



Ramsar Information Sheet

Update version, previously published on : 30 March 2005

Republic of Korea Jangdo Wetland



Designation date	30 March 2005
Site number	1458
Coordinates	34°40'23"N 125°22'15"E
Area	9,00 ha

Color codes

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

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

1 - Summary

Summary

The Jangdo Wetland is a mountainous wetland occurring in a small island where wetlands are hardly found. Relatively large given the size of the island where it is formed, and with its high water-retaining capacity, the wetland is a major source of drinking water and supports the livelihood of the local community. The wetland is internationally important due to its unique geological features that provide stopover habitats for 60 migratory birds travelling along the East Asia Australian Flyway. Those birds visit the Site, along with other adjacent islands, mostly during spring and autumn. The Site was designated as a "National Wetland Conservation Area" on 31st of August 2004 by the Ministry of Environment. The Site retains a 26,457 tonnes of freshwater and the peat layer plays a significant role in holding the water. The quality of water in the wetland also records highest mark on the Water Quality Standard of ROK. This freshwater supports not only about 640 species of plants and animals but also the population of about 120 local people in the island. There were 644 species which consist of seven taxonomic groups (Plants, Birds, Mammals, Amphibians/Reptiles, Insects, Benthic Invertebrates (fresh water), hytoplanktons/Zooplanktons) found inhabiting the Site in 2013, the largest number of species that one can find in a Site occurring in any islands in Korea. The Site is unique and of conservation value considering that the plant species in the site are mostly tropical ones even though the island is not located in the tropical climate zone. The Jangdo wetland supports the internationally vulnerable Chinese egret *Egretta eulophotes* and the Styan's Grasshopper Warbler *Locustella pleskei* as well as species which are listed as nationally as endangered, e.g. Peregrine Falcom *Falco peregrinus* and the Eurasia Otter *Lutra ultra*. In addition, the Site and its land and seascape are of scenic value with various beautiful landforms and marine landscapes in and around the island.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Hong, Kyung-Pyo
Institution/agency	Ministry of Environment
Postal address	339-012, Building #6, Government Complex-Sejong, 11 Doum 6-ro, Sejong Special Self-Governing City, Republic of Korea
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2.1.2 - Period of collection of data and information used to compile the RIS

From year	2004
To year	2013

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Jangdo Wetland
Unofficial name (optional)	Jangdo Wetland

2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary Yes No

(Update) B. Changes to Site area No change to area

2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS? No

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps 0

Boundaries description

The official area of the Jangdo Wetland Ramsar Site specified in the Section 2.2.4 is 0.1 hectares smaller than the official area specified in the Korean Law. The difference derives from the difference between the GIS area measurement and the administrative measurement used by the Korean Government, and it was mentioned that the government will hold a meeting of experts to close the gap in the second half of 2015.

2.2.2 - General location

a) In which large administrative region does the site lie?	Chollanam-do Province
b) What is the nearest town or population centre?	Heuksan-myeon, Sinan-gun

2.2.3 - For wetlands on national boundaries only

- a) Does the wetland extend onto the territory of one or more other countries? Yes No
- b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

2.2.4 - Area of the Site

Official area, in hectares (ha):

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

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	Holarctic Region. Eastern Asiatic Region Palaeartic
Marine Ecoregions of the World (MEOW)	Temperate Northern Pacific

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

- Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided

The size of Jangdo Island where the Site is located and its catchment area is very small. The only source of water recharge to the Site is rainfall, and over the last decade, the annual precipitation amounts to 1,316 millimeters and the evapotranspiration rate is 58.6%. While the runoff that can infiltrate the surface of the wetland is small, the wetland retain enough water from groundwater recharge. Jangdo wetland provides important function to maintain the life of residents around the wetland by storing and cleansing surface water in the area where development of hydrangea - hydrological system is extremely limited. In the country, no other watersheds in islands whose size is similar to or smaller than Jangdo Island provide greater or similar hydrological services that the site does. No wetlands have been found to provide hydrological services, such as the Changdeu wetland, on a small island among the island's territory.

Other ecosystem services provided

The Jangdo Wetland not only supports the survival and livelihood of the local community, but also provides refuge for wildlife. It provides about 50 tonnes of drinking and usable water per day and 18,250 tonnes annually. The water it provides is a single drinking water source for about 120 local people.

- Criterion 2 : Rare species and threatened ecological communities

- Criterion 3 : Biological diversity

Justification

The Jangdo Wetland is home to a myriad of wild species including 99 species of migratory birds. European otters, at the top of the food chain, are found within and around the site, which indicates a healthy ecosystem and rich biodiversity of the site.

The site provides habitats for most of the species on the island. The wetland is critical for those species because the island itself is not big enough to support all these species without the wetland. There are about 644 species found in the wetland. It represents the largest species concentration in terms of islands in ROK.

Most of the birds inhabit either in alpine wetlands or in the mountainous area at the back of the wetland. However, for their survival, fresh water is necessary which the wetland provides. Also, it was observed that they feed from the wetland. According to the first survey conducted from March to June in 2004, it was observed that the island may have been used by large number of migratory birds as a stopover or temporary habitat.

Because the survey has been conducted from March to June 2004, it is hard to find out which birds stay in the island for whole year and visit the island temporarily. However, the number of birds observed in March hit the peak and the number gradually decreased. We could speculate that many birds stay only for stopover temporarily. Further survey is necessary (Page 136, in Ministry of Environment & National Institute of Environmental Research, 2004).

Unfortunately, long-term survey to observe migratory birds has not been conducted on the island and the changes on the population of migratory birds are not available.

Animals broadly inhabit almost whole area of the island, as it is a major source of clean fresh water. Even though the island itself is fairly small (3.02 km²), local people used to graze animals before designating as a protected area. Furthermore, Lutra lutra, which needs clean water and appropriate food, has been found living near the wetland. It explains that the wetland sustains stable food web even for the large animals.

Many endangered plants are pushed to the cliff area of the island and remain only in small numbers. It is caused by human activities like collecting plants for commercial purpose and natural succession of plants. At present, only a couple of Dendrobium minutiflorum surviving at the cliff on the northwest side of island. The island supports other precious species such as Ligularia stenocephala and Neofinetia falcate which are narrowly distributed in a small area at the northern part of ROK.

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

<no data available>

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

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence ¹⁾	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA / AVES	 <i>Locustella pleskei</i>	Styan's Grasshopper Warbler	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>			

1) Percentage of the total biogeographic population at the site

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

<no data available>

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

4.1 - Ecological character

The main wetland type of the Site is freshwater marshes and freshwater marshes on peat soils. The geology of Jangdo Wetland comprises of metamorphic and granite rocks, and metamorphic rocks are considered to be formed in the pre-Cambrian period. Due to the presence of granite rocks that are softer than metamorphic rocks, differential erosion occurs and sediments and water converges in the depressed areas.

The main vegetation in the Site consists of plant species of second vegetation that are usually found in an environment in which disturbance, such as rice farming, regularly occurs and has conditions that ensure suitable pollination for plant species, including *Isachne globosa*-*Salix koreensis*, *Isachne globosa*, *Persicaria thunbergii*, *Mischanthus sinensis* var. *purpurascens*, *Juncus effusus* var. *decipiens*-*Carex dickinsii*, and *Camellia japonica*.

Jando Wetland is assessed to be of high conservation value because the site provides stopover sites for migratory waterbirds, many of which are endangered or threatened, and is a linkage that connects the warm temperate vegetation. Indeed, studies have found that a total of 99 migratory bird species use the site as a stopover. The abundant aquifer of the watershed provides water for about 640 species. The site also provides a refuge for wildlife.

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

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		3		Rare
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		1		Representative

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
<i>Carex jaluensis</i>		
<i>Carex onoei</i>		
<i>Clematis fusca</i>		
<i>Damnanthus indicus</i>		
<i>Dendropanax morbiferus</i>		
<i>Drosera rotundifolia</i>		
<i>Farfugium japonicum</i>		
<i>Galium trifidum</i>		
<i>Gentiana jamesii</i>		
<i>Glyceria leptolepis</i>		
<i>Hosta yingeri</i>		
<i>Juncus decipiens</i>		
<i>Litsea japonica</i>		
<i>Lobelia sessilifolia</i>		
<i>Lonicera caerulea caerulea</i>		
<i>Ludwigia epilobioides</i>		
<i>Machilus japonica</i>		
<i>Menyanthes trifoliata</i>		
<i>Murdannia keisak</i>		
<i>Pteurospermum kantschaticum</i>		
<i>Sanguisorba tenuifolia alba</i>		
<i>Sphagnum palustre</i>		
<i>Trientalis europaea arctica</i>		
<i>Utricularia ochroleuca</i>		
<i>Viola biflora</i>		

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	Accipiter gularis	Japanese Sparrowhawk				
CHORDATA/AVES	Accipiter nisus	Eurasian Sparrowhawk				
CHORDATA/AVES	Accipiter soloensis	Chinese Sparrowhawk; Gray Frog-Hawk				
CHORDATA/AVES	Columba janthina	Japanese Wood Pigeon				
CHORDATA/AVES	Egretta eulophotes	Chinese Egret				
CHORDATA/AVES	Falco peregrinus	Peregrine Falcon				
CHORDATA/AVES	Falco subbuteo	Eurasian Hobby; Northern Hobby				
CHORDATA/AVES	Milvus migrans	Black Kite				
CHORDATA/AVES	Pandion haliaetus	Osprey; Western Osprey				
CHORDATA/AVES	Pernis ptilorhynchus	Crested Honey Buzzard				
ARTHROPODA/INSECTA	Acrida cinerea					
ARTHROPODA/INSECTA	Camponotus jejuensis					
ARTHROPODA/INSECTA	Copris tripartitus					
ARTHROPODA/INSECTA	Ctenichneumon seoulensis					
ARTHROPODA/INSECTA	Eurhadina koreana					
ARTHROPODA/INSECTA	Gampsocleis sedakovii					
ARTHROPODA/INSECTA	Gryllotalpa orientalis					
ARTHROPODA/INSECTA	Locusta migratoria					
CHORDATA/MAMMALIA	Lutra lutra	European Otter				
ARTHROPODA/INSECTA	Oxya chinensis sinuosa					
ARTHROPODA/INSECTA	Teleogryllus emma					
ARTHROPODA/INSECTA	Trichomma koreanum					

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dwa: Humid continental (Humid with severe, dry winter, hot summer)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

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

4.4.3 - Soil

Mineral

(Update) Changes at RIS update No change Increase Decrease Unknown

Organic

(Update) Changes at RIS update No change Increase Decrease Unknown

No available information

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

Please provide further information on the soil (optional)

In the site, the brownish-red peat layers were initially built up by the bedrock weathering and erosion processes throughout geological periods. This was further developed by the accumulation of rarely-decomposed plants owing to hydrologic conditions and micro-climate of the soil below surface layer. The bottom impermeable layer below the peat layers is composed of yellowish sediments that contain clay minerals leached out from the surface layer.

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from rainfall	<input checked="" type="checkbox"/>	No change

Water destination

Presence?	Changes at RIS update
Marine	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels largely stable	No change

4.4.5 - Sediment regime

Sediment regime unknown

Please provide further information on sediment (optional):

The depth of the sediment layer reaches on average 30.3 ±20.1cm and the depth of the deepest area stands at 102 cm. The proportion of organic matters in soil is 15.6±7.6 % (5.8 to 40.1 %) on average, which is slightly higher than that in other forest soils (less than 10%).

4.4.6 - Water pH

Circumneutral (pH: 5.5-7.4)

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

4.4.7 - Water salinity

Fresh (<0.5 g/l)

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

Please provide further information on salinity (optional):

Salinity: 0.07 psu (mean)

4.4.8 - Dissolved or suspended nutrients in water

Mesotrophic

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

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

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

Surrounding area has greater urbanisation or development

Surrounding area has higher human population density

Surrounding area has more intensive agricultural use

Surrounding area has significantly different land cover or habitat types

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

The depersion of the bedrock of the island, which was formed by erosion, is greater in the middle of the island than the edges, which causes water to flow from the edges and maintains the ability of the site to retain water. The soil conditions in the area surrounding the site is shallower and drier than those in the site, so the surrounding area is covered by a forest vegetation and rocky landscapes.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Fresh water	Drinking water for humans and/or livestock	High

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	High
Pollution control and detoxification	Water purification/waste treatment or dilution	Medium
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Spiritual and inspirational	Aesthetic and sense of place values	Medium
Scientific and educational	Educational activities and opportunities	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium
Scientific and educational	Major scientific study site	High

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	Medium

Within the site:

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

4.5.2 - Social and cultural values

- i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland
- ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland
- iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples
- iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

4.6 - Ecological processes

^(ECD) Animal reproductive productivity

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

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

As of 2009, the government authorities bought up the entire land area of the site, 76,790 square meters. Regardless of ownership form, both the site and its surrounding areas are conserved and managed in pursuant to the Wetland Conservation Act enacted in August 2004 and the National Park Act in December 1981, both of which prevent the harmful impacts of human activities.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Yeongsan River Basin Environmental Office

Provide the name and title of the person or people with responsibility for the wetland:

Hee-cheol Lee, Head of Yeongsan River Basin Environmental Office

Postal address:

Yeongsan River Basin Environmental Office
31, Gyesu-ro, Seo-gu, Gwangju, Republic of Korea 502-788

E-mail address:

hcleee17@korea.kr

5.2 - Ecological character threats and responses (Management)

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

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Housing and urban areas	Low impact	Low impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage	Low impact	Low impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified/others			<input checked="" type="checkbox"/>		<input type="checkbox"/>	

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified			<input type="checkbox"/>		<input checked="" type="checkbox"/>	

Please describe any other threats (optional):

The land used to be used to graze domesticated goats. Since the designation as a National Park and National Wetland Conservation Area given to the whole island area and to the site respectively, however, no human activities have occurred in the site, except ecotourism programmes which place limits on human access and focus on ecological monitoring and eco-friendly management of the area. With the leag protection by the National Park Law, efforts have made by the local people to protect the site and its water supply.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Park	Tadohae-Haesang National Park	http://dadohae.knps.or.kr	partly
National Wetland Conservation Area	National Wetland Conservation Area	http://wetland.go.kr	whole

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- Ib Wilderness Area: protected area managed mainly for wilderness protection
- II National Park: protected area managed mainly for ecosystem protection and recreation
- III Natural Monument: protected area managed mainly for conservation of specific natural features
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

<no data available>

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Hydrology management/restoration	Implemented

Human Activities

Measures	Status
Management of water abstraction/takes	Partially implemented
Livestock management/exclusion (excluding fisheries)	Implemented

5.2.5 - Management planning

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

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

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

5.2.6 - Planning for restoration

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

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water regime monitoring	Implemented
Plant community	Implemented
Plant species	Implemented
Animal community	Implemented
Animal species (please specify)	Implemented
Birds	Implemented
Soil quality	Implemented

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

- Choi, B.K., Kim, J.W., Kim, S.Y. and Lim, J.C.(2012).Vegetation of Jangdo island. Korean journal of environment and ecology. 26: 512-527.
- Kim, J.Y., Yang, D.Y., and Lee, D.Y., (1998), "The natural Environment in the Daeamsan high moor," The Journal of Quaternary Research, vol. 12(1), 55~62.
- Ministry of Environment & National Institute of Environmental Research, (2004), A Report of Natural Ecosystem in Jangdo Island high moor.
- National Park Service, (1999), A Report of Natural Ecosystem in Odaesan Mountainous Wetland.
- Park, E.J., (2004), "A Study on the Classification and Formation of Wetland Ecosystem in the ROK", The Journal of Korea Professional Geographers, vol. 37(4), 256~268.
- Park, E.J., and Kim. Y.T., (2004), "The Formation of Island Mountainous Wetland in the ROK – Case Study of Jangdo high moor", The Journal of Korea Wetland Society (in press).
- Park, S.J., Burt, T.P., and Bull, P.A., (1996), "A soil-landscape continuum on a three-dimensional hill slope, Quantock Hills, Somerset," M.G. Anderson and S.M. Brooks (eds), Advance in Hillslope Processes, Vol. 1, 367~396, John Wiley and Sons.
- Song, H.K., Park, G.S., Park, H.R., So, S.K., Kim, H. J., Kim, M. Y.(2006). Vegetation and Soil Properties of a Forest Wetland in Jangdo, Sinan-Gun. Journal of Korean Society of Environment & Ecology. 20:407-414.
- U.S.G.S., 1999, Wetland Inventory Summary of U.S.A; Identification and Application of Wetland Ecosystems, National Water Supply Paper, 2425.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<1 file(s) uploaded>

vi. other published literature

<no file available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



site view (Ministry of Environment, 15-03-2012)



site view (Ministry of Environment, 17-08-2013)



site view (Ministry of Environment, 22-07-2013)



site view (Ministry of Environment, 22-07-2013)



site view (Ministry of Environment, 23-09-2013)



site view (Ministry of Environment, 17-08-2013)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation