fish : Japanese eel</li> </ul> </li> <li>• Protected or endangered species</li> </ul>

				<ul style="list-style-type: none"> <li>- None</li> <li>• Management plan</li> <li>- Dadohae Marine National Park by MOE</li> </ul>
Jido-eup, Imsu Peninsula	Jido-eup, Sinan-gun and Haeje-myeon, Muan County	218.22	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Covered from West of Hampyeong county and North of Muan county</li> <li>- Less than 10m in most area</li> <li>- Well developed mud tidal flats in South and North</li> <li>• Human activity</li> <li>- Saltpan (Singang)</li> <li>• Major species</li> <li>- Benthos 171 spp. : shortneck clam, polychaetes, arthropod, barnacle</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed, Chinese lawngrass</li> <li>- Fish (25 spp.) : flathead mullet, brown croaker</li> <li>- Birds (28 spp.) : great crested grebe, black-tailed gull, herring gull</li> <li>• Protected or endangered species</li> <li>- Natural monument by CHA</li> <li>: <i>Pinus thunbergii</i> (곰솔)</li> <li>- Specific species by MOE</li> <li>: great crested grebe</li> <li>• Management plans</li> <li>- Fisheries Resources Protection Area by MOMAF covered Hampyeong-bay</li> <li>- Environment Conservation Area by MOMAF covered Hampyeong-bay</li> <li>- Wetland Protection Area by MOMAF covered Muan Tidal Flat</li> </ul>	
Jeung Island	Jeungdo myeon, Sinan County	33.59	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Sinan county</li> <li>- Well developed mud tidal flats</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Macrobenthos : 166 spp.</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>	
Aphae Island	Aphae myeon, Sinan County	67.43	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Sinan county</li> <li>- Well developed mud tidal flats</li> <li>- Bay in East, West and South</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Macrobenthos : 182 spp.</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>	
Jaeun Island, Amtae Island	Jaeun-myeon, Sinan County	95.89	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Sinan county</li> <li>- Well developed mud tidal flats</li> <li>- Sand beach in Southwest island</li> <li>• Human activities</li> <li>- Tourism and fisheries</li> <li>• Major species</li> <li>- Benthos: polychaetes, arthropod, barnacle, shellfish, oyster</li> <li>- Plants : laver, green laver, <i>Suaeda japonica</i> (칠면초)</li> <li>- Fish : anchovy</li> <li>- Birds : egret, crane</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>	

Palgeum Island, Anja Island	Palgeum-myeon, Sinan County	78.28	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Sinan county</li> <li>- Well developed mud tidal flats</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, barnacle, shellfish, oyster</li> <li>- Plants : green laver, reed, <i>Suaeda japonica</i> (칠면초)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Muan Peninsula	Unnam-myeon, Samhyang-myeon Muan County	142.99	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Muan county</li> <li>- Well development mud flat</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Aquaculture</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, barnacle, shellfish, oyster, sea slug, anemone</li> <li>- Salt marsh plants (21 spp.) <ul style="list-style-type: none"> <li>: <i>Suaeda japonica</i> (칠면초), reed, <i>Suaeda maritime</i> (해홍나물), <i>Artemisia fukudo</i> (가는갯능쟁이), <i>Zoysia sinica</i> (갯잔디), <i>Elymus mollis</i> (갯그렁), <i>Salicornia herbacea</i> (통통마디)</li> </ul> </li> <li>- Bird : egret</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOMAF covered Muan Tidal Flat</li> <li>- Ramsar Wetland</li> </ul> </li> </ul>
Bigeum Island, Docho Island, Ui Island	Bigeum-myeon, Sinan County	106.92	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Sinan county</li> <li>- Rocky offshore islands</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, barnacle, shellfish, oyster, sea slug, anemone</li> <li>- Plants : seagrass (<i>Z. ma</i>), <i>Suaeda japonica</i> (칠면초)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument number by CHA <ul style="list-style-type: none"> <li>: Bigeumdo (seabird breeding place)</li> </ul> </li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> </ul> </li> </ul>
Hau Island, Sangtae Island, Jangsan Island	Jangsan-myeon, Sinan County	97.00	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Sinan county</li> <li>- Rocky offshore islands</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, barnacle, shellfish, oyster, sea slug, anemone</li> <li>- Plants : green laver, <i>Suaeda japonica</i> (칠면초)</li> <li>- Bird : Kentish plover</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Endangered species by MOE <ul style="list-style-type: none"> <li>: Kentish plover</li> </ul> </li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> </ul> </li> </ul>
Jin Island	Jindo County	373.73	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Less than 1 m depth</li> <li>- Muddy sand flat</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>• Human activities <ul style="list-style-type: none"> <li>- Aquaculture</li> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, barnacle, shellfish, oyster</li> <li>- Plants : green laver, <i>Suaeda japonica</i> (칠면초), seagrass (<i>Z. cau</i>, <i>Z.ma</i>)</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> <li>- Wetland Protection Area by MOMAF covered Jindo Tidal Flat</li> </ul> </li> </ul>
	Hwawon Peninsula	Haenam County	224.18	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Northwest part of Haenam county</li> <li>- Well development mud flat</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Harbor</li> <li>- Geumho Lake and Yeongam lake</li> <li>- Tide embankment (Geumho and Yeongam )</li> <li>- Industrial complex</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Geumho Lake and Yeongam lake</li> <li>- Costal residential area</li> <li>- Farmland</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shellfish, oyster</li> <li>- Plants : reed, <i>Suaeda japonica</i> (칠면초)</li> <li>- Bird : 45 spp.</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Endangered species by MOE : 1 spp.</li> <li>- Protected species by MOE : 4 spp.</li> <li>- Specific species by MOE : 2 spp.</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Sangjo Island, Hajo Island	Jodomyeon, Jindo County	56.99	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Southwest island of Jindo county</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>Benthos : polychaetes, arthropod, barnacle, shellfish</li> <li>Plant : laver, green laver, brown seaweed</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : <i>Ilex cornuta</i> (광광나무)</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Dadohae Marine National Park by MOE</li> </ul> </li> </ul>
Jeju Island	Jeju Island		671	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Southwest island the Korean Peninsula</li> <li>- Less than 40 m in most area</li> <li>- Well developed rocky offshore islands</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tourism and fisheries</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : black-faced spoonbill</li> <li>- Natural monument by CHA : Munseom (coral reef), Seopseom (coral reef), Beomseom (coral reef), poison bulb, black-faced spoonbill</li> <li>- Endangered species by MOE : black-faced spoonbill</li> <li>- Protected species by MOE : brent goose, whooper swan, pelagic cormorant, osprey</li> <li>- Specific species by MOE : great crested grebe, eastern reef heron, mandarin duck</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- World Natural Heritage by UNESCO</li> </ul> </li> </ul>

## H. Intertidal marshes;

salt marshes, salt meadows, saltings, raised salt marshes; includes tidal brackish and freshwater marshes.

Definition : A salt marsh is a type of marsh that is a transitional zone between land and salty or brackish water (e.g., sloughs, bays, estuaries). It is dominated by halophytic (salt tolerant) herbaceous plants.

Province	Site name	Location	Area (m <sup>2</sup> )	Characteristics
Seoul, Incheon, Gyeonggi Province	Inhwa	Inhwa-ri, Yangsa-myeon, Ganghwa County, Incheon	4,536	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Ganghwa Island</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (10spp.) <ul style="list-style-type: none"> <li>: <i>Suaeda maritime</i> (해홍나물), <i>Zoysia sinica</i> (갯잔디), <i>Phragmites communis</i> (갈대), <i>Carex scabrifolia</i> (천일사초), <i>Suaeda asparagoides</i> (나문재), <i>Atriplex gmelini</i> (가는갯능쟁이), <i>Suaeda japonica</i> (칠면초)</li> </ul> </li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Hwangcheong	Hwangcheong-ri, Naegamyeon, Ganghwa County	338	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Ganghwa Island</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plant (9spp.) <ul style="list-style-type: none"> <li>: <i>Suaeda maritime</i> (해홍나물), <i>Zoysia sinica</i> (갯잔디), <i>Phragmites communis</i> (갈대), <i>Carex scabrifolia</i> (천일사초)</li> </ul> </li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Yeocha-ri	Yeocha-ri, Hwadomyeon, Ganghwa County, Incheon	2,360	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Ganghwa Island</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (9spp.) <ul style="list-style-type: none"> <li>: <i>Phragmites communis</i> (갈대), <i>Triglochin maritimum</i> (지채), <i>Carex scabrifolia</i> (천일사초), <i>Zoysia sinica</i> (갯잔디), <i>Suaeda maritime</i> (해홍나물), <i>Suaeda japonica</i> (칠면초)</li> </ul> </li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Buleum Island	Buleumdo-ri, Seodomyeon, Ganghwa County, Incheon	1,444	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Ganghwa Island</li> <li>- Well developed dune</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (23spp.) <ul style="list-style-type: none"> <li>: <i>Lathyrus japonica</i> (갯완두), <i>Zoysia sinica</i> (갯잔디), <i>Messerschmidia sibirica</i> (모래지치), <i>Carex pumila</i> (좁보리사초), <i>Scutellaria strigillosa</i> (참골무꽃)</li> </ul> </li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Ganghwa	Donggeom-ri, Gilsang-	250,250	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Well developed mud tidal flats in the South Ganghwa Island</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> </ul> </li> </ul>

	myeon, Ganghwa County, Incheon		<ul style="list-style-type: none"> <li>- Salt marsh plants (13spp.) : <i>Suaeda japonica</i> (칠면초), <i>Triglochin maritimum</i> (지채), <i>Carex scabrifolia</i> (천일사초), <i>Phragmites communis</i> (갈대)</li> <li>- Fish : gizzard shad</li> <li>- Bird : snipe, Kentish plover, blackfaced spoonbill, gull</li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : blackfaced spoonbill, far eastern curlew, red-crowned crane</li> <li>- Natural monument by CHA : Ganghwa Tidal Flat and blackfaced spoonbill</li> <li>- Endangered species by MOE : blackfaced spoonbill</li> <li>- Protected species by MOE : Kentish plover</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOMAF covered Ongjin and Jangbong Island Tidal Flat</li> </ul> </li> </ul>
Daecheong Island	Daecheong-ri, Daecheong-myeon, Ongjin County, Incheon	5,434	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West island of Incheon</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (21spp.) : <i>Vitex rotundifolia</i> (순비기나무), <i>Elymus mollis</i> (갯그렁), <i>Carex kobomugi</i> (통보리사초), <i>Calystegia soldanella</i> (갯메꽃), <i>Messerschmidia sibirica</i> (모래지치), sweetbrier</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Yeongheung Island	Oe-ri, Yeongheung-myeon, Ongjin County, Incheon	260	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Well developed dune</li> <li>- South part of Incheon Harbor</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Harbor</li> <li>- Shihwa Lake</li> <li>- Yeongheung Bridge</li> <li>- Shihwa Tide embankment</li> <li>- Industrial complex</li> <li>- Yeongheung Thermoelectric Power Plant</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Shihwa lake</li> <li>- Coastal residential area</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, polychaetes, arthropod, oyster</li> <li>- Plants : green laver, arctic daisy, moss algae, green hair algae, horneri</li> <li>- Salt marsh plants (22 spp.) : <i>Carex pumila</i> (좁보리사초), <i>Vitex rotundifolia</i> (순비기나무), sweetbrier, <i>Ixeris repens</i> (갯씀바귀), <i>Messerschmidia sibirica</i> (모래지치), <i>Phragmites communis</i> (갈대), <i>Triglochin maritimum</i> (지채), <i>Carex scabrifolia</i> (천일사초)</li> </ul> </li> <li>- Fish : mullet</li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Special Management Area by MOMAF covered Shihwa Lake and Incheon Coastal Area</li> </ul> </li> </ul>

	Daebu Island	Nam-dong, Ansan City, Gyeonggi Province	96,836	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Incheon city</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (12spp.) : <i>Suaeda japonica</i> (칠면초), <i>Triglochin maritimum</i> (지채), <i>Zoysia sinica</i> (갯잔디), <i>Suaeda maritima</i> (해홍나물), <i>Carex scabrifolia</i> (천일사초)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Chungcheongnam Province	Bunjum	Banggal-ri, Wonbuk-myeon, Taean County	25,920	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Taean peninsula</li> <li>- Well developed dune</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (14spp.) : <i>Elymus mollis</i> (갯그렁), <i>Carex kobomugi</i> (통보리사초), <i>Vitex rotundifolia</i> (순비기나무), sweetbrier, <i>Ischaemum antheophoroides</i> (갯쇠보리), <i>Carex pumila</i> (좁보리사초), <i>Calystegia soldanella</i> (갯메꽃), <i>Salsola collina</i> (솔장다리)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Anmyeon 1	Changgi-ri, Anmyeon-eup, Taean County	78,200	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> <li>- Well developed dune</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (14spp.) : <i>Elymus mollis</i> (갯그렁), <i>Carex kobomugi</i> (통보리사초), <i>Carex pumila</i> (좁보리사초), <i>Ischaemum antheophoroides</i> (갯쇠보리), <i>Messerschmidia sibirica</i> (모래지치), <i>Calystegia soldanella</i> (갯메꽃)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
	Anmyeon 2	Jungjang-ri, Anmyeon-eup, Taean County	15,000	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Taean peninsula</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (14spp.) : <i>Elymus mollis</i> (갯그렁), <i>Carex kobomugi</i> (통보리사초), <i>Suaeda maritima</i> (해홍나물), <i>Ixeris repens</i> (갯씀바귀), <i>Carex pumila</i> (좁보리사초), <i>Calystegia soldanella</i> (갯메꽃), <i>Glehnia littoralis</i> (갯방풍), <i>Lathyrus japonica</i> (갯완두)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
	Sapsi Island	Sapsido-ri, Ocheon-myeon, Boryeong City	390	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South island of Taean peninsula</li> <li>- Well developed sand dune</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, abalone, oyster</li> <li>- Plants : laver, seagrass (<i>Z.ca</i>)</li> <li>- Salt marsh plants (28spp.) : <i>Elymus mollis</i> (갯그렁), <i>Calystegia soldanella</i> (갯메꽃), <i>Ixeris repens</i> (갯씀바귀), <i>Carex kobomugi</i> (통보리사초), <i>Carex pumila</i> (좁보리사초), <i>Vitex rotundifolia</i> (순비기나무), <i>Lathyrus japonica</i> (갯완두)</li> </ul> </li> <li>- Fish : anchovy, Spanish mackerel</li> </ul>



				<ul style="list-style-type: none"> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Taean Marine National Park by MOE</li> </ul> </li> </ul>
	Songhak	Songhak-ri, Jugyo- myeon, Boryeong City	608	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Boryeong city</li> <li>- Well developed dune</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (17spp.) <ul style="list-style-type: none"> <li>: <i>Elymus mollis</i> (갯그렁), <i>Vitex rotundifolia</i> (순비기나무), <i>Carex kobomugi</i> (통보리사초), <i>Calystegia soldanella</i> (갯메꽃)</li> </ul> </li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Sohwang	Sohwang-ri, Ungcheon- eup, Boryeong City	17,600	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Boryeong city</li> <li>- Well developed dune</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (23spp.) <ul style="list-style-type: none"> <li>: <i>Elymus mollis</i> (갯그렁), <i>Carex kobomugi</i> (통보리사초), <i>Carex pumila</i> (좁보리사초), <i>Messerschmidia sibirica</i> (모래지치), <i>Ixeris repens</i> (갯씀바귀), <i>Scutellaria strigillosa</i> (참골무꽃), <i>Elymus mollis</i> (갯그렁), <i>Salsola komarovi</i> (수송나물)</li> </ul> </li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Seocheon 1	Jangpo-ri, Biin-myeon, Seocheon County	17,070	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Seocheon county</li> <li>- Dune is excellent (by MOE)</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Plants : spindle tree</li> <li>- Salt marsh plants (27spp.) <ul style="list-style-type: none"> <li>: <i>Elymus mollis</i>(갯그렁), <i>Carex kobomugi</i> (통보리사초), <i>Vitex rotundifolia</i> (순비기나무), <i>Ixeris repens</i> (갯씀바귀), <i>Calystegia soldanella</i> (갯메꽃), <i>Glehnia littoralis</i> (갯방풍), <i>Carex pumila</i> (좁보리사초)</li> </ul> </li> <li>- Insects : ant lion, beetle</li> <li>- Fish : crucian carp, minnow</li> <li>- Amphibia : leopard frog</li> <li>- Reptile : <i>Eremias argus</i> (표범장지뱀)</li> <li>- Birds : Chinese egret, snipe</li> <li>- Mammals : mole, elk</li> <li>- Plants (194spp.), insects (61 spp.), amphibia and reptiles (61 spp.), birds (49 spp.), mammals (12 spp.)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA (7 spp.) <ul style="list-style-type: none"> <li>: Chinese egret</li> </ul> </li> <li>- Endangered species by MOE (4 spp.) <ul style="list-style-type: none"> <li>: Chinese egret, <i>Eremias argus</i> (표범장지뱀)</li> </ul> </li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOMAF covered Seocheon Tidal Flat</li> </ul> </li> </ul>
	Seocheon 2	Namjeon-ri, Maseo- myeon, Seocheon County	76,000	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Seocheon county</li> <li>- Well developed dune</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (17spp.) <ul style="list-style-type: none"> <li>: <i>Phragmites communis</i> (갈대), <i>Carex scabrifolia</i> (천일사초),</li> </ul> </li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li><i>Triglochin maritimum</i> (지채)</li> <li>• Management plan <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOMAF covered Seocheon Tidal Flat</li> </ul> </li> </ul>
	Songnim	Songnim-ri, Janghang-eup, Seocheon County	17,184	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Seocheon county</li> <li>- Well developed dune</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (16spp.)</li> <li>: <i>Elymus mollis</i>(갯그렁), <i>Carex kobomugi</i> (통보리사초), <i>Carex pumila</i> (좁보리사초), <i>Messerschmidia sibirica</i> (모래지치), <i>Ixeris repens</i> (갯씀바귀), <i>Scutellaria strigillosa</i> (참골무꽃), <i>Salsola komarovi</i> (수송나물)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Jeollabuk Province	Okbong	Okbong-ri, Okseo-myeon, Gunsan City	500	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Gunsan city</li> <li>- Well developed dune</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (20spp.)</li> <li>: <i>Suaeda japonica</i> (칠면초), <i>Suaeda asparagoides</i> (나문재), <i>Suaeda maritima</i> (해홍나물), <i>Salicornia herbacea</i> (통통마디), <i>Atriplex gmelini</i> (가는갯능쟁이)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Seonyu Island	Seonyudo-ri, Okdo-myeon, Gunsan City	6,040	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Island in front of Seamangeum</li> <li>- Well developed mud tidal flats in the East</li> <li>- Sandbar and tideland</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Seamangeum Tide Embankment</li> <li>- Industrial complex</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Farmland</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, shortneck clam, <i>Pupa strigosa strigosa</i> (비자고둥)</li> <li>- Plants : laver, reed, seagrass (<i>Z.ja</i>, <i>Z.ma</i>)</li> <li>- Salt marsh plants (28spp.)</li> <li>: <i>Carex kobomugi</i> (통보리사초), <i>Carex pumila</i> (좁보리사초), <i>Glehnia littoralis</i> (갯방풍), <i>Messerschmidia sibirica</i> (모래지치), <i>Ixeris repens</i> (갯씀바귀), <i>Salsola komarovi</i> (수송나물), <i>Elymus mollis</i> (갯그렁), <i>Calystegia soldanella</i> (갯메꽃), <i>Zoysia sinica</i> (갯잔디), <i>Vitex rotundifolia</i> (순비기나무), <i>Suaeda japonica</i> (칠면초), <i>Suaeda maritima</i> (해홍나물), <i>Plantago major for. Yezomaritima</i> (갯질경), <i>Phragmites communis</i> (갈대), <i>Carex scabrifolia</i> (천일사초)</li> <li>- Fish : anchovy, yellow corvina</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Bian Island	Biando-ri, Okdo-myeon, Gunsan City	192	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Southwest island of Gunsan port</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (10spp.)</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>: <i>Calystegia soldanella</i> (갯메꽃), <i>Atriplex gmelini</i> (가는갯능쟁이), <i>Messerschmidia sibirica</i> (모래지치)</li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Woryeon	Woryeon-ri, Okseomyeon, Gunsan City	54,800	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Gunsan city</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (13spp.)</li> <li>: <i>Suaeda japonica</i> (칠면초), <i>Suaeda asparagoides</i> (나문재), <i>Atriplex gmelini</i> (가는갯능쟁이), <i>Phragmites communis</i> (갈대)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Mankeung 3	Okeso-ri, Okseomyeon, Gunsan City	291,010	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Gunsan city</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (13spp.)</li> <li>: <i>Suaeda japonica</i> (칠면초), <i>Aster tripolium</i> (갯개미취), <i>Phragmites communis</i> (갈대), <i>Phacelurus lalifolius</i> (모새달), <i>Salicornia herbacea</i> (통통마디)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Mangyeong 2	Okeso-ri, Okseomyeon, Gunsan City	526,080	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Gunsan city</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (10spp.)</li> <li>: <i>Suaeda japonica</i> (칠면초), <i>Aster tripolium</i> (갯개미취), <i>Phragmites communis</i> (갈대)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Mangyeong 1	Jigyeong-ri, Daeyamyeon, Gunsan City	177,000	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- South part of Gunsan city</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (14spp.)</li> <li>: <i>Suaeda japonica</i> (칠면초), <i>Aster tripolium</i> (갯개미취), <i>Phragmites communis</i> (갈대)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Hakdang	Eunpa-ri, Gwanghwalmyeon, Gimje City	561,822	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- West part of Gimje city</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (14spp.)</li> <li>: <i>Suaeda japonica</i> (칠면초), <i>Aster tripolium</i> (갯개미취), <i>Phragmites communis</i> (갈대), <i>Salicornia herbacea</i> (통통마디), <i>Carex scabrifolia</i> (천일사초)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
Jangdong	Jangdong-ri, Dongjinmyeon,	112,600	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Buan county</li> </ul> </li> <li>• Major species</li> </ul>

		Buan County		<ul style="list-style-type: none"> <li>- Salt marsh plants (15spp.) : <i>Phragmites communis</i> (갈대), <i>Phacelurus lalifolius</i> (모새달), <i>Suaeda japonica</i> (칠면초), <i>Aster tripolium</i> (갯개미취), <i>Atriplex gmelini</i> (가는갯능쟁이)</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Wi Island	Wido-myeon, Buan County	156	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West island of Buan county</li> <li>• Major species</li> <li>- Benthos : <i>Gyroscalea perplexa</i> (실패고둥)</li> <li>- Salt marsh plants (18spp.) : <i>Phragmites communis</i> (갈대), <i>Triglochin maritimum</i> (지채), <i>Zoysia sinica</i> (갯잔디), <i>Atriplex gmelini</i> (가는갯능쟁이), <i>Plantago major for. Yezomaritima</i> (갯질경이), <i>Carex scabrifolia</i> (천일사초)</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Gomso	Julpo-ri, Julpo-myeon, Buan County	14,000,500	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Covered from South of Buan county and North of Gochang county</li> <li>- Well developed mud tidal flats in South</li> <li>• Human activity</li> <li>- Saltpan (Samyang, Gomso)</li> <li>• Pollution sources</li> <li>- Coastal residential area</li> <li>- Farmland</li> <li>• Major species</li> <li>- Benthos (44 spp.) : gastropoda, oyster, ark shell, barnacle</li> <li>- Salt marsh plants (10spp.) : <i>Suaeda japonica</i> (칠면초), <i>Suaeda maritime</i> (해홍나물), <i>Suaeda asparagoides</i> (나문재), <i>Phragmites communis</i> (갈대)</li> <li>- Fish : yellow corvina, croaker</li> <li>- Birds (44 spp.) : common heron, egret, black-tailed gull</li> <li>• Protected or endangered species</li> <li>- Threatened species of the IUCN Red List : eastern black-tailed godwit</li> <li>• Management plan</li> <li>- Wetland Protection Area by MOMAF covered Buan and Julpo bay</li> <li>• Fisheries</li> <li>- Aquaculture : shellfish</li> </ul>
	Pangyo	Pankyo-ri, Sanghamyeon, Gochang County	105,000	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Gochang county</li> <li>• Major species</li> <li>- Salt marsh plants (14spp.) : <i>Lathyrus japonica</i> (갯완두), <i>Carex kobomugi</i> (통보리사초), <i>Messerschmidia sibirica</i> (모래지치), <i>Calystegia soldanella</i> (갯메꽃), <i>Carex pumila</i> (좁보리사초)</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
Jeollanam Province	Seokchang-g	Seokchang-ri, Sonbul-	500	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- North part of Hampyeong bay</li> <li>• Major species</li> <li>- Salt marsh plants (5spp.) : <i>Zoysia sinica</i> (갯잔디), <i>Suaeda japonica</i> (칠면초),</li> </ul>

		myeon, Hampyeong County		<ul style="list-style-type: none"> <li><i>Plantago major for. yezomaritima</i> (갯질경이), <i>Phragmites communis</i> (갈대)</li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Gaip	Hyeonhwa-ri, Hyeongyeon-g-myeon, Muan County	3,600	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Muan county</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (10 spp.) <ul style="list-style-type: none"> <li>: <i>Phragmites communis</i> (갈대), <i>Aster tripolium</i> (갯개미취), <i>Suaeda asparagooides</i> (나문재)</li> </ul> </li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Haeun	Haeun-ri, Hyeongyeon-g-myeon, Muan County	4,640	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Muan county</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (18 spp.) <ul style="list-style-type: none"> <li>: <i>Zoysia sinica</i> (갯잔디), <i>Vitex rotundifolia</i> (순비기나무), <i>Lathyrus japonica</i> (갯완두), <i>Calystegia soldanella</i> (갯메꽃), <i>Carex kobomugi</i> (통보리사초)</li> </ul> </li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Muan	Hyeonhwa-ri, Hyeongyeon-g-myeon, Muan County	15,302	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- North part of Muan county</li> <li>- Well developed mud flat</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shellfish, oyster, sea slug, anemone</li> <li>- Salt marsh plants (21 spp.) <ul style="list-style-type: none"> <li>: reed, <i>Suaeda japonica</i> (칠면초), <i>Suaeda maritime</i> (해홍나물), <i>Artemisia fukudo</i> (큰비쭈), <i>Zoysia sinica</i> (갯잔디), <i>Elymus mollis</i> (갯질경), <i>Salicornia herbacea</i> (통통마디)</li> </ul> </li> <li>- Bird : egret</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- None</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Wetland Protection Area by MOMAF covered Muan tidal flat</li> <li>- Ramsar Wetland</li> </ul> </li> </ul>
	Ui Island	Uido-ri, Docho-myeon, Sinan County	8,000	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Dune is excellent (by MOE)</li> <li>- West island of Jindo county</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Salt marsh plants (24 spp.) <ul style="list-style-type: none"> <li>: <i>Zoysia sinica</i> (갯잔디), <i>Zoysia macrostachya</i> (왕잔디), <i>Ischaemum antheophoroides</i> (갯쇠보리), <i>Carex kobomugi</i> (통보리사초), <i>Vitex rotundifolia</i> (순비기나무), <i>Calystegia soldanella</i> (갯메꽃)</li> </ul> </li> <li>- Insect : ant lion</li> <li>- Amphibia : frog</li> <li>- Reptile : snake</li> <li>- Bird : hawk</li> <li>- Plants (158 spp.), insects (115 spp.), amphibia (3 spp.), reptiles (10 spp.), birds (64 spp.)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>: hawk</li> <li>- Natural monument by CHA</li> <li>: hawk</li> <li>- Endangered species by MOE (7 spp.)</li> <li>: hawk, big snake, turtle</li> <li>• Management plan</li> <li>- None</li> </ul>
	Wau	Wau-ri, Jisan-myeon, Jindo County	381	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West part of Jindo county</li> <li>• Major species</li> <li>- Salt marsh plants (18spp.)</li> <li>: <i>Suaeda maritime</i> (해홍나물), <i>Plantago major for. Yezomaritima</i> (갯질경이), <i>Carex scabrifolia</i> (천일사초), <i>Zoysia sinica</i> (갯잔디), <i>Phacelurus lalifolius</i> (모새달), <i>Tetragonia tetragonoides</i> (변행초)</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Gulpo	Gulpo-ri, Imhoe-myeon, Jindo County	800	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Jindo county</li> <li>• Major species</li> <li>- Salt marsh plants (11spp.)</li> <li>: <i>Suaeda maritime</i> (해홍나물), <i>Zoysia sinica</i> (갯잔디)</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Namdong	Namdong-ri, Imhoe-myeon, Jindo County	600	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- South part of Jindo county</li> <li>• Major species</li> <li>- Salt marsh plants (16spp.)</li> <li>: <i>Carex pumila</i> (좁보리사초), <i>Messerschmidia sibirica</i> (모래지치), <i>Calystegia soldanella</i> (갯메꽃), <i>Zoysia sinica</i> (갯잔디), <i>Vitex rotundifolia</i> (순비기나무), <i>Cnidium japonicum</i> (갯사상자), <i>Tetragonia tetragonoides</i> (변행초)</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plan</li> <li>- None</li> </ul>
	Dapdong	Gwanmaedo-ri, Jodo-myeon, Jindo County	349	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West island of Jindo county</li> <li>• Major species</li> <li>- Salt marsh plants (16spp.)</li> <li>: <i>Vitex rotundifolia</i> (순비기나무), <i>Messerschmidia sibirica</i> (모래지치), <i>Carex kobomugi</i> (통보리사초), <i>Salsola collina</i> (솔장다리), <i>Calystegia soldanella</i> (갯메꽃)</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plans</li> <li>- Dadohae Marine National Park</li> </ul>
	Gwanmae Island	Gwanmaedo-ri, Jodo-myeon, Jindo County	840	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- West island of Jindo county</li> <li>• Major species</li> <li>- Salt marsh plants (16spp.)</li> <li>: <i>Carex kobomugi</i> (통보리사초), <i>Vitex rotundifolia</i> (순비기나무), <i>Carex pumila</i> (좁보리사초), <i>Salsola komarovi</i> (수송나물), <i>Salsola collina</i> (솔장다리), <i>Zoysia macrostachya</i> (왕잔디)</li> <li>• Protected or endangered species</li> <li>- None</li> <li>• Management plans</li> </ul>

				- Dadohae Marine National Park
Jeju Province	-	-	-	None

## I. Intertidal forested wetlands;

includes mangrove swamps, nipah swamps and tidal freshwater swamp forests.

Definition : The Class Forested Wetland is characterized by woody vegetation that is 6 m tall or taller. All water regimes are included except subtidal

Province	Site name	Location	Area (ha)	Characteristics
Seoul, Incheon, Gyeonggi Province	Janghang Forest Wetland	Ilsandong- gu , Deokyang- gu, Goyang City ~ Gimpo City, Gyeonggi Province	74ha	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Well developed mud tidal flats and estuary</li> <li>- Wetland in Han river downstream</li> <li>- Public access limited</li> <li>- Willow Forest</li> </ul> </li> <li>• Human activity               <ul style="list-style-type: none"> <li>- Bridges : 21</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Plants (868spp.), birds (35spp.), fish (97spp.), insects (468spp.), invertebrates (123spp.)</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : white-naped crane, blackfaced spoonbill, hawk</li> <li>- Natural monument by CHA : white-naped crane, Chinese egret, blackfaced spoonbill, Chinese sparrow hawk</li> <li>- Endangered species MOE (26 spp.) : hawk, blackfaced spoonbill</li> <li>- Protected species by MOE : hen harrier, Kentish plover</li> <li>- Specific species by MOE : Chinese sparrow hawk</li> </ul> </li> <li>• Management plans               <ul style="list-style-type: none"> <li>- Wetland Protected Area by MOE covered Janghang Wetland</li> <li>- Military Zone</li> </ul> </li> </ul>
Chungcheong nam Province	-	-	-	-
Jeollabuk Province	-	-	-	-
Jeollanam Province	-	-	-	-
Jeju Province	-	-	-	-



## J. Coastal brackish/saline lagoons;

Brackish to saline lagoons with at least one relatively narrow connection to the sea.

Province	Site name	Location	Area (ha)	Characteristics
Seoul, Incheon, Gyeonggi Province	Shihwa Lake	Daebunam-dong, Ansan City, Gyeonggi Province	5,650	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Shihwa Dinosaur Fossil Region</li> <li>- Developed for supplying agriculture water</li> <li>- West part of Ansan city</li> <li>- Tide Embankment linking to Siheung city to Daebu isl.</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Harbor</li> <li>- Shihwa Tidal Power Plant</li> <li>- Shihwa Tide Embankment</li> <li>- Industrial complex</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Pollution sources               <ul style="list-style-type: none"> <li>- Costal residential area</li> <li>- Industrial wastes</li> <li>- Excrement treatment (1 place)</li> <li>- Sewage treatment plant (1place)</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, Oyster</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed, <i>Artemisia princeps var. orientalis</i> (쭈)</li> <li>- Phytoplanktond (117 spp.), zooplanktons (57 spp.), plants (152 spp.), birds (22 spp.), mammalian (7 spp.), benthos 106 spp.</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : Saunder's gull, Estern imperial eagle</li> <li>- Natural monument by CHA : 9 spp.</li> <li>- Endangered species by MOE : 9spp.</li> </ul> </li> <li>• Management plans               <ul style="list-style-type: none"> <li>- Marine Environmental Research Site by MOMAF</li> <li>- Special Management Area by MOMAF covered Shihwa Lake and Incheon Coastal Area</li> </ul> </li> </ul>
	Hwaong Lake	Mado-myeon, Seosin-myeon, Bibong-myeon, Paltan-myeon, Ujeong-myeon, Jangan-myeon, Hwaseong City, Gyeonggi Province	1,452	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- West part of Hwaseong city</li> <li>- Developed for supplying agriculture water</li> <li>- The volume of water kept in store : 5.4 thousand ton</li> </ul> </li> <li>• Human activities               <ul style="list-style-type: none"> <li>- Hwaong Tide Embankment</li> <li>- Tidal power plant</li> <li>- Industrial complex</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Pollution sources               <ul style="list-style-type: none"> <li>- Costal residential area</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species               <ul style="list-style-type: none"> <li>- Phytoplankton (37 spp.), zooplankton (12 spp.), macro benthos (22 spp.) and bird (16 spp.)</li> </ul> </li> <li>• Protected or endangered species               <ul style="list-style-type: none"> <li>- Protected species by MOE : 1spp.</li> </ul> </li> <li>• Management plans               <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Namyang Lake	Suchon-ri, Jangan-myeon ~ Ihwa-ri, Ujeong-eup, Hwaseong City,	800	<ul style="list-style-type: none"> <li>• Geographical scales and environment               <ul style="list-style-type: none"> <li>- Developed for supplying agriculture water and making farmland</li> <li>- The volume of water kept in store : 38 million ton</li> </ul> </li> </ul>

		Gyeonggi Province		<ul style="list-style-type: none"> <li>• Human activities <ul style="list-style-type: none"> <li>- Namyang Tide Embankment</li> <li>- Reclamation Plain</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Balan stream</li> <li>- Farmland</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Birds : 28 spp.</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Specific species by MOE : 2 spp.</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Fisheries Resources Protection Area by MOMAF</li> </ul> </li> </ul>
Chungcheong nam Province	Asan Lake	Gongse-ri, Inju-myeon, Asan City~Gwongwan-ri, Hyeondeok-myeon, Pyeongtaek City	2,800	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Developed for supplying agriculture water and making farmland</li> <li>- Major drainage basin of Yongin city, Anseong city and Pyeongtaek city</li> <li>- The volume of water kept in store : 123 million ton</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Industrial complex</li> <li>- Danggin and Pyeongtaek Harbor</li> <li>- Asan Tide Embankment</li> <li>- Anseong Plain</li> <li>- Saltpan</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Anseong stream</li> <li>- Coastal residential area</li> <li>- Farmland</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, oyster, shortneck clam</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed</li> <li>- Fish (75 spp.) : mullet, rockfish</li> <li>- Birds (33 spp.) : gull, eastern curlew</li> <li>- Planktons : 64 spp.</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : hawk, swan goose, Saunder's gull, far eastern curlew</li> <li>- Natural monument by CHA : kestrel, whooper swan, white-tailed sea eagle</li> <li>- Endangered species by MOE : hawk, white-tailed sea eagle</li> <li>- Protected species by MOE : eastern curlew, bean goose, whooper swan, goshawk, common buzzard, hen harrier</li> <li>- Specific species by MOE (7 spp.) : kestrel, great spotted woodpecker, great crested grebe</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Fisheries Resources Protection Area by MOMAF</li> </ul> </li> </ul>
	Sapgyo Lake	Sinpyeong-myeon, Dangjin County	2,017	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Developed for supplying agriculture water and making farmland</li> <li>- Major drainage basin of Hongseung county and Yesna county</li> <li>- The volume of water kept in store : 84 million ton</li> <li>- Supply to Industrial and drinking water</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Industrial complex</li> <li>- Danggin and Pyeongtaek Harbor</li> <li>- Sapgyo Tide Embankment</li> <li>- Anseong Plain</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>- Saltpan</li> <li>- Fisheries and tourism</li> <li>• Pollution sources</li> <li>- Sapgyo stream</li> <li>- Coastal residential area</li> <li>- Farmland</li> <li>- Industrial wastes</li> <li>• Major species</li> <li>- Benthos : polychaetes, arthropod, barnacle, oyster, shortneck clam</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed</li> <li>- Fish (75 spp.) : mullet, rockfish</li> <li>- Birds (33 spp.) : gull, eastern curlew</li> <li>- Planktons : 64 spp.</li> <li>• Protected or endangered species</li> <li>- Threatened species of the IUCN Red List : hawk, swan goose, Saunder's gull</li> <li>- Natural monument by CHA : kestrel, whooper swan, white-tailed sea eagle</li> <li>- Endangered species by MOE : hawk, white-tailed sea eagle</li> <li>- Protected species by MOE : eastern curlew, bean goose, whooper swan, goshawk, common buzzard, hen harrier</li> <li>- Specific species by MOE (7 spp.) : kestrel, great spotted woodpecker, great crested grebe</li> <li>• Management plans</li> <li>- Fisheries Resources Protection Area by MOMAF</li> </ul>
Seokmon Lake	Janggohang-ri, Seongmun-myeon ~ Gagok-ri, Songsan-myeon, Dangjin County	855	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Developed for supplying agriculture water and making farmland</li> <li>• Human Activities</li> <li>- Seokmon Tide Embankment</li> <li>- Industrial complex</li> <li>- Reclamation Plain</li> <li>- Fisheries and tourism</li> <li>• Pollution sources</li> <li>- Industrial wastes</li> <li>- Farmland</li> <li>• Major species</li> <li>- Bird : 26 spp.</li> <li>• Protected or endangered species</li> <li>- Protected species by MOE : 5 spp.</li> <li>- Specific species by MOE : 7 spp.</li> <li>• Management plans</li> <li>- None</li> </ul>	
Daeho Lake	Seongmun-myeon~ Daehoji-myeon, Dangjin County	2,150	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Developed for supplying agriculture water and making farmland</li> <li>- North in Tae'an peninsula</li> <li>• Human activities</li> <li>- Daeho Tide Embankment</li> <li>- Fisheries and tourism</li> <li>• Major species</li> <li>- Bird : 36 spp.</li> <li>• Protected or endangered species</li> <li>- Threatened species of the IUCN Red List : swan goose</li> <li>- Endangered species by MOE : 1 spp.</li> <li>- Protected species by MOE : 6 spp.</li> <li>- Specific species by MOE : 1 spp.</li> <li>• Management plans</li> <li>- None</li> </ul>	
Ganwol Lake	Ganwoldo-ri, Buseok-myeon,	2,885	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Development for reclamation</li> </ul>	

	(Seosan A)	Seosan City		<ul style="list-style-type: none"> <li>- Covered from south of Taeon county and North of Hongseong county</li> <li>- North part of Chunsu bay</li> <li>- Visit place for migratory bird</li> <li>- Less than 20m in most area</li> <li>- Well developed mud tidal flats in South</li> <li>• Human activities <ul style="list-style-type: none"> <li>- Tide embankment (Ganwol, Buman)</li> <li>- Tideland</li> <li>- Saltpan</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Coastal residential area</li> <li>- Farmland</li> <li>- Excrement treatment (1 place)</li> <li>- Sewage treatment plant (1place)</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos (134 spp.) : polychaetes, arthropod, barnacle, egg cockle</li> <li>- Plants : <i>Carex kobomugi</i> (통보리사초), reed</li> <li>- Fish (75 spp.) : bass, sea bream, croaker, mulle</li> <li>- Birds (265 spp.) : Eurasian bittern, spoonbill, white stork, hooded crane</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : spoonbill, white stork, hooded crane, falcon</li> <li>- Natural monument by CHA (24 spp.) : white stork, Steller's sea-eagle, falcon, hooded crane, whooper swan, white-tailed sea eagle</li> <li>- Endangered species by MOE : white-tailed sea eagle, Steller's sea-eagle, golden eagle, hawk, white stork, spoonbill</li> <li>- Protected Species by MOE : Eurasian bittern, whooper swan, bean goose goshawk, upland buzzard, common buzzard, hen harrier, Saunders's gull</li> <li>- Specific species by MOE : kestrel, great crested grebe, Japanese reed bunting</li> </ul> </li> <li>• Management plans <ul style="list-style-type: none"> <li>- Fisheries Resources Protection Area by MOMAF covered Chunsu-bay</li> </ul> </li> <li>• Fisheries <ul style="list-style-type: none"> <li>- Aquaculture : laver and oyster</li> </ul> </li> </ul>
	Buman Lake (Seosan B)	Buseok-myeon, Seosan City	1,702	<ul style="list-style-type: none"> <li>• The same Ganwol lake (Seosan A)</li> </ul>
Jeollabuk Province	Geumgana Lake	Gunsan City	3,650	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Development for supplying agriculture and industrial water</li> <li>- Major drainage basin : Gunsan city and Seocheon county</li> <li>- Basin length : 394.79 km</li> <li>- The volume of water kept in store : 360 million ton</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Janghang Industrial Complex</li> <li>- Janghang and Geunsan Harbor</li> <li>- Geum River Estuarine Tide Embankment</li> <li>- Jeonbuk and Hoseo plain</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Boseung and Miho River</li> <li>- Farmland</li> <li>- Excrement treatment (2 place)</li> <li>- Industrial wastes (2 place)</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>• Major species <ul style="list-style-type: none"> <li>- Plants (44spp.), animals (10spp.), amphibia (7spp.), reptiles (5 spp.), birds (35 spp.), fish (54spp.)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Threatened species of the IUCN Red List : hawk, tundra swan, Saunder's gull</li> <li>- Natural monument by CHA : 7 spp.</li> <li>- Endangered species by MOE : 6 spp.</li> <li>- Protected species by MOE : 4 spp.</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Ecosystem Conservation Area by MOE covered Sohwang Dune</li> </ul> </li> </ul>
	Saemangeum Lake	Gunsan City, Gimje City, Buan City	9,670	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Developed for supplying agriculture water, making farmland and international trading port</li> <li>- Well developed mud tidal flats and estuary</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Industrial complex</li> <li>- Saemangeum Tide Embankment</li> <li>- Geunsan Harbor</li> <li>- Alluvial plain</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Mangyeong River</li> <li>- Farmland</li> <li>- Industrial wastes</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, oyster, barnacle</li> <li>- Phytoplankton (195 spp.), macrobenthic fauna (416 taxa), mega benthos (137 spp.)</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Specific species by MOE : 56 spp.</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- None</li> </ul> </li> </ul>
	Yeongsan Lake	Samho-eup, Yeongam County	3,460	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Developed for supplying agriculture water</li> <li>- Yeongsan River Estuarine Tide Embankment linking to Mokpo city to Yeongam county</li> <li>- Well developed mud tidal flats and estuary</li> <li>- The volume of water kept in store : 250 million ton</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Deabul National Industrial Complex</li> <li>- Yeongsan River Estuarine Tide Embankment</li> <li>- Fisheries and tourism</li> </ul> </li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Excrement treatment (2 place)</li> <li>- Industrial wastes (2 place)</li> </ul> </li> <li>• Major species <ul style="list-style-type: none"> <li>- Bird : 36 spp.</li> </ul> </li> <li>• Protected or endangered species <ul style="list-style-type: none"> <li>- Natural monument by CHA : 3 spp.</li> <li>- Protected species by MOE : 4 spp.</li> <li>- Specific species by MOE : 4 spp.</li> </ul> </li> <li>• Management plan <ul style="list-style-type: none"> <li>- Fisheries Resources Protection Area by MOMAF</li> </ul> </li> </ul>
Jeollana Province	Yeongam Lake	Samho-eup, Yeongam county ~Jan-myeon, Sanimyeon, Haenam County	4,286	<ul style="list-style-type: none"> <li>• Geographical scales and environment <ul style="list-style-type: none"> <li>- Developed for supplying agriculture water and making farmland</li> <li>- The volume of water kept in store : 317 million ton</li> <li>- Visit place for migratory birds</li> </ul> </li> <li>• Human activities <ul style="list-style-type: none"> <li>- Harbor</li> <li>- Tideland</li> <li>- Geumho Lake and Yeongam lake</li> </ul> </li> </ul>

				<ul style="list-style-type: none"> <li>- Tide embankment (Geumho and Yeongam )</li> <li>- Industrial complex</li> <li>- Fisheries and tourism</li> <li>• Pollution sources</li> <li>- Farmland</li> <li>- Industrial wastes</li> <li>• Major species</li> <li>- Benthos: polychaetes, arthropod, barnacle, shellfish, oyster</li> <li>- Plants : reed, <i>Suaeda japonica</i> (칠면초)</li> <li>- Bird : 45 spp.</li> <li>• Protected or endangered species</li> <li>- Endangered species by MOE : 1 spp.</li> <li>- Protected species by MOE : 4 spp.</li> <li>- Specific species by MOE : 2 spp.</li> <li>• Management plan</li> <li>- None</li> </ul>
	Geumho Lake	Haenam County	1,600	<ul style="list-style-type: none"> <li>• Geographical scales and environment</li> <li>- Developed for supplying agriculture water and making farmland</li> <li>• Human activities</li> <li>- Harbor</li> <li>- Geumho Lake and Yeongam lake</li> <li>- Tide embankment (Geumho and Yeongam)</li> <li>- Industrial complex</li> <li>- Fisheries and tourism</li> <li>• Pollution sources</li> <li>- Farmland</li> <li>- Industrial wastes</li> <li>• Major species</li> <li>- Benthos: polychaetes, arthropod, barnacle, shellfish, oyster</li> <li>- Plants : reed, <i>Suaeda japonica</i> (칠면초)</li> <li>- Birds : 40 spp.</li> <li>• Protected or endangered species</li> <li>- Endangered species by MOE : 1 spp.</li> <li>- Protected species by MOE : 4 spp.</li> <li>- Specific species by MOE : 2 spp.</li> <li>• Management plan</li> <li>- None</li> </ul>
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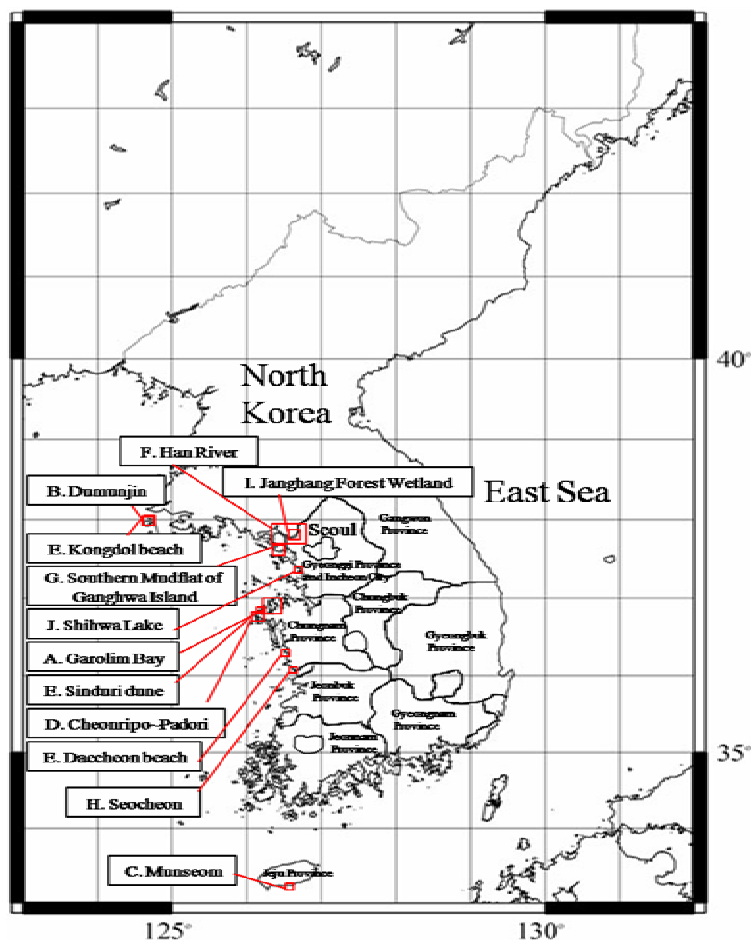
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## 2. Selection of Representative Habitats

Representative habitat (RH) for each habitat type was selected among the regions based on the habitat selection criteria as described on the “Materials and Methods”. Major criteria for selection of the representative habitats are as follows; 1) physical conditions, 2) species diversity, 3) endangered or threatened species, 4) habitat diversity, 5) habitat size, 6) conservation status, 7) degree of pollution, 8) future plans for development, 9) management and conservation plans, 10) economical importance, 11) existing studies.

The numbers of unit habitats for mud tidal flats were the most diverse, and only one habitat of wetland forest and salt lagoon was found, respectively. The selected representative habitats are Han River Estuary for estuarine waters in Incheon City and Gyeonggi Province, Garolim Bay for permanent shallow marine waters in Chungnam Province, southern tidal flat in Ganghwa Island of Incheon City, Dumunjin sea-grass bed in Baekryoung Island of Incheon City, Sinduri sand dune in Chungnam Province, Kongdol pebble shore in Baekryoung Island of Incheon City, Deachon sand beach in Chungnam Province, Han River wetland forest in Gyeonggi Province, Munseom coral reef in Jeju Island of Jeju Province, and artificial Lake Shihwa as salt lagoon in Gyeonggi Province. Details on each representative habitat refer to the following tables.



Locations of 12 representative habitats in the west coast of Korea

## 2-1. Representative habitat of permanent shallow marine waters

Among the shallow marine waters including major bays in the west coast, the Garolim Bay was selected as the representative habitat of the category. The bay is located in Chungnam Province and surrounded by Seosan City and Taean County with 25km long and 2-3km wide in scale. The bay is not the biggest one in the west coast but has the most typical shapes of bay with narrow mouth and wide surface water area inside. Also, the conservation status of natural environment of the bay is very excellent compared to other bays in the west coasts, which have been developed for last decades with dyke construction for agricultural irrigation and reclamation for land use etc. Therefore, most of the bays in the west coasts lost their original shapes and functions except the Garolim bay. In terms of the pollution status, the water quality of the bay is in Class I-II by Korean Seawater Criteria because of no major river inputs and less polluted drainage basins. The habitats types within the bay are also very divers, including salt marshes, intertidal mud flats, and sand dunes etc due to the high tidal amplitude reaching up to 13meters. Therefore, the bay provides diverse habitats for marine and terrestrial species, and also migratory birds to maintain the high species diversity in the bay.

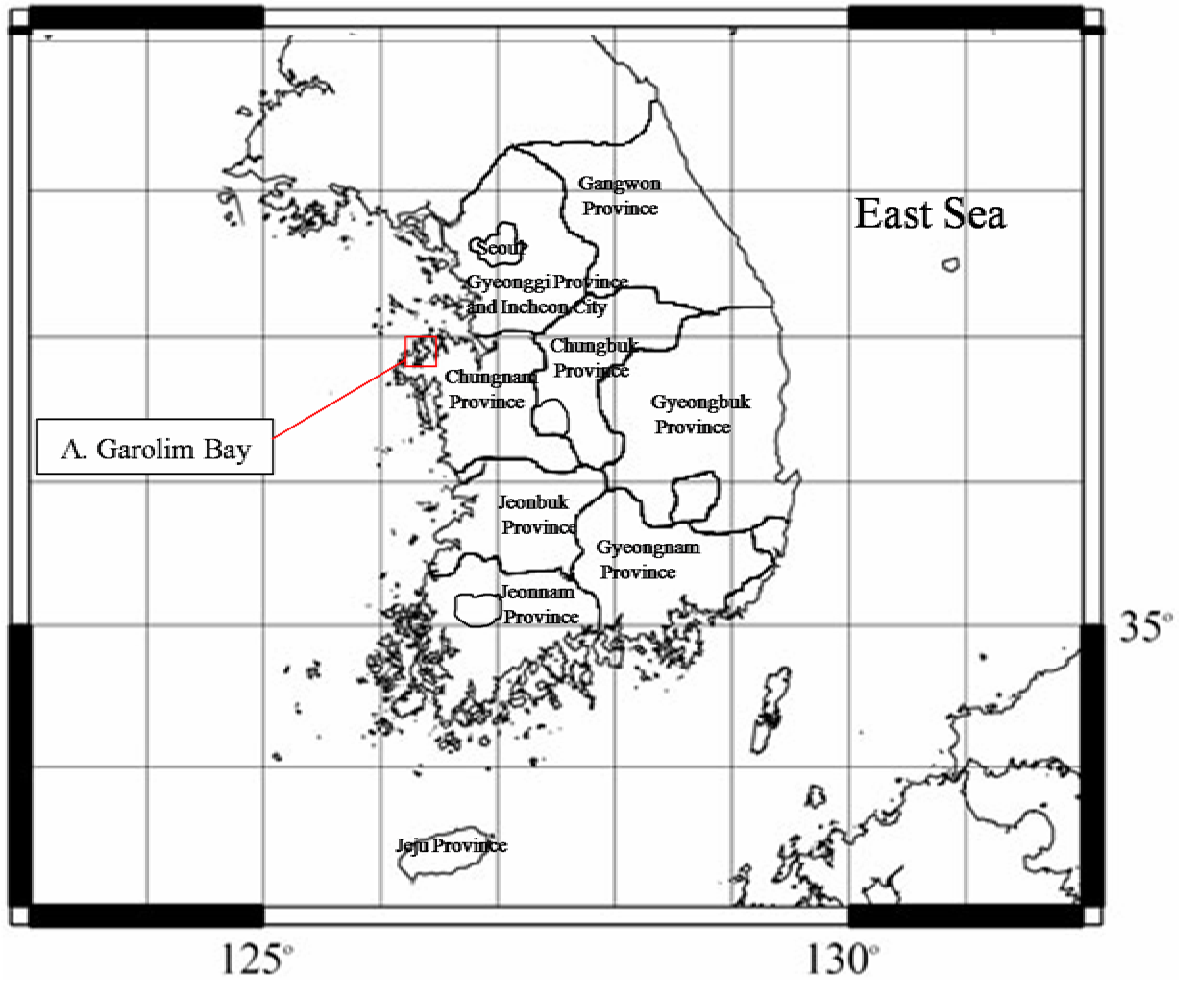
### Habitat Name : Garolim bay (Chungnam Province)

<i>Selection Criteria</i>	<i>Description</i>	<i>Score</i>
Location	<ul style="list-style-type: none"> <li>• Western part of Chungnam Province</li> <li>• Surrounded by Seosan City and Taean County</li> </ul>	-
Ecological functions	<ul style="list-style-type: none"> <li>• Important nursery ground for fish and shellfish</li> <li>• Resting area for migratory birds</li> <li>• Diverse tidal flats and intertidal marshes as shellfish and plant habitat</li> <li>• Stabilized shoreline and bottom</li> <li>• Recreational activities (boating, rowing, some limited swimming, fishing and shoreline walking)</li> <li>• Aesthetic value</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• Mid-size bay in south Korea</li> <li>• Typical shape of bay : narrow entrance and wide water surface inside</li> <li>• Various habitat types               <ul style="list-style-type: none"> <li>- Well developed mud tidal flats : 70% of area to be exposed during low tide</li> </ul> </li> <li>• Length : 25km, Width : 2~3 km</li> <li>• &lt; 6m in depth</li> <li>• Number of islets in the bay : 36</li> <li>• Number of small streams in the bay : 67</li> <li>• Best environmental quality among the bays in the west coasts of Korea</li> <li>• Resting area for migratory and wintering birds</li> <li>• Relatively low amount of terrestrial pollutant loadings due to no big river inputs</li> <li>• Unclosed stream system within the bay</li> </ul>	10
Species diversity	<ul style="list-style-type: none"> <li>• High biodiversity</li> <li>• Species diversity               <ul style="list-style-type: none"> <li>- Phytoplankton (49 spp. ) : diatom, autotrophic dinoflagellates, dictyochophyceae</li> <li>- Protozooplankton (5 spp.) : Heterotrophic dinoflagellate, tintinnid ciliates</li> <li>- Metazooplankton (22 spp.) : nauplius, copepodite</li> <li>- Benthos (134 spp.) : polychaetes, arthropod, barnacle, shortnek clam, oyster, snail</li> <li>- Fish (75 spp.) : flathead mullet, sea bass</li> <li>- Plants (547 spp.): Reed, <i>Suaeda japonica</i> ( 칠면초), Chinese Lawngrass</li> </ul> </li> </ul>	10

	<ul style="list-style-type: none"> <li>- Mammals (11 spp.) : mole, raccoon, elk</li> <li>- Birds (63 spp.) : gull, kestrel, whooper swan, Bewick's swan</li> <li>- Amphibians (8 spp.) : green frog, toad</li> <li>- Reptiles (5 spp.) : <i>Natrix tigrina lateralis</i> (유혈목이), lizard</li> <li>- Insects (137 spp.) : dragonfly, praying mantis, grasshopper, adybird</li> </ul>	
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• Natural monument by the Cultural Heritage Administration (CHA) <ul style="list-style-type: none"> <li>- 28 spp. : hawk, kestrel, whooper swan, Bewick's swan</li> </ul> </li> <li>• Endangered species by Ministry of Environment (MOE) <ul style="list-style-type: none"> <li>- 10 spp. : hawk</li> </ul> </li> <li>• Preserved species by MOE <ul style="list-style-type: none"> <li>- 32 spp. : pied harrier, bean goose, whooper swan, Bewick's swan, goshawk, common buzzard, merlin</li> </ul> </li> <li>• Specific species by MOE <ul style="list-style-type: none"> <li>: kestrel</li> </ul> </li> </ul>	10
Habitat diversity	<ul style="list-style-type: none"> <li>• Dune (Ramsar Classification of Coastal Habitats, : E)</li> <li>• Intertidal mud flat (G)</li> <li>• Intertidal salt marshes (H)</li> </ul>	10
Habitat size	<ul style="list-style-type: none"> <li>• Bay area : 11,200 ha</li> <li>• Tidal flat in the bay : 81.9 Km<sup>2</sup></li> </ul>	9
Conservation status of nature	<ul style="list-style-type: none"> <li>• Well preserved natural environment without large scale reclamation</li> <li>• Agricultural land use and none of industrial complex nearby</li> <li>• None of commercial harbor inside</li> <li>• Shellfish culture</li> </ul>	9
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• Excellent water and sediment quality due to the low pollutant loadings</li> <li>• Seawater quality criteria : Class II</li> <li>• Pollution Sources <ul style="list-style-type: none"> <li>- Costal residential area</li> <li>- Aquaculture</li> <li>- Livestock sewages</li> <li>- Agricultural wastes</li> <li>- Excrement treatment plants (3 place)</li> <li>- Sewage treatment plants (1place)</li> </ul> </li> </ul>	7
Future plans for development	<ul style="list-style-type: none"> <li>• Increase of farmland, saltpan, aquaculture in the marginal area of the bay</li> <li>• Candidate site for tidal power plant</li> <li>• Local candidate site for harbor and industrial complex (2015) by Seosan City</li> <li>• Planned for bridge construction in the entrance of the bay (2016) by MLTM (Ministry)</li> </ul>	7
Management and conservation plans	<ul style="list-style-type: none"> <li>• Wildlife sanctuary by MOE : 12</li> <li>• Taean Marine National Park by MOE</li> </ul>	8
Economical importance	<ul style="list-style-type: none"> <li>• Saltpan : 90.88 ha</li> <li>• Aquaculture : 1,439 ha (laver, shrimp, shellfish, oyster, fish and abalone)</li> <li>• Fishing boat : 3,714</li> <li>• Tourism and fisheries</li> </ul>	10
Existing studies	<ul style="list-style-type: none"> <li>• Management plan in coastal area of Garolim-bay by MOMAF</li> <li>• National Marine Environmental Quality Monitoring Program by MOMAF : 3 sites</li> </ul>	8
Total Score		98



Garolim bay (Chungnam Province)





## 2-2. Representative habitat of marine subtidal aquatic beds

Dumunjin is located in the northwestern part of Baekryoung island located in the 222km away from Incheon City and in the extreme north of Korea. The island has the well-preserved natural environment with the rocky and sand shores in the coast. Marine environmental conditions of the island are different from those of the west coast of Korea which has the high turbidity, high degree of pollution and human activity such as reclamation and embankment etc. and are good for seagrass habitat with low turbidity and wave actions. There are three natural monuments in the island such as natural airfield, pebble beach, and peridotite embedded basalt, and also the island is a candidate site of UNESCO World Natural Heritage and Marine Peace Park of Korea.

The major reason for the selection of the place as representative habitat of subtidal aquatic bed is that the site includes endemic and rare species of seagrass including *Zostera caespitosa* and *Zostera marina*. *Zostera caespitosa* is distributed only in Korea and Japan and the red list species of Japan.

### Habitat Name : Dumunjin (Baekryoung Island in Incheon City)

Selection Criteria	Description	Score
Location	<ul style="list-style-type: none"> <li>• North island in South Korea</li> <li>• 8th biggest island in Korea</li> <li>• 222 km west from Incheon city</li> <li>• Port in the west part of island</li> </ul>	-
Ecological functions	<ul style="list-style-type: none"> <li>• Well developed seagrass bed to provided a habitat for important primary producer</li> <li>• Provide hard bottom substrate and organic detritus</li> <li>• Provide habitat for suspension feeder</li> <li>• Important nursery ground for fish and shellfish</li> <li>• Buffering capacity for sediment /shoreline stabilization</li> <li>• Prevention of wave disturbance</li> <li>• Improve filtering ability of water column</li> <li>• Benthos and periphyton habitat</li> <li>• Improve biodiversity and bio-abundance</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• &lt; 1m in depth, muddy sand</li> <li>• Average tidal amplitude : 3 m</li> <li>• Shoreline length: 57km</li> <li>• Well developed sea cliff</li> <li>• Important seabird habitat</li> <li>• Excellent environmental quality</li> <li>• Beautiful natural view</li> <li>• Only habitat for spotted seal (Korean natural monument)</li> <li>• Dumunjin is a natural monument and also includes many natural monument nearby</li> <li>• Well preserved natural environment (military zone and DMZ border area)</li> <li>• World natural air field nearby (Sagot beach)</li> <li>• Two <i>Zosteraceae</i> species grow together in Dumunjin</li> </ul>	10
Species diversity	<ul style="list-style-type: none"> <li>• Species diversity               <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, sea cucumber, abalone, <i>Siphonaria rucuana</i> (꼬마고랑따개비), <i>Mitrella bicincta</i> (보리무럭)</li> <li>- Plants : seagrass (<i>Zostera caespitosa</i> (<i>Z.ca</i>), <i>Zostera marina</i> (<i>Z.ma</i>))</li> <li>- Fish : sea bass, sting fish, Spotty belly greenling, Japanese anchovy</li> <li>- Birds : gull</li> </ul> </li> </ul>	4
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• Natural monument by CHA               <ul style="list-style-type: none"> <li>- spotted seal</li> </ul> </li> <li>• Endangered species by Ministry of Environment (MOE)               <ul style="list-style-type: none"> <li>- spotted seal</li> </ul> </li> <li>• <i>Zostera caespitosa</i> <ul style="list-style-type: none"> <li>- Only species distributed in Korea and Japan throughout the world.</li> <li>- Japanese red list species</li> </ul> </li> </ul>	5

	- Limited natural fecundation	
Habitat diversity	<ul style="list-style-type: none"> <li>• Permanent shallow marine water (A)</li> <li>• Rocky marine shore (D)</li> </ul>	7
Habitat size	<ul style="list-style-type: none"> <li>• Seagrass bed area</li> <li>- 30m×40m (<i>Zostera caespitosa</i>), 60m ×70m (<i>Zostera marina</i>)</li> </ul>	3
Conservation status of nature	<ul style="list-style-type: none"> <li>• Well preserved natural environment due to the isolation and designated military zone</li> <li>• None of industrial complex nearby</li> </ul>	10
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• Best water quality and nature</li> <li>• Seawater quality criteria :Class I</li> <li>• Very limited pollution sources (costal residential area)10</li> </ul>	10
Future plans for development	<ul style="list-style-type: none"> <li>• None</li> </ul>	10
Management and conservation plans	<ul style="list-style-type: none"> <li>• Natural monument by CHA</li> <li>: Baekryoung Island, Kongdol (pebble) beach, peridotite and basalt, Sagot (sand) beach</li> <li>• Candidate site of UNESCO World Natural Heritage</li> <li>• Candidate area Marine Peace Park of Korea by KMI</li> <li>• Place of scenic beauty by CHA</li> <li>• Military zone</li> </ul>	10
Economical importance	<ul style="list-style-type: none"> <li>• Fisheries and tourism</li> </ul>	6
Existing studies	<ul style="list-style-type: none"> <li>• Sites for “The General Investigation of Marine Ecosystem” by MOMAF in 2007</li> </ul>	5
Total Score		80

### Dumunjin (Baekryoung Island in Incheon City)









### 2-3. Representative habitat of coral reefs

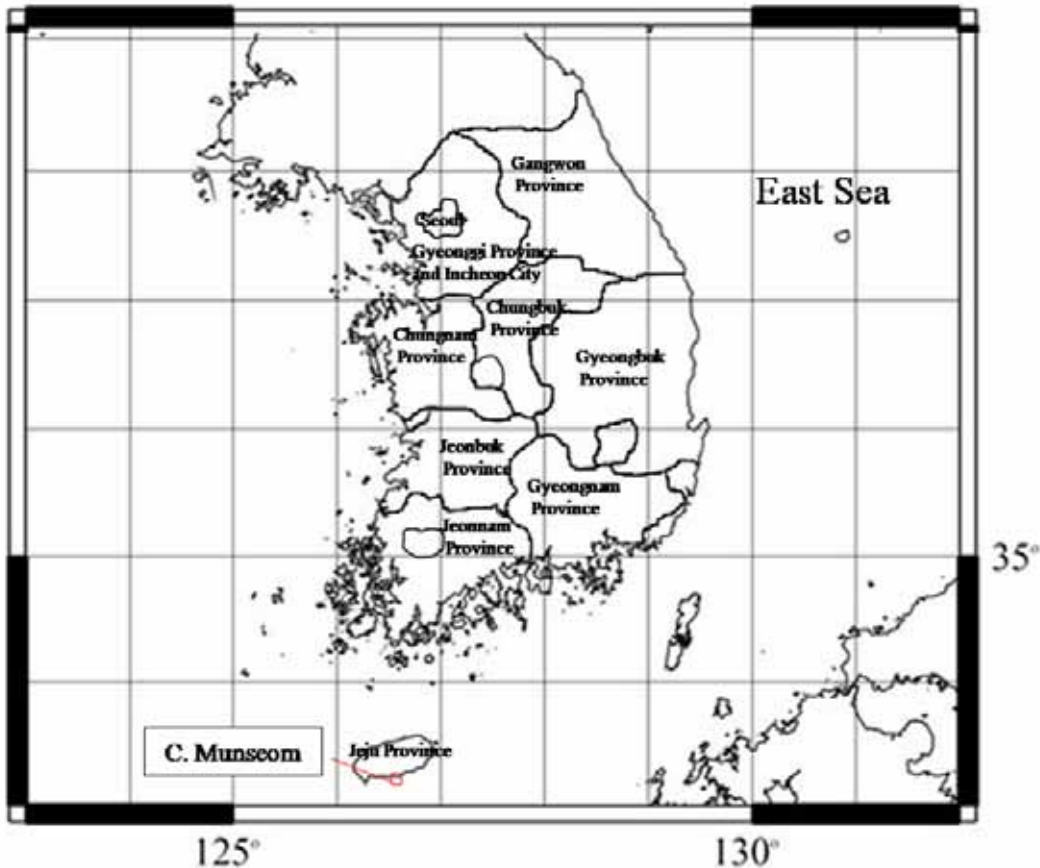
Munseom is a small island located in the south of Jeju island and designated as natural monument with Beomseom island nearby. The island is at the subtropical area and directly influenced by the warm current from the Kuroshio. Coral habitats in Korea are not common and can be found only southern part of the Hong Island located in Jeonnam province and mainly distributed in Jeju Island. Among those habitats in Jeju, Munseom island is designated as representative habitats for coral reefs in Korea because of the high biodiversity of corals including 63 coral species. In addition to the coral species many subtropical fishes such as red seabreams, parrotfish, and damselfish etc are found at the island with a couple of local natural monuments such as evergreen trees. Because of these exotic habitats, the island is designated as natural monument by CHA, Ecological Conservation Area by MOMAF, MAB Biosphere Reserve by UNESCO and candidate site of World Geopark (by 2010), and considered as a treasures of Korean marine ecosystem.

#### Habitat Name : Munseom (Jeju Province)

Selection Criteria	Description	Score
Location	<ul style="list-style-type: none"> <li>• Islet located in the south of Jeju Province</li> <li>• 1.3 km from Seogwipo City</li> <li>• One of the islet in Seogwipo City</li> </ul>	-
Ecological functions	<ul style="list-style-type: none"> <li>• Important nursery ground for fish and shellfish</li> <li>• Buffering capacity for sediment /shoreline stabilization</li> <li>• Prevention of wave disturbance</li> <li>• Benthos and periphyton habitat</li> <li>• High biodiversity and bio-abundance</li> <li>• Extracte a new substance from coral</li> <li>• Recreational place ( SCUBA diving, boat fishing, sightseeing)</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• Unhabited island with an area of 96.833m<sup>2</sup></li> <li>• 73m above the sea level and less than 40m in depth</li> <li>• Well developed pillar-shaped joint and marine plateau</li> <li>• Consist of quartz trachyte</li> <li>• Excellent environmental quality among coral habitats in the west coast</li> <li>• Important place for geological study</li> <li>• Sea bird breeding place</li> <li>• Beautiful natural view</li> <li>• Famous tour place</li> <li>• SCUBA diving point</li> <li>• Many subtropical fishes and commercial fishes</li> <li>• Well preserved natural environment</li> </ul>	8
Species diversity	<ul style="list-style-type: none"> <li>• The most diverse coral species in Korea</li> <li>• High marine biodiversity and indigenous species like Galapagos Island</li> <li>• Species diversity               <ul style="list-style-type: none"> <li>- Benthos : snail species, barnacle, sea mussel</li> <li>- Plants (118 spp.): gulfweed, laver</li> <li>- Algae (111 spp.) : green algae, brown algae</li> <li>- Coral (63 spp.) : staghorn coral</li> </ul> </li> </ul>	6
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• Habitat for the exotic tree species in the world (<i>Machilus thunbergii</i> (후박나무))</li> </ul>	3
Habitat diversity	<ul style="list-style-type: none"> <li>• Permanent shallow marine water (A)</li> <li>• Rocky marine shore (D)</li> </ul>	7
Habitat size	<ul style="list-style-type: none"> <li>• Islet area : 9.68 × 10<sup>-3</sup> ha</li> </ul>	4
Conservation status of nature	<ul style="list-style-type: none"> <li>• Well preserved natural environment (nonresident island and Ecological Conservation Area)</li> <li>• None of industrial complex nearby</li> </ul>	9

	<ul style="list-style-type: none"> <li>• Sharp changes in biodiversity due to the increase of sea water temperature</li> <li>• Increased vulnerability due to the SCUBA diving and submarine toures</li> </ul>	
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• No pollution sources ( nonresident island)</li> <li>• Seawater quality criteria : Class I</li> </ul>	10
Future plans for development	<ul style="list-style-type: none"> <li>• Candidate site of Korean naval base (by 2014)</li> </ul>	8
Management and conservation plans	<ul style="list-style-type: none"> <li>• Diverse management plannings for protection</li> <li>• Natural monument by CHA</li> <li>• Ecological Conservation Area by MOMAF</li> <li>• MAB Biosphere Reserve by UNESCO</li> <li>• Candidate site of World Geopark (by 2010)</li> </ul>	10
Economical importance	<ul style="list-style-type: none"> <li>• Boat fishing, tourism and SCUBA diving</li> </ul>	6
Existing studies	<ul style="list-style-type: none"> <li>• Studies of Natural Environment in Munseom by KORDI in 2001</li> <li>• Management Plan of Ecological Conservation Area in Munseom and around Water (by MOMAF, until 2013)</li> <li>• National Marine Environmental Quality Monitoring Program by MOMAF</li> </ul>	10
Total Score		81

**Munseom (Jeju Province)**









## 2-4. Representative habitat of rocky marine shores

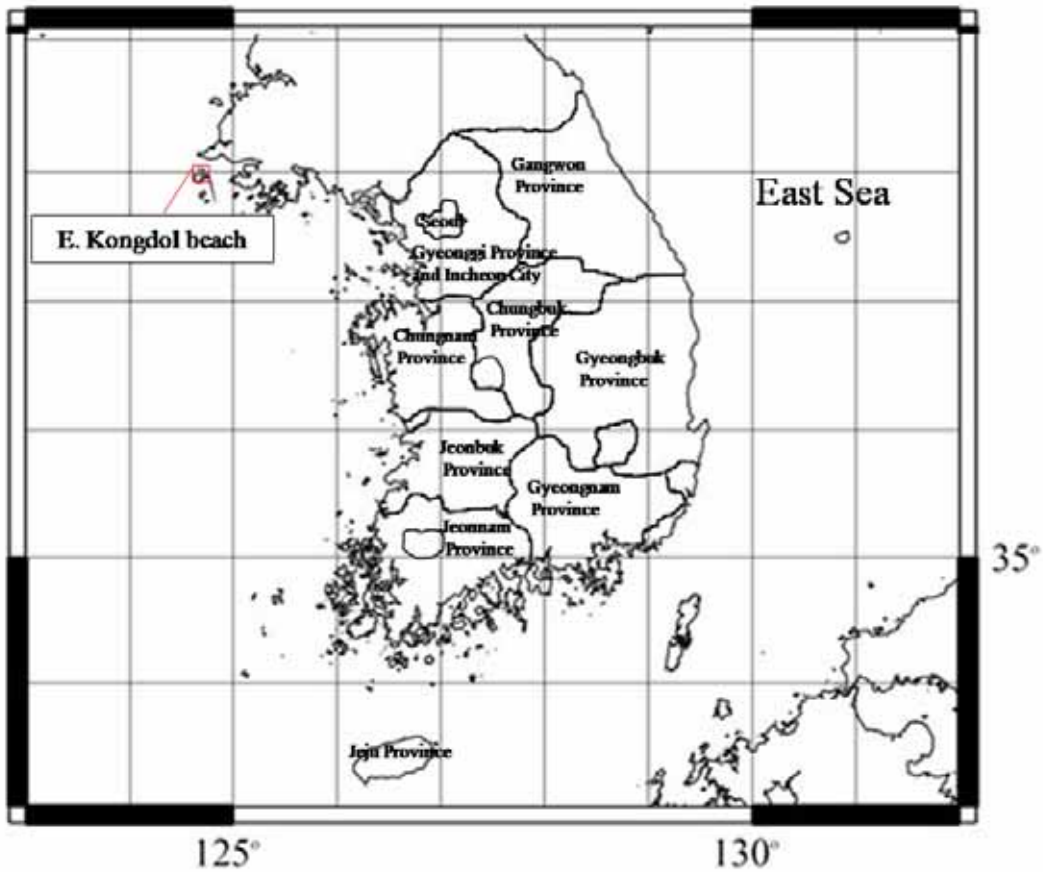
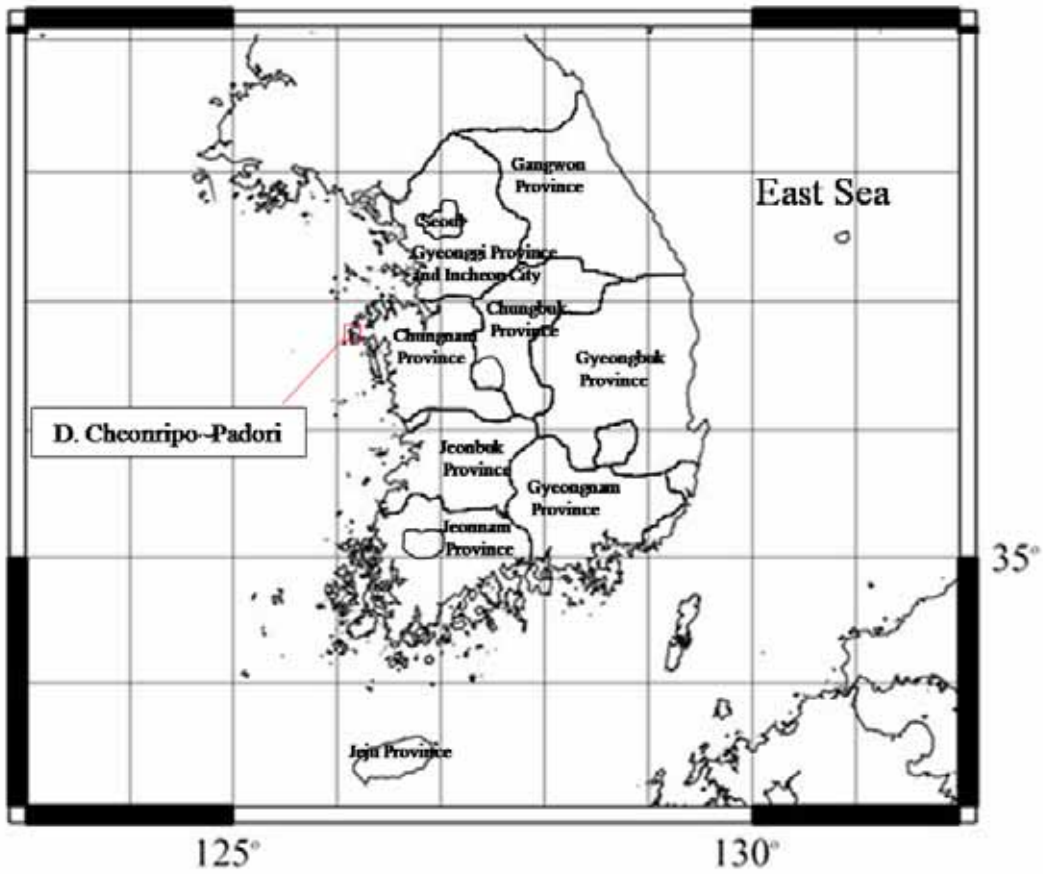
Rocky marine shores are not a common habitat in the west coast and can be found only at a small portion of the coastal area. Most coastal area is covered by intertidal mud flats in the west coast. The largest rocky shores are located between Cheonripo and Padori of Taean County in Chungnam Province. The area has the well-developed and continuous sea cliffs, and wave-cut terrace well along the coastal line. Also, the area includes famous sand beaches such as Cheoripo and Manripo Beach and is within the Taean Marine National Park by MOE.

### Habitat Name : Cheonripo-Padori (Chungnam Province)

Selection Criteria	Description	Score
Location	<ul style="list-style-type: none"> <li>• Mid-west part of the Korean Peninsula</li> <li>• North part of Taean peninsula</li> </ul>	-
Ecological functions	<ul style="list-style-type: none"> <li>• Important nursery ground for fish, crustacean species and shellfish</li> <li>• Provide habitat for marine organism</li> <li>• Provide many food for fish</li> <li>• Many important commercial fishes</li> <li>• Feeding grounds for birds</li> <li>• Buffering capacity for sediment /shoreline stabilization</li> <li>• High biodiversity and abundance</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• &lt; 5m in depth</li> <li>• Well developed sea cliff</li> <li>• Rais coast</li> <li>• Habitat for seabird</li> <li>• Famous tour place (beautiful beaches)</li> <li>• The longest rocky shore in the west part of South Korea</li> <li>• Beautiful and long beach nearby (Cheonripo and Manripo beach)</li> <li>• Oil spill in December 2007</li> </ul>	5
Species diversity	<ul style="list-style-type: none"> <li>• High biodiversity in rocky marine shore</li> <li>• Number of birds in Cheonripo : 1,041</li> <li>• Species diversity               <ul style="list-style-type: none"> <li>- Benthos : arthropod, snail, shortnek clam</li> <li>- Plant (250 spp.): moss algae, green hair algae, horneri, diraricatum, sea mustard, seagrass (<i>Phyllospadix iwatensis</i>, <i>Zostera marina</i>)</li> <li>- Birds : <i>Parus majo</i> (박새), <i>Hypsipetes amaurotis</i> (직박구리), <i>Paradoxornis webbiana</i> (붉은머리오목눈이), <i>Streptopelis orientalis</i> (멧비둘기)</li> </ul> </li> </ul>	5
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• None</li> </ul>	2
Habitat diversity	<ul style="list-style-type: none"> <li>• Sand shore (D)</li> </ul>	4
Habitat size	<ul style="list-style-type: none"> <li>• Rocky marine shores length : 12 km</li> </ul>	4
Conservation status of nature	<ul style="list-style-type: none"> <li>• Preserved area (Taean Marine National Park)</li> <li>• Changes in biodiversity due to 2007 oil spill</li> </ul>	5
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• Oil spill in December 2007               <ul style="list-style-type: none"> <li>- Decreasing of biodiversity and bio-abundance</li> <li>- Polluted sediment and rocky shore</li> </ul> </li> <li>• Seawater quality criteria :Class I</li> <li>• None of industrial complex nearby</li> <li>• Pollution Source               <ul style="list-style-type: none"> <li>- Costal residential area</li> </ul> </li> </ul>	7
Future plans for development	<ul style="list-style-type: none"> <li>• None</li> </ul>	10
Management and conservation plans	<ul style="list-style-type: none"> <li>• Taean Marine National Park by MOE</li> </ul>	6

Economical importance	• Fisheries and tourism	6
Existing studies	<ul style="list-style-type: none"> <li>• Sites for “The General Investigation of Marine Ecosystem” by MOMAF in 2008</li> <li>• National Marine Environmental Quality Monitoring Program by MOMAF</li> <li>• Monitoring Program of Natural Resources in Taean Marine National Park by MOE</li> </ul>	10
Total Score		64

**Cheonripo-Padori (Chungnam Province)**









## 2-5. Representative habitat of sand, shingle or pebble shores

### 2-5-1. Shingle or pebble shores

The most common habitat type in this category is sand beaches, and shingle or pebble beaches and dune system are not common in the west coast. For the shingle or pebble beaches we selected Kongdol (means shingle in Korean) Beach located in the Baekryoung island as a representative habitat. The substratum of the beach is mainly composed of shingles and extend about 1km long along with the well-developed pine tree forest and rocky shores. Natural environment of the beach is well preserved and designated as national monument by CHA. Also, habitat for spotted seal and Sagot natural airfield (both are natural monument) are located near the beach.

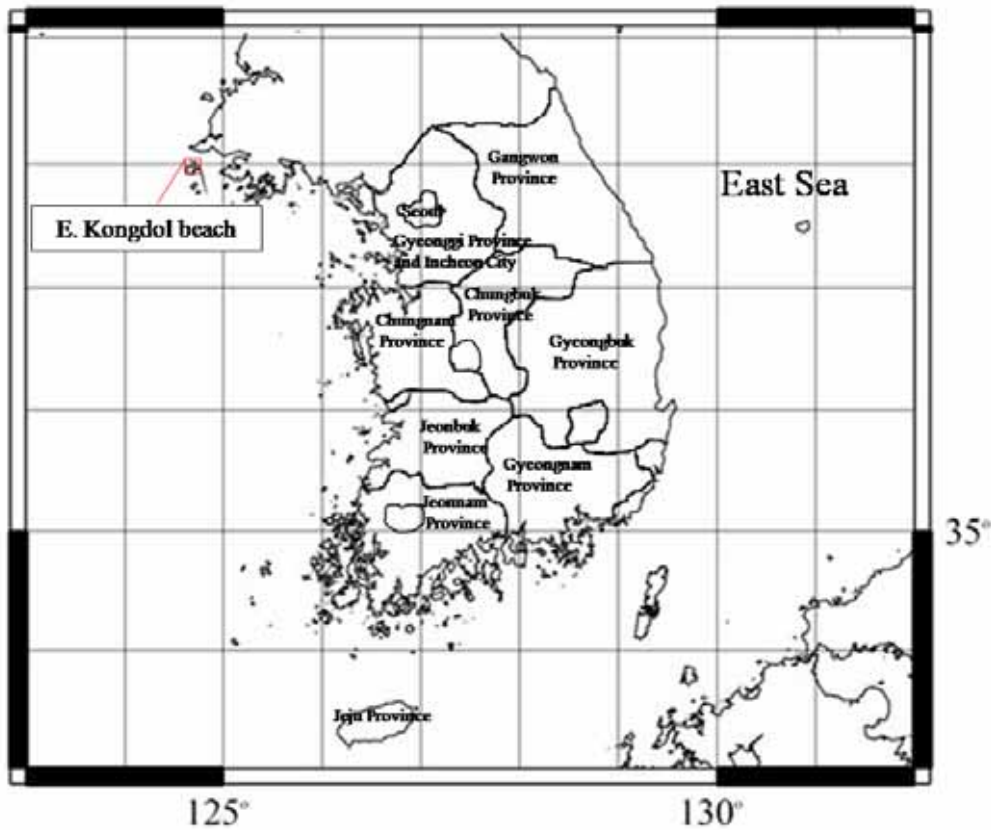
#### Habitat Name : Pebble shores : Kongdol beach (Baekryoung Island in Incheon city)

Selection Criteria	Description	Score
Location	<ul style="list-style-type: none"> <li>• North island in South Korea</li> <li>• 8th biggest island in Korea</li> <li>• 222 km from Incheon city</li> <li>• Beach located in the south of Baekryeong Island</li> </ul>	-
Ecological functions	<ul style="list-style-type: none"> <li>• Provide hard bottom substrate and habitat</li> <li>• Important hiding place for marine organism</li> <li>• Important nursery ground for fish and shellfish</li> <li>• Buffering capacity for sediment /shoreline stabilization</li> <li>• Prevention of wave disturbance</li> <li>• Benthos and periphyton habitat</li> <li>• Improve biodiversity and bio-abundance</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• &lt; 1m in depth</li> <li>• Average tidal amplitude : 3 m</li> <li>• Well developed sea cliff in beach side</li> <li>• Consist of round pebble</li> <li>• Specific characters of topography and geological features</li> <li>• Important place for geological study</li> <li>• Excellent environmental quality</li> <li>• Beautiful natural view</li> <li>• Only habitat for spotted seal (Korean natural monument)</li> <li>• Kongdol beach is a natural monument and also include many natural monument nearby</li> <li>• Well preserved natural environment (military zone and DMZ border area)</li> <li>• World natural air field nearby (Sagot beach)</li> </ul>	10
Species diversity	<ul style="list-style-type: none"> <li>• Species diversity               <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, sea cucumber, abalone, <i>Siphonaria rucuana</i> (꼬마고랑따개비), <i>Mitrella bicincta</i> (보리무럭)</li> <li>- Plants : seagrass (<i>Zostera caespitosa</i> (Z.ca), <i>Zostera marina</i> (Z.ma))</li> <li>- Fish : sea bass, sting fish, spotty belly greenling, Japanese anchovy</li> <li>- Birds : gull</li> </ul> </li> </ul>	4
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• Natural monument by CHA               <ul style="list-style-type: none"> <li>- spotted seal</li> </ul> </li> <li>• Endangered species by Ministry of Environment (MOE)               <ul style="list-style-type: none"> <li>- spotted seal</li> </ul> </li> <li>• <i>Zostera caespitosa</i> <ul style="list-style-type: none"> <li>- Only species distributed in Korea and Japan throughout the world.</li> <li>- Japanese red list species</li> <li>- Limited natural fecundation</li> </ul> </li> </ul>	5
Habitat diversity	• Rocky marine shore (D) in side of pebble beach	4
Habitat size	• Pebble shore area : 2.4 ha	4
Conservation status	• Well preserved natural environment due to the isolation and designated	10



of nature	military zone • None of industrial complex nearby	
Degree of pollution and Pollution Sources	• Best water quality and nature • Seawater quality criteria :Class I • Very limited pollution sources (costal residential area)	10
Future plans for development	• None	10
Management and conservation plans	• Natural monument by CHA :Baekryoung Island, Kongdol (pebble) beach, peridotite and basalt distribution place, Sagot (sand) beach • Candidate site of UNESCO World Natural Heritage • Candidate area Marine Peace Park of Korea by KMI • Place of scenic beauty by CHA • Military zone and DMZ border area	10
Economical importance	• Fisheries and tourism	6
Existing studies	• Sites for “The General Investigation of Marine Ecosystem” by MOMAF in 2007	5
Total Score		78

**Kongdol beach (Baekryoung Island in Incheon city)**







### 2-5-2. Sand beaches

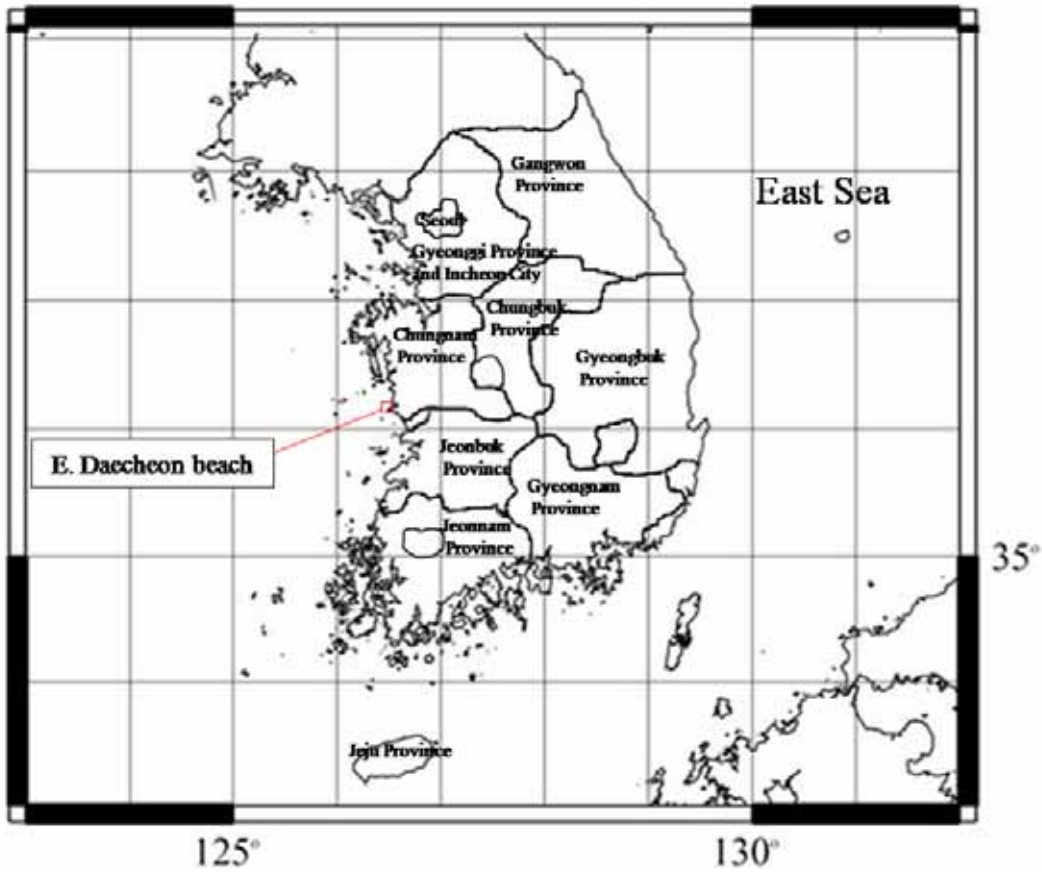
There are many sand beaches in the west coast and most of them are distributed in the Taean peninsula in Chungnam Province and Byeonsan peninsula in Jeonbuk Province. Among those, Daecheon beach in Chungnam Province is the largest one in the west coast with the total length of 3.4km. However, the natural environment of the beach is not well preserved. Many condos, hotels, and restaurants are built along the coastal lines and annual number of visitors reaches 16 million people.

#### Habitat Name : Sand shore : Daecheon beach (Chungnam Province)

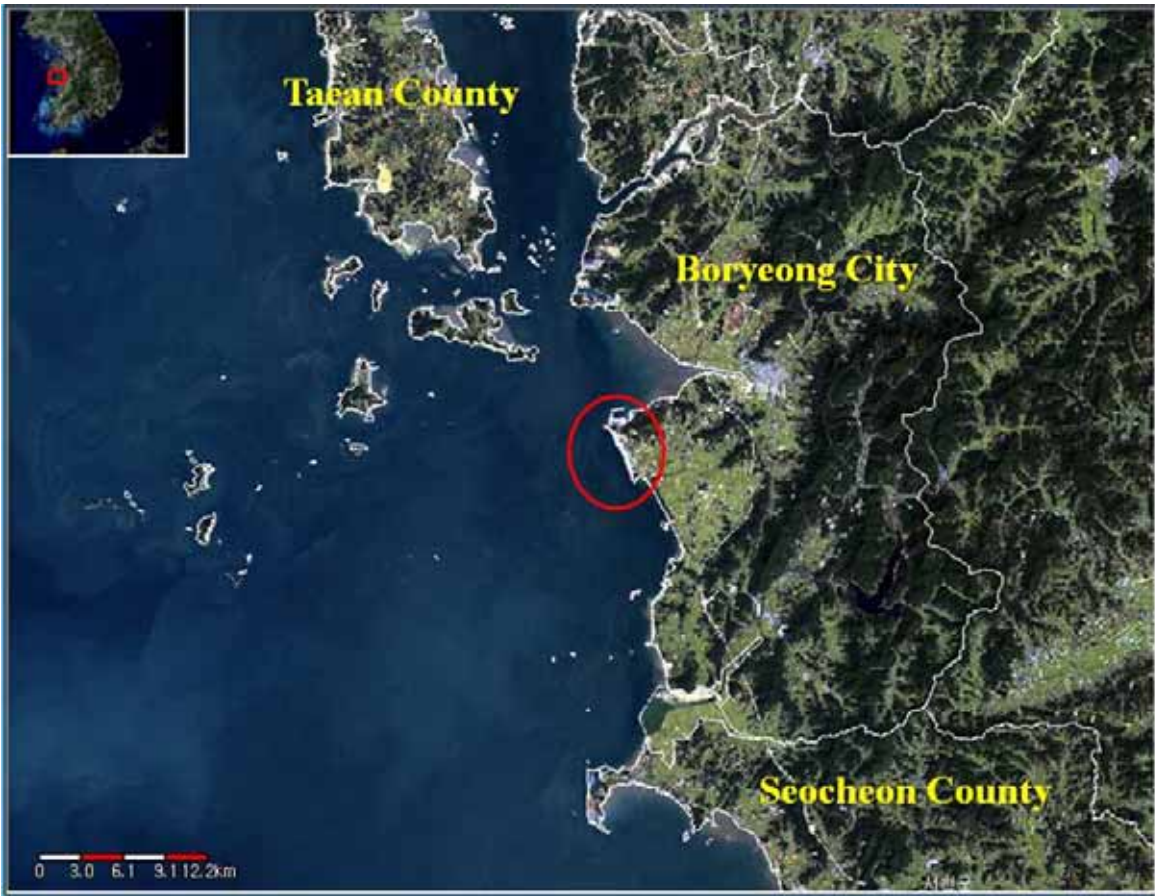
Selection Criteria	Description	Score
Location	<ul style="list-style-type: none"> <li>• Middle part of Chungnam Province</li> <li>• Western part of Boryeong city</li> </ul>	-
Ecological functions	<ul style="list-style-type: none"> <li>• Important nursery ground for fish, crustacean species and shellfish</li> <li>• Provide habitat for marine organism</li> <li>• Buffering capacity for sediment /shoreline stabilization</li> <li>• Improve filtering ability of water column</li> <li>• Recreational activities ( boating, rowing, some limited swimming, fishing and shoreline walking)</li> <li>• Aesthetic value</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• Well developed sand beach</li> <li>• Some hard bottoms like rocks and stones in the south of Daecheon beach</li> <li>• Pine tree forest in the backside of beach</li> <li>• Good environmental conditions (shell beach)</li> <li>• Length : 3.5 km, width : 100 m</li> <li>• The most famous sand beach in the west coast</li> <li>• The first swimming beach in Korea</li> <li>• Well developed tourism industry</li> <li>• Various marine sports in summer</li> </ul>	5
Species diversity	<ul style="list-style-type: none"> <li>• Species diversity</li> <li>- Benthos : polychaetes, arthropod, barnacle, shortnek clam, oyster</li> <li>- Plant : algae</li> <li>- Fish : sea bream, sea bass, sting fish, spotty belly greenling</li> </ul>	2
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• None</li> </ul>	2
Habitat diversity	<ul style="list-style-type: none"> <li>• Rocky marine shore (D) in side of sand beach</li> </ul>	4
Habitat size	<ul style="list-style-type: none"> <li>• Beach area : 35 ha</li> </ul>	5
Conservation status of nature	<ul style="list-style-type: none"> <li>• Not well preserved ( increased human activities, ocean development) especially in the marginal area of the beach</li> <li>• Many geological change due to construction</li> </ul>	5
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• Increased pollution due to the human activity</li> <li>• Construction of tourist area</li> <li>• Port and aquaculture nearby</li> <li>• Seawater quality criteria :Class II</li> <li>• Pollution Sources</li> <li>- Costal residential area</li> <li>- Aquaculture</li> </ul>	7
Future plans for development	<ul style="list-style-type: none"> <li>• Constructing bridge for connecting Anmeon, Taean county to Boryeong city (by 2016)</li> <li>• Residential land development</li> </ul>	10
Management and conservation plans	<ul style="list-style-type: none"> <li>• None</li> </ul>	2
Economical	<ul style="list-style-type: none"> <li>• Fishing and tourism ( marine sports and sightseeing)</li> </ul>	7

importance	<ul style="list-style-type: none"> <li>• Daecheon port</li> <li>• Aquaculture</li> </ul>	
Existing studies	<ul style="list-style-type: none"> <li>• Sites for “The General Investigation of Marine Ecosystem” by MOMAF in 2008</li> <li>• National Marine Environmental Quality Monitoring Program by MOMAF</li> <li>• Beach water quality monitoring by local government during summer season</li> </ul>	10
Total Score		59

**Daecheon beach (Chungnam Province)**









### 2-5-3. Sand dunes

Sand dune is a hill of sand near the sea or in a sand desert, and is formed by the prevailing winds which move the sand from the shores carried by ocean current. Sinduri sand dune is the largest one in Korea and its original shape has been well preserved. The physical features are 3.4 km long and 0.5-1.3km wide and it functions as buffering area between terrestrial land area and seashores. On the Sinduri dune wind mark on the surface of sand can be found which is usually observed on the surface area of sand desert. Physical diversities in Sinduri sand dune also are very diverse including pre-sand dune, wetland, and barchans (crescent-shape dune) etc. Additionally, the sand dune is connected with freshwater Duung Wetland (Ramsar Wetland Site). Korean Cultural Heritage Administration (CHA) designated the sites as natural monument which is also habitat for endangered species such as Korean golden frog, narrow-mouth frog, and Korean tiger lizard.

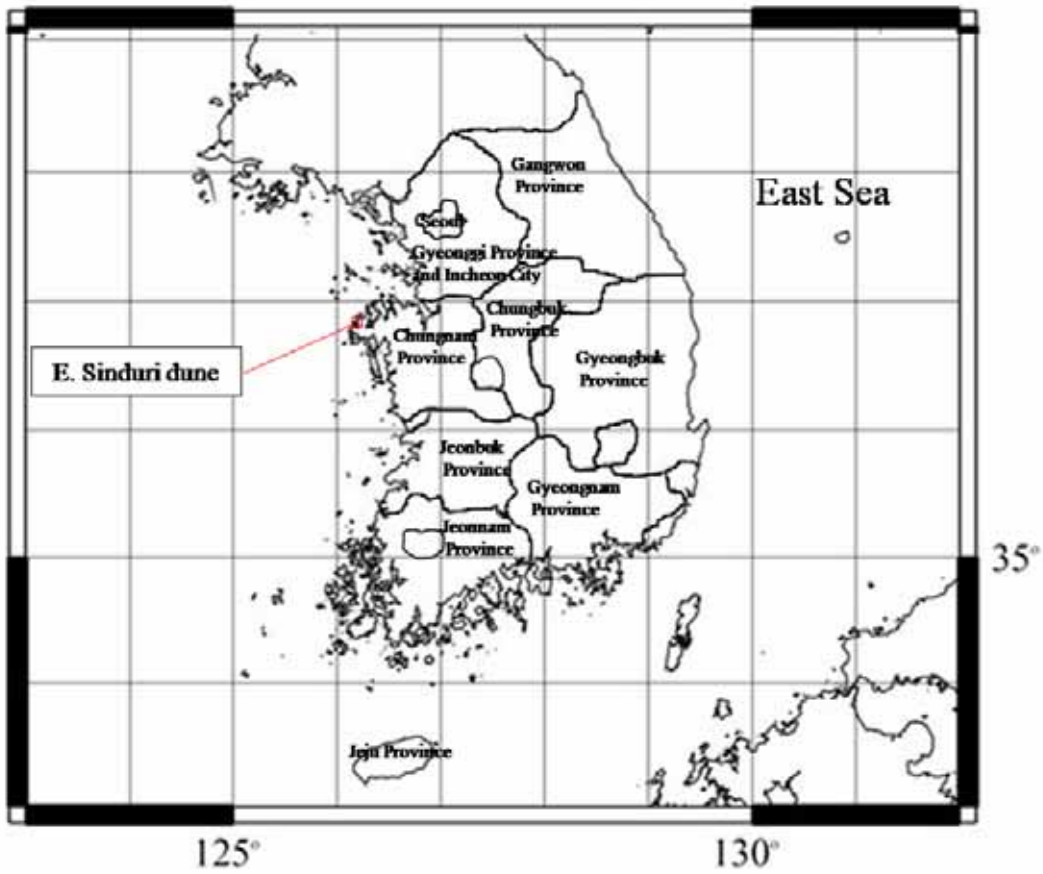
#### Habitat Name : Dune : Sinduri Dune (Chungnam Province)

Selection Criteria	Description	Score
Location	• North part of Taean peninsula	-
Ecological functions	<ul style="list-style-type: none"> <li>• Improve filtering ability of water column</li> <li>• Enhancing and maintaining coastal water quality</li> <li>• Prevent wind erosion by decreasing wind speed at ground level</li> <li>• Dune plants reduce the extension of recession by storm</li> <li>• Natural regeneration from storm damages</li> <li>• Self-supporting ecosystem that dune plants play roles for physical protection of ecosystem and nutrient supply within the habitat</li> <li>• Transition area between marine to terrestrial ecosystem</li> <li>• Habitats for rare wildlife species</li> <li>• Beautiful nature</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• Dune formation for 15,000 years</li> <li>• Barchans sand dune (Crescent-shape)</li> <li>• Wide sand beach front of dune</li> <li>• Include Duung Wetland inside (Wetland Protection Area, Ramsar site)</li> <li>• The biggest dune in South Korea</li> <li>• Well preserved dune plant (ex. sweetbrier community)</li> <li>• Well appearance of wind mark on sand dune</li> <li>• Sea bird breeding place</li> <li>• Many halophyte and dune plant</li> <li>• Excellent sea sight and scientific value</li> <li>• Excellent dune by MOE</li> </ul>	10
Species diversity	<ul style="list-style-type: none"> <li>• High biodiversity</li> <li>• Species diversity               <ul style="list-style-type: none"> <li>- Benthos (134 spp.) : polychaetes, arthropod, barnacle, shortnek clam, oyster</li> <li>- Plants (240 spp.): reed, <i>Suaeda japonica</i> (칠면초), Chinese Lawngrass, sweetbrier, sea bindweed, <i>Carex kobomugi</i> (통보리사초)</li> <li>- Mammals (10 spp.) : raccoon, elk</li> <li>- Birds (42 spp.) : kestrel, Chinese sparrow hawk</li> <li>- Amphibians (9 spp.) : Korean golden frog, narrow-mouth frog</li> <li>- Reptiles (10 spp.) : Korean tiger lizard</li> <li>- Insects (85 spp.) : dragonfly, grasshopper</li> <li>- Fish : gizzard shad, javeline gob</li> </ul> </li> </ul>	7
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• Natural monument by CHA : Chinese sparrow hawk</li> <li>• Endangered species by MOE : Korean golden frog, narrow-mouth frog, Korean tiger lizard</li> </ul>	6
Habitat diversity	• Sand beach (E) and dune wetland	4
Habitat size	<ul style="list-style-type: none"> <li>• Biggest sand dune in Korea</li> <li>• Dune area : 442 ha (982,953 square meter)</li> </ul>	6



	• 3.4km long and 0.5-1.3km wide	
Conservation status of nature	• Well preserved natural environment (half of the dune is well preserved and the other half is under development for tourism)	7
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• Well preserved natural environment</li> <li>• Seawater quality criteria :Class I</li> <li>• None of industrial complex nearby</li> <li>• Oil spill in December 2007</li> <li>• Pollution Sources <ul style="list-style-type: none"> <li>- Costal residential area</li> </ul> </li> </ul>	7
Future plans for development	• None	10
Management and conservation plans	<ul style="list-style-type: none"> <li>• Natural monument by CHA : Shinduri Dune, Chinese sparrow hawk</li> <li>• Ramsar Wetland covered Duung Wetland</li> <li>• Wetland Protection Area by MOE covered Duung Wetland</li> <li>• Ecological Conservation Area by MOE covered Shinduri Dune</li> <li>• Taeam Marine National Park by MOE</li> <li>• Military Zone</li> </ul>	10
Economical importance	• Tourism	5
Existing studies	<ul style="list-style-type: none"> <li>• Sites for “The General Investigation of Marine Ecosystem” by MOMAF in 2008</li> <li>• Monitoring Program of Natural Resources in Taeam Marine National Park by MOE</li> </ul>	7
Total Score		79

**Sinduri dune (Chungnam Province)**







## 2-6. Representative habitat of estuarine waters

The Han River is the second largest river in South Korea and passes through the capital city of Seoul and Gyeonggi Provinces. The estuary of the river covers from lower Han River to Gyeonggi bay and is the only large natural estuarine system in South Korea where the natural flow of the tides has not been obstructed by man-made barriers (e.g., tidal gates, dikes, etc.). The major cities from the head to the mouth of the estuary are Seoul, Goyang, and Gimpo Cities, and Ganghwa County. The tidal ranges for this region are very wide.

There is no direct saltwater intrusion in Seoul area even the water level changes by the tidal actions in the mouth of the estuary. Estuarine waters dominate within Goyang and Gimpo cities located in the lower Han River regions. In Ganghwa County (island) salinity dramatically changes from 0 psu to 35psu during low and high tide, respectively. During summer seasons, heavy rainfalls make the amount of drain water increased from the river to the estuary, and this makes the overall area in the estuary freshwater dominated environment during low tide in summer. By these high tidal actions and salinity gradients, diverse habitats are created such as wetland forest, salt marsh, mud tidal flat, river-estuary transitional zone, small islands and channels, followed by the high species diversity in the area. Especially, the estuary includes the DMZ located between Gimpo City and Ganghwa County where public access are strictly limited and wire entanglements were stretched along the riverbank. Therefore, the natural environments in the Han River estuary are well preserved, especially in the area of DMZ. However, most of the riverbanks lost their function as land-water transitional zone due to the dike construction along the river bank and used for road. Accordingly, there is an ecological disconnection between terrestrial area and watershed of the river by dike along the riverbank. Most of the drainage basins of the river are agricultural land and residential area in the Han River and its estuary.

However, the tributaries and main streams of the river are well connected. Unfortunately most of the estuaries of main rivers in the west coast lost their functions as transitional zone between freshwater and marine ecosystem due to the seawall or dike construction to control flooding, freshwater reservoir construction and reclamation etc. Han River estuary is the only one which has the ecological functions as estuary in the west coast. The estuary plays roles of connection between huge drainage basins, tributaries and main streams of the river, and seawater ecosystem, and creates the largest single ecosystem in the west coast of Korea.

Accordingly, lower Han River and its estuary is very important area for migratory fish and birds, wetland forest, and terrestrial and marine species. The estuary is considered as a BirdLife International IBA (Important Bird Area). This critical wetland complex also provides important roosting and breeding areas for 38 endangered bird species; 1<sup>st</sup> level endangered species of 9 families (e.g., Black-faced Spoonbill) and 2<sup>nd</sup> level endangered species of 29 families (e.g., White-naped Crane).

### Habitat Name : Han River estuary (Gyeonggi Province, Seoul and Incheon city)

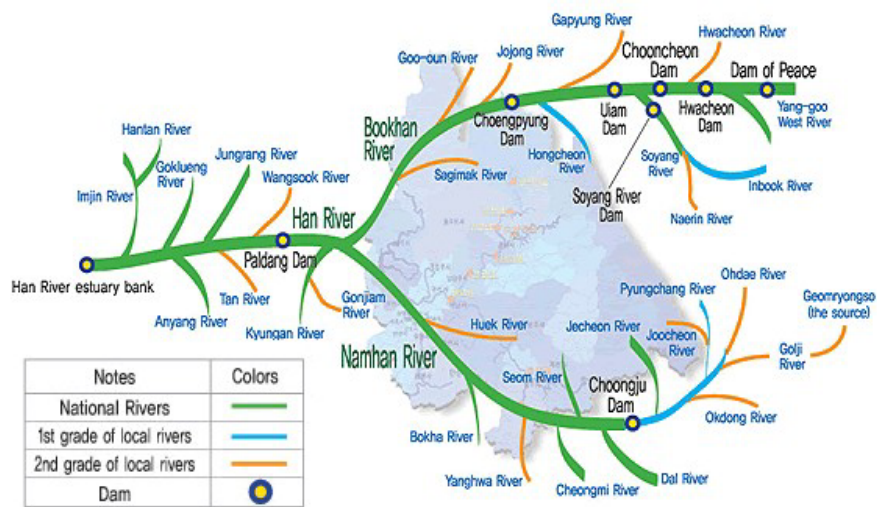
Selection Criteria	Description	Score
Location	• Major drainage basin of Seoul, Gimpo and Goyang City	-
Ecological functions	<ul style="list-style-type: none"> <li>• Contribute greatly to the biodiversity of the marine environment</li> <li>• Erosion control and storm surge protection</li> <li>• The most productive ecosystems in the west coast</li> <li>• Water filtering by vegetation and fine sediments in estuaries</li> <li>• Habitat for plants, birds and other animals</li> <li>• Education, recreation and tour place</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• Flow through capital city of Korea</li> <li>• Imjin and Yeseong River flows into the Han River Estuary in the north of Ganghwa</li> <li>• The only natural estuarine system in South Korea</li> <li>• High tidal ranges of 8.1m</li> <li>• Well developed mud tidal flats and flood plain</li> <li>• Diverse small wetlands within the site : Janghang (Goyang City), Siamri (Gimpo City), Yu Island, Sannam (Paju City), Gokrueng-cheon Estuary,</li> </ul>	8

	<p style="text-align: center;">Sungdong, Imjin River Estuary and Jangdan</p> <ul style="list-style-type: none"> <li>• Includes the only habitat for wetland forest (Janghang Wetland) in the west coast</li> <li>• Buffer zone between fresh water and sea water</li> <li>• Rare wildlife and endangered species habitat</li> <li>• Bird Life International IBA (Important Bird Area) : global significance for migratory (Austral-Asian Flyway) cranes</li> <li>• Provide food for bird</li> <li>• Gimpo plain</li> <li>• Number of the bridges : 21</li> <li>• Beautiful nature</li> <li>• Military zone and DMZ</li> </ul>	
Species diversity	<ul style="list-style-type: none"> <li>• High biodiversity and production</li> <li>• Species diversity <ul style="list-style-type: none"> <li>- Plants (868spp.), birds (35spp.), fish (97spp.), insects (468spp.), invertebrates (123spp.)</li> </ul> </li> </ul>	10
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• Threatened species of the IUCN Red List <ul style="list-style-type: none"> <li>: white-naped crane, Chinese egret, blackfaced spoonbill, hawk, swan goose, Saunder's gull</li> </ul> </li> <li>• Natural monument by CHA <ul style="list-style-type: none"> <li>: white-naped crane, Chinese egret, blackfaced spoonbill</li> </ul> </li> <li>• Endangered species MOE (26 spp.) <ul style="list-style-type: none"> <li>: hawk, blackfaced spoonbill</li> </ul> </li> <li>• Preserved species by MOE <ul style="list-style-type: none"> <li>: hen harrier, Kentish plover</li> </ul> </li> <li>• Specific species by MOE <ul style="list-style-type: none"> <li>: Chinese sparrow hawk</li> </ul> </li> </ul>	10
Habitat diversity	<ul style="list-style-type: none"> <li>• Intertidal mud flat (G)</li> <li>• Intertidal salt marsh (H)</li> <li>• Intertidal forest wetland (I)</li> <li>• Estuarine waters</li> </ul>	10
Habitat size	<ul style="list-style-type: none"> <li>• Length of the river: 481 km</li> <li>• Estuarine area : 163,717 ha</li> </ul>	10
Conservation status of nature	<ul style="list-style-type: none"> <li>• Well preserved natural (physical) environment (no dyke to block the river flow into the sea)</li> <li>• Well preserved area due to the military zone and DMZ</li> <li>• Agricultural land and industrial complex nearby</li> </ul>	7
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• Freshwater quality criteria :Class II~III</li> <li>• Seawater quality criteria :Class II~III</li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Anyang, Jungryang and Gokreung stream</li> <li>- Coastal residential area</li> <li>- Farmland</li> <li>- Industrial complex</li> </ul> </li> </ul>	6
Future plans for development	<ul style="list-style-type: none"> <li>• Industrial complex nearby cities</li> <li>• Han River Renaissance Project</li> <li>• Planned for road and bridge construction by Gyeonggi Province</li> <li>• Planned for leisure complex construction by Gyeonggi Province</li> <li>• New town construction plan by Gimpo city, Goyang city, and Paju city</li> <li>• Candidate site for Gyeongin artificial Canal</li> <li>• Agricultural fields and urban parklands, dam construction (Imjin River) and re-defining the Civilian Controlled Area (CCA)</li> <li>• Candidate site for South-North Korea Joint Han Estuary Development Project</li> </ul>	5
Management and conservation plans	<ul style="list-style-type: none"> <li>• Wetland Protection Area by MOE</li> <li>• DMZ border area</li> </ul>	10



	<ul style="list-style-type: none"> <li>• Military Zone</li> <li>• Crane Network Site by the Asia-Pacific MWCC (Migratory Waterbird Conservation Committee)</li> <li>• Preservation plan of Wetland Protection Area in Han River by MOE (2007)</li> </ul>	
Economical importance	<ul style="list-style-type: none"> <li>• Farmland</li> <li>• Fisheries and Tourism</li> <li>• Industrial complex</li> </ul>	8
Existing studies	<ul style="list-style-type: none"> <li>• Monitoring Program of Wetland Resources in Han River by MOE</li> <li>• National Marine Environmental Quality Monitoring Program by MOMAF (in the lower Han River)</li> <li>• National River Water Quality Monitoring Station by MOE</li> </ul>	10
Total Score		94

**Han River estuary (Gyeonggi Province, Seoul and Incheon city)**









## 2-7. Representative habitat of intertidal mud, sand or salt flats

The Ganghwa tidal flat is located in the southern part of the Ganghwa island in Incheon and is one of the world's five largest tidal flats. The tidal mud flat is located between Ganghwa and Yeongjong (Incheon International Airport) island, and covers 105km<sup>2</sup> in area and 6 km wide at low tide. Most of the area between two islands is exposed during low tides, and it is still expanding toward southwest of Ganghwa island. The area is a part of Han River estuary and enclosed by two channels; one in Yeomha in the east and the other in Seokmo channel in the west.

In addition to the Han River, Yeseong and Imjin River are sediment sources for the tidal flat. Tremendous amount of suspended solids are supplied from the above three rivers and accumulate in the area during ebbing. Strong tidal current (max. 3 knots) and high tidal amplitude (max. 8m) creates tide-dominated delta and the various habitat types in the area. For example, various sizes of sand islands are exposed during low tide in the subtidal area and salt marshes are formed in the intertidal area. Meandering costal lines also make the small bays and channels in the tidal flats. By its location, the tidal flats of Ganghwa Island play roles as filtration bed for Han River estuary. Tremendous amounts of suspended solids accumulate and filter the highly polluted river water in the tidal flat.

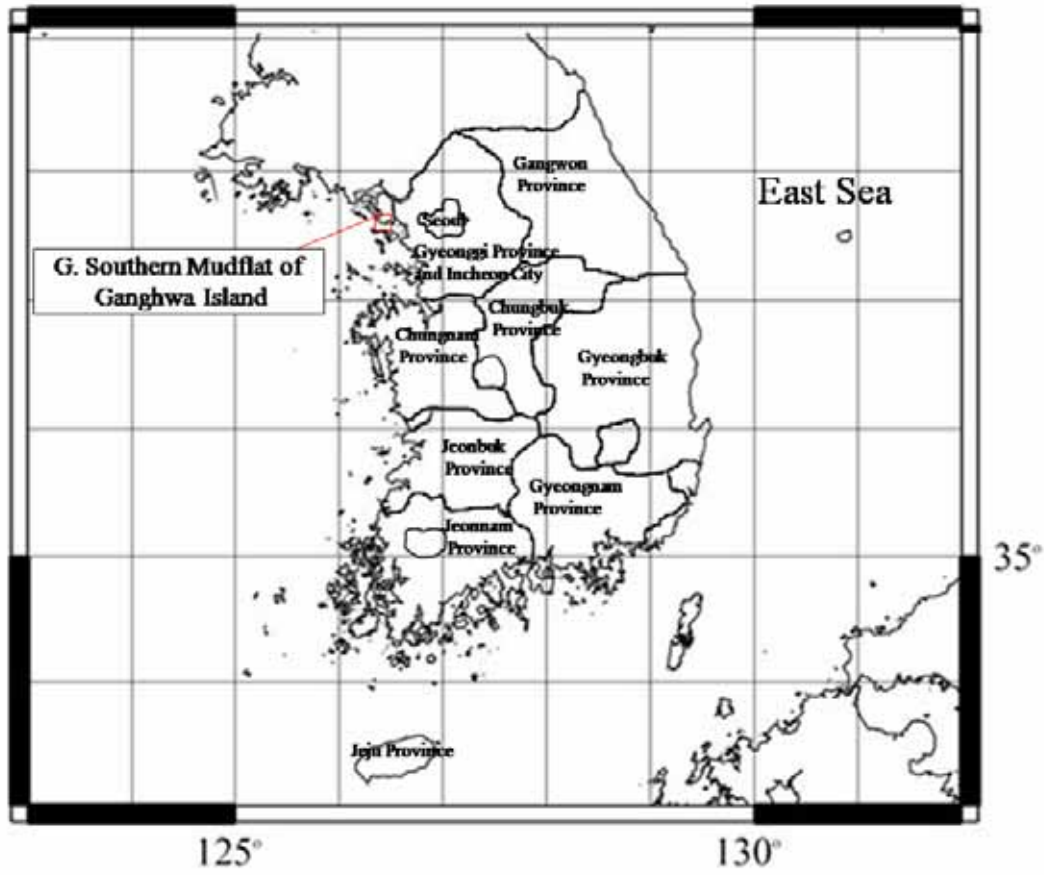
These various habitats are very important for shellfishes and other benthic animals, and the stopover of many migratory birds including many endangered species. In particular, the black-faced spoonbill of which only about 600 remain worldwide, and visit this tidal flat. A total of 52 bird species are observed and of them 20 species are natural monuments.

### Habitat Name : Southern Mudflat of Ganghwa Island (Incheon City)

Selection Criteria	Description	Score
Location	<ul style="list-style-type: none"> <li>• Northwest coast of South Korea</li> <li>• Southern part of the Ganghwa Island in Incheon</li> <li>• 5<sup>th</sup> biggest island in Korea</li> </ul>	-
Ecological functions	<ul style="list-style-type: none"> <li>• Contribute greatly to the biodiversity of the marine environment</li> <li>• Habitat for plants, birds and other animals</li> <li>• Filtering and removing excess nutrients from the water</li> <li>• Buffering capacity for sediment /shoreline stabilization</li> <li>• Prevent erosion</li> <li>• Important nursery ground for fish and prawns</li> <li>• Important area for migratory fishes (freshwater eel)</li> <li>• Migrating and wintering shorebirds habitat</li> <li>• Provide abundant food source for shorebirds</li> <li>• Education, recreation and tour place</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• Waterway from fresh water to sea water</li> <li>• Waterway in the east part of Ganghwa island</li> <li>• Maximum tidal amplitude is about 10m.</li> <li>• Well developed mud tidal flats in the south part of Ganghwa island</li> <li>• The largest tidal flat in South Korea</li> <li>• Well preserved tidal flat (natural monument)</li> <li>• Rare wildlife and endangered species habitat</li> <li>• Ganghwa is a natural monument and also include many natural monument nearby</li> <li>• Many historic sites nearby</li> <li>• Military zone in the north part of Ganghwa island</li> </ul>	10
Species diversity	<ul style="list-style-type: none"> <li>• High biodiversity and production</li> <li>• Number of migrating and wintering shorebirds : &gt; 20,000</li> <li>• Species diversity               <ul style="list-style-type: none"> <li>- Benthos : polychaetes, arthropod, barnacle, shortneck clam, oyster</li> <li>- Salt marsh plants (13spp.)</li> </ul> </li> </ul>	7

	<ul style="list-style-type: none"> <li>: <i>Suaeda japonica</i> (칠면초), <i>Triglochin maritimum</i> (지채), <i>Carex scabrifolia</i> (천일사초), <i>Phragmites communis</i> (갈대)</li> <li>- Fish (22 spp.): gizzard shad</li> <li>- Birds : snipe, Kentish plover, blackfaced spoonbill, gull</li> </ul>	
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• Threatened species of the IUCN Red List : blackfaced spoonbill, Far eastern curlew, Red-crowned crane</li> <li>• Natural monument by CHA : Ganghwa Tidal Flat and blackfaced spoonbill</li> <li>• Endangered species by MOE : blackfaced spoonbill</li> <li>• Preserved species by MOE : Kentish plover</li> </ul>	8
Habitat diversity	<ul style="list-style-type: none"> <li>• Intertidal salt marsh (H)</li> </ul>	4
Habitat size	<ul style="list-style-type: none"> <li>• Tidal flat area : 33,950 ha</li> </ul>	10
Conservation status of nature	<ul style="list-style-type: none"> <li>• Relatively well preserved natural habitat</li> <li>• Reclaimed tidal flat area is 130 km<sup>2</sup> in the east and west part of the island</li> <li>• Agricultural land and industrial complex nearby</li> </ul>	7
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• Seawater quality criteria :Class II-III</li> <li>• Pollution Sources <ul style="list-style-type: none"> <li>- Costal residential area</li> <li>- Farmland</li> <li>- Han River</li> </ul> </li> </ul>	7
Future plans for development	<ul style="list-style-type: none"> <li>• Candidate site of Ganghwa tidal power plant</li> <li>• Development of Incheon economic free zone</li> <li>• Candidate site for Gyeongin artificial Canal</li> <li>• Bridge between Ganghwa Isl. and Gyeseong (North Korea)</li> </ul>	7
Management and conservation plans	<ul style="list-style-type: none"> <li>• Special Management Area by MOMAF covered Shihwa Lake and Incheon Coastal Area</li> <li>• Wetland Protection Area by MOMAF covered Ongjin and Jangbong Island Tidal flat</li> <li>• Military Zone</li> <li>• Candidate site of the first Tidal Flat National Park</li> </ul>	10
Economical importance	<ul style="list-style-type: none"> <li>• Tourism and fisheries</li> <li>• Fishing village community member :4,632</li> <li>• Fisher boat : 500</li> <li>• Fisheries catches : 697 tone</li> </ul>	9
Existing studies	<ul style="list-style-type: none"> <li>• Sites for “The General Investigation of Marine Ecosystem” by MOMAF in 2007</li> <li>• Management plan in coastal of Ganghwa Island by Ganghwa County</li> <li>• National Marine Environmental Quality Monitoring Program by MOMAF</li> </ul>	10
Total Score		89

Southern Mudflat of Ganghwa Island (Incheon City)







## 2-8. Representative habitat of intertidal marshes

Seocheon salt marsh is located in the Seocheon City of Chungnam Province, in the middle of South Korea. The habitat is connected to the well developed sand dune and mud tidal flats, and with the Geum river estuary in the south. The most common community is well developed reed (*Phragmites communis*) covering 330,000m<sup>2</sup>, 1km long and 200m wide along the coastal lines. Small channels are developed inside of the reed community. This provides habitat for migratory birds, and 6-7 natural monument species of birds are found.

Seocheon salt marsh has the highest biodiversity of halophytes in South Korea. And it is high value (IV) conservation quality by MOE. The 30% oystercatcher (endangered species) of East Asia visits the area in winter. Recently, Seocheon mud tidal flats are designated as 8th Wetland Protection Area by MOMAF.

### Habitat Name : Seocheon (Chungnam Province)

Selection Criteria	Description	Score
Location	<ul style="list-style-type: none"> <li>• The middle western coast of South Korea</li> <li>• The north part of Seocheon county</li> </ul>	-
Ecological functions	<ul style="list-style-type: none"> <li>• Connects terrestrial and marine ecosystem</li> <li>• Provides various habitat types and benthic ecosystem.</li> <li>• Diverse salt-marsh plants may contain new matters and/or genetic resources possibly used as medicine and foods.</li> <li>• Storage, dilution, and stabilization of pollutants</li> <li>• Production, storage, transformation, and exportation of nutrients</li> <li>• Spawning, nursery, and refuge habitat for many fish and shellfish species</li> <li>• Nesting, feeding, and staging (resting) areas for birds and wildlife</li> <li>• Pollution control</li> <li>• Buffering capacity for sediment /shoreline stabilization</li> <li>• Coastal flood control</li> <li>• Ecotourism (esthetics)</li> <li>• Recreation (birding, boating, hiking, hunting and fishing)</li> <li>• Education (interpretation and research)</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• Connected to Geum River estuary</li> <li>• Include a dune (excellent dune by MOE)</li> <li>• Well developed tidal flat in the west part and salt marsh in the east part of Seocheon intertidal marsh</li> <li>• Excellent environmental quality among the intertidal marshes in the west coasts</li> <li>• The highest biodiversity of halophytes in Korea</li> <li>• High value (IV) conservation quality by MOE</li> <li>• Include a excellent dune (by MOE)</li> <li>• 30% oystercatcher of East Asia visits the area in winter</li> <li>• Spawning ground of fish and shellfish</li> <li>• Breeding place of migratory bird</li> <li>• Well preserved nature</li> <li>• Well developed of reed forest</li> <li>• Beautiful sights</li> </ul>	10
Species diversity	<ul style="list-style-type: none"> <li>• Species diversity</li> <li>- Plants : spindle tree</li> <li>- Salt marsh plants (27spp.) : <i>Phragmites communis</i> (reed) <i>Elymus mollis</i>(갯그렁), <i>Carex kobomugi</i> (통보리사초), <i>Vitex rotundifolia</i> (순비기나무), <i>Ixeris repens</i> (갯썸바귀), <i>Calystegia soldanella</i> (갯메꽃), <i>Glehnia littoralis</i> (갯방풍), <i>Carex pumila</i> (좁보리사초)</li> <li>- Insects : ant lion, beetle</li> <li>- Fish : crucian carp, minnow</li> <li>- Amphibia : leopard frog</li> </ul>	7

	<ul style="list-style-type: none"> <li>- Reptile : <i>Eremias argus</i> (표범장지뱀)</li> <li>- Birds : Chinese egret, snipe</li> <li>- Mammals : mole, elk</li> <li>- Plants (194 spp.), insects (61 spp.), amphibia and reptiles (61 spp.), birds (49 spp.), mammals (12 spp.)</li> </ul>	
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• Natural monument by CHA (7 spp.) : Chinese egret</li> <li>• Endangered species by MOE (4 spp.) : Chinese egret, <i>Eremias argus</i> (표범장지뱀)</li> </ul>	7
Habitat diversity	<ul style="list-style-type: none"> <li>• Intertidal mud flat (G)</li> </ul>	4
Habitat size	<ul style="list-style-type: none"> <li>• Intertidal marsh area : 9,307 ha</li> </ul>	4
Conservation status of nature	<ul style="list-style-type: none"> <li>• Well preserved natural environment</li> <li>• Industrial complex nearby (Janghang Industrial Complex)</li> <li>• No commercial harbor</li> </ul>	7
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• Low degree of pollution</li> <li>• Seawater quality criteria : Class II</li> <li>• Pollution Sources <ul style="list-style-type: none"> <li>- Costal residential area</li> <li>- Aquaculture</li> </ul> </li> </ul>	8
Future plans for development	<ul style="list-style-type: none"> <li>• Candidate site of National Ecology Institute by MOMAF (by 2011)</li> </ul>	8
Management and conservation plans	<ul style="list-style-type: none"> <li>• Wetland Protection Area by MOMAF covered Seocheon Tidal Flat</li> <li>• Candidate site of the Ramsar Convention on Wetlands</li> </ul>	8
Economical importance	<ul style="list-style-type: none"> <li>• Aquaculture</li> <li>• Fishing port</li> <li>• Tourism and fisheries</li> <li>• Fishing boat : 1,557</li> <li>• Fisheries catches : 10,414 tone</li> </ul>	7
Existing studies	<ul style="list-style-type: none"> <li>• The General Investigation of Marine Ecosystem by MOMAF in 2008</li> <li>• National Marine Environmental Quality Monitoring Program by MOMAF</li> </ul>	7
Total Score		77

### Seocheon (Chungnam Province)











## 2-9. Representative habitat of intertidal forested wetlands

Intertidal forest wetlands are not common habitat in the west coast of Korea. Only one wetland forest habitat is located in the lower Han River, part of Han River estuary, and is called “Janghang Wetland”. The forest is about 8km long between Ilsan and Gimpo Bridge of Gyeonggi Province, and mainly composed of willow and reed community. The forest is very important area for filtering of highly polluted river water, and habitat for crabs, terrestrial mammals, migratory birds, and fishes.

In terms of salinity ranges, the area is freshwater dominated environment, but direct salt water intrusions take place sporadically, especially during flooding in time of spring tide. The area is strictly limited to public access due to the military purposes, and stretched by wire fence. Therefore, the natural environments are well preserved and aquatic ecosystems are partially isolated from the terrestrial area by the fence.

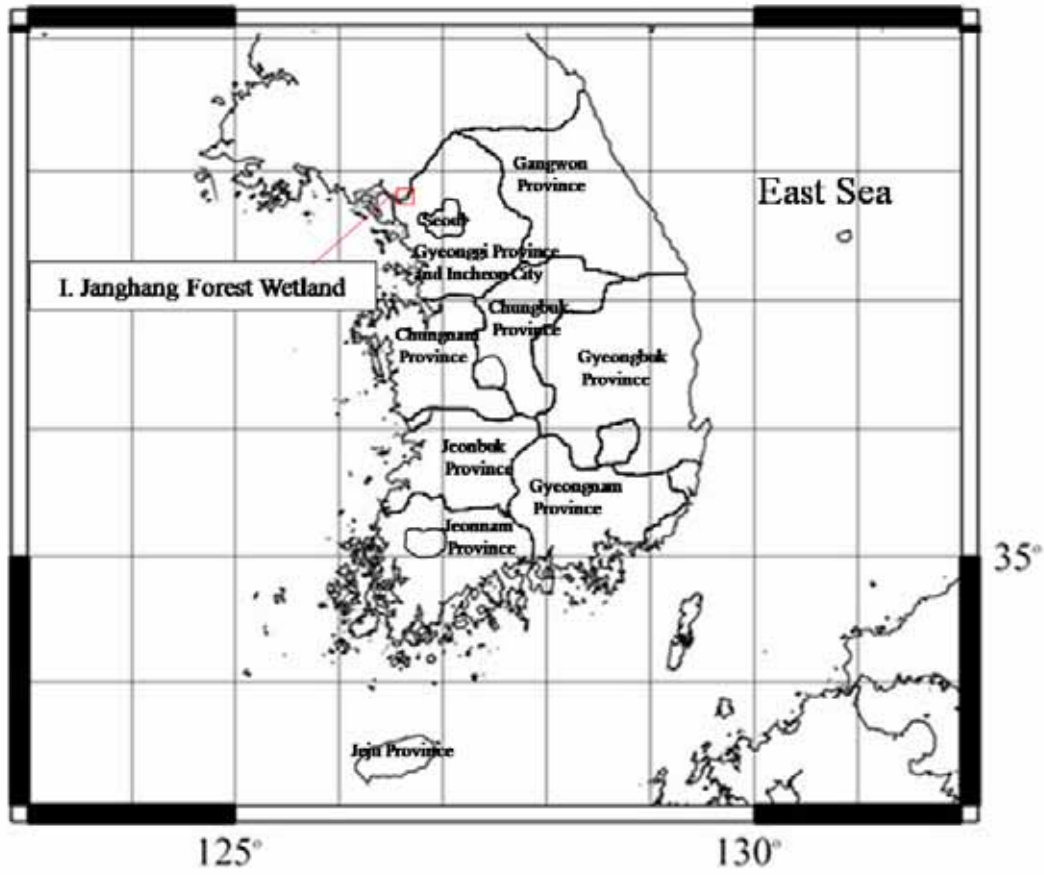
Janghang Wetland is distinctive and unique environment in South Korea. There are many endangered or threatened species and high biodiversity. The area is especially important for wintering ground of White-naped Crane and Bean Goose. Janghang Wetland is designated as Wetland Protection Area by MOE and is on track to be designated as South Korea’s sixth Ramsar site.

### Habitat Name : Janghang Forest Wetland (Gyeonggi Province)

Selection Criteria	Description	Score
Location	<ul style="list-style-type: none"> <li>• The southwest part of Goyang City of Gyeonggi Province</li> <li>• Located in the lower Han River</li> </ul>	-
Ecological functions	<ul style="list-style-type: none"> <li>• Habitats for plants and animals</li> <li>• Control flood and erosion</li> <li>• Enhance the decomposition of organic matter, incorporating nutrients back into the food chain</li> <li>• Provide breeding, nesting, and feeding habitat for millions of waterfowl, birds, fish, and other wildlife</li> <li>• Improve human water supplies by filtering out sediments, nutrients, and pollutants</li> <li>• Ecotourism (esthetics)</li> <li>• Recreation (birding, boating and fishing)</li> <li>• Education (interpretation and research)</li> </ul>	-
Physical conditions	<ul style="list-style-type: none"> <li>• Rice farming lands and new cities nearby</li> <li>• Military Zone</li> <li>• Willow Forest</li> <li>• The only forest wetland system in South Korea</li> <li>• Especially important for wintering of White-naped Crane and Bean Goose</li> <li>• Bird Life International IBA (Important Bird Area)</li> <li>• Buffering zone</li> <li>• Rare habitat of <i>Sesarma (Holometopus) dehaani</i> (Crab)</li> <li>• High biodiversity and production</li> <li>• Rare wildlife and endangered species habitat</li> <li>• Well preserved (military zone and DMZ)</li> <li>• Beautiful sights</li> </ul>	8
Species diversity	<ul style="list-style-type: none"> <li>• Major species</li> <li>- Plants (868spp.) : Willow, Chinese squill, <i>Pennisetum alopecuroides</i> (수크령), <i>Scirpus triqueter</i> (세모고랭이)</li> <li>- Birds (35spp.) : White-naped Crane, Hooded Crane, Common Crane, Siberian Crane, Black-faced Spoonbill, Swan Goose, Bean Goose and Eurasian Spoonbill</li> <li>- Fish (97spp.) : <i>Anguilla japonica</i>(뱀장어), <i>Takifugu obscurus</i>(황복), <i>Coilia nasus</i>(응어), and <i>Liza haematocheila</i> (가승어)</li> <li>- Amphibia : <i>Kaloula borealis</i>(맹꽂이)</li> <li>- Benthos : <i>Eriocheir sinensis</i> (참게), <i>Ilyoplax deschampsii</i> (필콩게),</li> </ul>	10

	<p><i>Sesarma (Holometopus) dehaani</i> (말뚱개)</p> <ul style="list-style-type: none"> <li>- Insects (468spp.) : dragonfly, <i>Oxya japonica japonica</i> (벼메뚜기), <i>Apatura ilia</i> (오색나비), moth</li> <li>- Invertebrates (123spp.)</li> <li>- Mammals : <i>Prionailurus bengalensis</i>(산표범), Raccoon Dog and Siberian Mink</li> </ul>	
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• Threatened species of the IUCN Red List : white-naped crane, blackfaced spoonbill, hawk</li> <li>• Natural monument by CHA : white-naped crane, Chinese egret, blackfaced spoonbill, Chinese sparrow hawk</li> <li>• Endangered species MOE (26 spp.) : hawk, blackfaced spoonbill</li> <li>• Preserved species by MOE : hen harrier, Kentish plover</li> <li>• Specific species by MOE : Chinese sparrow hawk</li> </ul>	10
Habitat diversity	<ul style="list-style-type: none"> <li>• Intertidal mud flat (G)</li> <li>• Intertidal salt marsh (H)</li> </ul>	7
Habitat size	<ul style="list-style-type: none"> <li>• Wetlands area : 74 ha</li> </ul>	5
Conservation status of nature	<ul style="list-style-type: none"> <li>• Well preserved</li> <li>• Agricultural land and industrial complex nearby</li> <li>• No harbors or ports</li> </ul>	7
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• Freshwater quality criteria : Class II</li> <li>• Pollution Sources <ul style="list-style-type: none"> <li>- Coastal residential area</li> <li>- Farmland</li> <li>- Han River</li> </ul> </li> </ul>	8
Future plans for development	<ul style="list-style-type: none"> <li>• Gimpo City continues to dredge river sands</li> <li>• Candidate site of Ecological Park by Gyeonggi Province</li> </ul>	8
Management and conservation plans	<ul style="list-style-type: none"> <li>• Wetland Preserved Area by MOE covered Janghang Wetland</li> <li>• Military Zone</li> <li>• Candidate site of South Korea's sixth Ramsar site</li> </ul>	9
Economical importance	<ul style="list-style-type: none"> <li>• Farmland and fisheries</li> </ul>	6
Existing studies	<ul style="list-style-type: none"> <li>• National River Water Quality Monitoring Station by MOE</li> <li>• Wetland study by UNDP GEF</li> </ul>	7
Total Score		85

Janghang Forest Wetland (Gyeonggi Province)







## 2-10. Representative habitat of coastal brackish/saline lagoons

There are no natural lagoons in the west coast of Korea. Therefore, artificial saltwater lakes are classified into this category and we selected the Lake Shihwa, only one saltwater lake in the west coast, as brackish coastal lagoon.

Shihwa Lake is the artificial saltwater lake constructed from 1986 to 1994 and surrounded by Ansan, Hwaseong, and Shiheung City in Gyeonggi Province. 12.6km seawall was built in order to seal off the mouths of the bay. The original plan was aimed at creating 133.7 km<sup>2</sup> of reclaimed land as well as 42.3 km<sup>2</sup> of a freshwater lake to be used for irrigation purposes. After the closing of the lake, the water quality had been rapidly degraded since 1994 due to insufficient water supply for the lake, the lack of wastewater treatment capacity, and increasing pollution load from the watershed. Large-scale dam construction project removed mudflat, reducing the natural pollution-absorption capabilities while blocking seawater inflow. The brackish lake suffered from severe eutrophication, e.g. 17.4 mg/l of annual mean Chemical Oxygen Demand (COD) in 1997, so that even treated water from the lake could not be used for irrigation of agricultural lands.

To maintain at least a moderate water quality of the lake, seawater has been in circulation since January 1999. The Marine Pollution Prevention Act designated Lake Shihwa as a Special Management Area in February 2000. In December 2000, it was finally decided that Lake Shihwa would be managed as a seawater lake rather than fresh water resources for the farmlands.

The high levels of nutrients evidently enhanced phytoplankton growth, thus depleting dissolved oxygen in the bottom water. Anoxia occurred in the water column in summer season. The water quality of the freshwater reservoir could not be controlled through any countermeasures, because increasing levels of nutrients were entering the waters.

The water quality of Lake Shihwa has been improved since the opening of the sluices in January 1999. In order to reduce land-based pollution, the capacity of existing wastewater treatment plants was expanded and a new wastewater treatment plant is under construction. Annual mean COD concentration of Lake Shihwa decreased from 17.4 mg/l in 1997 to 4.2 mg/l in 2005, while COD in the Yellow sea outside Lake Shihwa was 1.4 mg/l. Ecological improvement was insufficient and eutrophication still causes hypoxia in summer. Oxygen depletion in summer season is one of significant reasons of unstable benthic ecosystem in Lake Shihwa.

Shihwa tidal power plant is under construction to increase seawater circulation, which is the most efficient measure for improving water quality and restore its ecosystem. The water quality of Shihwa Lake is expected to be seawater quality grade II that will meet under 2.0 mg/l of COD in 2010. Public participation mechanism has been strengthened after ICM program implementation and local capacity building.

In order to address the environmental problem of Shihwa, Lake Shihwa was designated as a PEMSEA parallel site in 2000, followed by the signing of MOA among MOMAF, local governments and PEMSEA in 2001. Lake Shihwa Management Committee contributed to establish a unified decision-making system that ensures cooperation between various stakeholders such as the national government, the local governments, and the local residents.

Action plan for the implementation was completed in end of 2002. The management plan was composed of four major components with 34 projects. MOMAF's Lake Shihwa program began in 2003. Total of 469 million USD was invested to improve water quality of Lake Shihwa from 1997 to 2005.

The lake is still influenced by tidal action outside of the lake, and have about 7-8m tidal amplitude. These tidal actions make the various habitat types within the lake such as tidal mud flat, subtidal habitats, salt marsh, reed community, and typical terrestrial community which provide habitat for aquatic and terrestrial species.

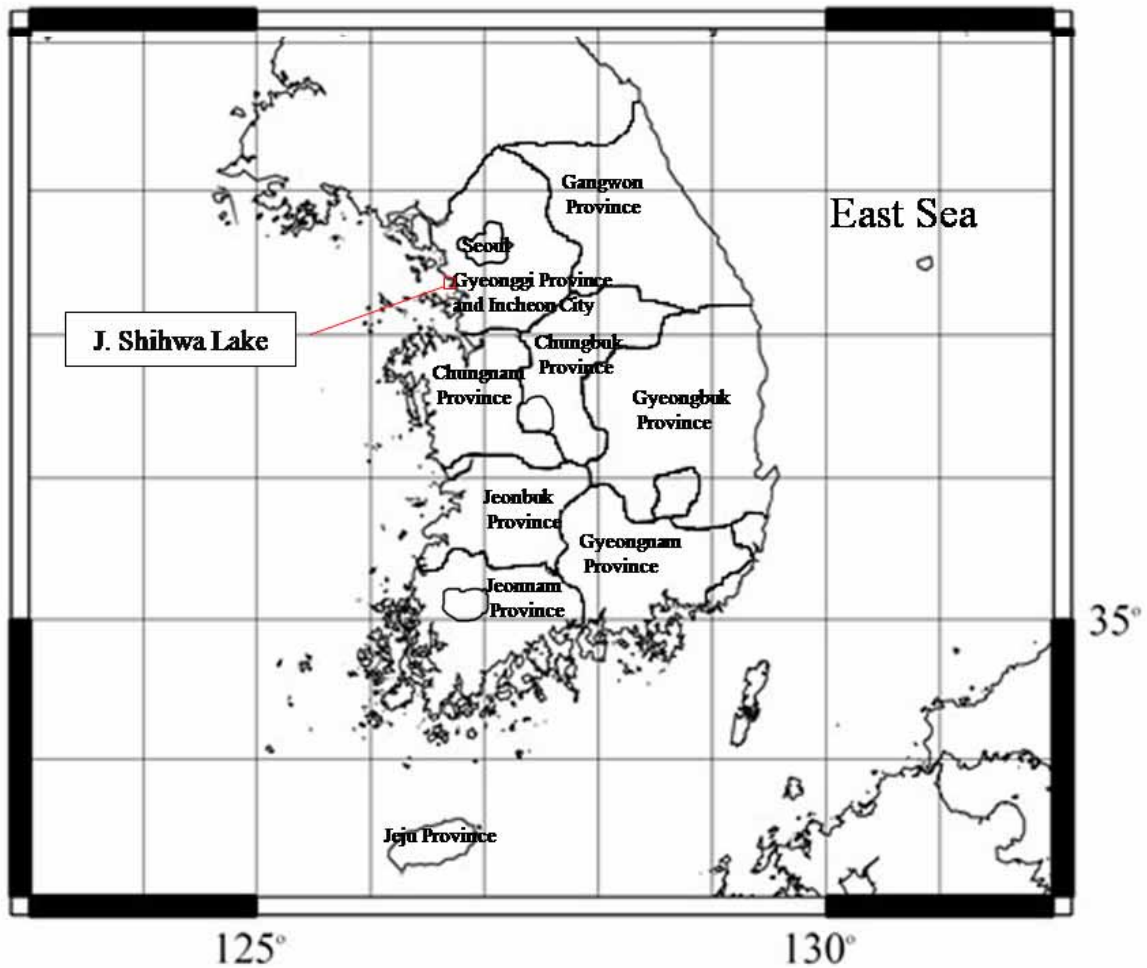
### Habitat Name : Shihwa Lake (Ansan and Hwaseong City of Gyeonggi Province)

Selection Criteria	Description	Score
Location	• Artificial lake surrounded by Shiheung, Hwaseong and Ansan City	-
Ecological functions	• Habitats for terrestrial animals in the marginal area of the lake • Fishing and tourism	-

Physical conditions	<ul style="list-style-type: none"> <li>• Shihwa Tide Embankment (1997)</li> <li>• Developed for supplying agricultural and industrial water</li> <li>• Seawall length : 12.6 km</li> <li>• The volume of water kept in store : 332 million ton</li> <li>• Maximum water depth 18 m</li> <li>• Indraft of sea water : 380 million ton / year</li> <li>• The only saltwater lake in Korea with the channel even it is artificial lake</li> <li>• High turbidity</li> <li>• Highly polluted area</li> <li>• Deteriorated benthic ecosystem</li> <li>• Important research site (environment change)</li> <li>• Research site of PEMSEA (Partnerships in Environmental Management for the Seas of East Asia)</li> <li>• Small fishing port</li> <li>• Shihwa Dinosaur Fossil Region</li> <li>• Artificial wetland park inside</li> <li>• Place for environmental education</li> <li>• Many industrial complex nearby</li> <li>• Constructing of industrial complex, reclaimed land and tidal power plant</li> </ul>	3
Species diversity	<ul style="list-style-type: none"> <li>• Low biodiversity</li> <li>• Species diversity <ul style="list-style-type: none"> <li>- Benthos: polychaetes, arthropod, Oyster</li> <li>- Plants : <i>Suaeda japonica</i> (칠면초), reed, <i>Artemisia princeps var. orientalis</i> (쭈)</li> <li>- Phytoplankton (117 spp.), zooplanktons (57 spp.), plants (152 spp.), birds (22 spp.), mammalian (7 spp.), benthos 106 spp.</li> </ul> </li> </ul>	3
Endangered species or threatened species	<ul style="list-style-type: none"> <li>• Threatened species of the IUCN Red List : Saunder's gull, Eastern imperial eagle</li> <li>• Natural monument by CHA : 9 spp.</li> <li>• Endangered species by MOE : 9spp.</li> </ul>	8
Habitat diversity	<ul style="list-style-type: none"> <li>• Intertidal mud flat (G)</li> <li>• Intertidal salt marsh (H)</li> </ul>	7
Habitat size	<ul style="list-style-type: none"> <li>• Artificial lake area : 5,650 ha</li> </ul>	8
Conservation status of nature	<ul style="list-style-type: none"> <li>• Many changes in natural environment (tidal flat → artificial freshwater lake → saltwater lake → increase water exchange by the tidal power plant construction)</li> <li>• Agricultural land and industrial complex nearby</li> </ul>	2
Degree of pollution and Pollution Sources	<ul style="list-style-type: none"> <li>• High degree of pollution</li> <li>• Seawater quality criteria : &lt; Class III</li> <li>• High heavy metal concentration in sediment</li> <li>• Pollution sources <ul style="list-style-type: none"> <li>- Coastal residential area</li> <li>- Industrial wastes</li> <li>- Excrement treatment plant (1 place)</li> <li>- Sewage treatment plant (1place)</li> </ul> </li> </ul>	2
Future plans for development	<ul style="list-style-type: none"> <li>• Shihwa Tidal Power Plant by MOMAF</li> <li>• Constructing of Banwol Special Zone (2011) by Ministry of Construction &amp; Transportation (MCT)</li> <li>• Constructing of Tando Lake for agricultural water by Ministry of Agriculture and Forestry (MAF)</li> <li>• Songsan Green City (2007) by Gyeonggi Province</li> <li>• Universal studio Korea (2012) by Gyeonggi Province</li> </ul>	5
Management and conservation plans	<ul style="list-style-type: none"> <li>• Marine Environmental Research Site by MOMAF</li> <li>• Special Management Area by MOMAF covered Shihwa Lake and Incheon Coastal Area</li> </ul>	8
Economical	<ul style="list-style-type: none"> <li>• Industrial complex</li> </ul>	7

importance	<ul style="list-style-type: none"> <li>• Port</li> <li>• Tourism and fisheries</li> <li>• Reclaimed land : 1,336 km<sup>2</sup></li> </ul>	
Existing studies	<ul style="list-style-type: none"> <li>• Sites for “The General Investigation of Marine Ecosystem” by MOMAF in 2007</li> <li>• Lake Shihwa watershed management Program by MOMAF</li> <li>• Monitoring Shihwa Lake by PEMSEA</li> <li>• Monitoring Shihwa Lake by Ministry of Land, Transport and Maritime Affairs, MAF, Gyeonggi Province, Ansan City and etc.</li> <li>• National Marine Environmental Quality Monitoring Program by MOMAF</li> <li>• Environmental Quality Monitoring by KORDI</li> </ul>	10
Total Score		63

**Shihwa Lake (Ansan and Hwaseong City of Gyeonggi Province)**









### 3. Selection of three demo sites

The three demonstration sites were selected from the ten representative habitats. These are selected by the total score based on the following criteria.

- 1) physical conditions :
- 2) species diversity
- 3) endangered or threatened species
- 4) habitat size
- 5) conservation status
- 6) pollution
- 7) future plans for development
- 8) management and conservation plans
- 9) economical importance
- 10) existing studies.

In the west coast, estuary, bay and tidal mudflats are representative habitats in terms of the biodiversity. These three habitats are much more important than any other habitat types in the west coast for the biodiversity maintenance. In the west coast of Korea two facts are major sources of high biodiversity. These are occasionally combined and independent for biodiversity increase in the west coast. One fact is the meandering coastal lines and the other is the major river input to the Yellow Sea due to the high east and low west of topography in Korean peninsula. The meandering coastal lines divide the whole coastal habitats into the relatively small independent habitats which have their own exotic ecosystems. By this reason the habitat types in the west coast are very diverse like bays, sand bars, and hard bottom shores etc. Those habitats are isolated each other during low tides even they are connected each other during high tides. This isolation provides the high physical habitat diversities followed by high biodiversity in the west coast. Also, the meandering coastal lines make the high tidal amplitude in the west coast reaching up to 13 meters in most bays. This results in the creation of huge tidal flats in the west coast during low tides representing 83% of total tidal flats in Korean peninsula. By these reasons we selected bay and tidal flats as the most important habitats in the west coast.

In addition to the meandering coastal lines, major river inputs to the Yellow Sea significantly contribute to increase biodiversity in the west coast. The big rivers in Korean peninsula like the Yalu (Amnok), Han, Geum, Dongjin, Mangyeong, Youngsan Rivers flow into the Yellow Sea through estuaries due to the high east and low west of Korea topography. This connection between freshwater and saltwater systems makes great contribution on the high biodiversity in the west coast. Moreover, high tidal amplitudes by the meandering coastal lines make the estuarine area more extended to the river system. For instance, tidal amplitude in the Gyeonggi Bay in Incheon can affect the water level in Jamsil Bridge in the central area of Seoul and direct salt water intrusion to Haeju Bridge in Goyang City of Gyeonggi Province. Also, high tidal amplitudes in the estuarine systems make the diverse small habitats in rivers and estuaries. By these reasons lots of migratory fishes and other brackish water species can inhabit in the Yellow Sea. Han River Estuary is one of the best examples in estuarine systems in the west coasts.

By these two facts, we selected bays, tidal mud flats, and estuaries as the most representative habitats in the west sea of Korea.

Han River estuary is the only one estuary which maintains the original shapes and has not been developed because of its location. The area includes the military zone and DMZ which exclusively contribute to the natural conservation of the area. Also, the estuary is the one of the largest in South Korea, and the drain basins include the capital city, Seoul, Incheon (third largest city), and Gyeonggi Province. The function of the bay is not only biological diversity but also human life of Seoul and its satellite cities which represent the half of South Korean population. The estuary includes various types of sub-habitats such as mud tidal flats, seawater-freshwater transitional area, freshwater habitats, salt marshes and wetland forest etc.

The estuary connects the Gyeonggi bay and mainstream of Han River, producing lots of diverse physical habitats and providing resting area for migratory birds and channels for migratory fishes. Also, the estuary includes the river-estuary transitional habitats located within the DMZ area which may have the high biodiversity of fishes and other estuarine species. These areas have never been scientifically surveyed due to the strict limitation of public access. For these reasons, we select the Han River estuary as the most representative habitat in the west coast of Korea.

Garolim Bay is the most typical bay in the west coast in terms of its shape, narrow mouth and wide water surface inside. High tidal amplitude makes the various water levels followed by various types of habitats in the marginal area of the bay. The bay includes various types of habitats such as seagrass bed, pebble and sand shores, salt marshes, mud tidal flat and small islands. The environment of bay was well preserved for last decades with relatively low degree of developments without dyke construction and reclamation etc. This makes the relatively high biodiversity in the bay.

Southern mud flat of Ganhwa island was selected as representative habitat in the west coast. There are many typical mud tidal flats in the west coast which have the similar environment with southern tidal flat of Ganhwa Island. However, the mud flat was selected as representative one in terms of the scales, conservation status, and values as natural resources etc. The flat is located in the mouth of Han River estuary and represent the filtration bed for the pollutant from the river and the biggest unit tidal mud flat in the west coast of South Korea.

### Score of representative habitat

<b>Ramsar Classification</b>	Permanent shallow marine waters (A)	Marine subtidal aquatic beds (B)	Coral reefs (C)	Rocky marine shores (D)	Sand, shingle or pebble shores (E)			Estuarine waters (F)	Intertidal mud, sand or salt flats (G)	Intertidal marshes (H)	Intertidal forested wetlands (I)	Coastal brackish/saline lagoons (J)
<b>Representative habitat</b>	Garolim Bay	Dumunjin	Munseom	Cheonripo-Padori	Kongdol beach	Daecheon beach	Sinduri Dune	Han River Estuary	Southern Mudflat of Ganghwa Island	Seocheon	Janghang Forest Wetland	Shihwa Lake
<b>Physical conditions</b>	10	10	8	5	10	5	10	8	10	10	8	3
<b>Species diversity</b>	10	4	6	5	4	2	7	10	7	7	10	3
<b>Endangered &amp; threatened species</b>	10	5	3	2	5	2	6	10	8	7	10	8
<b>Habitat diversity</b>	10	7	7	4	4	4	4	10	4	4	7	7
<b>Habitat size</b>	9	3	4	4	4	5	6	10	10	4	5	8
<b>Conservation status of nature</b>	9	10	9	5	10	5	7	7	7	7	7	2
<b>Degree of pollution and pollution sources</b>	7	10	10	7	10	7	7	6	7	8	8	2
<b>Future plans for development</b>	7	10	8	10	10	10	10	5	7	8	8	5
<b>Management and conservation plans</b>	8	10	10	6	10	2	10	10	10	8	9	8
<b>Economical importance</b>	10	6	6	6	6	7	5	8	9	7	6	7
<b>Existing studies</b>	8	5	10	10	5	10	7	10	10	7	9	10

<b>Key Points</b>	- Typical shape of bay	- Well developed seagrass bed	- The most diverse coral species	- Well developed sea cliff	- Excellent environmental quality	- The biggest sand beach	- The biggest dune in South Korea	- The only natural estuarine system in South Korea	- The largest tidal flat in South Korea	- The biggest reed community	- The only forest wetland system in South Korea	- The only saltwater lake with the connection to the sea in Korea
	- Best environmental quality	- Well preserved natural environment	- Excellent environmental quality	- The longest rocky shore in the west coast of Korea	- Important place for geological study		- Excellent connection of habitats from freshwater wetland to subtidal zone	- Well developed management plans	- Well preserved tidal flat	- Rare wildlife and endangered species habitat	- The highest biodiversity of halophytes in Korea	- Rare wildlife and endangered species habitat
	- Unclosed stream system	- Habitat for red list species of Japan	- Well preserved natural environment	- High biodiversity in rocky marine shore	- Well preserved natural environment			- Diverse small wetlands within the site	- Rare wildlife and endangered species habitat	- Excellent environmental quality	- Well preserved natural environment	- Important research site (environment change)
	- Various habitat types							- Rare wildlife and endangered species habitat	- Its location in the delta area of Han River estuary	- Visiting place of migratory birds such as oyster catcher		- Lots of existing studies
<b>Total Score</b>	<b>98</b>	<b>80</b>	<b>81</b>	<b>64</b>	<b>78</b>	<b>59</b>	<b>79</b>	<b>94</b>	<b>89</b>	<b>77</b>	<b>87</b>	<b>63</b>

\* When degree of pollution and future plans for development is low, score is high.

## Discussions

Habitat classification in the west coast of Korea is first time in this report except for ecoregion classification by WWF. Therefore, this report will provide general understanding on the habitat distributions in the west coast of Korea. The largest habitat in terms of the physical scales in the west coast was mud tidal flats followed by bays, estuaries, sand beaches and intertidal salt marshes. Rocky shores, sand dunes, corals and sea-grass beds were very rare in physical scale, and only one wetland forest in the Han River tidal wetland and salt lagoons of artificial Lake Shihwa were found at the small portion of the coastal area.

The classified habitats in this study represent the large portion of the coastal area, reaching up to kilometers in scale, and therefore microhabitats were not considered. Classification criteria were established only for this study and it is necessary to develop the representative habitat classification criteria which can be applied to general coastal habitat classification. The criteria were as follows; physical conditions, species diversity, endangered or threatened species, habitat size, conservation status, pollution, future plans for development, management and conservation plans, economical importance and existing studies.

Based on these criteria, Garolimbay, Han River estuary, and southern tidal mud flat of Ganghwa island were selected as the most representative three habitats out of ten representative habitats in the west coast of Korea. However, the other RHs are also very important for species diversity maintenance in the west coast. For example, Janhang wetland forest, Sinduri sand dune, aquatic seaweed bed, and corals in Jeju island are very exotic marine habitats in the west coast of Korea. They occupy small portion of the coast but are inhabited by endemic and exotic species which are important for biodiversity in the region. Also, the three representative habitats are potential critical habitats of Yellow Sea Ecoregion Planning Programme (YSEPP). Han River estuary and southern mud flat of Ganghwa island are designated as YSEPP 16 and Garolim bay as YSEPP 17.

As a matter of coastal management and activity at the government level, three ministries are involved in Korea after re-organization of government system in February, 2008. Missions at former MOMAF (Ministry of Maritime Affairs and Fisheries) were transferred to MIFAFF (Ministry in Food, Agriculture, Forestry and Fisheries) and MLTM (Ministry of Land, Transport and Maritime Affairs). Departments related to the marine environment and ecosystem at MOMAF made strategic move to MLTM, and NFRDI (National Fisheries Research and Development Institute) to MIFAFF. MOE (Ministry of Environment) is still in charge of environmental concerns in terrestrial area. Now, the representative Korean ministry connected to YSLME Program will be MLTM which is in charge of the designation of marine protection area and conducting marine environment-related programs.

# ANNEX

## Freshwater Quality Criteria by MOE

Class	BOD/COD (mg/L)	DO (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	PO <sub>4</sub> <sup>3-</sup> (mg/L)	pH
I	< 1	> 7.5	< 0.200	< 0.010	6.5~8.5
II	< 3	> 5	< 0.400	< 0.030	6.5~8.5
III	< 6	> 5	< 0.600	< 0.050	6.5~8.5
IV	< 8	> 2	< 1.0	< 0.100	6.0~8.5
V	< 10	> 2	< 1.5	< 0.150	6.0~8.5

## Seawater Quality Criteria by MOMAF

Class	Parameters						
	pH	COD (mg/L)	DO (mg/L)	Total coliform (number/100mL)	Distillate (mg/L)	TN (mg/L)	TP (mg/L)
I	7.8~8.3	<1	>7.5	<1,000	<0.01	<0.3	<0.03
II	6.5~8.5	<2	>5.0	<1,000	<0.01	<0.6	<0.05
III	6.5~8.5	<4	>2.0	-	-	<1.0	<0.09

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